

**Certain Flat-Rolled Carbon Steel Products From Argentina,
Australia, Austria, Belgium, Brazil, Canada, Finland,
France, Germany, Italy, Japan, Korea, Mexico,
the Netherlands, New Zealand, Poland,
Romania, Spain, Sweden, and the United Kingdom**

Investigations Nos. 701-TA-319-332, 334, 336-342, 344, and 347-353 (Final)
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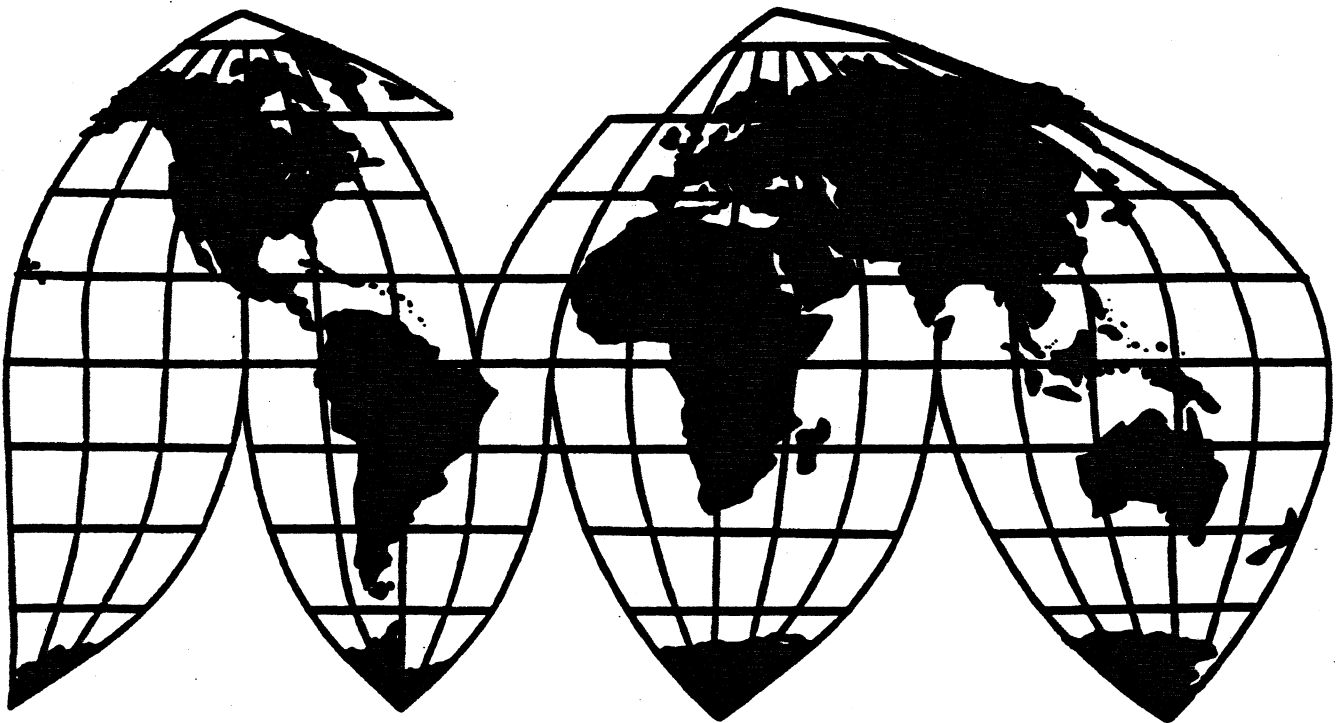
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Note.--Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report. Such deletions are indicated by asterisks.

INFORMATION OBTAINED IN THE INVESTIGATIONS

INTRODUCTION

Following preliminary determinations by the U.S. Department of Commerce (Commerce) that imports of certain flat-rolled carbon steel products¹ from

¹ The merchandise covered by these investigations is--

1. Certain cut-to-length carbon steel plate, defined as hot-rolled carbon steel universal mill plates (i.e., flat-rolled products rolled on four faces or in a closed-box pass, of a width exceeding 150 millimeters but not exceeding 1,250 millimeters and of a thickness of not less than 4 millimeters, not in coils and without patterns in relief), of rectangular shape, neither clad, plated, nor coated with metal, whether or not painted, varnished, or coated with plastics or other nonmetallic substances; and certain hot-rolled carbon steel flat products in straight lengths, of rectangular shape, neither clad, plated, nor coated with metal, whether or not painted, varnished, or coated with plastics or other nonmetallic substances, 4.75 millimeters or more in thickness and of a width that exceeds 150 millimeters and measures at least twice the thickness, currently covered by Harmonized Tariff Schedule of the United States (HTS) statistical reporting numbers 7208.31.0000, 7208.32.0000, 7208.33.1000, 7208.33.5000, 7208.41.0000, 7208.42.0000, 7208.43.0000, 7208.90.0000, 7210.70.3000, 7210.90.9000, 7211.11.0000, 7211.12.0000, 7211.21.0000, 7211.22.0045, 7211.90.0000, 7212.40.1000, 7212.40.5000, and 7212.50.0000. Included in these investigations are flat-rolled products of nonrectangular cross section where such cross section is achieved subsequent to the rolling process (i.e., products that have been "worked after rolling"); e.g., products that have been bevelled or rounded at the edges. Excluded from these investigations is grade X-70 plate.

2. Certain hot-rolled carbon steel flat products, defined as hot-rolled carbon steel flat products, of rectangular shape, of a width of 12.69 millimeters or greater, neither clad, plated, nor coated with metal, whether or not painted, varnished, or coated with plastics or other nonmetallic substances, in coils (whether or not in successively superimposed layers), or in straight lengths that are less than 4.75 millimeters in thickness and of a width at least 10 times the thickness, currently covered by HTS statistical reporting numbers 7208.11.0000, 7208.12.0000, 7208.13.1000, 7208.13.5000, 7208.14.1000, 7208.14.5000, 7208.21.1000, 7208.21.5000, 7208.22.1000, 7208.22.5000, 7208.23.1000, 7208.23.5030, 7208.23.5090, 7208.24.1000, 7208.24.5030, 7208.24.5090, 7208.34.1000, 7208.34.5000, 7208.35.1000, 7208.35.5000, 7208.44.0000, 7208.45.0000, 7208.90.0000, 7210.70.3000, 7210.90.9000, 7211.12.0000, 7211.19.1000, 7211.19.5000, 7211.22.0090, 7211.29.1000, 7211.29.3000, 7211.29.5000, 7211.29.7030, 7211.29.7060, 7211.29.7090, 7211.90.0000, 7212.40.1000, 7212.40.5000, 7212.50.0000, 7214.30.0000, 7214.40.0010, 7214.50.0010, 7214.60.0010, and 7215.90.5000. Included in these investigations are flat-rolled products of nonrectangular cross section where such cross section is achieved subsequent to the rolling process (i.e., products that have been "worked after rolling"); e.g., products that have been bevelled or rounded at the edges. Excluded from these investigations are certain hot-rolled seatbelt retractor spring steel and certain hot-rolled carbon bandsaw steel (for definitions, see Commerce's final notice, 58 F.R. 37062).

3. Certain cold-rolled carbon steel flat products, defined as cold-rolled (cold-reduced) carbon steel flat products, of rectangular shape, neither clad, plated, nor coated with metal, whether or not painted,

I-3
(continued...)

¹ (...continued)

varnished, or coated with plastics or other nonmetallic substances, in coils (whether or not in successively superimposed layers), and of a width of 12.69 millimeters or greater, or in straight lengths that, if of a thickness less than 4.75 millimeters, are of a width of 12.69 millimeters or greater and which measure at least 10 times the thickness or, if of a thickness of 4.75 millimeters or more, are of a width that exceeds 150 millimeters and measures at least twice the thickness, currently covered by HTS statistical reporting numbers 7209.11.0000, 7209.12.0030, 7209.12.0090, 7209.13.0030, 7209.13.0090, 7209.14.0030, 7209.14.0090, 7209.21.0000, 7209.22.0000, 7209.23.0000, 7209.24.1000, 7209.24.5000, 7209.31.0000, 7209.32.0000, 7209.33.0000, 7209.34.0000, 7209.41.0000, 7209.42.0000, 7209.43.0000, 7209.44.0000, 7209.90.0000, 7210.70.3000, 7210.90.9000, 7211.30.1030, 7211.30.1090, 7211.30.3000, 7211.30.5000, 7211.41.1000, 7211.41.3030, 7211.41.3090, 7211.41.5000, 7211.41.7030, 7211.41.7060, 7211.41.7090, 7211.49.1030, 7211.49.1090, 7211.49.3000, 7211.49.5030, 7211.49.5060, 7211.49.5090, 7211.90.0000, 7212.40.1000, 7212.40.5000, 7212.50.0000, 7217.11.1000, 7217.11.2000, 7217.11.3000, 7217.19.1000, 7217.19.5000, 7217.21.1000, 7217.29.1000, 7217.29.5000, 7217.31.1000, 7217.39.1000, and 7217.39.5000.

Included in these investigations are flat-rolled products of nonrectangular cross section where such cross section is achieved subsequent to the rolling process (i.e., products that have been "worked after rolling"); e.g., products that have been bevelled or rounded at the edges. Excluded from these investigations is certain shadow mask steel, i.e., aluminum-killed, cold-rolled steel coil that is open-coil annealed, has a carbon content of less than 0.002 percent, is 0.076 to 0.304 millimeters in thickness and 381 to 762 millimeters in width, and has an ultraflat, isotropic surface.

4. Certain corrosion-resistant carbon steel flat products, defined as flat-rolled carbon steel products, of rectangular shape, either clad, plated, or coated with corrosion-resistant metals such as zinc, aluminum, or zinc-, aluminum-, nickel-, or iron-based alloys, whether or not corrugated or painted, varnished, or coated with plastics or other nonmetallic substances in addition to the metallic coating, in coils (whether or not in successively superimposed layers), and of a width of 12.69 millimeters or greater, or in straight lengths that, if of a thickness less than 4.75 millimeters, are of a width of 12.69 millimeters or greater and that measures at least 10 times the thickness, or, if of a thickness of 4.75 millimeters or more, are of a width that exceeds 150 millimeters and measures at least twice the thickness, currently covered by HTS statistical reporting numbers 7210.31.0000, 7210.39.0000, 7210.41.0000, 7210.49.0030, 7210.49.0090, 7210.60.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.1000, 7210.90.6000, 7210.90.9000, 7212.21.0000, 7212.29.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, 7212.60.0000, 7215.90.1000, 7215.90.5000, 7217.12.1000, 7217.13.1000, 7217.19.1000, 7217.19.5000, 7217.22.5000, 7217.23.5000, 7217.29.1000, 7217.29.5000, 7217.32.5000, 7217.33.5000, 7217.39.1000, and 7217.39.5000.

Included in these investigations are flat-rolled products of nonrectangular cross section where such cross section is achieved subsequent to the rolling process (i.e., products that have been "worked after rolling"); e.g., products that have been bevelled or rounded at the edges. Excluded from these investigations are flat-rolled steel products either plated or coated with tin, lead, chromium, chromium oxides, both tin and lead ("terne plate"), or

(continued⁴..)

Austria, Belgium, Brazil, France, Germany, Italy, Korea, Mexico, New Zealand, Spain, Sweden, and the United Kingdom are being subsidized by the governments of those countries (57 F.R. 57750, December 7, 1992), the U.S. International Trade Commission (Commission), effective December 7, 1992, instituted investigations Nos. 701-TA-319-332, 334, 336-342, 344, and 347-353 (Final) under section 705(b) of the Tariff Act of 1930 (19 U.S.C. 1671d(b)) to determine whether an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports of such merchandise.

In addition, following preliminary determinations by Commerce that imports of certain flat-rolled carbon steel products from Argentina, Australia, Austria, Belgium, Brazil, Canada, Finland, France, Germany, Italy, Japan, Korea, Mexico, the Netherlands, Poland, Romania, Spain, Sweden, and the United Kingdom are being sold at less than fair value (LTFV) (58 F.R. 7066, February 4, 1993), the Commission, effective February 4, 1993, instituted investigations Nos. 731-TA-573-579, 581-592, 594-597, 599-609, and 612-619 (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. 1673d(b)) to determine whether an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports of such merchandise.

Notice of the institution of the Commission's investigations and of a public hearing to be held in connection therewith was posted in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and published in the *Federal Register* on December 18, 1992 (57 F.R. 60247), and on February 18, 1993 (58 F.R. 8974).² The hearing was held in Washington, DC, on June 29 and 30, 1993.³

Commerce made its final subsidy and LTFV determinations on June 21, 1993 (58 F.R. 37062, July 9, 1993). The Commission voted on these cases on July 27, 1993. The applicable statute directs that the Commission make its final injury determination within 45 days after the final determinations by Commerce.

BACKGROUND

These investigations result from a petition filed by counsel for Armco Steel Co., L.P. (Armco); Bethlehem Steel Corp. (Bethlehem); Geneva Steel

¹ (...continued)

both chromium and chromium oxides ("tin-free steel"), whether or not painted, varnished or coated with plastics or other nonmetallic substances in addition to the metallic coating. Also excluded from these investigations are certain clad stainless flat-rolled products, which are three-layered corrosion-resistant carbon steel flat-rolled products less than 4.75 millimeters in composite thickness that consist of a carbon steel flat-rolled product clad on both sides with stainless steel in a 20-60-20 ratio.

² Copies of the Commission's *Federal Register* notices are presented in app. A.

³ A calendar of the public hearing is presented in app. B.

(Geneva); Gulf States Steel, Inc. of Alabama (Gulf States); Inland Steel Industries, Inc. (Inland); Laclede Steel Co. (Laclede); LTV Steel Co., Inc. (LTV); Lukens Steel Co. (Lukens); National Steel Corp. (National); Sharon Steel Corp. (Sharon); USX Corp./U.S. Steel Group (USX); and WCI Steel, Inc. (WCI) on June 30, 1992, alleging that an industry in the United States is materially injured or threatened with material injury by reason of subsidized and/or LTFV imports of certain flat-rolled carbon steel products from the countries listed above and from Taiwan.⁴ Petitioners in the countervailing duty investigations are Armco, Bethlehem, Geneva, Gulf States, Inland, Laclede, LTV, Lukens, National, Sharon, USX, and WCI, except as noted in table 1. Petitioners in the antidumping investigations are Armco, Bethlehem, Geneva, Gulf States, Inland, Laclede, LTV, Lukens, National, Sharon, USX, and WCI, except as noted in table 2.

In response to that petition the Commission instituted investigations Nos. 701-TA-319-354 and 731-TA-573-620 (Preliminary) under sections 703 and 733 of the Tariff Act of 1930 (19 U.S.C 1671b(a) and 1673b(a)) and, on August 14, 1992, determined that there was a reasonable indication of such material injury in 72 of the 84 cases.

On May 21, 1993, Commerce initialled suspension agreements on certain flat-rolled carbon steel products from Argentina, Australia, Austria, Brazil, Finland, Germany, Mexico, Poland, New Zealand, and Sweden. These constituted agreements to suspend countervailing duty cases involving imports from Austria, Mexico, and New Zealand, and antidumping investigations involving all countries except New Zealand. In its final antidumping and countervailing duty determinations, Commerce determined that proceeding with such agreements would not be in the public interest.

A summary of the data collected from these investigations is presented in appendix C.

PREVIOUS AND RELATED INVESTIGATIONS

Flat-rolled steel products, including those subject to these investigations, have been the subject of numerous Commission investigations since the late 1970s. Details on these investigations are provided in tables 3-6.⁵

⁴ On Nov. 25, 1992, the United Steelworkers of America, AFL-CIO/CLC, entered an appearance as a co-petitioner in these investigations.

⁵ In addition, on May 13, 1993, countervailing duty petitions were filed with Commerce on plate, hot-rolled products, cold-rolled products, and corrosion-resistant products from South Africa. Those cases are not before the Commission because South Africa is not a "country under the Agreement" as provided for in section 701(b) of the Tariff Act of 1930 (19 U.S.C. 1671). As these cases are "subject to investigation" because Commerce has initiated investigations, however, petitioners argue that the Commission should include them in its cumulation analysis.

Table 1
Certain flat-rolled carbon steel products: Final countervailing duty investigations, by product and by country¹

Country	Plate	Hot-rolled products	Cold-rolled products	Corrosion-resistant products
Austria	--	--	701-TA-336 ²	--
Belgium	701-TA-319 ³	701-TA-329 ⁴	701-TA-337 ²	--
Brazil	701-TA-320 ³	701-TA-330 ⁴	701-TA-338 ²	701-TA-347 ⁵
France	701-TA-321 ³	701-TA-331 ⁴	701-TA-339 ²	701-TA-348 ⁵
Germany	701-TA-322 ³	701-TA-332 ⁴	701-TA-340 ²	701-TA-349 ⁵
Italy	701-TA-323 ³	(⁶)	701-TA-341 ²	--
Korea	701-TA-324 ³	701-TA-334 ⁴	701-TA-342 ²	701-TA-350 ⁵
Mexico	701-TA-325 ³	--	--	701-TA-351 ⁵
New Zealand	--	(⁶)	(⁶)	701-TA-352 ⁵
Spain	701-TA-326 ³	--	701-TA-344 ²	--
Sweden	701-TA-327 ³	--	--	701-TA-353 ⁵
United Kingdom . .	701-TA-328 ³	--	(⁶)	--

¹ The Commission issued negative determinations in all preliminary investigations involving imports from Taiwan.

² Geneva, Laclede, and Lukens are not petitioners.

³ Armco, Laclede, LTV, National, and WCI are not petitioners.

⁴ Lukens is not a petitioner.

⁵ Laclede is not a petitioner.

⁶ Negative Commission determination in the preliminary investigation.

Source: The petition; USITC publication 2549.

Table 2
Certain flat-rolled carbon steel products: Final antidumping investigations, by product and by country¹

Country	Plate	Hot-rolled products	Cold-rolled products	Corrosion-resistant products
Argentina	--	--	731-TA-597 ²	--
Australia	--	--	(³)	731-TA-612 ⁴
Austria	--	--	731-TA-599 ²	--
Belgium	731-TA-573 ⁵	731-TA-588 ⁶	731-TA-600 ²	--
Brazil	731-TA-574 ⁵	731-TA-589 ⁶	731-TA-601 ²	731-TA-613 ⁴
Canada	731-TA-575 ⁵	731-TA-590 ⁴	731-TA-602 ²	731-TA-614 ⁴
Finland	731-TA-576 ⁵	--	--	--
France	731-TA-577 ⁵	731-TA-591 ⁶	731-TA-603 ²	731-TA-615 ⁴
Germany	731-TA-578 ⁵	731-TA-592 ⁶	731-TA-604 ²	731-TA-616 ⁴
Italy	731-TA-579 ⁵	(³)	731-TA-605 ²	--
Japan	(³)	731-TA-594 ⁷	731-TA-606 ⁸	731-TA-617 ⁹
Korea	731-TA-581 ⁵	731-TA-595 ¹⁰	731-TA-607 ²	731-TA-618 ⁴
Mexico	731-TA-582 ⁵	--	--	731-TA-619 ⁴
Netherlands	--	731-TA-596 ⁶	731-TA-608 ²	--
Poland	731-TA-583 ⁵	--	--	--
Romania	731-TA-584 ⁵	--	--	--
Spain	731-TA-585 ⁵	--	731-TA-609 ²	--
Sweden	731-TA-586 ⁵	--	(³)	--
United Kingdom . .	731-TA-587 ⁵	--	(³)	--

¹ The Commission issued negative determinations in all preliminary investigations involving imports from Taiwan.

² Geneva, Laclede, and Lukens are not petitioners.

³ Negative Commission determination in the preliminary investigation.

⁴ Laclede is not a petitioner.

⁵ Armco, Laclede, LTV, National, and WCI are not petitioners.

⁶ Lukens is not a petitioner.

⁷ Armco, Inland, LTV, Lukens, and National are not petitioners.

⁸ Armco, Geneva, Inland, Laclede, LTV, Lukens, and National are not petitioners.

⁹ Armco, Inland, Laclede, LTV, and National are not petitioners.

¹⁰ Lukens and USX are not petitioners.

Source: The petition; USITC publication 2549.

Table 3
Cut-to-length plate:¹ Previous and related investigations, 1921-91

Item/source	Investigation number	Date of inv.	Report No.	Result
Steel plates.....	N/A	1921	C-29	
Carbon steel plate:				
Belgium.....	731-TA-18 (F)	1980	USITC 1064	Affirmative
	701-TA-83 (F)	1982	USITC 1207	Affirmative
	701-TA-86 (F)	1982	USITC 1221	Affirmative
	731-TA-53 (F)	1982	USITC 1221	Affirmative
	701-TA-86 (F)	1982	(²)	Terminated 10/26/82
	731-TA-53 (F)	1982	(²)	Terminated 10/26/82
	731-TA-146 (F)	1983	USITC 1451	Affirmative
Brazil.....	701-TA-84 (F)	1982	USITC 1208	Affirmative
	701-TA-87 (F)	1982	USITC 1221	Affirmative
	701-TA-87 (F)	1983	USITC 1356	Affirmative (suspension agreement reached)
	701-TA-204 (F)	1983	(²)	Petition withdrawn 11/83
Czechoslovakia.....	731-TA-213 (F)	1985	USITC 1642	Affirmative
	731-TA-213 (F)	1985	(²)	Petition withdrawn 5/28/85
Finland ³	731-TA-169 (F)	1984	USITC 1510	Affirmative
	731-TA-169 (F)	1985	(²)	Petition withdrawn 1/18/85
France.....	731-TA-20 (F)	1980	USITC 1064	Affirmative
	701-TA-88 (P)	1982	USITC 1221	Negative
	731-TA-54 (P)	1982	USITC 1221	Negative
Germany (East).....	731-TA-214 (F)	1985	USITC 1642	Affirmative
	731-TA-214 (F)	1985	(²)	Terminated 8/12/85
Germany (West) ⁴	731-TA-19 (F)	1980	USITC 1064	Affirmative
	701-TA-93 (P)	1982	USITC 1221	Affirmative
	731-TA-60 (P)	1982	USITC 1221	Affirmative
	701-TA-93 (F)	1982	(²)	Terminated 10/26/82
	731-TA-60 (F)	1982	(²)	Terminated 10/26/82
	731-TA-147 (F)	1984	USITC 1550	Affirmative (on remand)
	731-TA-147 (F)	1985	(²)	Terminated 11/29/84
Hungary.....	731-TA-215 (F)	1985	USITC 1642	Affirmative
	731-TA-215 (F)	1985	(²)	Petition withdrawn 5/28/85
Italy.....	731-TA-21 (F)	1980	USITC 1064	Affirmative
	701-TA-89 (P)	1982	USITC 1221	Negative
	731-TA-55 (P)	1982	USITC 1221	Negative
Japan.....	AA1921-179	1978	USITC 882	Affirmative (AD order)
Korea.....	701-TA-170 (F)	1982	USITC 1261	Affirmative
	701-TA-170 (F)	1983	USITC 1346	Affirmative (CVD order)
	731-TA-151 (F)	1983	USITC 1459	Affirmative
	731-TA-151 (F)	1984	USITC 1561	Affirmative (AD order)
Luxembourg.....	701-TA-90 (P)	1982	USITC 1221	Negative
	731-TA-56 (P)	1982	USITC 1221	Negative
Netherlands.....	731-TA-23 (P)	1980	USITC 1064	Affirmative
	701-TA-91 (P)	1982	USITC 1221	Negative
	731-TA-57 (P)	1982	USITC 1221	Negative
Poland.....	AA1921-203	1979	USITC 984	Negative
	731-TA-216 (F)	1985	USITC 1642	Affirmative
	731-TA-216 (F)	1985	(²)	Terminated 8/12/85
Romania.....	731-TA-51 (P)	1982	USITC 1207	Affirmative
	731-TA-58 (P)	1982	USITC 1221	Affirmative
	731-TA-58 (F)	1982	(²)	Suspension agreement reached 1/4/83; terminated 7/3/85
South Africa ⁵	731-TA-170 (F)	1984	USITC 1510	Affirmative
Spain.....	701-TA-155 (F)	1982	USITC 1255	Affirmative
	701-TA-155 (F)	1982	USITC 1331	Affirmative
	731-TA-171 (F)	1984	USITC 1510	Affirmative
	731-TA-171 (F)	1985	(²)	Terminated 1/22/85
Sweden.....	701-TA-225 (P)	1985	USITC 1642	Affirmative
	701-TA-225 (F)	1985	USITC 1759	Negative
Taiwan.....	AA1921-197	1979	USITC 970	Affirmative (AD order)
United Kingdom.....	731-TA-24 (F)	1980	USITC 1064	Affirmative
	701-TA-92 (P)	1982	USITC 1221	Affirmative
	731-TA-59 (P)	1982	USITC 1221	Affirmative
	701-TA-92 (F)	1982	(²)	Terminated 10/26/82
	731-TA-59 (F)	1982	(²)	Terminated 10/26/82
Venezuela.....	701-TA-226 (F)	1985	USITC 1642	Affirmative
	731-TA-217 (F)	1985	USITC 1642	Affirmative

¹ Investigations include carbon steel plate in coils, unless otherwise noted.

² No report issued.

³ Inv. No. 731-TA-169 involved cut-to-length plate only.

⁴ Inv. No. 731-TA-147 involved cut-to-length plate only.

⁵ Involved cut-to-length plate only.

Source: Various cited USITC publications.

Table 4
Hot-rolled products: Previous and related investigations, 1980-91

Item/source	Investigation number	Date of inv.	Report No.	Result
Hot-rolled carbon steel sheet and strip:				
Austria ¹	701-TA-227 (F)	1985	USITC 1642	Affirmative
	701-TA-227 (F)	1985	USITC 1759	Negative
	731-TA-219 (F)	1985	USITC 1642	Affirmative
	731-TA-219 (F)	1985	USITC 1759	Negative
Belgium.....	731-TA-18 (F)	1980	USITC 1064	Affirmative
	701-TA-94 (F)	1982	USITC 1221	Affirmative
	701-TA-94 (F)	1982	(²)	Terminated 11/2/82
	731-TA-61 (F)	1982	USITC 1221	Affirmative
	731-TA-61 (F)	1982	(²)	Terminated 11/2/82
Brazil ³	701-TA-95 (F)	1982	USITC 1221	Negative
	701-TA-206 (F)	1983	USITC 1470	Affirmative
	701-TA-206 (F)	1984	USITC 1538	Affirmative
	731-TA-153 (F)	1983	USITC 1470	Affirmative
	731-TA-153 (F)	1984	USITC 1568	Affirmative
Finland.....	731-TA-220 (F)	1984	(²)	Petition withdrawn 1/18/85
France ⁴	731-TA-20 (F)	1980	USITC 1064	Affirmative
	701-TA-85 (F)	1982	USITC 1206	Affirmative ⁵
	701-TA-96 (F)	1982	USITC 1221	Affirmative
	701-TA-96 (F)	1982	(²)	Terminated 11/2/82
	731-TA-62 (F)	1982	USITC 1221	Affirmative
	731-TA-62 (F)	1982	(²)	Terminated 11/2/82
Germany (West).....	731-TA-19 (F)	1980	USITC 1064	Affirmative
	701-TA-101 (F)	1982	USITC 1221	Affirmative
	701-TA-101 (F)	1982	(²)	Terminated 11/2/82
	731-TA-67 (F)	1982	USITC 1221	Affirmative
	731-TA-67 (F)	1982	(²)	Terminated 11/2/82
Hungary.....	731-TA-221 (F)	1985	USITC 1642	Affirmative
Italy.....	731-TA-21 (F)	1980	USITC 1064	Affirmative
	701-TA-97 (F)	1982	USITC 1221	Affirmative
	701-TA-97 (F)	1982	(²)	Terminated 11/2/82
	731-TA-63 (F)	1982	USITC 1221	Affirmative
	731-TA-63 (F)	1982	(²)	Terminated 11/2/82
Korea ¹	701-TA-171 (F)	1982	USITC 1261	Affirmative
	701-TA-171 (F)	1983	USITC 1346	Affirmative
Luxembourg.....	701-TA-98 (F)	1982	USITC 1221	Negative
	731-TA-64 (F)	1982	USITC 1221	Negative
Netherlands.....	731-TA-23 (F)	1980	USITC 1064	Affirmative
	701-TA-99 (F)	1982	USITC 1221	Affirmative
	701-TA-99 (F)	1982	(²)	Terminated 9/8/82
	731-TA-65 (F)	1982	USITC 1221	Affirmative
	731-TA-65 (F)	1982	(²)	Terminated 9/8/82
Romania.....	731-TA-222 (F)	1985	USITC 1642	Affirmative
	731-TA-222 (F)	1985	(²)	Terminated 7/19/85
South Africa.....	731-TA-174 (F)	1984	USITC 1510	Affirmative
Spain ¹	701-TA-156 (F)	1982	USITC 1255	Negative
Sweden ¹	701-TA-228 (F)	1985	USITC 1642	Affirmative
	701-TA-228 (F)	1985	USITC 1759	Negative
United Kingdom ⁴	731-TA-24 (F)	1980	USITC 1064	Affirmative
	701-TA-100 (F)	1982	USITC 1221	Negative
	731-TA-66 (F)	1982	(²)	Petition withdrawn 1/30/82
Venezuela ¹	701-TA-229 (F)	1985	USITC 1642	Affirmative
	701-TA-229 (F)	1985	(²)	Terminated 7/19/85
	731-TA-223 (F)	1985	USITC 1642	Affirmative
	731-TA-223 (F)	1985	(²)	Terminated 7/19/85
Carbon steel plate in coils:				
Belgium.....	731-TA-146 (F)	1983	USITC 1451	Affirmative
	731-TA-146 (F)	1983	(²)	(²)
Brazil.....	731-TA-123 (F)	1983	USITC 1361	Affirmative
	731-TA-123 (F)	1983	USITC 1499	Affirmative
	701-TA-205 (F)	1983	USITC 1470	Affirmative
	701-TA-205 (F)	1984	USITC 1538	Affirmative
Finland.....	731-TA-218 (F)	1984	(²)	Petition withdrawn 1/18/85
Germany (West).....	731-TA-147 (F)	1983	USITC 1451	Affirmative
	731-TA-147 (F)	1983	(²)	(²)
South Africa.....	731-TA-172 (F)	1984	USITC 1510	Affirmative
Spain.....	731-TA-173 (F)	1984	USITC 1510	Affirmative

¹ Sheet only.

² No report issued.

³ Invs. Nos. 701-TA-95 and 731-TA-153 involved sheet only.

⁴ Inv. No. 701-TA-85 involved sheet only.

⁵ Self-initiated investigation terminated by Commerce on 2/8/82.

⁶ Inv. No. 701-TA-100 involved sheet only.

⁷ Commerce terminated the investigation on plate in coils because it determined that the petitioner did not have standing on this product.

Source: Various cited USITC publications.

Table 5
Cold-rolled products: Previous and related investigations, 1980-91

Item/source	Investigation number	Date of inv.	Report No.	Result
Cold-rolled carbon steel sheet and strip:				
Argentina ¹	731-TA-175 (F)	1984	USITC 1510	Affirmative
	731-TA-175 (F)	1985	USITC 1637	Negative
Austria ¹	701-TA-230 (F)	1985	USITC 1642	Affirmative
	701-TA-230 (F)	1985	USITC 1759	Affirmative
	731-TA-224 (F)	1985	USITC 1642	Affirmative
	731-TA-224 (F)	1985	(²)	Terminated 8/19/85
Belgium.....	731-TA-18 (F)	1980	USITC 1064	Affirmative
	701-TA-102 (F)	1982	USITC 1221	Negative
	731-TA-68 (F)	1982	USITC 1221	Negative
Brazil ²	701-TA-103 (F)	1982	USITC 1221	Negative
	701-TA-207 (F)	1983	USITC 1470	Affirmative
	701-TA-207 (F)	1984	USITC 1538	Affirmative
	731-TA-154 (F)	1983	USITC 1470	Affirmative
	731-TA-154 (F)	1984	USITC 1579	Negative
Czechoslovakia ¹	731-TA-225 (F)	1985	USITC 1642	Affirmative
Finland ¹	731-TA-227 (F)	1985	(²)	Petition withdrawn 1/18/85
France.....	731-TA-20 (F)	1980	USITC 1064	Affirmative
	701-TA-104 (F)	1982	USITC 1221	Affirmative
	701-TA-104 (F)	1982	(²)	Terminated 11/2/82
	731-TA-69 (F)	1982	USITC 1221	Affirmative
	731-TA-69 (F)	1982	(²)	Terminated 11/2/82
Germany (East) ¹	731-TA-226 (F)	1985	USITC 1642	Affirmative
	731-TA-226 (F)	1985	(²)	Terminated 8/14/85
Germany (West).....	731-TA-19 (F)	1980	USITC 1064	Affirmative
	701-TA-109 (F)	1982	USITC 1221	Affirmative
	701-TA-109 (F)	1982	(²)	Terminated 11/2/82
	731-TA-74 (F)	1982	USITC 1221	Affirmative
	731-TA-74 (F)	1982	(²)	Terminated 11/2/82
Italy.....	731-TA-21 (F)	1980	USITC 1064	Affirmative
	701-TA-105 (F)	1982	USITC 1221	Affirmative
	701-TA-105 (F)	1982	(²)	Terminated 11/2/82
	731-TA-70 (F)	1982	USITC 1221	Affirmative
	731-TA-70 (F)	1982	(²)	Terminated 11/2/82
Korea ¹	701-TA-172 (F)	1982	USITC 1261	Negative
	701-TA-218 (F)	1984	USITC 1539	Affirmative
	701-TA-218 (F)	1985	USITC 1634	Affirmative
Luxembourg.....	701-TA-106 (F)	1982	USITC 1221	Negative
	731-TA-71 (F)	1982	USITC 1221	Negative
Netherlands.....	731-TA-23 (F)	1980	USITC 1064	Affirmative
	731-TA-72 (F)	1982	USITC 1221	Affirmative
	731-TA-72 (F)	1982	(²)	Terminated 9/8/82
	701-TA-99 (F)	1982	USITC 1221	Affirmative
	701-TA-99 (F)	1982	(²)	Terminated 9/8/82
Romania ¹	731-TA-228 (F)	1985	USITC 1642	Affirmative
	731-TA-228 (F)	1985	(²)	Terminated 7/19/85
South Africa ¹	731-TA-176 (F)	1984	USITC 1510	Affirmative
Spain ¹	701-TA-157 (F)	1982	USITC 1255	Affirmative
	701-TA-157 (F)	1982	USITC 1331	Affirmative
	731-TA-177 (F)	1984	USITC 1510	Affirmative
	731-TA-177 (F)	1984	(²)	Petition withdrawn 1/18/85
Sweden ¹	701-TA-231 (F)	1985	USITC 1642	Affirmative
	701-TA-231 (F)	1985	USITC 1759	Affirmative
United Kingdom.....	731-TA-24 (F)	1980	USITC 1064	Affirmative
	701-TA-108 (F)	1982	USITC 1221	Negative
	731-TA-73 (F)	1982	USITC 1221	Negative
Venezuela ¹	701-TA-232 (F)	1985	USITC 1642	Affirmative
	701-TA-232 (F)	1985	(²)	Terminated 7/19/85
	731-TA-229 (F)	1985	USITC 1642	Affirmative
	731-TA-229 (F)	1985	(²)	Terminated 7/19/85

¹ Sheet only.

² No report issued.

³ Invs. Nos. 701-TA-207 and 731-TA-154 involved sheet only.

Source: Various cited USITC publications.

Table 6
Corrosion-resistant products: Previous and related investigations, 1980-91

Item/source	Investigation number	Date of inv.	Report No.	Result
Galvanized carbon steel sheet:				
Australia.....	701-TA-212 (P)	1984	USITC 1510	Affirmative
	701-TA-212 (F)	1984	(¹)	Commerce negative
	731-TA-178 (P)	1984	USITC 1510	Affirmative
	731-TA-178 (F)	1984	(¹)	Petition withdrawn 1/18/85
Austria.....	701-TA-233 (P)	1985	USITC 1642	Negative
	731-TA-230 (P)	1985	USITC 1642	Negative
Belgium.....	731-TA-18 (P)	1980	USITC 1064	Affirmative
	701-TA-110 (P)	1982	USITC 1221	Negative
	731-TA-75 (P)	1982	USITC 1221	Negative
France.....	731-TA-20 (P)	1980	USITC 1064	Affirmative
	701-TA-111 (P)	1982	USITC 1221	Negative
	731-TA-76 (P)	1982	USITC 1221	Negative
Germany (East).....	731-TA-231 (P)	1985	USITC 1642	Negative
Germany (West).....	731-TA-19 (P)	1980	USITC 1064	Affirmative
	701-TA-116 (P)	1982	USITC 1221	Negative
	731-TA-81 (P)	1982	USITC 1221	Negative
Italy.....	731-TA-21 (P)	1980	USITC 1064	Affirmative
	701-TA-112 (P)	1982	USITC 1221	Negative
	731-TA-77 (P)	1982	USITC 1221	Negative
Korea.....	701-TA-173 (P)	1982	USITC 1261	Affirmative
	701-TA-173 (F)	1983	USITC 1346	Affirmative
Luxembourg.....	731-TA-78 (P)	1982	USITC 1221	Negative
	701-TA-113 (P)	1982	USITC 1221	Negative
Netherlands.....	731-TA-23 (P)	1980	USITC 1064	Affirmative
	701-TA-114 (P)	1982	USITC 1221	Negative
	731-TA-79 (P)	1982	USITC 1221	Negative
Romania.....	731-TA-232 (P)	1985	USITC 1642	Negative
South Africa.....	731-TA-179 (P)	1984	USITC 1510	Affirmative
Spain.....	701-TA-158 (P)	1982	USITC 1255	Affirmative
	701-TA-158 (F)	1983	USITC 1331	Affirmative
	731-TA-180 (P)	1984	USITC 1510	Affirmative
	731-TA-180 (F)	1984	(¹)	Petition withdrawn 1/18/85
United Kingdom.....	731-TA-24 (P)	1980	USITC 1064	Affirmative
	701-TA-115 (P)	1982	USITC 1221	Negative
	731-TA-80 (P)	1982	USITC 1221	Negative
Venezuela.....	701-TA-234 (P)	1985	USITC 1642	Negative
	731-TA-233 (P)	1985	USITC 1642	Negative

¹ No report issued.

Source: Various cited USITC publications.

Many of the investigations listed in the tables were terminated by Commerce because the United States entered into voluntary restraint agreements (VRAs) with the exporting nations that limited the volume of those nations' exports to the United States. The VRA program stemmed from a determination by the President, on September 18, 1984, that taking action under section 201 of the Trade Act of 1974 was not in the national economic interest; this decision followed an investigation conducted by the Commission in which imports of certain steel products were found to be a substantial cause of serious injury, or threat thereof, to certain domestic industries in inv. No. TA-201-51.⁶ The President directed the United States Trade Representative (USTR) to negotiate VRAs to cover a 5-year period, i.e., October 1, 1984, through September 30, 1989, with countries whose exports to the United States had increased significantly. Although the structure of the arrangements varied from one country to another, each involved an agreement by the foreign government to limit exports of certain steel products to the United States. Accordingly, starting on October 1, 1984, imports of flat-rolled carbon steel products, including the products subject to these investigations (except those from Argentina, Canada, New Zealand, and Sweden) were subject to quantitative limitations under the VRAs negotiated with 19 foreign governments and the European Community. In order to bring the agreements into effect, U.S. producers withdrew pending unfair trade petitions, and the U.S. Government suspended antidumping and countervailing duties on steel products covered by the VRAs.⁷

In July 1989, these agreements were extended for 2½ years, until March 31, 1992. For the extension period, the President directed the USTR to negotiate VRAs at an overall restraint level of 18.4 percent (the 1988 VRA import penetration level).⁸ In addition, the United States sought to address the causes of unfair trade and reduce subsidization and overcapacity in the steel industry. In this regard, the President authorized up to an additional 1-percent import penetration annually that would be available to countries

⁶ Affirmative decisions were rendered in the case of semifinished steel, plates, sheets and strip, wire and wire products, and structural shapes and units. Negative determinations were rendered in the case of wire rod, railway-type products, bars, and pipe and tube.

⁷ The VRAs were authorized by the Steel Import Stabilization Act, which also contained requirements that the steel industry invest in modernization, retrain workers, and take actions to improve its international competitiveness. The export restraints were negotiated to assist in these efforts.

⁸ It is difficult to state how "binding" the VRAs were on imports of the subject products because the VRA categories for plate, hot-rolled, cold-rolled, and corrosion-resistant products were generally broader than those for the products subject to these investigations. Some products are also categorized differently. The VRA category for plate, for example, included both strip-mill plate and plate-mill plate, whether coiled or cut-to-length, whereas in these investigations only cut-to-length plate is included in the plate category. In addition, the VRAs provided for flexibility, wherein a limited amount of tonnage could be shifted between categories or carried forward to a subsequent period, upon consultation with the United States. In only 10 instances were final ceilings for individual flat-rolled products from subject countries 95 percent or more filled for a specific period, and only 3 of those were 100 percent filled.

that entered into bilateral consensus agreements (BCAs) on tariffs, subsidies, and other nontariff measures. These agreements were commitments by countries to prohibit most subsidies for the steel industry, to reduce tariffs and nontariff barriers to steel trade, and to incorporate a binding arbitration mechanism. The BCAs were to be multilateralized within the General Agreement on Tariffs and Trade (GATT) through the Multilateral Steel Agreement (MSA) that was being negotiated with BCA countries and most other major steel producing countries. On March 31, 1992, however, the MSA negotiations were suspended without agreement. Negotiations resumed in December 1992 and are continuing at present.

U.S. TARIFF TREATMENT

Virtually all imports of flat-rolled carbon steel products subject to these investigations are classified in headings 7208 through 7212 of the Harmonized Tariff Schedule of the United States (HTS). The column 1-general (most-favored-nation) rates of duty for the subject products, applicable to imports from 19 of the 20 countries subject to these investigations, range from 2.4 percent to 6.5 percent ad valorem. The column 2 rates of duty for the subject products, applicable to imports from Romania, range from 6 percent to 45 percent ad valorem. The tariff rates on eligible imports from Canada, which range from 1.2 percent to 3.2 percent ad valorem, are subject to phased reduction under the U.S.-Canada Free-Trade Agreement and are scheduled to be eliminated by January 1, 1998.

In addition to the above imports, a very small volume of subject imports are classified in HTS headings 7214, 7215, and 7217 and are subject to import duties ranging from 0.9 percent to 7.5 percent ad valorem. None of the subject Romanian products fall in these additional tariff headings, and imports from Canada classified in these headings, which are subject to duties ranging from 0.4 percent to 3.7 percent ad valorem, are also subject to phased duty reduction under the U.S. Canada Free-Trade Agreement. The tariff provisions and the corresponding tariff rates are provided in appendix D.

NATURE AND EXTENT OF SUBSIDIES AND LTFV SALES

Commerce's determinations regarding subsidies and sales at LTFV are summarized in appendix E. Further details on the operations of the programs found to confer subsidies and the methodologies used by Commerce in calculating the margins are provided in Commerce's final determinations.⁹ The weighted-average subsidy rates and LTFV margins for all countries and all products are presented in table 7. The total quantity and value of U.S. sales of these companies examined by Commerce for the period January 1, 1992 through June 30, 1992, along with the percent, by quantity and value, of such sales found to be at LTFV, are presented in table 8.

⁹ 58 F.R. 37062, July 9, 1993. On May 13, 1993, petitioners filed countervailing duty cases against plate, hot-rolled products, cold-rolled products, and corrosion-resistant products from South Africa. Allegations of subsidies ranged between 10 and 15 percent. Commerce initiated these cases on June 10, 1993.

Table 7

Certain flat-rolled carbon steel products: Final antidumping and countervailing duty margins found by Commerce, by countries, products, and exporters

Countries, products, and exporters	LTFV margins	Subsidy rates
Argentina:		
Cold-rolled products:		
SOMISA.....	51.58	(¹)
All others.....	51.58	(¹)
Australia:		
Corrosion-resistant products:		
BHP.....	24.96	(¹)
All others.....	24.96	(¹)
Austria:		
Cold-rolled products:		
VA Linz.....	18.11	6.04
All others.....	18.11	6.04
Belgium:		
Plate:		
Clabecq.....	6.78	5.85
Fabfer.....	3.65	5.85
Cockerill.....	6.75	25.97
All others.....	6.75	5.85
Hot-rolled products:		
Cockerill.....	62.11 ²	25.97 ²
Fabfer.....	41.98 ²	0.68 ²
Sidmar.....	21.84 ²	0.68 ²
All others.....	41.98 ²	0.68 ²
Cold-rolled products:		
Sidmar.....	14.73	0.58
Cockerill.....	14.73	25.97
All others.....	14.73	0.58
Brazil:		
Plate:		
COSIPA.....	109.00	44.66
USIMINAS.....	42.08	6.07
All others.....	75.54	21.84
Hot-rolled products:		
COSIPA.....	87.00	44.66
CSN.....	87.00	30.39
USIMINAS.....	40.44	5.71
All others.....	71.48	30.39
Cold-rolled products:		
COSIPA.....	88.00	44.66
CSN.....	88.00	30.39
USIMINAS.....	35.76	5.71
All others.....	70.59	21.24
Corrosion-resistant products:		
CSN.....	43.00	30.39
All others.....	43.00	30.39
Canada:		
Plate:		
IPSCO.....	1.47	(¹)
Stelco.....	68.70	(¹)
All others.....	61.95	(¹)
Hot-rolled products:		
Dofasco.....	32.79	(¹)
IPSCO.....	20.08	(¹)
Stelco.....	16.86	(¹)
All others.....	20.84	(¹)
Cold-rolled products:		
CMP.....	7.49	(¹)
Dofasco.....	11.73	(¹)
Sidbec-Dosco.....	48.29	(¹)
Stelco.....	48.29	(¹)
All others.....	36.19	(¹)
Corrosion-resistant products:		
Dofasco.....	10.89	(¹)
Stelco.....	28.27	(¹)
All others.....	22.29	(¹)
Finland:		
Plate:		
Rautaruukki Oy.....	32.25	(¹)
All others.....	32.25	(¹)

Footnotes presented at end of table.

Table 7--Continued
 Certain flat-rolled carbon steel products: Final antidumping and countervailing duty margins found by Commerce, by countries, products, and exporters

Countries, products, and exporters	LTFV margins	Subsidy rates
France:		
Plate:		
Usinor Sacilor.....	52.76	15.12
All others.....	52.76	15.12
Hot-rolled products:		
Usinor Sacilor.....	83.87	15.12
All others.....	83.87	15.12
Cold-rolled products:		
Usinor Sacilor.....	110.44	15.12
All others.....	110.44	15.12
Corrosion-resistant products:		
Usinor Sacilor.....	92.90	15.12
All others.....	92.90	15.12
Germany:		
Plate:		
Dillinger.....	35.06	14.84
Ilseburg.....	35.06	0.80
Preussag.....	35.06	1.72
Thyssen.....	35.06	0.50
All others.....	35.06	14.84
Hot-rolled products:		
Kloekner.....	29.02	1.06
Preussag.....	29.02	1.06
All others.....	29.02	1.06
Cold-rolled products:		
Kloekner.....	23.54	0.84
Thyssen.....	17.33	0.84
All others.....	19.52	0.84
Corrosion-resistant products:		
Thyssen.....	4.88	0.59
All others.....	4.88	0.59
Italy:		
Plate:		
Ilva.....	53.88	72.91
Falck.....	53.88	3.71
All others.....	53.88	72.91
Cold-rolled products:		
Ilva.....	50.15	72.91
Falck.....	50.15	3.71
All others.....	50.15	72.91
Japan:		
Hot-rolled products:		
Nippon Steel.....	26.51	(¹)
NKK.....	26.51	(¹)
Sumitomo.....	26.51 ²	(¹)
All others.....	26.51	(¹)
Cold-rolled products:		
Nippon Steel.....	36.62	(¹)
NKK.....	20.38	(¹)
Sumitomo.....	36.62 ²	(¹)
All others.....	32.16	(¹)
Corrosion-resistant products:		
Kawasaki.....	40.19 ²	(¹)
Nippon Steel.....	40.19	(¹)
All others.....	40.19	(¹)
Korea:		
Plate:		
Dongkuk.....	8.88 ²	3.46 ²
All others.....	8.88 ²	3.46 ²
Hot-rolled products:		
Posco.....	24.95 ²	4.64 ²
All others.....	24.95 ²	4.64 ²
Cold-rolled products:		
Posco.....	14.44	3.76
All others.....	14.44	3.76
Corrosion-resistant products:		
Posco.....	17.70	2.34
All others.....	17.70	2.34

Footnotes presented at end of table.

Table 7--Continued

Certain flat-rolled carbon steel products: Final antidumping and countervailing duty margins found by Commerce, by countries, products, and exporters

Countries, products, and exporters	LTFV margins	Subsidy rates
Mexico:		
Plate:		
APSA.....	49.25	20.26
All others.....	49.25	20.26
Corrosion-resistant products:		
IMSA.....	64.50 ²	5.71 ¹
Bylsa.....	64.50 ²	47.84 ²
All others.....	64.50 ²	5.71 ¹
Netherlands:		
Hot-rolled products:		
Hoogovens.....	30.70	(¹)
All others.....	30.70	(¹)
Cold-rolled products:		
Hoogovens.....	20.09	(¹)
All others.....	20.09	(¹)
New Zealand:		
Corrosion-resistant products:		
NZS.....	(¹)	36.05
All others.....	(¹)	36.05
Poland:		
Plate:		
PMZ Stalexport.....	61.98 ²	(¹)
All others.....	61.98 ²	(¹)
Romania:		
Plate:		
Metalexportimport.....	75.04 ²	(¹)
All others.....	75.04 ²	(¹)
Spain:		
Plate:		
ENSIDESA.....	105.61 ²	36.86 ²
All others.....	105.61 ²	36.86 ²
Cold-rolled products:		
ENSIDESA.....	43.12 ²	36.86 ²
All others.....	43.12 ²	36.86 ²
Sweden:		
Plate:		
SSAB.....	24.23	4.27
All others.....	24.23	4.27
Corrosion-resistant products:		
SSAB.....	(¹)	4.27
All others.....	(¹)	4.27
United Kingdom:		
Plate:		
British Steel.....	109.22	12.00
Glynwed.....	109.22	0.73
All others.....	109.22	12.00

¹ Not applicable.

² Affirmative final critical circumstances determination.

Source: U.S. Department of Commerce.

Table 8

Certain flat-rolled carbon steel products: Quantity and value of sales examined by Commerce, and percent of such sales at LTFV, by product, January-June 1992

* * * * *

THE PRODUCTS

Description

All products subject to investigation are flat-rolled carbon steel products. Carbon steel, which is marked by the presence of alloying elements in limited proportions, is the most common grade of steel and generally cheaper to manufacture than the various grades of alloy steels. It is defined as a combination of carbon and iron that is usefully malleable as first cast and in which: (1) iron predominates, by weight, over each of the other contained elements, (2) the carbon content is 2 percent or less, by weight, and (3) none of the elements listed below is equal to or exceeds the quantity, by weight, respectively indicated:

- 1.65 percent of manganese, or
- 0.60 percent of silicon, or
- 0.40 percent of copper, or
- 0.30 percent of aluminum, or
- 0.30 percent of chromium, or
- 0.30 percent of cobalt, or
- 0.40 percent of lead, or
- 0.30 percent of nickel, or
- 0.30 percent of tungsten, or
- 0.0008 percent of boron, or
- 0.08 percent of molybdenum, or
- 0.06 percent of niobium, or
- 0.05 percent of titanium, or
- 0.10 percent of vanadium, or
- 0.05 percent of zirconium, or
- 0.10 percent of any other elements (except sulfur, phosphorus, carbon and nitrogen), taken separately.

Flat-rolled products, as implied by the name, are marked by their surface flatness, which distinguishes them from other steel products, such as bar, wire, pipes, and beams. They are of solid rectangular shape and may be coiled or in straight lengths.¹⁰

In general, domestically produced flat-rolled carbon products are similar or comparable to the imported products in terms of both production processes

¹⁰ If in straight lengths, flat-rolled products must (1) be of a width measuring at least 10 times the thickness for thicknesses less than 0.187 inches (4.75 mm) or (2) be of a width that exceeds 5.906 inches (150 mm) and measures at least twice the thickness for thicknesses of 0.187 inches (4.75 mm) or more.

and product characteristics. In specific instances, however, imported products may meet unique gauge, quality, dimensional, or metallurgical specifications. In such instances, respondents argue that the unique characteristics of the imported products (called "niche" products) are such as virtually to eliminate competition between the imported and domestic product, and therefore preclude any injury to the domestic industry. In other instances, respondents and/or the Commission have raised questions as to whether some covered products should be found to be separate "like products" for purposes of injury analysis. Petitioners dispute most of the like product and competition arguments made in these investigations. Below is a description of the four flat-rolled carbon products subject to these investigations and a discussion of the "like product" issues raised by the Commission and parties in these investigations. Information on "niche" products can be found in appendix F.

Plate

The plate products covered by these investigations are uncoiled flat products rolled on either a plate mill or hot-strip mill, of rectangular shape, of a thickness of 0.187 inches (4.75 mm) or more, whether or not pickled, and plate produced on a universal plate mill of a thickness of 0.157 inches (4 mm) or greater, and without patterns in relief.¹¹ Plate must be greater than 150 mm (5.9 inches) in width. There is no specified upper width limit, although in practice most plate exceeds 2,250 millimeters (88 inches) in width. Included in this category is plate the nonrectangular cross section of which was formed by working the plate following the hot-rolling process (beveling or rounding the edges of the plate, for example).

Specifically excluded from this category are plates in coils (which are included in the "hot-rolled" category), plates that are not of rectangular shape, and plates that are characterized as X-70 plates.¹² Cut-to-length carbon steel plate that has been clad, plated, or coated with metal is also excluded from this category, but is included in the category of corrosion-resistant flat-rolled carbon steel products.

Separate plate like products

Respondents argued that there should be three separate like products within the plate category: universal mill plate, bevelled plate, and other

¹¹ "Patterns in relief" are raised patterns in the surface of the steel that provide a skid-resistant surface for walkways and floors in industrial facilities and on equipment. Floor plate in coils is typically produced on a hot-strip mill in coiled form (see manufacturing section) and is included in the category, "hot-rolled products."

¹² Commerce's scope specifically excludes nonrectangular plate and X-70 plate. Nonrectangular cut-to-length plates include circular and semicircular plates; these are termed sketch plates and rings. They are produced by shearing or gas-cutting hot-rolled rectangular plates to specified shapes. X-70 plate has a yield strength exceeding 70,000 pounds per square inch, and is used to manufacture certain grades of pipe. (Skadden, Arps, Slate, Meagher & Flom letter, July 22, 1992, on behalf of petitioners.)

cut-to-length plate products.^{13 14} A universal mill is a specific type of plate mill that has vertical rolls preceding and following the horizontal rolls; hence the plate is rolled to desired length and width. Vertical rolls give a "universal" or rolled edge to the product. The plate is typically rolled on all four faces in a closed-box pass, and its width may range from approximately 6 to 50 inches (although universal mill plate narrower than 30 inches is more common). Although the universal mill generally is considered obsolete and universal plate is no longer produced in the United States, Caterpillar testified in the hearing that it must use plate produced on a universal mill in the production of motor grader frames because of engineering considerations.¹⁵ According to a Caterpillar spokesman, the plate must be exceptionally strong with a straight, smooth edge because such an edge inhibits the development of stress cracks that might cause structural failure. In response, petitioners state that universal mill and sheared mill plate share many end uses with similar critical safety criteria for edge soundness; moreover, USX claims it has sold commercial quantities of sheared mill plate to Caterpillar for use in motor grader frames, following the successful laboratory testing of the product by Caterpillar.¹⁶

Bevelled plate is produced by working the product after hot-rolling. Beveling is considered a finishing or weld-preparation procedure that can be performed on any rectangular plate but is most commonly performed on plate designated for pressure vessel applications, as well as for shipbuilding and railroad tank cars.¹⁷ According to hearing testimony, bevelling may be accomplished on a burning table or mechanical edge planer by domestic steelmakers, toll processors, or service centers who consider the value added for the service to be in the range of 5 to 7 percent of the value of the plate, approximately ***.¹⁸ The cost of bevelling is reportedly a function of the thickness, width, length, and bevel configuration of the plate, and is

¹³ Posthearing brief of Powell, Goldstein, Frazer and Murphy on behalf of Caterpillar, Inc., p. 2, and transcript of the public hearing ("TR"), p. 973.

¹⁴ Prehearing brief of Willkie, Farr and Gallagher on behalf of USIMINAS (Brazil), p. 4, and TR, p. 986; letter to Commerce on behalf of Primary Steel, Inc., Jan. 6, 1993; posthearing brief of Willkie, Farr & Gallagher on behalf of USIMINAS and Primary Steel, Inc., pp. 8-9.

¹⁵ Posthearing brief of Powell, Goldstein, Frazer and Murphy on behalf of Caterpillar, Inc., p. 5; and TR, p. 977.

¹⁶ Petitioners' posthearing brief, vol. 2, att. C [***].

¹⁷ Respondents for Brazil disagree that bevelling is a finishing procedure because it is not commonly listed among other surface-finishing steps such as painting or oiling. There does not seem to be any disagreement, however, that bevelling is a preparatory step for welding or that bevelling occurs after hot-rolling, similar to other finishing procedures. Respondents describe bevelling as the beginning step of the production of the downstream article of commerce and point out that the HTS explanatory notes list bevelling among processes of "working after rolling". Posthearing brief of Willkie, Farr & Gallagher on behalf of USIMINAS and Primary Steel, Inc., p. 13. Petitioners describe it as a finishing process, indicate that there is a wider range of applications for bevelled plate besides pressure vessels, and claim that the essential nature of the plate has not been altered by reason of the bevelling procedure. Petitioners' posthearing brief, vol. 2, atts. B and C.

¹⁸ TR, pp. 319-320.

performed in the United States by the plate manufacturers, processors, or the end user.

Hot-rolled Products

Commonly referred to as hot-rolled sheet, strip, and coiled plate, these are flat-rolled products of rectangular shape that have been hot rolled on a hot-strip mill, but not cold rolled (as described below in the "Manufacturing Process" section). Hot-rolled products must be greater than 0.5 inches (12.7 mm) in width, although in practice they can be as wide as 90 inches (228.6 cm) or more. In terms of thickness (gauge), hot-rolled products, if in coils, have no specified upper gauge limit, but if in straight lengths must be less than 0.187 inches (4.75 mm). In practice, most hot-rolled products are greater than 0.06 inches (1.5 mm) in thickness. Hot-rolled products may be pickled and/or oiled, and may be painted, varnished, or coated with plastics or other nonmetallic substances.

Respondents and petitioners in the final investigations distinguished between hot-rolled steel that is shipped on the open market (merchant hot-rolled) and that which is captively consumed by related cold-rollers or pipemakers. According to data developed during the investigations, hot-rolled intracompany transfers, which include shipments by integrated steelmakers to related cold-rollers, account for approximately two-thirds of total shipments of hot-rolled products. In terms of the production of cold-rolled sheet, competition between captive and merchant shipments of hot-rolled products is limited, and most cold-rolled sheet is made from hot-rolled inputs provided by one or more dedicated suppliers. For example, Bethlehem uses its own hot-rolled product to make cold-rolled products, as do most other integrated producers of cold-rolled sheet; respondents estimate that every cold-reducing sheet facility is captively supplied with its hot-rolled feedstock.¹⁹ Nonintegrated or independent cold-rollers, which account for a very small *** portion of U.S. production, may use multiple sources because their production economics or product mix allows them greater flexibility on sources.²⁰ Petitioners argue that much of this hot-rolled production should be excluded because of its nature as "semifinished" or "work in process;" respondents dispute this argument.²¹

An integrated company technically can substitute merchant hot-rolled products for its own. Respondents argue, however, that this is not done even when the price of merchant hot-rolled products drops below the company's production cost for such products. According to industry officials, there are several reasons for this. First, using hot-rolled products purchased on the open market ultimately decreases the demand of the company for raw steel, thereby decreasing the capacity utilization of the blast furnace and melt shop and increasing average steelmaking costs. Second, cold-rollers are greatly aided by having precise knowledge of the feedstock (its chemistry, metallurgy, gauge, and rolling characteristics, for example) for their cold-rolling mill; by rolling their own hot-rolled products, they have a record of precise chemical and physical properties of each product. Third, relying on merchant

¹⁹ Hot-rolled respondents' posthearing brief, pp. 22-23.

²⁰ Telephone conversations with company officials at *** on July 1, 1993. I-20

²¹ Hot-rolled respondents' posthearing brief, pp. 11-12 and n. 12.

hot-rolled products puts cold-rollers at a distinct disadvantage in periods of high demand, when traditional suppliers might need to use all their hot-rolled products for internal consumption. Fourth, consistency and uniformity of supply are more easily maintained when using one's own product.²² Fifth, integrated supply arrangements reduce variability in the input, allowing equipment to be utilized at high efficiencies. Sixth, output variability is also reduced providing the cold-roller's customers with confidence in product quality.²³

According to officials at UPI, the industry perceives captive supply as the only commercially viable way of obtaining the consistent supply they need in the necessary quantities. According to U.S. industry officials, the captive supply argument is lessened as the cold-roller's product mix expands (i.e., become more differentiated), allowing the nonintegrated cold-roller to utilize a broader mix of hot-rolled products.²⁴ U.S. industry officials also argue that for the most common cold-rolled sheet applications, hot-rolled products can be sourced from many domestic mills.²⁵ Respondents also stated that many of the nonintegrated purchasers of hot-rolled products are cold-rolled strip producers who operate reversing mills (as opposed to cold-rolled sheet producers who tend to operate continuous rolling mills) that operate at a lower speed. This difference in equipment speed and the economics of lower volumes allow horizontal integration rather than vertical integration.^{26 27}

Separate hot-rolled like products

Respondents argue that there should be several separate like products within the hot-rolled category: floor plate,²⁸ certain seatbelt retractor

²² TR, pp. 561-563 and 577, and posthearing brief of Morrison & Foerster on behalf of Korea, p. 2. For further comments on industry structure, see hot-rolled respondents' posthearing brief, p. 25.

²³ Posthearing brief of Weil, Gotshal & Manges on behalf of UPI, app. 17, p. 4.

²⁴ USITC staff telephone conversations with company officials at cold-strip producers such as ***, July 1, 1993.

²⁵ TR, p. 176.

²⁶ TR, p. 628; hot-rolled respondents' posthearing brief, p. 26, n. 39.

²⁷ In the preliminary investigations, the Commission included plate produced on a plate mill in its analysis of the cut-to-length plate industry (i.e., that plate-mill plate and cut-to-length plate are one like product). The Commission also included plate produced on a hot-strip mill (i.e., hot-rolled, flat-rolled products in coils produced on a hot-strip mill and meeting plate tolerances, or hot-strip mill plate) in its analysis of the hot-rolled industry. In these final investigations, no party questioned the inclusion of hot-strip mill plate with hot-rolled products.

²⁸ Posthearing brief of Hogan and Hartson on behalf of Fried. Krupp AG Hoesch-Krupp and affidavit of Wirth, Inc., an importer of the product from Germany. Respondents estimate that U.S. imports of floor plate from Germany accounted for between 6 and 10 percent of apparent domestic consumption of floor plate during 1990-92, although U.S. hot-rolled imports from Germany accounted for approximately 0.4 percent of total apparent domestic consumption of hot-rolled products.

spring steel, and certain carbon bandsaw steel.²⁹ Floor plate comprises a group of abrasion-resistant flat hot-rolled finished steel products that have a rolled raised figure in the form of buttons, lozenges, or lugs at regular intervals on one surface of the plate. The raised surface is produced by the final pass of the steel at hot-rolling temperatures between one or more rolls, one roll having a pattern cut into it, so that part of the metal on one surface is forced into the depressions on the pattern roll. Patterns that provide a nonskid surface vary among manufacturers and are provided for aesthetic reasons.³⁰ Rolled floor plate is typically available in a limited number of gauge numbers (thicknesses) ranging from approximately one-eighth up to 1 inch thick; floor plate is generally not specified to chemical composition limits or mechanical property requirements.³¹ The product is used for decks and floors on trucks, ships, and in mines and industrial facilities. According to industry officials, at least four domestic steelmakers produce floor plate, each utilizing similar equipment as the foreign industry, and three produce floor plate on a hot-strip mill, as does the foreign industry.³²

Cold-rolled Products

Commonly referred to as cold-rolled sheet and strip, these are flat-rolled products that have been subjected to the process of cold-rolling (as described below in the "Manufacturing Process" section). Like hot-rolled products, cold-rolled products must be of rectangular shape and be greater than 0.5 inches (12.7 mm) in width, although in practice they also can be 80 inches (203.2 cm) in width or more. In terms of thickness (gauge), cold-rolled products are much thinner than hot-rolled products and are frequently produced down to as low as 0.01 inches (0.254 mm), although there are no specified lower gauge limits. If in coils, cold-rolled products have no specified upper gauge limit but, if in straight lengths, they must be less than 0.187 inches (4.75 millimeters). Cold-rolled products may be annealed, painted, varnished, or coated with plastics or other nonmetallic substances. Commerce specifically excluded ultrathin steel used in the manufacture of shadow masks for color television display panels.³³

²⁹ Prehearing brief of Howrey & Simon on behalf of Theis Precision Steel Corp., p. 2, n. 3. As noted earlier, Commerce excluded certain hot-rolled seatbelt retractor spring steel and certain hot-rolled carbon bandsaw steel from the scope of these investigations. Seatbelt retractor spring steel and bandsaw steels are classified as hot-rolled high-carbon steels with a clean (no inclusions) microstructure. They are produced as strip, up to 14 inches wide. Because of their high tensile strength, both are used in demanding applications.

³⁰ TR, p. 611.

³¹ American Iron and Steel Institute (AISI), *Steel Products Manual: Plates; Rolled Floor Plates: Carbon, High Strength Low Alloy, and Alloy Steel*, Washington, DC, Aug. 1985, p. 62.

³² TR, pp. 321-323 and pp. 611-612; petitioners' prehearing brief, vol. 6A, app. A, p. 14.

³³ Excluded "shadow mask" steel is aluminum killed, cold-rolled coil that is open-coil annealed, has a carbon content of less than 0.002 percent, is 0.003 to 0.012 inches in thickness and 15 to 30 inches in width, and has an ultraflat isotropic surface.

Separate cold-rolled like products

Respondents have proposed that there should be several separate like products within the cold-rolled category: cold-rolled motor lamination steel (CRML), ultrathin steel (also known as tin mill black plate), high-carbon steel, spring steel, seatbelt retractor spring steel, hardened carbon steel, strapping steel, and ultrabright steel. Counsel argue that for each of these products, the product, its end use, and its manufacturing process are distinct.

CRML is generally classified as an electrical steel, meaning that it contains silicon in sufficient quantities to impart specific properties to the steel.³⁴ When the silicon content of CRML exceeds 0.60 percent, it is classified as an alloy steel and is therefore outside the scope of the investigations. A small amount of total CRML, however, falls within the carbon grade. CRML (alloy and carbon) is used specifically for the cores of electric motors. The production process varies slightly from other cold-rolled products; the reheating of slabs and the coiling and annealing process must all be done at unique temperatures and the product requires heavier temper rolling than other cold-rolled products. Petitioners argue that, as a result of its silicon content, CRML is often used in other types of cold-rolled steel because the addition of small amounts of either aluminum or aluminum and silicon prevents molten steel from boiling out of the molds during continuous casting.³⁵

Ultrathin steel is a very thin cold-rolled product (less than 0.0142 inches (0.361 mm)). According to industry statistics, approximately 93 percent of production in 1992 was utilized internally as the substrate in the manufacture of tin plate (ultrathin steel coated with tin) and tin-free steel (ultrathin steel coated with chromium or chromium oxide), which are used to make steel cans and containers.³⁶ Cold-rolled sheet somewhat thicker than ultrathin steel is used as the substrate for tin "coated" products. According to counsel for respondents, ultrathin steel is not interchangeable with thicker gauge cold-rolled steel. Although the products are usually rolled in separate facilities (tin mills versus cold mills), petitioners argue that rolling facilities for ultrathin steel and cold-rolled product rolling facilities can be used interchangeably, as can finishing operation facilities.³⁷ In addition, one domestic producer, UPI, stated that all of its ultrathin steel and cold-rolled sheet are produced on the same cold mill.³⁸ Other domestic mills also reported overlap of rolling facilities, stating that

³⁴ The silicon content, in combination with low sulfur, phosphorus, and manganese content, imparts to the steel certain magnetic characteristics, particularly low core loss (measure of the ability of the material to carry an alternating current), high permeability (ease with which material becomes magnetized), and high electrical resistivity (measure of a material's non-conductivity of electricity, magnetism, or heat).

³⁵ Petitioners' prehearing brief, vol. 2, p. 24.

³⁶ AISI form AIS 10-C, 1992. Out of 3,898,000 tons of open-market shipments of ultrathin steel, tin plate, and tin-free steel shipped in 1992, only 279,000 tons was shipped as ultrathin steel.

³⁷ TR, p. 345; petitioners' posthearing brief, vol. 4, app. 7, p. 4.

³⁸ TR, p. 620. UPI accounted for approximately *** percent of total U.S. ultrathin steel shipments in 1992.

a particular line can roll any product within its gauge capabilities.³⁹ Although ultrathin steel will rust sooner because it is thinner, both cold-rolled sheet and ultrathin steel have the same rusting rate on their outer surfaces. Industry pricing practices for ultrathin steel are distinct; it is priced according to its surface area or "base box," whereas thin cold-rolled sheet is priced by weight.⁴⁰

Although the U.S. industry typically classifies any cold-rolled product above 0.25-percent carbon as being a high-carbon steel, high-carbon steel for purposes of these investigations is defined as any cold-rolled product containing 0.35 percent or more of carbon. Carbon makes steel harder but also less ductile, making it relatively more difficult to form than steel containing lesser amounts of carbon. Thus, high-carbon steels are used in applications where hardness is important. Common applications for high-carbon steels are in the manufacture of fasteners and springs for the automotive industry, blades for tools, brake parts for airplanes, security locks, seatbelts, and safety shoe toe caps, as well as flapper valves in automotive compressors and shock absorbers. Respondents argue that because much high-carbon steel is made by "rerollers" who perform the necessary multiple rolling and any annealing processes, rather than by integrated steel producers, the distribution patterns are therefore different than for other cold-rolled steel.⁴¹ Petitioners argue that the production of high-carbon steel requires additional, rather than different, processing.⁴² Included in the category of high-carbon steels are many of the products discussed below, including hardened carbon steel, spring steel, seatbelt retractor spring steel, and some strapping steel.

Hardened carbon steel, which accounts for a small percentage of high-carbon consumption, is a high-carbon steel that has been heated to a very high temperature (about 1600 F), quenched, and then tempered (to about 750 F).⁴³ Although respective counsel for Japanese, Brazilian, and German respondents argue that hardened carbon steel should be a separate like product, each defines the product somewhat differently. Counsel on behalf of the cold-rolled steel respondents refers to hardened carbon steel as having a carbon content of over 0.85 percent.⁴⁴ Counsel for Japanese respondents defines hardened carbon steel as "niche" product 38, having a carbon content over 0.65 percent made from high-purity sponge iron using a hardening and tempering

³⁹ At ***, *** of the output of the line used for all ultrathin steel products is cold-rolled product for the open market and an additional *** of the output is captive cold-rolled for the galvanizing lines. At ***, *** of the ultrathin steel production intended for the open market (or about *** of total shipments) is rolled on the line which rolls most of its cold-rolled products. (Letter of July 14, 1993, from *** and USITC telephone conversation with *** official, July 14, 1993.)

⁴⁰ Petitioners' prehearing brief, vol. 2, p. 46.

⁴¹ Cold-rolled respondents' joint prehearing brief, pp. 108-109 and exh. 42.

⁴² TR, p. 348.

⁴³ Telephone conversation with *** official, July 16, 1993.

⁴⁴ Cold-rolled respondents' joint prehearing brief, p. 101.

furnace as well as a vacuum-induction furnace.⁴⁵ Counsel for Brazilian respondents argue that hardened carbon steel is a high-carbon steel (customarily made from products with a 0.60 percent or greater carbon content) that has been annealed in a 100-percent-hydrogen-atmosphere annealing furnace, processed in a hardening and tempering furnace, and used for various applications including saws, trowel blades, and springs.⁴⁶ German respondents list separate specifications for the individual hardened carbon steel products each firm produces, including precision spring steel.⁴⁷

Spring steel is defined by counsel as a high-carbon steel having a carbon content of between 0.46 and 0.80 percent, a width of between 36 and 50 inches, and a light matte finish.⁴⁸ It is used primarily in applications requiring a strong, heat-treated steel, commands a higher price than cold-rolled steel in general, is sold only through trading companies, and is available in widths over 36 inches only from Japanese producers.⁴⁹

Cold-rolled seatbelt retractor spring steel is defined by counsel as a cold-rolled product having a carbon content of 0.65 to 0.95 percent, a width of less than 200 mm (7.9 inches), and both the low inclusion rate and high tensile strength required by U.S. Federal Motor Vehicle Safety Specification 209.⁵⁰ According to counsel the product has unique characteristics, uses, distribution, and manufacturing processes, as well as substantially higher prices.⁵¹ Additionally, they point out that hot-rolled seatbelt retractor steel, used by other domestic firms to produce the cold-rolled product, has been excluded from these investigations by Commerce.⁵²

Strapping steel has a width of not more than 1.25 inches, a carbon content of 0.15 to 0.38 percent, and a manganese content of 0.3 to 1.5 percent; it is coated with water-based paint or zinc epoxy, sold in coils of less than 125 pounds, and used for the bundling and securing of loads. According to counsel for the Canadian respondents, strapping steel has a higher carbon/manganese content than other cold-rolled steel, is sold through manufacturers, and is perceived as a packaging product.⁵³

⁴⁵ TR, p. 768 and prehearing brief of Howrey and Simon on behalf of Hitachi Metals of Japan, pp. 1, 3, and 8 and apps. 1 and 2; cold-rolled respondents' joint posthearing brief, app. 1, p. 1.

⁴⁶ Posthearing brief of O'Melveny and Myers on behalf of Positrade Corp. and Mangels Sao Bernardo SA of Brazil, pp. 5-7.

⁴⁷ Prehearing brief of Robert Dusil, president, J.N. Eberle and Cie. of Germany.

⁴⁸ Prehearing brief of Rogers and Wells on behalf of American Steel and Aluminum Corp., an importer of Japanese products, p. 1.

⁴⁹ Id., p. 6.

⁵⁰ Prehearing brief of Porter, Wright, Morris and Arthur on behalf of Kern-Liebers, USA, an importer of hot-rolled products from Germany and a converter of such products into cold-rolled seatbelt retractor spring steel, app. 1.

⁵¹ Id., pp. 4-9.

⁵² Id., pp. 17-18.

⁵³ Prehearing brief of Rogers and Wells on behalf of ***, a Canadian producer of steel strapping, pp. 4-5.

Ultrabright steel, as defined by counsel, has a very smooth surface, typically under 3.3 micro inches Ra (an industry measure of surface roughness), is 30.5 to 48 inches in width, is usually electroplated with chromium, nickel, copper, or brass, and is used in ornamental applications such as light fixtures, fireplace enclosures, and appliance trims.⁵⁴ According to counsel for the importer, this product, in the widths it needs, is only available from Japanese producers.⁵⁵

Corrosion-resistant Products

These are flat products of rectangular shape that have been either clad, plated, or coated with corrosion-resistant metals such as zinc, aluminum, or alloys of zinc, aluminum, nickel, or iron. Excluded are products either plated or coated with tin, lead, chromium, chromium oxides, both tin and lead ("terne plate"), or both chromium and chromium oxides ("tin-free steel"). Commerce also excluded stainless-clad sheet.⁵⁶ Corrosion-resistant products may be coiled or in straight lengths, may be corrugated or crimped, and may be coated or plated electrolytically. In addition to the metallic coating, corrosion-resistant products may be painted, varnished, or coated with plastics or other nonmetallic substances.

Most of the domestic and imported corrosion-resistant products are carbon steel products that have been coated or plated with zinc or a zinc-alloy, including galvanized, galvalume, galfan, and galvanized steel. Technically, "galvanized" steel has a nearly pure zinc coating, although the term "galvanized" is also used in a generic sense to refer to all products coated or plated with zinc-containing metal. "Galvalume" steel has a coating that is approximately 55 percent aluminum, 43.3 to 43.5 percent zinc, and 1.5 to 1.6 percent silicon. "Galfan" steel has a coating that is approximately 95 percent zinc and 5 percent aluminum, with small amounts of either magnesium (0.1 percent) or a mixture of cerium (0.04 percent) and lanthanum (0.04 percent). In contrast to the above items, "galvanized" steel is made from galvanized steel that is then subjected to an annealing process.⁵⁷ This postcoating process forms an iron-zinc alloy transition zone that provides an improved bond between the zinc coating and the steel substrate and improves paintability.

⁵⁴ Prehearing brief of Rogers and Wells on behalf of ***, an importer of Japanese products, pp. 3-4; posthearing brief, p. 2.

⁵⁵ Id., pp. 6-7.

⁵⁶ Stainless-clad sheet has a carbon steel core (accounting for more than 50 percent of the material by weight) that is clad on both sides with stainless steel but is less than 4.75 mm in composite thickness. Stainless-clad sheet has a 20-60-20 weight ratio (stainless steel-carbon steel-stainless steel), is used to make cookware, and is made in the United States by a stainless steel, rather than a carbon steel, producer.

⁵⁷ Annealing is a heat-treating process that renders the steel more ductile.

Separate corrosion-resistant like products

Respondents argue that there should be several separate like products within the corrosion-resistant product group, including clad plate, stainless clad sheet, aluminum-zinc-coated sheet, automotive steel, and all other corrosion-resistant products.

Clad plate consists of carbon steel plate that has been covered with a metallic coating (such as nickel, copper, stainless steel, or titanium) on one or both sides by a process that forms a physical bond between the cladding material and the carbon steel substrate. Respondents argue that clad plate is a separate like product because it is unique in manufacture and physical characteristics, is significantly higher priced than corrosion-resistant steel, and is used in applications where extreme corrosive conditions exist and where plate, rather than sheet, is required to maintain structural integrity.⁵⁸ Clad plate is used in heavy industrial projects such as smokestack scrubbers and pressure vessels for the petrochemical industry, rather than consumer applications such as appliances and automobiles, and can withstand harsh exposures, rather than being sacrificial, as are the usual corrosion-resistant product coatings.⁵⁹ Petitioners state that customers perceive clad plate to be interchangeable only with solid, corrosion-resistant alloy products and that, in the absence of clad plate, a fabricator of pressure vessel tanks intended to hold caustic materials would be compelled to purchase a solid alloy product.⁶⁰

Aluminum-zinc-coated sheet has a coating of approximately 55 percent aluminum, about 43.5 percent zinc, and about 1.5 percent silicon by weight, and has a variety of product names worldwide, including "Galvalume," "Zincalume," and others. Aluminum-zinc-coated sheet is offered with 20-year warranties on its corrosion resistance, is used for the construction industry, is not suitable for automotive panels or in alkaline environments, is perceived as giving superior corrosion protection, and, according to respondents, cannot be produced on galvanizing lines without considerable conversion cost.⁶¹ Bethlehem developed, patented, and licensed the aluminum-zinc coating process to steel firms in 24 countries. In 1983, Bethlehem sold its subsidiary, BIEC, which owned the patents and licenses, to BHP of Australia. The main product patents expired in January 1991. BIEC, however, still retains active patents on several processes and specialized pieces of equipment, which are also needed for production. In addition to distinct production elements, aluminum-zinc-coated sheet has specialized applications in the roofing and building-construction markets where 80 percent of the product is used, and where premium prices are paid for its superior durability and rust resistance.⁶² Petitioners indicate that although aluminum-zinc-coated sheet has a premium product image, it competes with galvanized products in roofing applications and is not price-independent of galvanized products.⁶³

⁵⁸ Corrosion-resistant respondents' joint prehearing brief, pp. 135-136.

⁵⁹ TR, pp. 903-905.

⁶⁰ Petitioners' prehearing brief, vol. 2, p. 94.

⁶¹ TR, pp. 897-900.

⁶² USITC conversation with *** officials, May 19, 1993.

⁶³ TR, pp. 335-336.

Automotive steel is corrosion-resistant sheet and strip that either is supplied to U.S. purchasers for automotive applications, has passed U.S. purchasers' qualifications tests for automotive applications, or is expected to pass such qualification tests. Counsel argues that automotive products are produced in separate facilities, are made much wider than other products, must have maximum as well as minimum thicknesses of coating, and must meet tight gauge and temperature-control requirements.⁶⁴ Petitioners indicate that many products approved for automotive use may be used for construction or appliance applications and that automotive production lines typically also produce some products for other uses.⁶⁵

Counsel on behalf of respondents indicates that automobile manufacturing utilizes a whole range of precision engineered, alloy-coated steel sheets and that these specialized products were not available in the United States when Japanese auto producers began producing in the United States. Respondents claim that U.S. steel firms still cannot meet these special demands in sufficient quantity and that certain products are not produced domestically at all. They argue, however, that technical assistance and new coating facility joint ventures between U.S., Japanese, and Canadian steel firms, located in the United States and Canada, will allow North America to meet this demand.⁶⁶ ⁶⁷ Both respondents and domestic steel producers state, however, that there are stringent, time-consuming qualification procedures for supplying the auto industry that may delay the utilization of new capacity.

Several major auto manufacturers, including Chrysler, Ford, and many U.S.-based affiliates of Japanese auto firms, such as Nissan, Mazda, Toyota, Subaru-Isuzu, and Honda, have announced their intentions to purchase all of their steel requirements from U.S. sources as U.S. firms become qualified suppliers for individual products.⁶⁸ Honda, for example, indicated that it is currently paying a premium for steel from Japan while it works with domestic producers to develop sufficient U.S. capacity to produce steel that will meet its standards. Honda stated that imports from Japan existed because of the "technological gap" between major steel producers in the two countries, not economic policies.⁶⁹ Respondents indicate that, given the complexity and costs of auto manufacturing, there are potentially catastrophic results if nonqualified steel is used.⁷⁰

⁶⁴ Corrosion-resistant respondents' joint prehearing brief, pp. 116-123.

⁶⁵ Petitioners prehearing brief, vol. 2, pp. 77-83.

⁶⁶ See "Capacity" section for discussion of announced plans to expand U.S. capacity.

⁶⁷ Canadian exports to the United States include advanced automotive products from the new "Z-line," which began operations in July 1991 as a joint venture between Stelco of Canada and Mitsubishi of Japan.

⁶⁸ Posthearing brief of Steptoe and Johnson, et. al., on behalf of Japanese corrosion-resistant respondents, p. 14; TR, pp. 874-884.

⁶⁹ Letter from Honda of America Manufacturing, Inc., July 24, 1992.

⁷⁰ Prehearing brief of Japanese corrosion-resistant respondents, p. 9.²⁸

Manufacturing Process

The manufacturing processes for flat-rolled carbon steel products are described below.⁷¹ Generally speaking, there are five stages: (1) melting or refining raw steel, (2) casting the raw steel into semifinished forms and preparation for hot-rolling, (3) hot-rolling the semifinished forms into flat-rolled carbon steel mill products, (4) cold-rolling hot-rolled sheet and strip, and (5) plating and coating plate, sheet, and strip with metals or other coatings.

Melt Stage

Steel is produced either by the integrated or nonintegrated process. The nonintegrated, or scrap-based, process produces molten steel by melting scrap in an electric furnace (termed an electric arc furnace, or EAF). The integrated process typically smelts iron ore and coke in a blast furnace to produce molten iron, which is subsequently poured into a steelmaking furnace, generally a basic oxygen furnace (BOF), together with a small amount of scrap metal. The hot metal is processed into steel when oxygen is blown into the metal bath. Lime is added to serve as a fluxing agent; it combines with impurities to form a floating layer of slag, which is later removed.⁷² The molten steel is poured or "tapped" from the furnace to a ladle.

Whether produced by the integrated or nonintegrated process, it is increasingly common for molten steel to pass through a ladle metallurgy station, where its chemistry is refined to embody the steel with properties required for specific applications. At the ladle refining station additional techniques are employed to produce extra clean or low-carbon steels. The chemical content may be adjusted (such elements as oxygen and oxides, sulfur and sulfides, hydrogen, and carbon are removed, for example) while the temperature of the steel is adjusted for optimum casting.⁷³ Shifting the final refining stages to the ladle metallurgy station allows shorter cycles in the primary steelmaking vessel (EAF or BOF), effectively raising steelmaking capacity.

⁷¹ For more detail on the manufacturing processes, see USITC, *Steel Industry Annual Report on Competitive Conditions in the Steel Industry and Industry Efforts to Adjust and Modernize*, USITC publication 2436, Sept. 1991.

⁷² This describes the making of carbon steel. Alloy steels are produced by additions of alloying agents (including chromium, nickel, and molybdenum) to liquid steel to impart specific properties such as increased strength, hardness, or resistance to corrosion or heat to the finished steel products.

⁷³ Depending on the grade of steel required, mills may utilize one or more ladle refining techniques: vacuum degassing, in which hydrogen, nitrogen, and other nonmetallic inclusions are removed; vacuum slag cleaning, in which slag is skimmed from the surface after the steel has been transferred from the BOF; and argon bubbling, in which argon gas is blown into the ladle, assisting the removal of slag and impurities.

Casting Stage

Once molten steel with the desired properties has been produced, it is cast into a form that can enter the rolling process. Currently the industry uses two principal methods of casting: ingot teeming and continuous casting. In recent years, continuous casting has become the preferred, lower cost method. Nearly 90 percent of steel produced in the United States by integrated steelmakers is continuously cast, and some companies, USX for example, have eliminated ingot casting entirely.⁷⁴ In the ingot-based process, the ladle is moved by an overhead crane to a pouring platform where the steel is poured or "teemed" into ingot molds. As the steel begins to solidify, the mold is stripped from the ingot and the ingot is then transferred to a soaking pit that equalizes the temperature within the ingot. Following removal from the soaking pit, the ingots are hot-rolled on a primary breakdown mill to slab, bloom, or billet sizes.

Continuous casting bypasses several steps of the conventional ingot-casting process by casting steel directly into semifinished shapes in the desired cross-sectional dimensions. Molten steel is poured into a reservoir (called a tundish) from which it is released into the molds. As the column of steel descends through the molds a solid skin forms. Below the mold, water sprays cool the cast steel, resulting in complete solidification. The many benefits derived from this quicker casting method include increased yield, improved product quality, decreased energy consumption, and less pollution.⁷⁵

The final result of both conventional ingot teeming and continuous casting is steel in one of three semifinished shapes: slabs, blooms, or billets. Slabs are wide semifinished products from which the products subject to these investigations are made, whereas blooms and billets are used in the production of bars, rods, and other nonflat steel products.

Rolling Stage

Plate mill rolling

In general, the process of rolling plate on a plate mill is similar to that used to produce coiled plate on a hot-strip mill, described below. The plate mill, however, has fewer rolling and finishing stands, typically two or fewer breakdown stands and two or fewer finishing stands as compared to the five breakdown and five or more finishing stands on a hot-strip mill. The stands are designed for a heavier and wider product, the steel is rolled in both longitudinal and transverse directions, the process is generally less continuous (there may be more reversing passes made during the breakdown, rolling, and finishing stages), and there is no coiler.⁷⁶

⁷⁴ See USITC, *Steel Industry Annual Report on Competitive Conditions in the Steel Industry and Industry Efforts to Adjust and Modernize*, USITC publication 2436, Sept. 1991.

⁷⁵ USX, *The Making, Shaping and Treating of Steel*, 10th ed., 1985, p. 745.

⁷⁶ Petitioners' prehearing brief, vol. 2, app. A, pp. 3-8.

As on the hot-strip mill, steel slabs are uniformly heated before rolling in batch or continuous furnaces to a temperature of approximately 2,400°F. The slabs are then sent through a scalebreaker to remove the iron oxide that forms on their surface during heating, and passed through a series of rollers that shape and reduce the slabs in thickness until they reach the specifications desired.

Plate rolling mills are generally listed in one of two very broad design classifications, universal mills and sheared-plate mills. Universal mills roll plates to a width (generally about 48 inches) within standard tolerances. They are characterized by vertical rolls preceding and following the horizontal rolls; the horizontal and vertical rolls are integrated into a single mill unit and work the stock simultaneously.⁷⁷ Sheared-plate mills may also include some edge-working equipment, although final widths are attained by edge shearing or flame cutting. The ends on both universal mill plates and sheared plates are sheared or flame-cut. The U.S. industry operates only sheared-plate mills and has phased out its plate production on universal mills.⁷⁸

Hot-strip mill rolling

After reheating, slabs enter the rolling process.⁷⁹ Coiled plates and sheet are rolled on hot-strip mills.⁸⁰ Hot-strip mills are fairly standardized in their construction. Slabs are fed into a roughing train that reduces the thickness of the slab from 8-10 inches to 1-2 inches, at which point it is termed a "transfer bar." The finishing train of a hot-strip mill usually has four to seven stands that reduce the transfer bar from 1-2 inches to the desired thickness of the hot-rolled plate, sheet, or strip. Final thicknesses generally vary between one-tenth of an inch (2.5 mm) and one-half inch (12.7 mm).⁸¹ Exiting the rolling line, the steel is fed into a downcoiler that coils the material.

During the hot-rolling process, exposure to water and the atmosphere results in the formation of oxides on the surface of the steel that are

⁷⁷ Although the universal mill generally is considered obsolete, Caterpillar testified at the hearing that it preferred plate produced on a universal mill. TR, p. 975; see earlier plate separate like product discussion.

⁷⁸ Petitioners' prehearing brief, vol. 2, app. A, pp. 3-8. This statement is supported by testimony from Caterpillar (TR, p. 975).

⁷⁹ Some facilities are able to hot-roll slabs directly from the casting stage, bypassing the reheat furnace, although there is an effort to maintain and equalize the temperature throughout the slab in other ways. This results in energy economies and shorter processing time. Among the U.S. producers, Geneva recently completed the installation of a direct roll line. (Transcript of the preliminary conference (preliminary transcript), pp. 69-70.)

⁸⁰ The word "strip" in "hot-strip mill" is distinct from the strip that refers to a finished product that has definite width and gauge specifications. Strip is either rolled directly in narrow widths or formed by slitting sheet, which is wider than strip, in order to acquire a narrow product.

⁸¹ See earlier separate like-product discussion on floor plate for a description of its manufacturing process.

removed through a process known as pickling. Pickling involves passing the hot-rolled product through a series of acid baths that remove the oxides. The material is then dried and oiled to prevent reformation of oxides, and recoiled. Operations that cut hot-strip mill products to length are also performed at this stage.

Cold (reduction) rolling

The term "cold rolling" refers to any process in which the product is fed into a rolling mill at ambient temperature. Cold rolling can be performed for a variety of reasons, including a desired reduction in product thickness, a need to impart specific mechanical properties, or to impart a specific surface texture. A cold-rolling mill typically has five to seven roll stands. Additional reduction in thickness may be accomplished on a one-stand temper mill.

Cold-reduction rolling involves a fairly large reduction in the thickness of a hot-rolled material, typically ranging from 25 to 90 percent. The process of cold rolling renders the material stiffer and more brittle. In order to produce a material with desirable working properties, the steel must be made more ductile through annealing, thereby yielding a more malleable material.

There are two basic annealing processes: batch and continuous. Batch (or box) annealing, the older technology, involves placing cold-rolled steel products into a furnace and slowly bringing the material up to a specified temperature, followed by controlled cooling. Because batch annealing may require several days, a newer technology utilizing pressurized hydrogen annealing is becoming more common. This significantly reduces annealing time compared with other types of batch annealing. Continuous annealing processes have made inroads in terms of total tonnage processed for a variety of reasons. In the continuous annealing process, the heating and cooling process requires only several minutes, rather than days, and the treatment is more uniform throughout the coil. For most grades of low-carbon cold-rolled steel, contemporary continuous annealing technology can produce satisfactory results for most applications.

Slitting, shearing, and levelling

Slitting and shearing are operations that involve the cutting of metal. Cutting across the width of the coil is called shearing, and cutting along the length of the coil is referred to as slitting. Wavy edges or buckles in the material are removed from the steel product through levelling operations. Plate may also be levelled and made more rectangular.

Corrosion Resistance (Coatings)

Flat-rolled steel products are coated with metals or nonmetallic substances in order to improve their aesthetics, reduce the final product cost, improve their corrosion resistance, and anticipate the requirements of downstream forming operations. For purposes of these investigations, only

products having a metallic coating, such as zinc, aluminum, or iron-, zinc-, aluminum-, or iron-based alloys, are corrosion-resistant products.⁸²

There are seven alternative processes for applying coatings, though a particular process may be inappropriate for a given coating element or coating weight. These processes include immersion in a bath of molten metal or metal alloy ("hot-dipping"); electroplating, which is the cathodic deposition by electrolysis of a solution of metallic salts; sherardizing, chromizing, or calorizing, in which the products to be coated are heated first and then impregnated or diffused with the coating in powder form (zinc, chromium, and aluminum, respectively); spraying the molten coating metal in atomized form; sputtering, a coating process by cathode vaporization; coating with nonmetallic substances (including enamelling, varnishing, lacquering, painting, surface printing, or coating with ceramics or plastics); and cladding, where there is a molecular interpenetration of the surface (similar to welding) in contact with another metal such as chromium, nickel, stainless steel, copper, or titanium.⁸³

Uses

Plate

Plate products include both plate produced on a plate mill and cut-to-length plate produced on a hot-strip mill from coils, which are uncoiled, leveled, and cut to length by the producer. Although there are several differences in physical and mechanical characteristics, all plate products share dimensional characteristics that render them interchangeable for certain end uses. (See "Manufacturing Process" section.) According to industry representatives at the conference, the mill design dictates the specific end use. Cut-to-length plate from hot-strip mills is narrower, thinner, possesses lower mechanical and physical properties, and is not suitable for many of the uses for which plate-mill plate is utilized.⁸⁴

⁸² Alternatively, steel may be coated with organic materials such as resins, pigments, and oils, or inorganic materials, such as vitreous enamels and cements. Steels coated with these products are not corrosion-resistant products for purposes of these investigations, unless the coating is in addition to the metallic coatings. Specifically excluded from the investigations are products coated with tin; chromium oxides, chromium, or both; lead; or lead and tin combinations.

⁸³ Customs Co-operation Council, *Harmonized Commodity Description and Coding System Explanatory Notes*, Brussels, July 1989, pp. 981-982.

⁸⁴ According to industry officials there are some distinctive end-use differences for plate-mill plate as opposed to hot-strip-mill plate. For example, hot-strip-mill plate would not be used where there would be postfinishing heat treatment, it is not used for pressure tanks (storage tanks, water towers, or chemical tanks), and it is not used where the product requires impact strength. Further, according to petitioners there is little overlap in major end uses; most plate-mill plate is consumed by the construction industry and in industrial equipment and tools, while most hot-strip-mill plate in coil form is consumed in automotive uses and for pipe and tube. (Petitioner's prehearing brief, vol. 6A, app. A, p. 10.)

Cut-to-length plate is generally used for applications where superior strength and surface characteristics are important. For example, 33 percent of U.S. shipments in 1992 by end use (table 9) were for construction (13 percent) and industries producing machinery, industrial equipment, tools, rail freight cars, and shipbuilding/marine equipment (20 percent). Another 41 percent of U.S. shipments were made to service centers, which reportedly sold plate to construction companies.

Hot-rolled Products

Hot-rolled products are used in a variety of applications in several industries, particularly construction, automotive, machinery, and equipment (table 9). Most hot-rolled products (***) percent), however, are not shipped onto the open market; rather, they are either used internally or transferred to an affiliated company to make cold-rolled sheet and strip, or formed and welded to make welded pipe. About *** percent, ***, is transferred to an affiliated firm for sale as hot-rolled material. In addition to the internal transfers, another 11 percent is shipped on the open market to unaffiliated firms for further processing. In cases where hot-rolled steel is used as is, the strength of the hot-rolled product generally serves a structural function for applications where surface finish and light weight are not crucial. The thicker hot-rolled products, referred to as coiled plates, are often used by customers in the same industries as plate, as described above. Typical applications for the thinner gauge sheet include auto body frames and wheels, and floor decks in steel construction.

Counsel on behalf of Posco argues that there is an important distinction in end-use applications that depend on the quality of the hot-rolled product. Specifically, the highest quality hot-rolled sheet, which meets the strictest specifications (in terms of chemical composition, flatness, ductility, and surface quality), is used in the production of cold-rolled sheet, whereas lower quality hot-rolled steel is typically sold to service centers or pipemakers (see "Description" section).⁸⁵

Cold-rolled Products

Open-market shipments of cold-rolled products are used in many of the same industries as hot-rolled (table 9), although the applications are distinct, primarily because of the greater strength-to-weight ratio of cold-rolled products and smoother surface finish. Cold-rolled products are most often used as panels in electrical equipment and appliances or for unexposed body parts and roofs in automobiles. As with hot-rolled products, a large portion of the cold-rolled shipments (***) percent) are company transfers. For the most part they are sent to internal or affiliated coating lines, where they are transformed into corrosion-resistant steel and other coated products not subject to these investigations (e.g., tinplate, terneplate). An additional 5 percent is shipped on the open market for further processing at nonaffiliated firms.

⁸⁵ Prehearing brief of Morrison and Foerster on behalf of Posco and UPI, pp. 3-4. I-34

Table 9

Certain flat-rolled carbon steel products: Shipments by U.S. producers, by products and by end markets, 1992

End market	Plate	Hot- rolled	Cold- rolled	Corrosion- resistant
(Percent)				
Company transfers ¹	***	***	***	***
Open-market shipments:				
Service centers.....	40.9	13.6	15.2	23.8
Steel for converting into steel mill products	1.4	10.5	5.4	2.4
Automotive.....	1.3	4.9	7.6	37.7
Construction.....	12.6	0.9	0.3	7.5
Contractors' products.....	0.5	0.6	2.0	12.2
Electrical equipment.....	0.7	0.5	4.3	1.3
Machinery, industrial equipment and tools.....	10.5	0.4	0.4	0.3
Containers, packaging and shipping materials.....	0.1	0.4	2.9	0.3
Agriculture.....	0.6	0.2	0.3	1.1
Appliances, utensils and cutlery.....	0.4	0.2	3.7	2.5
Rail freight cars.....	4.9	0.1	(²)	(²)
Shipbuilding and marine equipment.....	4.6	(²)	(²)	(²)
Exports (reporting companies only).....	3.7	1.2	0.9	2.1
All other.....	***	***	***	***
Non-classified.....	***	***	***	***
Total.....	100.0	100.0	100.0	100.0
Quantity (1,000 net tons)				
Total.....	4,028	48,425	27,450	12,367

¹ Primarily captive shipments, i.e., steel either consumed internally or transferred to an affiliated company for further processing. Company transfers to affiliated firms for sale without further processing are believed to be small.

² Less than 0.05 percent.

Note.--AISI product categories do not conform precisely to definitions adopted for these investigations. For example, AISI categorizes clad plate as plate, not as a corrosion-resistant product. The overall difference is believed to be small.

Source: Compiled from statistics of AISI, form AIS 16C, and data submitted in response to questionnaires of the U.S. International Trade Commission.

Corrosion-resistant Products

These products are used to prolong the useful life of end products in areas where the product is visible or exposed to weather or other corroding agents. In recent years, the use of corrosion-resistant materials (rather than uncoated cold-rolled materials) in automotive manufacturing and construction has grown significantly. In the automotive area, cars have used lighter, thinner steels in order to meet the federally mandated energy-efficiency requirements and the firms' desire to offer rust-through protection. Rust or corrosion eats through thinner materials, even the increasingly used high-strength low-alloy material, more rapidly, making corrosion-resistant coatings more essential. In the construction area, purchasers are taking into account the life-cycle cost of the project, justifying the higher initial cost of corrosion-resistant products in order to reduce replacement costs.

Overall, automotive manufacturing is by far the largest end market for corrosion-resistant products, accounting for 38 percent of shipments in 1992 (table 9). Construction (both building and highway) and contractors' products account for 20 percent of shipments. Appliances and exports account for 3 percent and 2 percent of shipments, respectively; 24 percent are sent to steel service centers; and the remainder go to a wide range of other markets.

Clad plates and sheet are specialized corrosion-resistant products engineered to achieve specific performance requirements. They are used primarily in pressure vessels for the petroleum, chemical, paper, and food industries, in applications utilizing the corrosion- and heat-resistant properties of the cladding material (stainless steel or nickel-based alloys, for example). Using clad plate reduces costs by using a thin layer of the expensive corrosion-resistant material, usually a stainless steel or nickel material.⁸⁶ In the sheet area, laminate sheets, having steel "skins" on each side bonded to an inner core of viscoelastic material, are used for such applications as sound attenuation, vibration damping, and thermal insulation.

Painted corrosion-resistant products are used primarily for color and aesthetic appeal. They may also be used for safety reasons to lower reflectivity, for example near airports, or to increase corrosion resistance in particularly exposed areas.

Substitute Products

The four flat-rolled carbon steel products subject to investigation compete with a variety of substitute materials. Wood and cement compete with plate, corrosion-resistant products, and perhaps hot-rolled sheet in structural applications, whereas aluminum, plastics, and advanced composites compete more with cold-rolled and corrosion-resistant carbon steel products.

In deciding which material to work with, manufacturers consider economic factors (e.g., price, transformation/installation cost, and maintenance/operation cost) as well as technical factors (e.g., density, tensile strength, and thermal conductivity). Normally, the decision on which material to use must

⁸⁶ Lukens and Japan Steel Works product brochures.

be made at an early part of the product design stage. Once a decision is made, manufacturers tend to stay with the material for a long period of time because of the high costs of switching, in part due to worker retraining, design changes, or retooling. Increasingly, steel manufacturers are working with consumers in the design and prototype building stages, or approximately 2 to 5 years prior to commercial purchases. Although consumers say they expect the steel to be priced competitively, this initial work provides the steel manufacturer with a nonprice competitive advantage and may assist the company to secure all or part of the order.⁸⁷ In economic terms, the cross-price elasticity of demand between steel and competing materials is low.⁸⁸

Although steel has lost market share to certain substitutes, particularly plastics or other metals, efforts by the industry to reduce production costs and improve product quality have slowed this trend. For example, steel prices have risen more slowly in nominal terms (and declined in real terms) and have been less volatile in the last decade than have prices for plastic, concrete, and aluminum. In addition, through new production processes and steel chemistries, producers have developed lighter, high-strength steels that are particularly useful in automotive applications.⁸⁹ These factors have recently resulted in substitution of steel for plastic in certain automotive applications.⁹⁰

The products subject to investigation also compete with each other in certain instances, although direct competition is infrequent. For example, as the flatness and surface finish of the hot-rolled product have improved, equipment manufacturers have used it in place of more expensive cold-rolled products.⁹¹ In addition, cold-rolled and corrosion-resistant products may compete in applications where corrosion resistance is desirable but not essential, and coiled plate produced on a hot-strip mill often competes with thin gauge plate made on a plate mill.

In addition, flat-rolled carbon steel products compete to a limited degree with alloy steel flat-rolled products. The addition of alloying elements to the steel raises the price of the steel, but also imparts that steel with improved mechanical and physical properties. As with plastic or aluminum, alloy steel generally competes with carbon steel in the design stage of manufacturing, when the tradeoff between cost and performance is weighed.

⁸⁷ Panel discussion among steel purchasers at *Steel Survival Strategies VIII* in New York, June 23, 1993.

⁸⁸ International Iron and Steel Institute, *Intermaterial Competition: An Economic Analysis of General Trends* (Brussels, 1989), pp. 1-2.

⁸⁹ *Steel Industry Annual Report*, USITC publication 2436, pp. 2-13 to 2-15.

⁹⁰ David H. Hoag, *Steel's Growing Success in the Marketplace*, presentation at the American Iron and Steel Institute General Meeting, May 19, 1993.

⁹¹ USITC interviews with executives of ***, Mar. 12, 1993.

THE U.S. MARKET

Apparent U.S. Consumption⁹²

The demand for steel can be characterized as a derived demand in that steel consumption is driven by the consumption of products that use steel as a raw material. The demand for products/applications such as automobiles, construction, machinery and equipment, shipbuilding, appliances, energy, and utilities have long affected demand in the steel industry. In addition, the range of end-use applications for steel is wide enough so as to make trends in steel consumption similar to the trend in overall economic activity.

Data on apparent U.S. consumption of certain flat-rolled carbon steel products are presented in tables 10 and 11. The data presented in table 10 are based on company transfers (including internally consumed products) and open-market shipments reported by U.S. producers in their questionnaire responses. Apparent open-market U.S. consumption is presented in table 11. Petitioners argue that, for hot- and cold-rolled products, including captive consumption in measuring apparent U.S. consumption results in double-counting.⁹³ Respondents argue that captive consumption of hot-rolled and cold-rolled products should be included with merchant (open-market) shipments for purposes of determining total U.S. shipments.⁹⁴

Plate

Apparent U.S. consumption of plate (including captive consumption) declined overall between 1990 and 1992, first dropping substantially, by 16 percent, between 1990 and 1991, then recovering slightly in 1992. Between 1990 and 1992, imports fell at a slower rate than overall consumption, recovering markedly in 1992; the value of U.S. producers' U.S. shipments declined each year during the period examined. The volume of subject imports fell between 1990 and 1991 but reversed direction in 1992. Import tonnage not subject to investigation also decreased in 1991, but recovered slightly in 1992. The construction industry is the largest consumer of cut-to-length plate, receiving 15 percent of U.S. shipments in 1991.⁹⁵ When consumption of plate is restricted to open-market consumption, totals and trends in the data are essentially identical to those exhibited when captive consumption is included.

⁹² The Commission received questionnaire responses from 38 U.S. producers in operation during 1990-92. Based on these responses, the Commission has 96-percent coverage of open-market shipments in 1992 of plate, 96-percent of hot-rolled products, 95-percent of cold-rolled products, and 96-percent of corrosion-resistant products, compared with data compiled by AISI. Official import statistics from the U.S. Department of Commerce have been used in the calculation of apparent U.S. consumption.

⁹³ TR, pp. 311, 351.

⁹⁴ TR, pp. 90.

⁹⁵ Petitioners' postconference brief, vol. 1, p. 47.

Table 10

Certain flat-rolled carbon steel products: Total market U.S. shipments of domestic product, U.S. imports, and apparent U.S. consumption, by products, 1990-92

Item	1990	1991	1992
Quantity (1,000 short tons)			
Plate:			
Producers' U.S. shipments..	4,783	4,062	4,177
U.S. imports from--			
Subject sources ¹	746	639	713
Other sources.....	104	56	75
Total.....	850	695	787
Apparent consumption.	5,633	4,757	4,965
Hot-rolled products:			
Producers' U.S. shipments..	48,683	41,917	47,274
U.S. imports from--			
Subject sources ¹	2,560	2,391	3,068
Other sources.....	326	227	303
Total.....	2,886	2,618	3,371
Apparent consumption.	51,569	44,535	50,646
Cold-rolled products:			
Producers' U.S. shipments..	26,629	23,576	26,502
U.S. imports from--			
Subject sources ¹	1,733	1,621	1,862
Other sources.....	259	173	116
Total.....	1,991	1,793	1,979
Apparent consumption.	28,620	25,370	28,481
Corrosion-resistant products:			
Producers' U.S. shipments..	10,962	9,774	11,235
U.S. imports from--			
Subject sources ¹	1,651	1,553	2,122
Other sources.....	182	163	155
Total.....	1,833	1,716	2,276
Apparent consumption.	12,795	11,489	13,511
Value (million dollars)			
Plate:			
Producers' U.S. shipments..	2,192	1,776	1,675
U.S. imports from--			
Subject sources ¹	317	256	254
Other sources.....	44	23	23
Total.....	361	279	277
Apparent consumption.	2,554	2,056	1,952
Hot-rolled products:			
Producers' U.S. shipments..	14,239	12,129	13,409
U.S. imports from--			
Subject sources ¹	959	856	1,031
Other sources.....	111	74	97
Total.....	1,070	930	1,129
Apparent consumption.	15,309	13,059	14,538
Cold-rolled products:			
Producers' U.S. shipments..	10,587	9,344	10,284
U.S. imports from--			
Subject sources ¹	900	805	901
Other sources.....	132	94	72
Total.....	1,033	899	973
Apparent consumption.	11,620	10,243	11,257
Corrosion-resistant products:			
Producers' U.S. shipments..	6,551	5,714	6,393
U.S. imports from--			
Subject sources ¹	1,120	993	1,332
Other sources.....	115	95	100
Total.....	1,235	1,088	1,433
Apparent consumption.	7,786	6,801	7,826

¹ Subject sources include imports from South Africa.

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table 11

Certain flat-rolled carbon steel products: Open-market U.S. shipments of domestic product, U.S. imports, and apparent U.S. consumption, by products, 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Plate:			
Producers' U.S. shipments..	4,569	3,889	4,114
U.S. imports from--			
Subject sources ¹	746	639	713
Other sources.....	104	56	75
Total.....	850	695	787
Apparent consumption.	5,419	4,584	4,902
Hot-rolled products:			
Producers' U.S. shipments..	16,093	13,930	15,954
U.S. imports from--			
Subject sources ¹	2,560	2,391	3,068
Other sources.....	326	227	303
Total.....	2,886	2,618	3,371
Apparent consumption.	18,979	16,548	19,325
Cold-rolled products:			
Producers' U.S. shipments..	12,117	10,597	12,292
U.S. imports from--			
Subject sources ¹	1,733	1,621	1,862
Other sources.....	259	173	116
Total.....	1,991	1,793	1,979
Apparent consumption.	14,109	12,390	14,271
Corrosion-resistant products:			
Producers' U.S. shipments..	10,509	9,372	10,936
U.S. imports from--			
Subject sources ¹	1,651	1,553	2,122
Other sources.....	182	163	155
Total.....	1,833	1,716	2,276
Apparent consumption.	12,343	11,088	13,213
<i>Value (million dollars)</i>			
Plate:			
Producers' U.S. shipments..	2,118	1,711	1,651
U.S. imports from--			
Subject sources ¹	317	256	254
Other sources.....	44	23	23
Total.....	361	279	277
Apparent consumption.	2,479	1,991	1,928
Hot-rolled products:			
Producers' U.S. shipments..	5,484	4,506	5,043
U.S. imports from--			
Subject sources ¹	959	856	1,031
Other sources.....	111	74	97
Total.....	1,070	930	1,129
Apparent consumption.	6,555	5,436	6,172
Cold-rolled products:			
Producers' U.S. shipments..	5,631	4,864	5,479
U.S. imports from--			
Subject sources ¹	900	805	901
Other sources.....	132	94	72
Total.....	1,033	899	973
Apparent consumption.	6,664	5,763	6,452
Corrosion-resistant products:			
Producers' U.S. shipments..	6,348	5,525	6,262
U.S. imports from--			
Subject sources ¹	1,120	993	1,332
Other sources.....	115	95	100
Total.....	1,235	1,088	1,433
Apparent consumption.	7,582	6,613	7,694

¹ Subject sources include imports from South Africa.

Note.--Because of rounding, figures may not add to the totals shown.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Hot-rolled Products

In terms of quantity, apparent consumption (including captive consumption) followed the same trends as plate; however, the recovery in consumption in 1992 was much more marked, with consumption practically regaining its 1990 level. In value terms, the 1992 recovery was not quite so dramatic. In terms of both quantity and value, subject imports increased overall between 1990 and 1992, while U.S. producers' shipments declined. Open-market apparent consumption for hot-rolled products, in contrast to when captive consumption is included, actually increased slightly overall between 1990 and 1992, when quantity-based data are considered. Trends in open-market shipments by U.S. producers, however, are identical to those demonstrated when U.S. producers' captive shipments are included. Principal uses for hot-rolled products include pipe and tube manufacture, automobiles, and industrial equipment.

Cold-rolled Products

Apparent U.S. consumption of cold-rolled products (including captive consumption of such products) declined in 1991, by 11 percent in terms of volume, before reversing direction in 1992, ending up less than 1 percent below its 1990 level. Trends in value-based data are very similar. Based on quantity, subject imports rose while U.S. producers' shipments declined slightly.

Open-market cold-rolled consumption demonstrated identical trends to data including captive consumption; i.e., a marked decline in 1991 followed by a recovery in 1992; in this instance, 1992 consumption actually exceeded 1990 levels. Cold-rolled products are used in the automotive, appliance, hardware, fasteners, and bearings industries, among many others.

Corrosion-resistant Products

Consumption of corrosion-resistant products, as with hot- and cold-rolled products, declined in 1991, and rebounded in 1992, to mostly or generally higher levels than those of 1990, on both a total- and open-market basis. The overall increase in consumption during the 3-year period, in quantity terms, was shared by subject imports and by U.S. producer shipments; in value terms, however, U.S. producers lost market share to imports.

U.S. Producers

The Commission sent questionnaires to 77 firms believed to produce the subject products. Of these firms, 26 notified the Commission that they do not produce the products, 38 provided complete data on their production, and 13 firms either did not provide data in response to the Commission's

questionnaire or provided data that were unusable.⁹⁶ The petitioning group of firms and their plant locations are shown in the following tabulation:

<u>Petitioning group firm</u>	<u>Plant locations</u>
Armco.....	Middletown, OH Ashland, KY
Bethlehem.....	Sparrows Point, MD Chesterton (Burns Harbor), IN
Geneva.....	Vineyard, UT
Gulf.....	Gadsden, AL
Inland.....	East Chicago, IN New Carlisle, IN ¹
Laclede.....	Alton, IL
LTV.....	East Chicago, IN Cleveland, OH Hennepin, IL Columbus, OH
Lukens.....	Coatesville, PA Conshohocken, PA
National.....	Ecorse, MI Portage, IN Granite City, IL
Sharon.....	Sharon, PA
USX.....	Pittsburgh, PA Fairless Hills, PA Birmingham, AL Gary, IN Pittsburg, CA ²
WCI.....	Warren, OH

¹ I/N Tek and I/N Kote joint ventures with Nippon Steel (Japan).

² Joint venture with Posco (Korea).

U.S. producers, their shares of reported production of subject products in 1992, and their position on these investigations are shown in table 12.

Steel producers are generally classified into one of three categories: fully integrated mills, so-called "minimills," and "converters."⁹⁷ Integrated mills are usually large capital-intensive facilities that possess both steelmaking facilities (e.g., coke ovens, blast furnaces, and basic oxygen furnaces) and rolling and finishing mills. The range of products produced by integrated plants is broad, although most products are carbon steels.

⁹⁶ Of the 13 firms that did not respond to the Commission's questionnaire or provided unusable data, none is considered to be a significant producer of the subject products. Of these firms, only *** supplied data in the preliminary investigations.

⁹⁷ In addition, some integrated mills (such as Geneva and Gulf States) are referred to as "reconstituted" mills, because such integrated steelmaking facilities were either divested or put into bankruptcy by their parent companies.

Table 12

Certain flat-rolled carbon steel products: U.S. producers' share of production and position on investigations, by firms, 1992

Share of reported 1992 production					
Firm	Plate	Hot- rolled	Cold- rolled	Corrosion resistant	Position
-----Percent-----					
<u>Petitioning group:</u> ¹					
Armco	***	***	***	***	Supports
Bethlehem	***	***	***	***	Supports
Geneva	***	***	***	***	Supports
Gulf States	***	***	***	***	Supports
Inland	***	***	***	***	Supports
Laclede	***	***	***	***	Supports
LTV	***	***	***	***	Supports
Lukens	***	***	***	***	Supports
National	***	***	***	***	Supports
Sharon	***	***	***	***	Supports
USX	***	***	***	***	Supports
WCI	***	***	***	***	Supports
Subtotal	80.7	78.9	77.6	70.8	
<u>Nonpetitioners:</u>					
Blair	***	***	***	***	***
CSI	***	***	***	***	***
Citisteel	***	***	***	***	***
Cold Metal	***	***	***	***	***
Empire	***	***	***	***	***
Gibraltar	***	***	***	***	***
Gregory	***	***	***	***	***
I/N Kote	***	***	***	***	***
Kentucky Electric	***	***	***	***	***
Lone Star	***	***	***	***	***
Marathon	***	***	***	***	***
Metaltech	***	***	***	***	***
Nextech	***	***	***	***	***
North Star	***	***	***	***	***
Nucor	***	***	***	***	***
Oregon	***	***	***	***	***
Pinole Point	***	***	***	***	***
Rome	***	***	***	***	***
Rouge	***	***	***	***	***
Theis	***	***	***	***	***
Thomas	***	***	***	***	***
Thompson	***	***	***	***	***
Tuscaloosa	***	***	***	***	***
UPI	***	***	***	***	***
Weirton	***	***	***	***	***
Wheeling-Pitt.	***	***	***	***	***
Subtotal	19.3	20.8	22.1	29.1	
Total (percent)...	100.0	99.7	99.7	99.9	
Total (1,000 short tons)	4,342	47,944	26,589	11,450	

¹ Not all members of the petitioning group are petitioners with respect to all investigations. See tables 1 and 2 for case-specific information. I-43

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Minimills generally produce steel by melting recycled scrap metal in electric arc furnaces, a method of steelmaking that usually involves less capital investment. At their inception, minimills tended to specialize in products such as bars, rods, and other "long products." Recently, however, minimills have increasingly begun to produce products such as hot- and cold-rolled sheet and large structurals, formerly produced almost exclusively by integrated producers.⁹⁹ Minimills are generally smaller than integrated mills, typically producing less than 1 million tons of raw steel per year at any one facility.

Steel converters (or processors) do not produce molten steel, but instead purchase steel for further processing. With regard to flat-rolled products, common converting operations include the production of hot-rolled coils from slabs, cold-rolled sheet from hot-rolled coil, and coated products from cold-rolled steel.

Between 1985 and 1992, the domestic industry, as required by the VRA program, re-invested all of its cash flow in modernization and re-structuring.⁹⁹ U.S. producers were requested to indicate the extent and effect of current and future modernization efforts. Responses are summarized in the following tabulation:

<u>Firm</u>	<u>Event</u>				<u>Effect</u>		
	*	*	*	*	*	*	*

Although integrated steel producers remained the primary producers of flat products during 1990-92, minimills are expanding into the area, spurred by the success of Nucor Corp.'s facilities in Crawfordsville, IN, and Hickman, AR. Nucor has announced plans to add 1.4 million tons of capacity to its two existing thin-slab facilities and to enter a joint venture with Oregon Steel to construct a 1.0-million-ton-per-year mill on the west coast. Dofasco, Canada's leading integrated steelmaker, has announced a joint venture with Co-Steel, also Canadian, to build a thin-slab-casting facility in Kentucky. ***.

The trend toward increased foreign investment in U.S. steelmakers is continuing, both in terms of direct equity investments and in formation of

⁹⁹ Accordingly, the distinction between an integrated mill and a minimill currently centers around differences in the steelmaking processes used rather than in the range of products produced. Even this distinction is somewhat tenuous because of major changes in steelmaking technology, particularly trends toward decreasing the minimum efficient scale of production and the convergence of integrated and nonintegrated production processes. In addition, a number of integrated companies utilize electric furnaces to make steel. For further discussion on this point see *Steel Industry Annual Report*, USITC publication 2436, pp. 3-38 and 3-39.

⁹⁹ See section of this report entitled "Previous and Related Investigations" for further discussion of the VRA program.

joint ventures, particularly with Japanese steel producers. This has provided domestic manufacturers with greater access to capital and new technology necessary for modernization. In turn, foreign firms have benefited from increased access to the U.S. market. Recently, foreign investment has been concentrated in specific operations or product lines, particularly for automotive applications. Current and planned foreign equity investment in U.S. steelmaking is shown in table 13.

Several responding producers indicated that they are subsidiaries or divisions of larger firms. Those firms and their corporate parents are listed in the tabulation below:

<u>Producer</u>	<u>Parent company</u>	<u>Percent ownership</u>
*	*	*

U.S. Importers

Questionnaires were sent to 351 firms identified by the U.S. Customs Service as having imported significant quantities of certain flat-rolled carbon steel products during fiscal year 1992.¹⁰⁰ Of the 351 recipients, 190 firms returned usable responses, and 88 firms indicated that they did not import certain flat-rolled carbon steel products.¹⁰¹ Because of the large number of importers, the Commission did not request data on imports and shipments of imports in its importers' questionnaire. Rather, official import statistics from the U.S. Department of Commerce were used to supply import quantity, value, and unit value data for each of the subject countries.¹⁰²

Importers of certain flat-rolled carbon steel products can be classified into three categories: (1) distributors, who buy steel from foreign manufacturers for immediate resale; (2) steel service centers, who maintain inventories of a wide selection of commodity grades of steel; and (3) end

¹⁰⁰ The Commission also sent importer questionnaires to all firms to which it sent producer questionnaires.

¹⁰¹ Accordingly, 73 firms did not respond to the Commission's questionnaire. Other than ***, none of these firms was a major importer of the subject products.

¹⁰² The importers' questionnaire did, however, collect information on imports (and shipments of imports) of ultrathin steel, cold-rolled motor lamination steel, high-carbon steel, clad plate, stainless-clad sheet, automotive steel, and aluminum-zinc alloy, as well as on inventories of imports. Information on stainless-clad sheet is not presented in this report because Commerce excluded that product from the scope of the investigations.

Table 13

Certain flat-rolled carbon steel products: U.S. producers and foreign equity investment in manufacturing facilities, by firms and projects, 1993¹

Product/ firm	Foreign partner/ owner	Foreign country	Share of foreign ownership	Start- up date	Project or asset, location
<u>Plate:</u>					
Laclede...	Ivaco	Canada	49.8	1983	All facilities
Citisteel.	CITIC	China	100	1989	Claymont, DE
Tuscaloosa	British Steel	United Kingdom	100	1984	Tuscaloosa, AL
<u>Hot-rolled products:</u>					
Armco.....	Kawasaki	Japan	49	1989	Ohio; Kentucky
California.	Kawasaki	Japan	50		
	CVRD	Brazil	50	1984	Fontana, CA
Inland.....	Nippon	Japan	13	1989	All facilities
Laclede....	Ivaco	Canada	49	1983	All facilities
National...	NKK	Japan	70	1984	All facilities
Gallatin...	Dofasco/ Co-Steel	Canada	100	1995	Gallatin, KY
<u>Cold-rolled products:</u>					
Armco.....	Kawasaki	Japan	49	1989	Ohio; Kentucky
California.	Kawasaki	Japan	50		
	CVRD	Brazil	50	1984	Fontana, CA
Inland.....	Nippon	Japan	40	1990	I/N Tek, IN
National...	NKK	Japan	70	1984	All facilities
USX.....	Posco	Korea	50	1986	UPI, Pittsburg, CA
<u>Corrosion-resistant products:</u>					
Armco.....	Kawasaki	Japan	49	1989	New line in 1994
Bethlehem..	National/ NKK	Japan	50	1994	Double G Coatings, Jackson, MS
California.	Kawasaki	Japan	50		
	CVRD	Brazil	50	1984	Fontana, CA
Inland.....	Nippon	Japan	50	1991	I/N Kote, IN
LTV.....	Sumitomo	Japan	40	1986	L-S Electro, OH
LTV.....	Sumitomo	Japan	50	1991	L-S II Electro, OH
National...	NKK	Japan	70	1984	Ecorse, MI
USX.....	Kobe	Japan	50	1993	Protec Coating Co.
Wheeling- Pitt.....	Nisshin	Japan	80	1988	Follansbee, WV

¹ As part of LTV's plan to emerge from 7 years of bankruptcy, Sumitomo of Japan invested \$200 million in LTV stock. LTV emerged from Chapter 11 creditor protection on June 28, 1993. (Conversation with LTV official, May 28, 1993 and *American Metal Market*, various issues).

Source: *Steel Industry Annual Report*, USITC publication No. 2436, pp. 3-8 to 3-11; Japan Steel Information Center, *Joint Ventures in the U.S. by Japanese Steel Makers*, June 1992; and *Metal Bulletin*, various issues.

users, such as automotive and appliance companies and manufacturers of heavy industrial equipment.¹⁰³

Numerous importers reporting data are subsidiaries of, or related to, other companies, including foreign steel companies. These firms, and their related companies, are presented in the tabulation below (foreign ownership noted in parentheses):

<u>Importer</u>	<u>Related company</u>	<u>Percent ownership</u>
*	*	*

Seven U.S. producers (***) reported imports of certain flat-rolled carbon steel products during the period examined. Through a related subsidiary, Pohang Steel America, Inc., UPI imports hot bands from its affiliated firm in Korea (Posco) for its cold-reduction operations in Pittsburgh, CA. Although the importer of record for some hot-rolled products from ***, *** primarily purchases the imported products from trading companies. Except for ***, none of these producers reported substantial levels of imports over the 3-year period. In addition, *** of the 12 petitioning producers reported imports during the period examined.

Channels of Distribution

Both domestic and imported flat-rolled carbon steel products are sold primarily to two broad categories of customers: steel distributors or service centers, and manufacturers or end users in the automobile, appliance, construction, and other industries.¹⁰⁴ Distribution channels vary by product and are different for U.S. producers compared to foreign producers (table 14). For example, plate is shipped through service centers more than any other product, reflecting the large number of small end users of plate in the construction and equipment industries. A large percentage of domestically produced corrosion-resistant products is sold to end users, reflecting a close relationship between U.S. steel producers and auto companies.

¹⁰³ Examples of distributors would include BHP Trading Co.; Mitsui & Co. USA, Inc.; Sumitomo Corp.; Ferrostaal Metals Corp.; and Sunbelt Trading Co. Examples of service centers would include Cargill Ferrous International, Inc.; Feralloy Corp.; Liebovich Bros., Inc.; Toyota Tsusho America; Thyssen Steel Group; and Center Steel Sales, Inc. Examples of the wide range of end user importers would be Chrysler Corp.; Nissan Motor Manufacturing, USA, Inc.; Toyota Motor Manufacturing, USA, Inc.; the West Bend Co.; and Caterpillar, Inc.

¹⁰⁴ AISI identifies several major noncaptive markets for steel mill products, including steel service centers and distributors, converters and processors, construction, automotive, rail transportation, aircraft and aerospace, oil and gas, machinery and industrial equipment, appliances, and containers and shipping materials. (See table 9 in the "Uses" section.)^{I-47}

Shipments to distributors/service centers/processors include intercompany transfers of flat-rolled products for further processing into downstream products covered by the investigations, along with a small level of intracompany transfers.¹⁰⁵ On the other hand, intracompany transfers are common among integrated producers, which use their own hot-rolled products in the production of cold-rolled products, and their own cold-rolled products in the production of corrosion-resistant products. Such processing may be performed at the same or separate facilities. Intercompany transfers from one steel company to another are less frequent, occurring primarily when another steelmaker shuts down an operation for maintenance and makes up decreased production with open-market purchases.

Table 14

Certain flat-rolled carbon steel products: U.S. merchant shipments and imports, by distribution channels, 1992

Item	(Percent)			
	Service centers, distributors, processors		End users	
	Related	Unrelated	Related	Unrelated
U.S. merchant shipments:				
Plate.....	2.4	43.9	0.0	53.7
Hot-rolled products...	0.8	28.3	43.6	27.3
Cold-rolled products..	2.6	24.7	27.4	45.3
Corrosion-resistant products.....	0.2	21.8	1.0	77.0
U.S. shipments of imports: ¹				
Plate.....	2.8	79.4	0.2	17.6
Hot-rolled products...	1.1	32.4	36.0	30.5
Cold-rolled products..	11.4	44.5	0.2	43.9
Corrosion-resistant products.....	4.4	26.0	4.5	65.1

¹ Data limited to firms reporting inventories of preceding-period shipments.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Steel service centers generally perform four different functions in the U.S. market. First, on some sales they act simply as a broker between the buyer and the domestic or foreign mill. In these instances, the service center does not take possession of the product; instead the order is shipped directly to the customer from the domestic mill or from the U.S. port of

¹⁰⁵ Intracompany and intercompany transfers for the manufacture of nonflat-steel products are not covered in this category, but rather are considered shipments to related and unrelated end users, respectively. For example, hot-rolled product is used in the manufacture of welded pipe and floor decking, which are produced by some flat-rolled steel producers.

entry. Second, service centers can act as buying brokers ordering specific products on a customer's behalf from domestic or foreign sources. The service centers take title to the products, inventory them in their U.S. storage facilities, and make shipments, often on a just-in-time basis, to the customer as needed. Third, service centers can also act as distributors by buying and inventorying products that are typically of commercial quality, with standardized sizes, grades, or tolerances, and reselling to U.S. customers in the merchant market. Finally, service centers can act as processors that purchase domestic or imported products, perform some further processing such as forming and slitting, and then resell the product to their U.S. customers. The degree to which each individual service center performs these functions depends on the company involved; some may concentrate on only one or two of the functions mentioned, while others routinely perform all four.

With respect to end users, the U.S. automobile industry, which primarily purchases cold-rolled and corrosion-resistant products, is the largest overall volume purchaser of flat-rolled carbon steel products in the manufacturing sector. The products shipped by domestic steel producers to the U.S. auto industry generally do not pass through service centers. The proximity of the U.S. mills to the auto plants allows them to make frequent deliveries in specified quantities. Also, many of the domestic mills are able to send engineers and metallurgists to the customers' facilities to work on product development and to help the customers with any problems that arise with the product. Similarly, one Canadian manufacturer reported that because of the technical expertise and sales support provided to the U.S. auto industry by the North American mills, small changes in price for competing products would not cause the auto manufacturers to switch suppliers.¹⁰⁶

In addition to the auto industry, corrosion-resistant products are also sold in varying degrees, depending on the type of coating, to service centers, the construction industry, and the appliance-manufacturing and furniture industries. Approximately 30 percent of open-market shipments of domestic hot-dipped galvanized steel of all types goes to the automotive industry while 27 percent goes to the service center market, 22 percent goes to the construction industry, and the remainder goes to other industries. Approximately 75 percent of domestic electrogalvanized steel goes to the auto industry, 14 percent is sold to service centers, and 11 percent goes to the construction and other industries.¹⁰⁷

CONSIDERATION OF MATERIAL INJURY TO AN INDUSTRY IN THE UNITED STATES

For the most part, the information in this section of the report is based on data received from responses to Commission questionnaires. The Commission sent questionnaires to 77 firms that it had a reason to believe may have produced certain flat-rolled carbon steel products during the period examined.¹⁰⁸ Of these firms, 26 responded that they did not manufacture such

¹⁰⁶ Preliminary transcript, pp. 245-46.

¹⁰⁷ Based on AISI data, form AIS 16C, year 1992.

¹⁰⁸ The Commission originally sent questionnaires to 62 known or suspected producers of flat-rolled carbon steel products. Because the definition of plate used in these investigations may cover production by producers of flat

products.¹⁰⁹ The Commission received usable responses from 38 producers of plate, hot-rolled products, cold-rolled products, and/or corrosion-resistant products, accounting for 96, 96, 95, and 96 percent, by quantity, respectively, of open-market U.S. shipments in 1992.¹¹⁰ Accordingly, 13 firms either did not respond to the questionnaire or provided data that were unusable. None of these firms, however, is considered to be a significant producer of flat-rolled carbon steel products.

The Commission also collected capacity, production, shipment, inventory, and employment data on ultrathin steel, cold-rolled motor lamination steel, and high-carbon steel (with regard to the cold-rolled industry), and on clad plate, automotive steel, and aluminum-zinc alloy (with regard to the corrosion-resistant industry). Those data are presented in appendix C.¹¹¹

U.S. Capacity, Production, and Capacity Utilization

The Commission requested U.S. producers to provide data on their full production capability to produce plate, hot-rolled products, cold-rolled products, and corrosion-resistant products for calendar years 1990 through 1992.¹¹² These data are presented in table 15. The majority of the responding firms reported operating the mills 50 weeks per year, although a significant number of firms indicated year-round operations. Much of the \$23 billion in investment made by the U.S. steel industry in the 1980s to modernize plants and upgrade equipment was made in the hot- and cold-rolled manufacturing areas in order to improve competitiveness and continue improvements in steelmaking and casting.¹¹³

Plate

Reported U.S. end-of-period capacity to produce plate declined steadily over the 3-year period, by 6 percent (table 15). The trend in plate production was similar between 1990 and 1991; in 1992, however, production increased slightly, leading to a slight upturn in capacity utilization. In 1992, this ratio recovered about half of the drop it had suffered between 1990 and 1991.

¹⁰⁸ (...continued)

bars, the Commission subsequently sent 15 additional questionnaires to companies that specialize in production of such products.

¹⁰⁹ Ten of the bar producers that were sent questionnaires responded that they did not manufacture products covered by the Commission's questionnaires.

¹¹⁰ Based on the final AIS 10-C report of AISI, Apr. 7, 1993.

¹¹¹ Data on domestic production of stainless-clad sheet were sought but not received. Commerce excluded this product from the scope of the investigations.

¹¹² Full production capability was defined as the maximum level of production that the establishment could reasonably expect to attain under normal operating conditions.

¹¹³ TR, pp. 110, 114.

Table 15

Certain flat-rolled carbon steel products: U.S. capacity, production, and capacity utilization, by products, 1990-92

Item	1990	1991	1992
<u>End-of-period capacity (1,000 short tons)</u>			
Plate.....	7,413	7,347	6,958
Hot-rolled.....	60,611	57,145	59,646
Cold-rolled.....	33,172	33,409	34,428
Corrosion-resistant.....	13,752	14,258	14,983
<u>Production (1,000 short tons)</u>			
Plate.....	4,915	4,219	4,342
Hot-rolled.....	49,818	44,003	47,944
Cold-rolled.....	27,254	23,676	26,589
Corrosion-resistant.....	11,288	9,941	11,450
<u>Capacity utilization (percent)</u>			
Plate.....	66.3	57.4	62.4
Hot-rolled.....	82.2	77.0	80.4
Cold-rolled.....	82.2	70.9	77.2
Corrosion-resistant.....	82.1	69.7	76.4

Note.--Capacity utilization is calculated from unrounded figures, using data of firms providing both capacity and production information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Hot-rolled Products

Production of hot-rolled products, as reported by responding firms, dipped slightly in 1991 from its 1990 level, then recovered a bit in 1992 to a level of 47.9 million tons, for an overall decrease of 4 percent from 1990. Trends in capacity over the period examined were similar. Capacity utilization first fell by approximately 5 percentage points in 1991, then recovered some of this loss in 1992.

Cold-rolled Products

Capacity to produce cold-rolled products increased marginally between 1990 and 1992, while production first decreased 13 percent in 1991, then rebounded in 1992, almost to 1990 levels. Capacity utilization declined strongly in 1991, and regained approximately half of this loss in 1992.

Corrosion-resistant Products

Trends in capacity and production for corrosion-resistant products were similar to those for cold-rolled products, except for a more vigorous increase in production in 1992. Unlike production of cold-rolled products, production of corrosion-resistant products was actually higher in 1992 than in 1990. Capacity utilization fell in 1991, but rebounded in 1992 to 76 percent, regaining about half of its 1991 loss.

Capacity to produce corrosion-resistant products has been increasing in recent years.¹¹⁴ As the automotive industry began producing smaller, lighter cars in the mid-1980's, the need for more corrosion-resistant products increased.¹¹⁵ Demand for galvanized steel also grew, but to a lesser extent, because of increased applications in the appliance and other nonautomotive industries.

The corrosion-resistant industry is on the verge of major increases in both cold-rolled and corrosion-resistant production occasioned by the opening of major new corrosion-resistant joint ventures developed by various U.S., Japanese, and Canadian partners specifically to serve the needs of automotive producers. In the first quarter of 1993, U.S. producers have added significant capacity for corrosion-resistant production, as shown in the following tabulation, based on Japan Steel Information Center, *Joint Ventures in the U.S. by Japanese Steel Makers*, June 1992; *Iron and Steel Engineer*, Feb. 1993; and *American Metal Market*, various issues.¹¹⁶

<u>Firm/joint venture</u>	<u>Capacity (tons per year)</u>
Bethlehem:	
Burns Harbor site.....	450,000
Sparrows Point site.....	260,000
Bethlehem-National(NKK) ¹	270,000
Nucor.....	225,000
USX-Kobe (Protec).....	600,000
Wheeling Pitt-	
Nisshin ²	<u>240,000</u>
Total.....	2,045,000

¹ Came on line after Mar. 31, 1993.

² ***.

¹¹⁴ TR, p. 854.

¹¹⁵ TR, p. 859.

¹¹⁶ TR, pp. 872-83. In addition, DNN, a joint venture of National, NKK, and Dofasco of Canada, started a 400,000-ton-per-year facility in Ontario, Canada, to service the U.S. and Canadian auto markets.

U.S. Producers' Domestic Shipments, Company Transfers, and Export Shipments

U.S. shipments of certain flat-rolled carbon steel products, compiled from U.S. producers' responses to the Commission's questionnaire, are presented in table 16.¹¹⁷

Plate

As seen from the table, the quantity of U.S. shipments of plate decreased by 15 percent from 1990 to 1991, and then edged upward, by 3 percent, from 1991 to 1992. By contrast, value-based data show a consistent decline. Unit values decreased steadily between 1990 and 1992. The value of export shipments, which varied between 2 and 3 percent of total shipments throughout the period, showed no particular trend, although the volume of such shipments did increase overall. Unit values of those shipments declined throughout 1990-92.

Hot-rolled Products

Data from producers of hot-rolled products show that the quantity of U.S. shipments of such products declined markedly between 1990 and 1991, but then reversed direction in 1992, climbing by 13 percent. When viewed in terms of dollar value, U.S. shipments showed a similar trend. Unit values declined overall during the period examined. Export shipments grew dramatically in 1991, both in terms of quantity and value, but in 1992 fell back to levels below those of 1990.

Cold-rolled Products

The quantity of U.S. producers' shipments declined very slightly, by less than 1 percent overall between 1990 and 1992, but again the trend was characterized by a substantial drop in 1991, followed by a recovery in 1992. Unit values declined slowly but steadily. Unlike hot-rolled products, exports of cold-rolled products showed no particular trend.

Corrosion-resistant Products

The volume of U.S. shipments of corrosion-resistant products first fell in 1991, by 11 percent, then climbed sharply in 1992 to a level 2 percent higher than that of 1990. Value-based data show a different trend, whereby U.S. shipments declined overall despite the recovery in 1992. As with the other flat-rolled products subject to investigation, unit values fell overall. Export shipments did not demonstrate a definite pattern.

¹¹⁷ U.S. shipments equal company transfers plus domestic shipments. I-53

Table 16

Certain flat-rolled carbon steel products: Shipments by U.S. producers, by products and by types, 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Plate:			
Company transfers.....	214	174	63
Domestic shipments.....	4,569	3,889	4,114
Subtotal.....	4,783	4,062	4,177
Exports.....	105	141	136
Total.....	4,888	4,204	4,313
Hot-rolled products:			
Company transfers.....	32,590	27,987	31,320
Domestic shipments.....	16,093	13,930	15,954
Subtotal.....	48,683	41,917	47,274
Exports.....	993	2,215	582
Total.....	49,676	44,131	47,856
Cold-rolled products:			
Company transfers.....	14,511	12,979	14,210
Domestic shipments.....	12,117	10,597	12,292
Subtotal.....	26,629	23,576	26,502
Exports.....	221	224	228
Total.....	26,850	23,800	26,730
Corrosion-resistant products:			
Company transfers.....	452	402	299
Domestic shipments.....	10,509	9,372	10,936
Subtotal.....	10,962	9,774	11,235
Exports.....	242	238	235
Total.....	11,204	10,012	11,470
<i>Value (million dollars)</i>			
Plate:			
Company transfers.....	75	65	24
Domestic shipments.....	2,118	1,711	1,651
Subtotal.....	2,192	1,776	1,675
Exports.....	45	55	50
Total.....	2,238	1,831	1,725
Hot-rolled products:			
Company transfers.....	8,755	7,622	8,366
Domestic shipments.....	5,484	4,506	5,043
Subtotal.....	14,239	12,129	13,409
Exports.....	383	623	167
Total.....	14,623	12,751	13,576
Cold-rolled products:			
Company transfers.....	4,956	4,481	4,804
Domestic shipments.....	5,631	4,864	5,479
Subtotal.....	10,587	9,344	10,284
Exports.....	112	110	113
Total.....	10,699	9,454	10,397
Corrosion-resistant products:			
Company transfers.....	204	189	132
Domestic shipments.....	6,348	5,525	6,262
Subtotal.....	6,551	5,714	6,393
Exports.....	154	155	153
Total.....	6,706	5,869	6,547

Table continued on next page.

Table 16--Continued

Certain flat-rolled carbon steel products: Shipments by U.S. producers, by products and by types, 1990-92

Item	1990	1991	1992
	Unit value (per short ton)		
Plate:			
Company transfers.....	\$348	\$374	\$381
Domestic shipments.....	464	440	401
Average.....	458	437	401
Exports.....	430	387	371
Average.....	458	436	400
Hot-rolled products:			
Company transfers.....	269	272	267
Domestic shipments.....	341	324	316
Average.....	292	289	284
Exports.....	386	281	288
Average.....	294	289	284
Cold-rolled products:			
Company transfers.....	342	345	338
Domestic shipments.....	463	459	446
Average.....	397	396	388
Exports.....	508	488	495
Average.....	398	397	389
Corrosion-resistant products:			
Company transfers.....	450	470	441
Domestic shipments.....	606	594	578
Average.....	599	589	575
Exports.....	639	651	652
Average.....	600	590	576

Note.--Because of rounding, figures may not add to the totals shown. Unit values are calculated from the unrounded figures, using data of firms supplying both quantity and value information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Trade Actions Against U.S. Exports

In response to the U.S. filings of unfair trade cases, Canadian producers have initiated their own dumping complaints against U.S. and other foreign producers. On August 24, 1992, Revenue Canada initiated an investigation into imports of non-heat-treated and heat-treated hot-rolled carbon steel plate and high-strength low-alloy plate. In May 1993, the Canadian International Trade Tribunal (CITT) determined that plate imports from the United States were not a cause of material injury, and the case was terminated.

On September 16, 1992, Revenue Canada initiated an investigation into imports of certain flat hot-rolled carbon steel sheet products. A final dumping determination, released April 29, 1993, found the margins of dumping by U.S. hot-rolled producers to be 8 to 13 percent. The CITT, in June 1993,

determined that U.S. hot-rolled products were not a cause of material injury and the case was terminated. On November 16, 1992, Revenue Canada initiated an investigation into imports of cold-rolled steel sheet and on June 30, 1993, made a final determination, finding an average margin of dumping of 25.5 percent by U.S. producers of cold-rolled products. On July 29, 1993, the CITT determined that U.S. cold-rolled products were a cause of material injury, thereby causing U.S. cold-rolled steel exports to Canada to become subject to antidumping duties equivalent to the margins previously determined by Revenue Canada.

The Mexican steel industry has also initiated antidumping cases on flat-rolled steel products from the United States. In the Diario Oficial of April 28, 1993, the Mexican Government announced final determinations on antidumping duties to be placed on products from the United States: 4.18 to 32.92 percent on plate in coils, 17.66 to 36.13 percent on hot-rolled sheet, and 2.73 to 12.88 percent on cold-rolled sheet products. Also announced April 28, 1993, were provisional or preliminary antidumping duties on corrosion-resistant steel from the United States of 5.85 to 29 percent, and on cut-to-length plate from the United States of 5.32 to 81 percent. On July 1, 1993, the Mexican Government announced that, for U.S. corrosion-resistant products, countervailing duty investigations were being initiated as well. Subsidies alleged by the Mexican industry include U.S. Government assumption of retirement obligations on the part of various steel producers, numerous import restriction programs, infrastructure programs with "Buy America" provisions, industrial and environmental protection programs financed by government-backed bonds, and rate structures for electricity use that offer lower rates to industrial users.¹¹⁸

Shipments of Specialized Products

The Commission requested U.S. producers to provide data on their company transfers, domestic shipments, and export shipments of 68 specialized plate, hot-rolled, cold-rolled, and corrosion-resistant products ("niche products").¹¹⁹ U.S. importers were also requested to provide import and shipment data regarding these products. Respondents argue that many of these products are not produced by the domestic industry or, if they are produced, are not produced in sufficient quantity to meet customer demand. U.S. producers' shipments, U.S. imports by country, apparent U.S. consumption, market penetration, and average unit values of these products are shown in appendix F.

U.S. Producers' Inventories

Table 17 presents U.S. producers' end-of-period inventories as reported in U.S. producers' questionnaires.

¹¹⁸ U.S. Department of State telegram, message reference No. 6602, July 2, 1993, Mexico City, and USITC telephone conversation with Mexican industry official, July 16, 1993.

¹¹⁹ See app. F for niche product specifications.

Table 17

Certain flat-rolled carbon steel products: End-of-period inventories of U.S. producers, by products, 1990-92

Item	1990	1991	1992
<u>Quantity (1,000 short tons)</u>			
Plate.....	222	231	243
Hot-rolled.....	1,886	1,746	1,852
Cold-rolled.....	2,122	1,975	1,813
Corrosion-resistant.....	1.398	1.376	1.409
<u>Ratio to total shipments (percent)</u>			
Plate.....	4.6	5.5	5.6
Hot-rolled.....	3.9	4.1	3.9
Cold-rolled.....	8.0	8.5	6.9
Corrosion-resistant.....	12.8	14.2	12.6

Note.--Ratios are calculated from the unrounded figures, using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Nineteen firms provided data on their end-of-period inventories of certain flat-rolled carbon steel products during the period examined. With regard to plate, U.S. producers' yearend inventories rose slowly but steadily from 222,000 tons in 1990 to 231,000 tons in 1991, accelerating their increase to a level of over 240,000 tons in 1992. Movements in yearend inventory levels of hot-rolled products, though, were different, first declining in 1991, then rebounding slightly in 1992 to a level 2 percent lower than that of 1990. Inventories of cold-rolled products fell continuously throughout the period examined, while corrosion-resistant products showed an irregular pattern during 1990-92, increasing overall.

Producers of corrosion-resistant products had the greatest propensity to keep inventories, when inventories are viewed as a percentage of total shipments. Hot-rolled producers had the lowest percentages of inventories to preceding-period shipments. As for the data themselves, trends roughly parallel those manifested when absolute inventory levels are examined.

U.S. Employment, Wages, and Productivity¹²⁰

Data reporting the average number of production and related workers (PRWs), hours worked and wages paid to those workers, and their average hourly wages, as collected in the Commission's producer questionnaires, are shown in tables 18 and 19. For purposes of this report, employment data are generated using two different methods. The first method (a "nonallocated method") is one that was specified in the Commission's producer questionnaire, and involves limiting reporting of PRWs, hours worked, wages, and total compensation to data that can be directly associated with the production process in question.¹²¹

The petitioning companies, all of which are to some degree integrated producers, maintained in their questionnaire responses that an alternative method (an "allocated" method) would yield more reasonable results. These firms submitted employment data based on production and related workers, hours worked, wages, and total compensation that were directly associated with the production process as related to market sales, plus an allocated portion of the upstream processes.¹²²

The Commission received employment data on a nonallocated basis from 23 firms, including 11 of the 12 petitioning firms.¹²³ Data on an allocated basis were received only from the 12 petitioning firms. Because such firms account for between 72 and 81 percent of the volume of reported 1992 U.S. production (depending on product), however, the two sets of data are reasonably comparable in terms of industry coverage.

Plate

The number of workers employed in plate production, on a nonallocated basis, declined between 1990 and 1991, by 5 percent, and continued to fall off, but at a slower rate, in 1992. Hours worked by these employees followed a similar pattern, but total compensation actually increased during the period examined. Between 1990 and 1992, hourly wages and unit labor costs increased, while productivity remained constant. On an allocated basis, declines are seen in all four basic indicators (employees, hours, wages, and total

¹²⁰ The U.S. steel industry has restructured and rationalized to such an extent that it is now reportedly one of the most efficient and lowest cost producers of steel in the world. Labor productivity has doubled during the past 10 years and employment has been cut by more than half (eliminating 200,000 jobs) as a result of improved technology and management. TR, p. 114.

¹²¹ For example, producers of cold-rolled products were requested to report as production workers only those workers employed in their cold mill.

¹²² For example, total employment in the cold-rolled category would be those workers in the cold mill based on market sales, plus allocated portions of workers in, among other locations, the basic steelmaking furnaces, the continuous casters, and the hot-strip mill. The share of workers in the cold mill, however, that was related to product that was subsequently coated or plated would be allocated to the corrosion-resistant category.

¹²³ *** did not provide data in the form requested by the Commission (i.e., on a nonallocated basis). 1-58

Table 18

Average number of U.S. production and related workers (nonallocated basis) producing certain flat-rolled carbon steel products, hours worked,¹ wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs,² by products, 1990-92

Item	1990	1991	1992
<u>Number of production and related workers (PRWs)</u>			
Plate.....	3,743	3,557	3,515
Hot-rolled.....	17,639	16,685	16,177
Cold-rolled.....	13,527	11,502	12,254
Corrosion-resistant.....	10,129	9,680	9,942
<u>Hours worked by PRWs (1,000 hours)</u>			
Plate.....	7,785	7,340	7,331
Hot-rolled.....	37,248	44,428	33,823
Cold-rolled.....	27,319	23,266	24,957
Corrosion-resistant.....	20,366	19,025	20,113
<u>Wages paid to PRWs (1,000 dollars)</u>			
Plate.....	139,413	135,909	138,966
Hot-rolled.....	656,050	643,058	654,860
Cold-rolled.....	480,009	429,075	487,262
Corrosion-resistant.....	369,217	358,611	395,952
<u>Total compensation paid to PRWs (1,000 dollars)</u>			
Plate.....	195,270	191,133	199,890
Hot-rolled.....	933,048	916,918	937,242
Cold-rolled.....	675,275	615,582	689,962
Corrosion-resistant.....	512,376	516,930	564,673
<u>Hourly wages paid to PRWs</u>			
Plate.....	\$17.91	\$18.52	\$18.96
Hot-rolled.....	17.84	14.47	19.36
Cold-rolled.....	17.57	18.44	19.52
Corrosion-resistant.....	18.13	18.85	19.69
<u>Hourly total compensation paid to PRWs</u>			
Plate.....	\$25.08	\$26.04	\$27.27
Hot-rolled.....	25.05	20.64	27.71
Cold-rolled.....	24.72	26.46	27.65
Corrosion-resistant.....	25.16	27.17	28.08

Table continued on next page.

Table 18--Continued

Average number of U.S. production and related workers (nonallocated basis) producing certain flat-rolled carbon steel products, hours worked,¹ wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs,² by products, 1990-92

Item	1990	1991	1992
<u>Productivity (short tons per hour)</u>			
Plate.....	0.6	0.6	0.6
Hot-rolled.....	1.1	.8	1.2
Cold-rolled.....	.9	.9	.9
Corrosion-resistant.....	.5	.4	.5
<u>Unit labor costs (per short ton)</u>			
Plate.....	\$39.88	\$45.49	\$46.17
Hot-rolled.....	22.38	25.16	23.58
Cold-rolled.....	28.95	30.72	30.49
Corrosion-resistant.....	53.47	60.95	57.86

¹ Includes hours worked plus hours of paid leave time.

² On the basis of total compensation paid.

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

compensation), while hourly wages and total hourly compensation show consistent increases.

Hot-rolled Products

As seen in table 18, employment, on a nonallocated basis, declined consistently between 1990 and 1992. Neither wages nor total compensation showed any particular trend, however, during the period examined. Unit labor costs increased overall.

Data on an allocated basis demonstrate slightly different trends. Both wages and total compensation increased during the period examined, while total employment fell overall. Productivity showed little movement, differing from when the nonallocated data are examined.

Table 19

Average number of U.S. production and related workers¹ (allocated basis) producing certain flat-rolled carbon steel products, hours worked,² wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs,³ by products, 1990-92

Item	1990	1991	1992
Number of production and related workers (PRWs)			
Plate.....	6,964	6,324	5,633
Hot-rolled.....	14,770	14,459	14,483
Cold-rolled.....	13,372	11,389	12,048
Corrosion-resistant.....	13,275	11,542	12,083
Hours worked by PRWs (1,000 hours)			
Plate.....	15,568	13,717	12,414
Hot-rolled.....	32,152	30,053	31,310
Cold-rolled.....	28,931	24,108	26,035
Corrosion-resistant.....	28,587	24,110	25,980
Wages paid to PRWs (1,000 dollars)			
Plate.....	270,760	249,374	230,665
Hot-rolled.....	575,798	584,219	613,123
Cold-rolled.....	514,838	466,252	521,613
Corrosion-resistant.....	517,160	470,341	527,422
Total compensation paid to PRWs (1,000 dollars)			
Plate.....	380,934	351,035	333,314
Hot-rolled.....	847,208	868,023	919,786
Cold-rolled.....	758,193	689,956	781,391
Corrosion-resistant.....	734,870	695,485	789,745
Hourly wages paid to PRWs			
Plate.....	\$17.39	\$18.18	\$18.58
Hot-rolled.....	17.91	19.44	19.58
Cold-rolled.....	17.80	19.34	20.04
Corrosion-resistant.....	18.09	19.51	20.30
Hourly total compensation paid to PRWs			
Plate.....	\$24.47	\$25.59	\$26.85
Hot-rolled.....	26.35	28.88	29.38
Cold-rolled.....	26.21	28.62	30.01
Corrosion-resistant.....	25.71	28.85	30.40

Table continued on next page.

Table 19--Continued

Average number of U.S. production and related workers¹ (allocated basis) producing certain flat-rolled carbon steel products, hours worked,² wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs,³ by products, 1990-92

Item	1990	1991	1992
<u>Productivity (short tons per hour)</u>			
Plate.....	0.3	0.3	0.3
Hot-rolled.....	1.1	1.0	1.1
Cold-rolled.....	.7	.7	.7
Corrosion-resistant.....	.3	.3	.3
<u>Unit labor costs (per short ton)</u>			
Plate.....	\$89.76	\$98.91	\$95.18
Hot-rolled.....	23.74	28.01	27.09
Cold-rolled.....	39.32	42.87	42.60
Corrosion-resistant.....	100.30	110.02	110.63

¹ Reported on an "allocated" basis, including allocated portions of data attributable to prior stages of production, and excluding allocated portions of data attributable to subsequent stages of production.

² Includes hours worked plus hours of paid leave time.

³ On the basis of total compensation paid.

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Cold-rolled Products

The number of workers employed in the production of cold-rolled products, on a nonallocated basis, first declined in 1991, by 15 percent, then reversed direction in 1992, for an overall drop of 9 percent. Wages and total compensation increased overall, after suffering declines in 1991. Unit labor costs increased slightly during the period examined, while productivity was flat.

According to data on an allocated basis, the number of production and related employees and hours worked both experienced general declines between 1990 and 1992, as wages and total compensation rose. Hourly total compensation increased steadily and unit labor costs increased sharply, as productivity was flat.

Corrosion-resistant Products

During the 1990-92 period, the number of workers employed in the production of corrosion-resistant products and hours worked by those workers,

on a nonallocated basis, both showed small overall declines; however, wages and total compensation increased sharply. Hourly wages and total compensation increased notably, while productivity and unit labor costs showed no particular direction.

According to allocated data, the number of PRWs and hours worked both experienced general declines between 1990 and 1992, while wages and total compensation rose overall. Productivity remained virtually constant, as hourly wages and compensation grew steadily. Unit labor costs generally increased.

Changes in Employment and Union Representation

In its questionnaire, the Commission requested U.S. producers to provide detailed information concerning reductions or increases in the number of production and related workers producing certain flat-rolled carbon steel products during calendar years 1990, 1991, and 1992, if such reductions or increases involved at least 5 percent of the workforce, or 50 workers. The reported reductions are shown in table 20.¹²⁴

Table 20

Certain flat-rolled carbon steel products: Reductions in force by U.S. producers, 1990-92

* * * * *

Two firms reported increases in the number of employees in the workforce. ***. ***.

Of the total number of reporting producers, 28 reported union representation of their employees, mostly by the United Steelworkers of America.¹²⁵ Employees at Rouge, Gibraltar, and Theis are represented by the United Auto Workers. Cold Metal's workers and employees at Pinole Point are represented by the International Association of Machinists and Aerospace Workers.

Financial Experience of U.S. Producers

Twenty-nine producers provided income-and-loss data on one or more of the flat-rolled carbon steel products (plate, hot-rolled products, cold-rolled products, and corrosion-resistant products).¹²⁶ Nine producers, accounting for

¹²⁴ The table does not include reductions in force not reported on a product-specific basis.

¹²⁵ Lukens reported that only one of its plants, that at Coatesville, PA, was unionized.

¹²⁶ The producers are ***. Two companies have fiscal yearends of Mar. 31, one has May 31, one has Sept. 30, two have Oct. 31, 21 have Dec. 31, one has a 52- or 53-week period ending nearest Dec. 31, and 1 has the last Friday in December.

approximately 95 percent of reported 1992 U.S. production of plate; 18 producers, accounting for approximately 98 percent of production of hot-rolled products; 19 producers, accounting for approximately 98 percent of production of cold-rolled products; and 18 producers, accounting for approximately 97 percent of production of corrosion-resistant products, provided financial data.

The questionnaire data of *** large producers, ***, were verified to official records at the respective corporate facilities. ***'s verification adjustments were incorporated in the prehearing report, and the adjustments for *** are included in this final report, but were not in the prehearing report. The data of the *** producers represent 48 percent of 1992 plate net sales (***), 57 percent of 1992 hot-rolled net sales, 55 percent of 1992 cold-rolled net sales, and 56 percent of 1992 corrosion-resistant net sales. The verification adjustments do not significantly alter the basic prehearing financial trends, with the largest change occurring in hot-rolled 1991 operating loss that decreased by \$66.1 million from a prehearing loss of \$590.8 million.

A significant share of shipments of hot- and cold-rolled products consists of products that are internally transferred for further processing. In the preliminary investigations, it was difficult for many firms to compute the estimated profitability for transferred intermediate product. In these final investigations, data were collected on the profitability of trade sales and the cost of production (COP) for both trade sales and transfers. The data collected are in a format more comparable to the actual data in each firm's books and records and are more reliable. In order to assess the overall profitability of the industry for both trade sales and transfers, the staff utilized the collected data and estimated the profitability on a consistent basis, recognizing that there are a number of methodologies that could be used for the calculation. The following method was used to calculate the profitability of transfers in order to achieve a fair presentation of the data:

1. The transfer value was the average for each firm of that firm's average per-ton trade sale unit value for each annual period, adjusted for any cost differentials between trade and transfer product. The transfer value used for some companies was less than the average unit value for trade sales because the captively consumed product did not go through the same final stages of production as the sold product, and was not allocated all the relevant fixed costs (see "Production Costs" below). Verification adjustments of the large producers have generally added fixed expenses to the transferred products so that dissimilarities in cost relate primarily to actual processing differences.
2. The cost of transferred product was requested in the COP data and was used as the cost of goods sold. The underprocessing of the transferred product is adjusted by the lower transfer value.
3. No additional selling expense was allocated to the transferred product; however, general and administrative (G&A) expense was allocated based on the per-ton G&A expense of trade sales.

In view of the adjustments in the value of the transferred product based on the cost differentials, for those producers that did not fully allocate all fixed costs of production to transfers, both the value and the cost were equally reduced. Staff believes, however, that the verification adjustments for the larger mills to reallocate fixed expenses to the intermediate transferred product essentially corrects the previous underallocation. The data indicate that in this case, for each product, there is not a significant difference between the operating income margins of trade-only sales and the profitability of each product with the inclusion of captive consumption. This, in effect, is a projection of the profitability of all shipments at the intermediate product level, including transfers. Because the income-and-loss data with transfers are projected, the financial data for each intermediate product level cannot be consolidated with the other levels without appropriate elimination of a portion of the transferred product from the aggregated products.¹²⁷

The per-unit revenues and costs for each firm are different and, as the amounts of market sales and transferred product are not proportional among the firms, the per-unit profits and profitability ratios differ between (1) all shipments, including transfers and (2) market shipments only.¹²⁸

Production Costs

Production costs of U.S. producers are based on questionnaire responses. The data for most of the large producers have been corrected to include the full cost allocation of all fixed costs (such as depreciation, certain elements of factory overhead, etc.) at the transitional level to the transferred product, rather than allocating entirely at the final stage. Allocating all relevant fixed costs at the intermediate level is not a typical costing arrangement for many of the firms. In addition, the per-unit costs for transferred product are generally lower than those of trade sales as the transferred products are not as finished (may not be pickled, etc.).

Property, plant, and equipment, capital expenditures, and research and development are reported as the actual values or expenses that are directly attributable to each product type, without any upstream allocations.

¹²⁷ The transferred products include (1) transfers for internal consumption in the production of other subject products (e.g., hot-rolled product for the production of cold-rolled and cold-rolled for the production of corrosion-resistant), (2) transfers for internal consumption in the production of other products produced by the plant (e.g., tinplate and pipe), (3) internal consumption as is (e.g., plate used as plate), and (4) transfers to affiliates (parents, subsidiaries, other divisions).

¹²⁸ As an example, the companies' hot-rolled products used in the production of cold-rolled products were obtained from three sources: (1) transferred (captive supplied), (2) purchased from domestic producers, or (3) purchased from foreign sources. The profitability of the cold-rolled product is dependent on the cost, and therefore the source, of the hot-rolled product. In each case, the actual cost of the hot-rolled product was used to determine the profitability of the cold-rolled product.

Operations on Plate

The income-and-loss experience of the U.S. producers on their plate operations for trade sales only is presented in table 21. Net sales value decreased each year from \$2.1 billion in 1990 to \$1.7 billion in 1991 and \$1.6 billion in 1992. The operating income (loss) was \$196 million in 1990, \$22 million in 1991, and \$(83) million in 1992. Operating income (loss) margins, as a ratio to net sales, were 9.4 percent in 1990, 1.3 percent in 1991, and (5.1) percent in 1992.

Selected income-and-loss data of the U.S. producers on their operations producing plate, by company, for trade-only sales are presented in table 22. All of the nine companies incurred decreased net sales in 1991, compared to 1990, six producers had decreased net sales for 1992, compared to 1991, all nine firms incurred decreases in the operating income margin in 1991 and 1992, compared to 1990, and eight companies had decreased operating income margins in 1992, compared to 1991.

Income-and-loss data for trade sales only on a per-short-ton basis for the producers of plate are shown in table 23. The average net sales value decreased each year, whereas the cost of goods sold and selling, general, and administrative expenses increased from 1990 to 1991, and then decreased from 1991 to 1992. Any analysis of plate on a per-short-ton basis may be affected by the mix of products between periods and from company to company. Production costs of the U.S. producers on their operations producing plate are shown in table 24.

Income-and-loss data for the producers of plate for trade sales and transfers combined are shown in table 25. These data show the same trends as for trade sales only. Transfers are minor compared to the trade sales and, therefore, have little effect on the trends.

Operations on Hot-rolled Products

The income-and-loss experience of the U.S. producers on their hot-rolled trade-only operations is presented in table 26. Net sales decreased from \$5.8 billion in 1990 to \$5 billion in 1991 and then increased to \$5.1 billion in 1992, still less than the net sales for 1990. The companies experienced combined operating profits of \$8 million in 1990, and operating losses of \$525 million in 1991 and \$435 million in 1992. The operating profit margin, as a ratio to net sales, was 0.1 percent in 1990, and operating loss margins were 10.4 percent in 1991 and 8.5 percent in 1992.

Selected income-and-loss data of the U.S. producers on their trade-only operations producing hot-rolled products, by company, are presented in table 27. Fifteen of the 18 companies incurred decreases in net sales in 1991 compared to 1990. Only 5 companies had lower net sales in 1992, compared to 1991, but 12 companies' net sales in 1992 were lower than their net sales in 1990. Seventeen companies incurred lower operating income margins in 1991 and 1992 compared to margins in 1990. Eight companies incurred operating losses in 1990, 13 in 1991, and 13 in 1992.

Table 21

Income-and-loss experience of U.S. producers¹ on their trade-only operations producing plate, fiscal years 1990-92

Item	1990	1991	1992
<i>Value (1,000 dollars)</i>			
Trade sales.....	2,094,762	1,697,779	1,628,850
Cost of goods sold.....	1,818,334	1,598,595	1,637,886
Gross profit or (loss).....	276,428	99,184	(9,036)
Selling expenses.....	30,520	29,552	30,561
General and administrative expenses.....	49,481	48,023	43,762
Operating income or (loss)...	196,427	21,609	(83,359)
Startup or shutdown expense..	4,686	32,674	4,530
Interest expense.....	40,095	37,041	39,247
Other expense, net.....	3,023	7,830	6,805
Net income or (loss) before income taxes.....	148,623	(55,936)	(133,941)
Depreciation and amortization.....	89,929	88,488	91,177
Cash flow ²	238,552	32,552	(42,764)
<i>Ratio to net sales (percent)</i>			
Cost of goods sold.....	86.8	94.2	100.6
Gross profit or (loss).....	13.2	5.8	(0.6)
Selling expenses.....	1.5	1.7	1.9
General and administrative expenses.....	2.4	2.8	2.7
Operating income or (loss)...	9.4	1.3	(5.1)
Net income or (loss) before income taxes.....	7.1	(3.3)	(8.2)
<i>Number of firms reporting</i>			
Operating losses.....	1	4	4
Net losses.....	2	4	7
Data.....	9	9	9

¹ The producers are ***.

² Cash flow is defined as net income or loss plus depreciation and amortization.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 22

Income-and-loss experience of U.S. producers on their trade-only operations producing plate, by firms, fiscal years 1990-92

* * * * *

Table 23

Income-and-loss experience (on a per-short-ton basis) of U.S. producers¹ on their trade-only operations producing plate, fiscal years 1990-92

(Per short ton)			
Item	1990	1991	1992
Trade sales.....	\$467.79	\$444.56	\$405.99
Cost of goods sold.....	406.06	418.59	408.25
Gross profit or (loss).....	61.73	25.97	(2.25)
Selling expenses.....	6.82	7.74	7.62
General and administrative expenses.....	11.05	12.57	10.91
Operating income or (loss)...	43.86	5.66	(20.78)

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 24

Production costs of U.S. producers on their operations producing plate, fiscal years 1990-92

Item	1990	1991	1992
Quantity (1,000 short tons)			
Plate.....	4,656	3,999	4,049
Steelmaking:			
Basic oxygen process.....	3,759	2,981	3,771
Electric furnace.....	935	920	957
Casting:			
Ingot.....	2,700	2,073	2,231
Continuous.....	3,341	3,047	2,927
Trade sales.....	4,478	3,819	4,012
Company transfers.....	***	***	***
Value (1,000 dollars)			
Cokemaking.....	220,355	181,005	128,408
Ironmaking.....	334,916	279,638	322,442
Steelmaking:			
Basic oxygen process.....	***	***	***
Electric furnace.....	***	***	***
Other ¹	***	***	*** ²

Table continued on next page.

Table 24--Continued

Production costs of U.S. producers on their operations producing plate, fiscal years 1990-92

Item	1990	1991	1992
	Value (1,000 dollars)		
Casting:			
Ingot.....	58,610	40,246	42,077
Continuous.....	115,420	130,150	94,750
Purchased slabs/ingots.....	***	***	***
Plate mill rolling with ingot breakdown.....	454,257	382,623	406,968
Shearing.....	13,026	10,301	12,120
Other.....	166,730	184,843	203,397
Total production cost....	1,896,190	1,663,169	1,667,044
Change in finished goods inventory.....	(6,057)	(1,444)	(6,633)
Total production cost and inventory change.....	1,890,133	1,661,725	1,660,411
	Unit production cost (per short ton)		
Steelmaking:			
Basic oxygen process.....	\$\$\$	\$\$\$	\$\$\$
Electric furnace.....	***	***	***
Casting:			
Ingot.....	21.71	19.41	18.86
Continuous.....	34.55	42.71	32.37
Trade sales.....	406.06	418.59	408.25
Company transfers.....	***	***	***

¹ Quantities for steelmaking (other) and purchased slabs/ingots are unavailable.

² ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 25

Income-and-loss experience of U.S. producers¹ on their operations producing plate, fiscal years 1990-92

Item	1990	1991	1992
<hr/>			
Quantity (short tons)			
<hr/>			
Trade sales.....	4,478,000	3,819,000	4,012,000
Company transfers.....	210.000	171.000	61.000
Total.....	4,688.000	3,990.000	4,073.000
<hr/>			
Value (1,000 dollars)			
<hr/>			
Net sales:			
Trade sales.....	2,094,762	1,697,779	1,628,850
Company transfers.....	87.974	71.834	22.725
Total.....	2,182,736	1,769,613	1,651,575
Cost of goods sold.....	1,890.133	1,661.725	1,660.411
Gross profit or (loss).....	292,603	107,888	(8,835)
Selling expenses.....	30,520	29,552	30,561
General and administrative expenses.....	51.192	49.725	44.147
Operating income or (loss)...	210.891	28.611	(83.543)
<hr/>			
Ratio to net sales (percent)			
<hr/>			
Cost of goods sold.....	86.6	93.9	100.5
Gross profit or (loss).....	13.4	6.1	(0.5)
Selling expenses.....	1.4	1.7	1.9
General, and administrative expenses.....	2.3	2.8	2.7
Operating income or (loss)...	9.7	1.6	(5.1)
<hr/>			
Number of firms reporting			
<hr/>			
Operating losses.....	1	4	4
Data.....	9	9	9

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 26

Income-and-loss experience of U.S. producers¹ on their trade-only operations producing hot-rolled products, fiscal years 1990-92

Item	1990	1991	1992
Value (1,000 dollars)			
Trade sales.....	5,767,668	5,026,193	5,125,379
Cost of goods sold.....	5,441,219	5,239,820	5,250,770
Gross profit or (loss).....	326,449	(213,627)	(125,391)
Selling expenses.....	59,257	60,504	59,658
General and administrative expenses.....	259,407	250,493	249,724
Operating income or (loss)...	7,785	(524,624)	(434,773)
Startup or shutdown expense..	9,758	155,590	104,081
Interest expense.....	125,670	144,793	142,072
Other income or (expense), net.....	17,089	(4,684)	(4,041)
Net (loss) before income taxes.....	(110,554)	(829,691)	(684,967)
Depreciation and amortization.....	256,016	271,143	284,995
Cash flow ²	145,462	(558,548)	(399,972)
Ratio to net sales (percent)			
Cost of goods sold.....	94.3	104.3	102.4
Gross profit or (loss).....	5.7	(4.3)	(2.4)
Selling expenses.....	1.0	1.2	1.2
General and administrative expenses.....	4.5	5.0	4.9
Operating income or (loss)...	0.1	(10.4)	(8.5)
Net (loss) before income taxes.....	(1.9)	(16.5)	(13.4)
Number of firms reporting			
Operating losses.....	8	13	13
Net losses.....	10	15	16
Data.....	18	18	18

¹ The producers are ***.

² Cash flow is defined as net income or loss plus depreciation and amortization.

Note: Some items classified as cost of goods sold or selling, general and administrative expenses by the U.S. producers were reclassified by the USITC staff to startup/shutdown and "other" expenses. Major reclassifications included ***'s expenses (\$*** in 1991 and \$*** in 1992) and ***'s expenses (\$*** million in 1991) and expenses (\$*** in 1992).

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission. I-71

Table 27

Income-and-loss experience of U.S. producers on their trade-only operations producing hot-rolled products, by firms, fiscal years 1990-92

* * * * *

Income-and-loss data on a per-short-ton basis for the producers of hot-rolled products are shown in table 28. The average net sales value decreased each year whereas the cost of goods sold and selling, general, and administrative expenses increased from 1990 to 1991 and then decreased in 1992. Any analysis of hot-rolled products on a per-short-ton basis may be affected by the mix of products between periods and from company to company. Production costs of the U.S. producers on their operations producing hot-rolled products are shown in table 29.

Table 28

Income-and-loss experience (on a per-short-ton basis) of U.S. producers¹ on their trade-only operations producing hot-rolled products, fiscal years 1990-92

<i>(Per short ton)</i>			
Item	1990	1991	1992
Trade sales.....	\$345.56	\$320.16	\$316.40
Cost of goods sold.....	326.00	333.77	324.14
Gross profit or (loss).....	19.56	(13.61)	(7.74)
Selling expenses.....	3.55	3.85	3.68
General and administrative expenses.....	15.54	15.96	15.42
Operating income or (loss)...	0.47	(33.42)	(26.84)

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 29

Production costs of U.S. producers on their operations producing hot-rolled products, fiscal years 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Hot-rolled.....	46,355	40,681	44,587
Steelmaking:			
Basic oxygen process.....	41,200	37,300	42,149
Electric furnace.....	2,524	1,967	2,034
Casting:			
Ingot.....	11,954	7,695	4,836
Continuous.....	34,313	34,142	40,565
Trade sales.....	16,689	15,699	16,199
Company transfers.....	29,483	25,083	28,217
Cokemaking.....	1,491	1,346	1,179
Ironmaking.....	4,022	3,558	4,093
Steelmaking:			
Basic oxygen process.....	***	***	***
Electric furnace.....	***	***	***
Other.....	***	***	***
Casting:			
Ingot.....	388	225	114
Continuous.....	946	985	1,205
Purchased slabs/ingots.....	297	243	289
Purchased.....	0	0	0
Hot-strip rolling with ingot breakdown.....	1,542	1,317	1,406
Pickling and oiling.....	376	329	324
Shearing.....	0	0	0
Other.....	***	***	***
Total production cost....	14,133	12,830	13,615
Change in finished goods inventory.....	(33)	14	(6)
Total production cost and inventory change.....	14,100	12,843	13,608
<i>Unit production cost (per short ton)</i>			
Steelmaking:			
Basic oxygen process.....	\$***	\$***	\$***
Electric furnace.....	***	***	***
Casting:			
Ingot.....	32.47	29.34	23.80
Continuous.....	27.57	28.86	29.69
Trade sales.....	326.04	333.77	324.14
Company transfers.....	293.68	303.13	296.19

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Income-and-loss data of the producers of hot-rolled products for trade sales and company transfers combined are shown in table 30. The net sales value decreased from \$14.9 billion in 1990 to \$12.1 billion in 1991, and then increased to \$13.1 billion in 1992, still less than the net sales in 1990. Company transfer values exceeded net sales values in each year. The companies experienced a combined operating profit of \$39 million in 1990, and operating losses of \$1.5 billion in 1991 and \$1.3 billion in 1992.

Table 30

Income-and-loss experience of U.S. producers¹ on their operations producing hot-rolled products, fiscal years 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Trade sales.....	16,691	15,699	16,199
Company transfers.....	29,483	25,083	28,217
Total.....	46,174	40,782	44,416
<i>Value (million dollars)</i>			
Net sales:			
Trade sales.....	5,768	5,026	5,125
Company transfers.....	9,135	7,074	7,926
Total.....	14,902	12,101	13,052
Cost of goods sold.....	14,100	12,843	13,608
Gross profit or (loss).....	803	(743)	(557)
Selling expenses.....	59	61	60
General and administrative expenses.....	704	649	684
Operating income or (loss)...	39	(1,452)	(1,301)
<i>Ratio to net sales (percent)</i>			
Cost of goods sold.....	94.6	106.1	104.3
Gross profit or (loss).....	5.4	(6.1)	(4.3)
Selling expenses.....	0.4	0.5	0.5
General and administrative expenses.....	4.7	5.4	5.2
Operating income or (loss)...	0.3	(12.0)	(10.0)
<i>Number of firms reporting</i>			
Operating losses.....	7	13	12
Data.....	18	18	18

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Operations on Cold-rolled Products

The income-and-loss experience of the U.S. producers on their trade only cold-rolled operations is presented in table 31. Net sales for cold-rolled products decreased from \$5.6 billion in 1990 to \$4.7 billion in 1991 and increased to \$5.3 billion in 1992, still less than the net sales of 1990. The companies realized a combined operating income of \$186 million in 1990 but incurred operating losses of \$208 million in 1991 and \$212 million in 1992. Operating income (loss) margins, as a ratio to net sales, were 3.3 percent in 1990, (4.5) percent in 1991, and (4.0) percent in 1992.

Selected income-and-loss data of the U.S. producers on their operations producing cold-rolled products, by company, are presented in table 32. Sixteen of the 19 companies incurred decreases in net sales in 1991 compared to sales in 1990, whereas 18 of the companies incurred decreases in the operating income margins in the same period. Sixteen of the companies had lower operating income margins in 1992 compared to margins in 1990.

Income-and-loss data on a per-short-ton basis for the producers of cold-rolled products are shown in table 33. The average net sales value decreased in each comparative year, whereas the cost of goods sold and selling, general, and administrative expenses increased from 1990 to 1991 and then decreased in 1992. Any analysis of cold-rolled products on a per-short-ton basis may be affected by the mix of products between periods and from company to company. Production costs of the U.S. producers on their operations producing cold-rolled products are shown in table 34.

Income-and-loss data of the producers of cold-rolled products for trade sales and company transfers combined are shown in table 35. The net sales value decreased from \$11.0 billion in 1990 to \$9.1 billion in 1991 and then increased to \$10.1 billion in 1992, still less than the net sales of 1990. The companies realized a combined operating income of \$378 million in 1990 but incurred operating losses of \$447 million in 1991 and \$397 million in 1992, resulting in operating income (loss) margins of 3.4 percent of net sales in 1990, (4.9) percent in 1991, and (3.9) percent in 1992.

Operations on Corrosion-resistant Products

The income-and-loss experience of the U.S. producers on their corrosion-resistant carbon steel trade-only operations is presented in table 36. Net sales for corrosion-resistant products decreased from \$6.3 billion in 1990 to \$5.4 billion in 1991 and increased to \$6.2 billion in 1992, still less than 1990 net sales value. The companies realized a combined operating income of \$414 million in 1990, incurred an operating loss of \$36 million in 1991, and realized an operating income of \$79 million in 1992. Operating income (loss) margins, as a ratio to net sales, were 6.6 percent in 1990, (0.7) percent in 1991, and 1.3 percent in 1992.

Table 31

Income-and-loss experience of U.S. producers¹ on their trade-only operations producing cold-rolled products, fiscal years 1990-92

Item	1990	1991	1992
Value (1,000 dollars)			
Trade sales.....	5,623,156	4,656,530	5,311,820
Cost of goods sold.....	5,210,061	4,657,208	5,293,798
Gross profit or (loss).....	413,095	(678)	18,022
Selling expenses.....	57,602	57,134	63,877
General and administrative expenses.....	169,490	150,389	165,721
Operating income or (loss)...	186,003	(208,201)	(211,576)
Startup or shutdown expense..	7,790	98,469	90,687
Interest expense.....	104,956	107,523	117,204
Other income or (expense), net.....	10,109	(3,307)	(10,855)
Net income or (loss) before income taxes.....	83,366	(417,500)	(430,322)
Depreciation and amortization.....	240,989	238,175	285,058
Cash flow ²	324,355	(179,325)	(145,264)
Ratio to net sales (percent)			
Cost of goods sold.....	92.7	100.0	99.7
Gross profit or (loss).....	7.3	(³)	0.3
Selling expenses.....	1.0	1.2	1.2
General and administrative expenses.....	3.0	3.2	3.1
Operating income or (loss)...	3.3	(4.5)	(4.0)
Net income or (loss) before income taxes.....	1.5	(9.0)	(8.1)
Number of firms reporting			
Operating losses.....	7	11	10
Net losses.....	9	14	15
Data.....	19	19	19

¹ The producers are ***.

² Cash flow is defined as net income or loss plus depreciation and amortization.

³ Less than (0.05) percent.

Note: Some items classified as cost of goods sold or selling, general and administrative expenses by the U.S. producers were reclassified to startup/shutdown or "other" expenses by the USITC staff. Major reclassifications included ***'s expenses (\$*** in 1991 and \$*** in 1992) and ***'s expenses (\$*** million in 1991) and expenses (\$*** in 1992).

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 32

Income-and-loss experience of U.S. producers on their trade-only operations producing cold-rolled products, by firms, fiscal years 1990-92

* * * * *

Table 33

Income-and-loss experience (on a per-short-ton basis) of U.S. producers¹ on their trade-only operations producing cold-rolled products, fiscal years 1990-92

<i>(Per short ton)</i>			
Item	1990	1991	1992
Trade sales.....	\$471.98	\$449.60	\$436.97
Cost of goods sold.....	437.31	449.67	435.49
Gross profit or (loss).....	34.67	(0.07)	1.48
Selling expenses.....	4.83	5.52	5.25
General and administrative expenses.....	14.23	14.52	13.63
Operating income or (loss)...	15.61	(20.10)	(17.41)

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 34

Production costs of U.S. producers on their operations producing cold-rolled products, fiscal years 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Cold-rolled.....	25,126	21,631	24,329
Hot-rolled product:			
Transferred from hot-rolled operations.....	26,976	22,546	25,610
Purchased.....	908	936	937
Trade sales.....	11,914	10,357	12,156
Company transfers.....	12,799	11,349	12,404

Table continued on next page.

Table 34--Continued

Production costs of U.S. producers on their operations producing cold-rolled products, fiscal years 1990-92

Item	1990	1991	1992
<hr/>			
	<hr/> Value (1,000 dollars) <hr/>		
Hot-rolled product:			
Transferred from hot-rolled operations.....	7,750,448	6,691,571	7,433,311
Purchased.....	363,015	341,127	329,898
Cold reduction rolling (with pickling.....)	805,000	680,861	687,318
Annealing.....	386,936	312,546	357,205
Temper rolling.....	317,847	251,878	296,556
Shearing.....	19,207	13,175	16,977
Other.....	677,043	688,933	868,214
Total production cost....	10,319,496	8,980,091	9,989,479
Change in finished goods inventory.....	(154,913)	72,053	52,212
Total production cost and inventory change.....	10,164,583	9,052,144	10,041,691
<hr/>			
	<hr/> Unit production cost (per short ton) <hr/>		
Hot-rolled product:			
Transferred from hot-rolled operations.....	\$287.31	\$296.80	\$290.25
Purchased.....	377.31	348.24	333.97
Trade sales.....	437.31	449.67	435.49
Company transfers.....	387.10	387.25	382.77

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 35

Income-and-loss experience of U.S. producers¹ on their operations producing cold-rolled products, fiscal years 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Trade sales.....	11,914	10,357	12,156
Company transfers.....	12,799	11,349	12,404
Total.....	24,713	21,706	24,560
<i>Value (million dollars)</i>			
Net sales:			
Trade sales.....	5,623	4,657	5,312
Company transfers.....	5,421	4,428	4,813
Total.....	11,044	9,084	10,125
Cost of goods sold.....	10,165	9,052	10,042
Gross profit.....	880	32	83
Selling expenses.....	58	57	64
General and administrative expenses.....	444	422	416
Operating income or (loss)...	378	(447)	(397)
<i>Ratio to net sales (percent)</i>			
Cost of goods sold.....	92.0	99.6	99.2
Gross profit.....	8.0	0.4	0.8
Selling expenses.....	0.5	0.6	0.6
General and administrative expenses.....	4.0	4.6	4.1
Operating income or (loss)...	3.4	(4.9)	(3.9)
<i>Number of firms reporting</i>			
Operating losses.....	6	11	10
Data.....	19	19	19

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 36

Income-and-loss experience of U.S. producers¹ on their trade-only operations producing corrosion-resistant products, fiscal years 1990-92

Item	1990	1991	1992
Value (1,000 dollars)			
Trade sales.....	6,251,854	5,393,212	6,153,310
Cost of goods sold.....	5,562,239	5,153,025	5,804,027
Gross profit.....	689,615	240,187	349,283
Selling expenses.....	58,035	56,956	59,070
General and administrative expenses.....	217,517	219,389	211,528
Operating income or (loss)...	414,063	(36,158)	78,685
Startup or shutdown expense..	6,560	78,504	139,825
Interest expense.....	88,436	105,812	138,255
Other income or (expense), net.....	5,826	(10,517)	(4,650)
Net income or (loss) before income taxes.....	324,893	(230,991)	(204,045)
Depreciation and amortization.....	228,784	235,517	276,362
Cash flow ²	553,677	4,526	72,317
Ratio to net sales (percent)			
Cost of goods sold.....	89.0	95.5	94.3
Gross profit.....	11.0	4.5	5.7
Selling expenses.....	0.9	1.1	1.0
General, and administrative expenses.....	3.5	4.1	3.4
Operating income or (loss)...	6.6	(0.7)	1.3
Net income or (loss) before income taxes.....	5.2	(4.3)	(3.3)
Number of firms reporting			
Operating losses.....	1	9	5
Net losses.....	4	11	12
Data.....	17	18	18

¹ The producers are ***.

² Cash flow is defined as net income or loss plus depreciation and amortization.

Note: Some items classified as cost of goods sold and selling, general, and administrative expenses by the U.S. producers were reclassified to startup/shutdown expenses and "other" expenses by the USITC staff. Major reclassifications included ***'s expenses (\$*** in 1991 and \$*** in 1992) and ***'s expenses (\$*** million in 1991) and expenses (\$*** in 1992). ***'s expenses could not be specifically determined; thus, no reclassification was made.

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Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Selected income-and-loss data of the U.S. producers on their operations producing corrosion-resistant products, by company, are presented in table 37. Sixteen of the 18 companies incurred decreases in net sales in 1991 compared to 1990. Fifteen of the companies showed improvement in net sales in 1992 compared to 1991, whereas 11 companies had lower net sales in 1992 compared to 1990. Sixteen of the 18 companies incurred decreases in operating income margins in 1991 compared to 1990, and 14 companies had decreases in operating income margins when comparing 1992 to 1990.

Table 37

Income-and-loss experience of U.S. producers on their trade-only operations producing corrosion-resistant products, by firms, fiscal years 1990-92

* * * * *

Income-and-loss data on a per-short-ton basis for the producers of corrosion-resistant products are shown in table 38. The average net sales value decreased in each comparative year, whereas the cost of goods sold and selling, general, and administrative expenses increased from 1990 to 1991 and then decreased in 1992. Any analysis of corrosion-resistant products on a per-short-ton basis may be affected by the mix of products between periods and from company to company. Production costs of the U.S. producers on their operations producing corrosion-resistant products are shown in table 39.

Table 38

Income-and-loss experience (on a per-short-ton basis) of U.S. producers¹ on their trade-only operations producing corrosion-resistant products, fiscal years 1990-92

(Per short ton)			
Item	1990	1991	1992
Trade sales.....	\$604.80	\$591.36	\$574.86
Cost of goods sold.....	538.09	565.02	542.23
Gross profit.....	66.71	26.34	32.63
Selling expenses.....	5.61	6.25	5.52
General and administrative expenses.....	21.04	24.06	19.76
Operating income or (loss)...	40.06	(3.96)	7.35

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 39

Production costs of U.S. producers on their operations producing corrosion-resistant products, fiscal years 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Corrosion-resistant.....	10,914	9,496	10,989
Cold-rolled product:			
Transferred from cold-rolled operations.....	***	***	***
Purchased.....	***	***	***
Coating:			
Hot dip (including galvanneal).....	7,696	6,658	7,328
Electrolytic.....	2,721	2,557	3,191
Trade sales.....	10,337	9,121	10,704
<i>Value (1,000 dollars)</i>			
Company transfers.....	***	***	***
Cold-rolled product:			
Transferred from cold-rolled operations.....	***	***	***
Purchased.....	***	***	***
Annealing.....	***	***	***
Coating:			
Hot dip (including galvanneal).....	823,765	683,705	756,223
Electrolytic.....	275,030	286,046	313,557
Other.....	485,069	651,685	715,180
Total production cost....	5,851,962	5,352,126	5,967,521
Change in finished goods inventory.....	(71,772)	5,250	(8,510)
Total production cost and inventory change.....	5,780,190	5,357,376	5,959,011
<i>Unit production cost (per short ton)</i>			
Cold-rolled product:			
Transferred from cold-rolled operations.....	\$***	\$***	\$***
Purchased.....	***	***	***
Coating:			
Hot dip (including galvanneal).....	103.58	99.73	98.87
Electrolytic.....	101.08	111.87	98.26
Trade sales.....	538.09	564.96	542.23
Company transfers.....	482.19	503.33	450.54

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Income-and-loss data of the producers of corrosion-resistant products for combined trade sales and company transfers are shown in table 40. The net sales value decreased from \$6.5 billion in 1990 to \$5.6 billion in 1991 and then increased to \$6.3 billion in 1992, still less than the net sales of 1990. Company transfers are a minor portion of total sales; therefore combined trade sales and company transfers followed the same general trends as trade sales only.

Table 40

Income-and-loss experience of U.S. producers¹ on their operations producing corrosion-resistant products, fiscal years 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Trade sales.....	10,337	9,120	10,704
Company transfers.....	452	406	344
Total.....	10,789	9,526	11,048
<i>Value (1,000 dollars)</i>			
Net sales:			
Trade sales.....	6,251,854	5,393,212	6,153,310
Company transfers.....	261,206	221,880	158,979
Total.....	6,513,060	5,615,092	6,312,289
Cost of goods sold.....	5,780,191	5,357,376	5,959,012
Gross profit.....	732,869	257,716	353,277
Selling expenses.....	58,035	56,956	59,070
General and administrative expenses.....	228,062	228,703	217,374
Operating income or (loss)...	446,772	(27,942)	76,833
<i>Ratio to net sales (percent)</i>			
Cost of goods sold.....	88.7	95.4	94.4
Gross profit.....	11.3	4.6	5.6
Selling expenses.....	0.9	1.0	0.9
General, and administrative expenses.....	3.5	4.1	3.4
Operating income or (loss)...	6.9	(0.5)	1.2
<i>Number of firms reporting</i>			
Operating losses.....	1	9	5
Data.....	17	18	18

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Research and Development

Research and development expenses for iron and steelmaking and for the subject flat-rolled carbon steel products are shown in table 41. Four companies reported research and development expenses for plate, 9 for hot-rolled products, and 11 each for cold-rolled products and corrosion-resistant products. Research and development expenses for 1992 decreased for all products compared to 1991 and for all products except plate when compared to expenses of 1990.

Table 41

Research and development expenses of U.S. producers¹ of certain flat-rolled carbon steel products, by products, fiscal years 1990-92

(1,000 dollars)			
Item	1990	1991	1992
Iron and steelmaking.....	30,834	29,190	26,950
Plate.....	4,764	5,069	5,049
Hot-rolled products.....	12,675	11,459	10,045
Cold-rolled products.....	13,969	13,678	13,349
Corrosion-resistant products.	26,382	22,162	20,232

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Investment in Productive Facilities

The investments in property, plant, and equipment for the reporting producers are shown in table 42. Seven producers provided fixed assets for plate, 13 for hot-rolled products, 16 for cold-rolled products, and 15 for corrosion-resistant products. The original cost of property, plant, and equipment increased steadily for all periods for all products. The return on book value and the return on total assets are not presented because of the difficulty in aggregating upstream assets of produced products.

Capital Expenditures

Capital expenditures are shown in table 43. Eight companies provided capital expenditures for plate, 17 for hot-rolled products, 18 for cold-rolled products, and 17 for corrosion-resistant products. Capital expenditures decreased in each comparative year for all products except iron and steelmaking and plate in 1991.

Table 42

Value of assets of U.S. producers' operations producing certain flat-rolled carbon steel products, by products, fiscal years 1990-92

(Million dollars)			
Item	1990	1991	1992
Iron and steelmaking:			
Fixed assets:			
Original cost.....	8,408	8,977	9,743
Book value.....	3,882	4,161	4,515
Total assets ²	7,387	7,511	8,101
Plate:			
Fixed assets:			
Original cost.....	765	824	855
Book value.....	285	312	306
Total assets ²	492	579	512
Hot-rolled:			
Fixed assets:			
Original cost.....	2,419	2,849	2,840
Book value.....	968	1,339	1,286
Total assets ²	1,858	2,209	2,100
Cold-rolled:			
Fixed assets:			
Original cost.....	2,502	2,478	2,611
Book value.....	1,138	1,134	1,083
Total assets ²	1,998	1,868	1,791
Corrosion-resistant:			
Fixed assets:			
Original cost.....	1,958	2,301	3,809
Book value.....	985	1,230	1,910
Total assets ²	1,495	1,711	2,660

¹ The producers are ***.

² Defined as book value of fixed assets plus current and noncurrent assets. Total establishment assets are apportioned, by firm, to product groups on the basis of the ratios of the respective book values of fixed assets.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 43

Capital expenditures by U.S. producers¹ of certain flat-rolled carbon steel products, by products, fiscal years 1990-92

(1,000 dollars)			
Item	1990	1991	1992
Iron and steelmaking:			
Land, building, and leasehold improvements.....	114,945	27,093	7,987
Machinery, equipment, and fixtures.....	1,045,429	1,142,333	875,844
Total.....	1,160,374	1,169,426	883,831
Plate:			
Land, building, and leasehold improvements.....	869	3,410	3,167
Machinery, equipment, and fixtures.....	32,173	61,517	26,100
Total.....	33,042	64,927	29,267
Hot-rolled:			
Land, building, and leasehold improvements.....	3,285	2,206	4,763
Machinery, equipment, and fixtures.....	279,356	227,376	135,647
Total.....	282,641	229,582	140,410
Cold-rolled:			
Land, building, and leasehold improvements.....	13,010	3,628	1,691
Machinery, equipment, and fixtures.....	335,201	209,800	184,652
Total.....	348,211	213,428	186,343
Corrosion-resistant:			
Land, building, and leasehold improvements.....	59,490	46,359	5,268
Machinery, equipment, and fixtures.....	497,476	494,261	240,727
Total.....	556,966	540,620	245,995

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Impact of Joint Ventures or Projects

The producers were requested to provide a description of the impact of foreign entities in joint ventures or projects on the firm's ability to raise capital. In addition, the firms were requested to indicate the amount of capital expenditures made to joint ventures or projects by fiscal year. Their comments follow.

* * * * *

Current and Planned Investment Projects

The producers were requested to provide a description of current and planned projects. A summary is provided in the following tabulation:

* * * * *

Environmental Expenditures

The producers were requested to provide capital expenditures for environmental purposes and environmental expenses included in operations. Six companies provided such expenditures for plate, 11 for hot-rolled products, and 16 each for cold-rolled and corrosion-resistant products (table 44).

Table 44

Environmental expenditures by U.S. producers¹ of certain flat-rolled carbon steel products, by products, fiscal years 1990-92

(1,000 dollars)			
Item	1990	1991	1992
Iron and steelmaking:			
Capital expenditures.....	159,043	273,955	149,160
Expensed in operations.....	318,726	329,259	302,420
Plate:			
Capital expenditures.....	***	***	***
Expensed in operations.....	3,822	3,680	3,706
Hot-rolled:			
Capital expenditures.....	16,606	4,629	4,867
Expensed in operations.....	33,456	25,893	25,706
Cold-rolled:			
Capital expenditures.....	11,747	11,552	10,813
Expensed in operations.....	29,234	24,821	27,136
Corrosion-resistant:			
Capital expenditures.....	7,274	10,512	4,323
Expensed in operations.....	23,907	23,454	24,187

¹ The producers are ***.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Capital and Investment

The Commission requested U.S. producers to describe any actual or potential negative effects of imports of certain flat-rolled carbon steel products from the subject countries on their firm's growth, investment, ability to raise capital, or existing development and production efforts (including efforts to develop a derivative or improved version of certain flat-rolled carbon steel products). The producers' responses are presented in appendix G.

CONSIDERATION OF THE QUESTION OF THREAT OF MATERIAL INJURY
TO AN INDUSTRY IN THE UNITED STATES

Section 771(7)(F)(i) of the Tariff Act of 1930 (19 U.S.C. § 1677(7)(F)(i)) provides that--

In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the merchandise, the Commission shall consider, among other relevant economic factors¹²⁹--

(I) If a subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the subsidy is an export subsidy inconsistent with the Agreement),

(II) any increase in production capacity or existing unused capacity in the exporting country likely to result in a significant increase in imports of the merchandise to the United States,

(III) any rapid increase in United States market penetration and the likelihood that the penetration will increase to an injurious level,

(IV) the probability that imports of the merchandise will enter the United States at prices that will have a depressing or suppressing effect on domestic prices of the merchandise,

(V) any substantial increase in inventories of the merchandise in the United States,

(VI) the presence of underutilized capacity for producing the merchandise in the exporting country,

(VII) any other demonstrable adverse trends that indicate the probability that the importation (or sale for importation) of the merchandise (whether or not it is actually being imported at the time) will be the cause of actual injury,

¹²⁹ Section 771(7)(F)(ii) of the act (19 U.S.C. 1677(7)(F)(ii)) provides that "Any determination by the Commission under this title that an industry in the United States is threatened with material injury shall be made on the basis of evidence that the threat of material injury is real and that actual injury is imminent. Such a determination may not be made on the basis of mere conjecture or supposition."

(VIII) the potential for product-shifting if production facilities owned or controlled by the foreign manufacturers, which can be used to produce products subject to investigation(s) under section 701 or 731 or to final orders under section 706 or 736, are also used to produce the merchandise under investigation,

(IX) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both), and

(X) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the like product.¹³⁰

The available information on the nature of the subsidies found by the Department of Commerce (item (I) above) is presented in the section of this report entitled "Nature and Extent of Subsidies and LTFV Sales;" information on the volume, U.S. market penetration, and pricing of imports of the subject merchandise (items (III) and (IV) above) is presented in the section entitled "Consideration of the Causal Relationship Between Imports of the Subject Merchandise and the Alleged Material Injury;" and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts (item (X)) is presented in the section entitled "Consideration of Material Injury to an Industry in the United States." Available information follows on U.S. inventories of the subject products (item (V)); foreign producers' operations, including the potential for "product-shifting" (items (II), (VI), and (VIII) above); any other threat indicators, if applicable (item (VII) above); and any dumping in third-country markets. Other threat indicators have not been alleged or are otherwise not applicable.

¹³⁰ Section 771(7)(F)(iii) of the act (19 U.S.C. 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other GATT member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

U.S. Importers' Inventories

Forty-one of the 180 firms responding to the Commission's importers' questionnaire reported maintaining end-of-period inventories of imports of certain flat-rolled carbon steel products. These data are presented below.

Plate

From 1990 to 1992, end-of-period inventories of imports of plate from the 14 subject countries declined sharply, falling in 1992 to less than one-third of their 1990 level (table 45). Among the countries, only importers of plate from Canada and Poland increased their inventory levels during the period examined.

The ratio of end-of-period inventories of plate to reported preceding-period U.S. shipments of imports from the 14 subject countries decreased from 30 percent in 1990 to 17 percent in 1992. Importers of plate from Spain and the United Kingdom had the greatest propensity to hold inventories, whereas importers from *** reported holding no inventories during the 3-year period.

Hot-rolled Products

End-of-period inventories of hot-rolled products imported from the eight subject countries moved upward slightly between 1990 and 1991, then fell back a lesser amount, by 7 percent, between 1991 and 1992 (table 46). In relation to preceding-period shipments, however, importers from these sources exhibited a general declining trend during the 3-year period with regard to their inventory levels. Except for end-of-year 1992, importers of hot-rolled products from ***, one of the largest subject suppliers, reported no inventories during the period examined.

Cold-rolled Products

From 1990 to 1992, end-of-period inventories of cold-rolled products from the 12 subject countries declined slightly overall, with most of the decline occurring between 1990 and 1991 (table 47). Inventory levels were particularly high for imports from Germany, although these levels were lower at the end of the period examined. Other marked declines in inventory holdings were for imports from Italy and Brazil. On the other hand, inventories of imports from Argentina increased markedly.

As a ratio to preceding-period shipments, inventories of imports from subject sources showed little movement during the 3-year period. Inventories of imports from Austria, Germany, and Italy (except in 1992) were particularly high in relation to preceding-period shipments.

Table 45

Plate: End-of-period inventories of U.S. importers, by sources, 1990-92

Item	1990	1991	1992
<u>Quantity (short tons)</u>			
Belgium.....	8,110	***	***
Brazil.....	4,919	8,163	3,422
Canada.....	***	3,138	***
Finland.....	7,715	5,698	1,044
France.....	***	***	***
Germany.....	***	***	***
Italy.....	***	***	***
Korea.....	***	***	***
Mexico.....	***	***	***
Poland.....	337	***	***
Romania.....	***	***	***
Spain.....	***	***	***
Sweden.....	***	***	***
United Kingdom.....	***	***	***
Total.....	68.875	49.726	22.304
<u>Ratio to U.S. shipments of imports (percent)</u>			
Belgium.....	24.1	***	***
Brazil.....	13.7	22.6	9.1
Canada.....	***	13.9	***
Finland.....	14.1	19.6	9.4
France.....	***	***	***
Germany.....	***	***	***
Italy.....	***	***	***
Korea.....	***	***	***
Mexico.....	***	***	***
Poland.....	10.3	***	***
Romania.....	***	***	***
Spain.....	***	***	***
Sweden.....	***	***	***
United Kingdom.....	***	***	***
Average.....	30.0	23.7	16.6

¹ Not applicable.

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 46

Hot-rolled products: End-of-period inventories of U.S. importers, by sources, 1990-92

Item	1990	1991	1992
<u>Quantity (short tons)</u>			
Belgium.....	***	***	***
Brazil.....	10,153	14,576	3,452
Canada.....	8,258	9,330	16,932
France.....	***	***	***
Germany.....	12,888	20,530	***
Japan.....	13,488	6,069	8,566
Korea.....	***	***	***
Netherlands.....	***	***	***
Total.....	44,885	50,645	47,064
<u>Ratio to U.S. shipments of imports (percent)</u>			
Belgium.....	***	***	***
Brazil.....	24.2	28.3	6.1
Canada.....	12.7	19.1	7.3
France.....	***	***	***
Germany.....	9.9	14.0	***
Japan.....	11.5	5.8	9.8
Korea.....	***	***	***
Netherlands.....	***	***	***
Average.....	12.1	13.8	9.3

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 47

Cold-rolled products: End-of-period inventories of U.S. importers, by sources, 1990-92

Item	1990	1991	1992
<u>Quantity (short tons)</u>			
Argentina.....	***	***	***
Austria.....	***	***	***
Belgium.....	***	***	***
Brazil.....	16,439	13,162	***
Canada.....	9,780	12,342	13,687
France.....	***	***	***
Germany.....	***	***	***
Italy.....	***	***	***
Japan.....	14,056	12,034	19,392
Korea.....	***	***	***
Netherlands.....	***	***	***
Spain.....	***	***	***
Total.....	117.123	109.361	109.917
<u>Ratio to U.S. shipments of imports (percent)</u>			
Argentina.....	***	***	***
Austria.....	***	***	***
Belgium.....	***	***	***
Brazil.....	16.7	16.5	***
Canada.....	20.7	28.0	26.2
France.....	***	***	***
Germany.....	***	***	***
Italy.....	***	***	***
Japan.....	5.2	4.7	8.4
Korea.....	***	***	***
Netherlands.....	***	***	***
Spain.....	***	***	***
Average.....	14.9	14.4	16.5

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Corrosion-resistant products

End-of-period inventories of corrosion-resistant products from the 10 countries subject to investigation edged upward in 1991, then jumped nearly 60 percent in 1992 (table 48). Notable increases in such inventories between 1991 and 1992 were associated with imports from Australia, Canada, Germany, Japan, and Mexico. In relation to preceding-period shipments, importers from these countries generally increased their inventory holdings (except for Brazil). Overall, ratios of inventories of imports from subject sources to such shipments increased by 5 percentage points over the 3-year period.

As seen by comparing the tables above to table 17, importers generally tend to keep higher levels of inventories than do U.S. producers. This reflects the fact that many reporting importers are steel service centers that tend to keep large stocks of commodity items.

In its questionnaire, the Commission requested importers to list any expected deliveries of subject products from the 20 subject countries after December 31, 1992. Responding importers reported that 1,028,771 tons of certain flat-rolled carbon steel products would be entered into the United States after December 31, 1992, of which 16,408 tons were specifically identified as plate, 36,088 tons as cold-rolled products, 108,708 tons as corrosion-resistant products, and 198,139 tons as hot-rolled products.¹³¹

Ability of Foreign Producers to Generate Exports and the Availability of Export Markets Other Than the United States

The Commission requested information in its foreign producer's questionnaire on foreign production, capacity, inventories, and distribution of shipments from producers of certain flat-rolled carbon steel products in Argentina, Australia, Austria, Belgium, Brazil, Canada, Finland, France, Germany, Italy, Japan, Korea, Mexico, the Netherlands, New Zealand, Poland, Romania, Spain, Sweden, and the United Kingdom. For the most part, data presented here were supplied by counsel for these firms; however, in instances when complete coverage of the foreign industry was not available by this route, the Commission requested that U.S. embassies supply data as well.

The Industry in Argentina (Cold-rolled Products)

According to the petition, two firms, SOMISA and Propulsora, produced cold-rolled products in Argentina during the period examined. Counsel for these firms reported in their response to the Commission's questionnaire, however, that in November 1992, SOMISA ceased production of steel products. Most of its productive assets were used to form a new corporation, Aceros Parana, S.A.I.C. (Aceros Parana), which thereupon resumed production and export of the subject merchandise. Propulsora, which stopped shipping cold-rolled products to the United States in 1991, is the majority shareholder of

¹³¹ The remaining tonnage was not specifically identified by product. I-94

Table 48

Corrosion-resistant products: End-of-period inventories of U.S. importers, by sources, 1990-92

Item	1990	1991	1992
<u>Quantity (short tons)</u>			
Australia.....	***	***	***
Brazil.....	***	***	***
Canada.....	13,997	21,200	32,897
France.....	***	***	***
Germany.....	***	***	***
Japan.....	48,720	53,013	67,702
Korea.....	1,586	1,700	***
Mexico.....	***	***	***
New Zealand.....	***	***	***
Sweden.....	***	***	***
Total.....	123,769	133,397	211,488
<u>Ratio to U.S. shipments of imports (percent)</u>			
Australia.....	***	***	***
Brazil.....	***	***	***
Canada.....	23.4	28.0	16.6
France.....	***	***	***
Germany.....	***	***	***
Japan.....	7.1	8.2	11.2
Korea.....	13.3	28.2	***
Mexico.....	***	***	***
New Zealand.....	***	***	***
Sweden.....	***	***	***
Average.....	12.1	13.2	17.0

¹ Not applicable.

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

this firm.¹³² Data compiled from the individual responses of SOMISA, Propulsora, and Aceros Parana, which account for *** percent of Argentine cold-rolled exports to the United States (based on official U.S. import statistics), are presented in table 49.

Table 49

Cold-rolled products: Argentina's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Argentina's production of cold-rolled products *** in 1991 by *** percent and *** its *** in 1992; 1993 projections indicate ***. Reported capacity *** throughout the period, ***. ***.

Reported exports to the United States *** between 1990 and 1991, then *** in 1992 to *** percent *** their 1990 level; as a share of production, they *** from *** to *** percent. Home market shipments, accounting for *** total shipments in 1990, accounted for over *** percent of shipments in 1992.

Counsel for the Argentine producers ***.¹³³ These capacity ***, in addition to ***. Argentina is also currently subject to a countervailing duty order (issued in 1984) on its exports of cold-rolled products to the United States.¹³⁴

The Industry in Australia (Corrosion-resistant Products)

BHP is the only producer of corrosion-resistant products in Australia. This firm, through counsel, responded to the Commission's request for data (table 50).¹³⁵ Submitted data account for *** percent, by volume, of 1992 exports of corrosion-resistant products from Australia to the United States, based on official import statistics.

Table 50

Corrosion-resistant products: Australia's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

BHP indicated that corrosion-resistant products made up *** percent of its total sales during its most recent fiscal year. As seen from the table,

¹³² Accordingly, counsel's view was that Propulsora is, in effect, the only current Argentine producer and exporter of cold-rolled products.

¹³³ ***.

¹³⁴ Annual reviews have been completed on this order through calendar year 1987.

¹³⁵ BHP also submitted separate data on its facilities producing aluminum-zinc alloy. Those data are presented in app. H.

BHP's production of corrosion-resistant products *** between 1990 and 1991, then *** in 1992, *** to approximately *** percent *** its 1990 level. Production is expected to *** in 1993. Capacity to produce such products *** during the period examined. Capacity utilization ratios *** in 1991, but *** in 1992; utilization rates are expected to *** percent in 1993.

Exports to the United States ***. BHP predicts that, in 1993, exports to the United States will ***. As a share of production and of total shipments, exports to the United States *** during the period examined.

During the period examined, BHP purchased New Zealand Steel, an exporter that is also subject to these investigations with regard to corrosion-resistant products.¹³⁶ In addition, BHP is the owner of patents on "galvalume" steel, an aluminum-zinc-alloy-coated product traded worldwide. Although some of the patents have now expired, BHP continues to license other patents related to the technology and "know-how" required for production through its subsidiary, BIEC International.

The Industry in Austria (Cold-rolled Products)

The petitioner identified a sole producer of cold-rolled products in Austria: Voest-Alpine Stahl AG, along with its wholly owned subsidiary, Voest-Alpine Stahl Linz GmbH (Voest-Alpine).¹³⁷ Cold-rolled products made up *** percent of sales by Voest-Alpine in its most current fiscal year. Data on Voest-Alpine's operations, accounting for *** percent of Austrian exports of cold-rolled products to the United States in 1992, were provided by its counsel, and are presented in table 51.

Table 51

Cold-rolled products: Austria's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

As seen from the table, Austrian production of cold-rolled products *** between 1990 and 1991, then *** in 1992, and is expected to *** in 1993. Capacity to produce such products also *** throughout the period. Capacity utilization ratios, although *** , were *** during the period examined. Exports to the United States *** in 1991 to ***; in 1992, such exports totalled ***.

The Austrian industry apparently produces principally ***. As a share of production, exports to the United States *** from *** percent in 1990 to *** percent in 1992. As the share of shipments going to the United States *** , the share going to other countries *** , reaching over *** percent of total shipments in 1992.¹³⁸

¹³⁶ *Metal Bulletin*, Apr. 1, 1993, p. 20.

¹³⁷ Voest-Alpine is owned by the Government of Austria.

¹³⁸ Third-country markets include ***.

The Industry in Belgium (Plate, Hot-rolled Products, and Cold-rolled Products)

Clabecq, a Belgian producer of plate, and Sidmar, a producer of hot-rolled and cold-rolled products, submitted data through counsel in response to the Commission's questionnaire. Two of the three firms named in the petition, Fabfer and Cockerill, in addition to a third firm, Usines Gustave Boel, were not represented by counsel. The Commission, however, received data on these firms through the American Embassy in Brussels. Data submitted by these firms, Sidmar, and Clabecq are presented in tables 52-54.

Plate

Reported exports of plate from Belgium make up *** percent, by quantity, of total 1992 imports of plate from Belgium to the United States, based on official U.S. import statistics. Belgian production of plate *** in 1991, before *** in 1992, for *** during 1990-92 of *** percent; 1993 projections indicate *** in production (table 52). Reported capacity *** percent between 1991 and 1992.¹³⁹

Table 52

Plate: Belgium's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Capacity utilization *** throughout the period examined, and is expected to *** in 1993. Reported exports to the United States *** between 1990 and 1991, and continued *** in 1992. As a share of total shipments, Belgium's exports to the United States *** during the investigation period, from *** percent in 1990 to *** percent in 1992. Shipments of plate to third countries, which constituted *** throughout the period, *** their share of total shipments. In August 1992, Canada issued an antidumping duty order on imports of carbon steel plate from Belgium.

Hot-rolled products

Reported exports to the United States *** from *** short tons in 1990 to *** tons in 1992, and Belgian firms *** (table 53). Belgian production of hot-rolled products *** from 1990 to 1992. By contrast, capacity *** between 1990 and 1992; thus, utilization levels *** over the 3-year period. As a share of total shipments, exports to the United States *** throughout the period examined, with ***.

¹³⁹ The *** in capacity in 1992 stems from a restructuring plan that Clabecq signed with Belgian trade unions in February 1992. This agreement ***.

Table 53

Hot-rolled products: Belgium's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

In 1990, Mexico conducted an antidumping investigation concerning imports of hot-rolled and cold-rolled products from the European Community. The investigation resulted in a negative determination, and no antidumping duty order was issued.¹⁴⁰

Cold-rolled products

Data provided by Sidmar, Cockerill, and Usines Gustave Boel concerning their cold-rolling facilities constituted *** percent, by volume, of exports in 1992 of cold-rolled products from Belgium to the United States. Belgian cold-rolled production ***, by *** percent, during the 3-year period (table 54). Capacity *** throughout the period; thus, utilization levels showed ***. Although production is expected *** in 1993, utilization levels will ***.¹⁴¹ Exports to the United States *** from 1990 to 1991, and *** in 1992. As a share of production, such exports *** between 1990 and 1992. Shipments to third countries held *** of total shipments during the period examined.

Table 54

Cold-rolled products: Belgium's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

The Industry in Brazil (Plate, Hot-rolled Products, Cold-rolled Products, and Corrosion-resistant Products)

The petition named six firms producing certain flat-rolled carbon steel products in Brazil. Three of these firms, CSN, COSIPA and USIMINAS, provided data through their counsel in response to the Commission's questionnaire.¹⁴²

¹⁴⁰ The determination was negative because no dumping was found, nor were the imports found to cause injury.

¹⁴¹ 1993 production is projected to ***.

¹⁴² CSN, the only Brazilian producer of corrosion-resistant products, was originally not represented by counsel. Thus, the Commission requested the American Embassy in Brasilia to provide data on the operations of the three firms named in the petition, including those not represented by counsel. The embassy supplied limited data on production and capacity, but such data were not broken out by product (i.e., plate, hot-rolled products, etc.). Subsequently, CSN retained counsel and submitted data on hot-rolled, cold-rolled, and corrosion-resistant products through counsel.

Plate

Data reported by COSIPA and USIMINAS account for *** percent, by quantity, of 1992 official statistics for imports from plate from Brazil. As can be seen from table 55, Brazilian firms' production of plate *** between 1990 and 1991, and *** between 1991 and 1992, for *** of *** percent. Between 1990 and 1992, as production ***, capacity utilization grew from *** to *** percent. Exports to the United States *** between 1990 and 1991, before *** in 1992 to *** their 1990 level. Brazil ***. Such exports accounted for *** of production between 1990 and 1992, with this share *** over the 3-year period. In January 1993, Canada issued an antidumping duty order against imports of plate from Brazil.

Table 55

Plate: Brazil's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * * * *

Hot-rolled products

Data reported by USIMINAS, CSN, and COSIPA, accounting for *** percent of exports of hot-rolled products to the United States in 1992, are presented in table 56. Production in Brazil of hot-rolled products *** between 1990 and 1992, and is expected to *** in 1993. Production levels in 1992 were approximately *** percent *** than those of 1990. Capacity also *** during the period examined with utilization levels *** as ***. As a share of production, exports to the United States *** throughout the period examined. Brazil ***.

Table 56

Hot-rolled products: Brazil's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * * * *

Cold-rolled products

USIMINAS, CSN, and COSIPA provided data to the Commission on their production of cold-rolled products. Such data represent *** percent of the volume of exports of such products to the United States in 1992, based on official U.S. import statistics.

Cold-rolled production in Brazil ***, by *** percent, during the 3-year period (table 57). Capacity also *** throughout the period, but because production ***, utilization levels ***. Exports to the United States *** from 1990 to 1991, then *** in 1992. As a share of production, such exports *** between 1990 and 1991, then *** by over *** percentage points in 1992. By contrast, the percentage of total shipments consisting of shipments to third countries *** between 1990 and 1992.

Table 57

Cold-rolled products: Brazil's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Corrosion-resistant products

CSN was the only producer of corrosion-resistant products in Brazil during the period examined. CSN submitted data through counsel; such data, accounting for *** percent of the volume of exports to the United States in 1992, according to official U.S. import statistics, are presented in table 58.

Table 58

Corrosion-resistant products: Brazil's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

As seen from the table, CSN's production of corrosion-resistant products *** between 1990 and 1991, then *** in 1992, *** to approximately *** percent *** its 1990 level. Production is *** in 1993. Capacity to produce such products *** during the period examined. Capacity utilization ratios *** in 1991, but *** in 1992; utilization rates *** in 1993.

Exports to the United States *** during the period examined. CSN ***. As a share of production and of total shipments, exports to the United States *** during the period examined.

Brazil has been rapidly privatizing its steel industry during the period examined. State-owned steel firms sold during 1991-92 included USIMINAS, Cosinor, Acos Finos Piratini, CST, and Acesita. USIMINAS noted in its response that ***.

In April 1993, controlling interest in CSN, Latin America's largest steel mill, was purchased by an investment group for \$1.05 billion.¹⁴³ Preliminary figures show CSN reaching a profit of \$100 million in 1992 with about one-half of its production being used for exports.¹⁴⁴

Other state-owned steel firms to be privatized during 1993 include COSIPA and Acominas. COSIPA is Brazil's fourth-largest steelmaker and for the first half of 1992 showed a loss of \$30 million.¹⁴⁵ Acominas is the seventh-largest steel firm in Latin America, with an annual output of over 2 million tons.¹⁴⁶

¹⁴³ U.S. Department of State telegram, message reference No. 6441, Apr. 6, 1993, Rio de Janeiro.

¹⁴⁴ U.S. Department of State telegram, message reference No. 00352, Jan. 25, 1993, Rio de Janeiro.

¹⁴⁵ U.S. Department of State telegram, message reference No. 00134, Jan. 12, 1993, Sao Paulo.

¹⁴⁶ Metal Bulletin, Feb. 11, 1993.

The Industry in Canada (Plate, Hot-rolled Products, Cold-rolled Products, and Corrosion-resistant Products)

The Commission sent questionnaires to all five firms named in the petition as producing certain flat-rolled carbon steel products in Canada: Algoma, Dofasco, IPSCO, Sidbec-Dosco, and Stelco.¹⁴⁷ These firms, through their respective counsels, provided data on their Canadian operations.

Plate

The Commission received data on Canadian operations producing plate from Algoma, IPSCO, and Stelco.¹⁴⁸ Based on official U.S. import statistics, these data make up *** percent, by volume, of exports of plate from Canada to the United States in 1992.

Canadian production of plate *** by *** percent between 1990 and 1991, *** by *** percent in 1992, and is expected to *** in 1993 (table 59). Capacity *** between 1990 and 1991; ***, utilization levels, which *** throughout the period examined, ***. Exports to the United States *** from 1990 to 1991, but *** in 1992. Such exports are projected to *** in 1993. As a ratio to production, exports to the United States ***, at approximately *** percent between 1990 and 1991, but accounted for nearly *** percent of production in 1992.

Table 59

Plate: Canada's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Algoma reported data both for its current operations (under Algoma Steel, Inc. (ASI)), and for the operations of its former subsidiary, the Algoma Steel Corp., Ltd. (ASCL). Algoma reported that ***. IPSCO ***. IPSCO noted ***. Stelco, ***, indicated that ***.

Hot-rolled products

All five firms responded to the Commission's requests for data concerning hot-rolled products. Data received constitute *** percent, by volume, of 1992 exports of hot-rolled products from Canada to the United States.

¹⁴⁷ Commerce investigated an additional firm, CMP, regarding its exports to the United States of cold-rolled products. Because CMP was not represented by counsel, the Commission did not send a foreign producer's questionnaire to this firm. CMP's related U.S. subsidiary, however, did submit a response to the Commission's U.S. producer and importer questionnaires. Sidbec-Dosco is owned by the Government of the Province of Quebec; the other firms are privately owned.

¹⁴⁸ Dofasco provided limited data on plate. Dofasco noted, however, that ***.

As seen from table 60, Canadian production of hot-rolled products *** in 1991 from its 1990 level, then *** in 1992; the 1992 production levels were *** than those of 1990. Capacity ***; thus, utilization levels ***. As a ratio to production, exports to the United States *** throughout the period examined, with the *** occurring between 1991 and 1992; in 1992, such exports accounted for *** percent of production.

Table 60

Hot-rolled products: Canada's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Algoma reported ***. Dofasco noted that ***.

Cold-rolled products

The Commission received data from four producers of cold-rolled products: Algoma, Dofasco, Sidbec-Dosco, and Stelco. Based on official U.S. import statistics, these firms' exports to the United States constituted *** percent, by volume, of total exports of Canadian cold-rolled products to the United States in 1992.

Canadian cold-rolled production ***, by *** percent, in 1991, then *** in 1992, for *** between 1990 and 1992 of *** percent (table 61). Capacity *** throughout the period; thus, utilization levels ***. Capacity utilization is expected to *** in 1993, however, as production is expected to *** without *** in capacity. Exports to the United States *** from 1990 to 1991, but then *** in 1992 over their 1991 level. As a ratio to production, such exports *** between 1991 and 1992. Home market shipments *** throughout the period, and are expected to *** in 1993.

Sidbec-Dosco reported ***. Stelco indicated ***.

Table 61

Cold-rolled products: Canada's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Corrosion-resistant products

Canadian production of corrosion-resistant products, as reported by Stelco and Dofasco, *** from 1990 to 1991, but then *** in 1992, representing an overall *** of *** percent over its 1990 level (table 62).¹⁴⁹ Capacity, by

¹⁴⁹ Reported data account for *** percent, by quantity, of exports of Canadian corrosion-resistant products to the United States in 1992, based on official U.S. import statistics.

contrast, *** throughout the period, resulting in a *** in capacity utilization in 1991, followed by a *** in 1992 to *** 1990 rate. During 1990-92, home market shipments *** as total exports ***; export *** was accounted for *** by *** in exports to the United States, which *** from approximately *** tons in 1990 to *** tons in 1992. Such exports are projected to ***, but at a *** rate, in 1993. As a ratio to production, such exports constituted *** percent in 1990; by 1992, they accounted for *** percent.

Table 62

Corrosion-resistant products: Canada's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Stelco reported data separately for its conventional galvanizing lines and its brand-new "Z-line," which started operations in July 1991. Stelco asserted that in 1992, this was the only line of its type operating in Canada to produce corrosion-resistant products.¹⁵⁰ ***. For its part, Dofasco noted that it is currently involved in a joint venture with National and its major shareholder, NKK Japan, to produce automotive exposed hot-dipped galvanized steel. The line, with a capacity of *** tons, is to ***.¹⁵¹

The Industry in Finland (Plate)

Only one firm, Rautaruukki Oy, located in Helsinki, produces plate in Finland. Plate makes up approximately *** percent of Rautaruukki's production and it has a related firm, ***, that imports plate into the United States. Rautaruukki operates its plant ***. Rautaruukki accounts for *** percent of exports of plate from Finland to the United States, based on official U.S. import statistics. Principal third-country export markets for Rautaruukki include ***. Data from this firm are presented in table 63.

Table 63

Plate: Finland's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Finland's production of plate *** in 1991 before *** in 1992 by *** percent over the previous year's level; 1993 projections indicate *** in production. Reported capacity *** throughout the period. Capacity utilization *** throughout the period examined, but is expected to *** in 1993. Reported exports to the United States *** between 1990 and 1992, by a total of *** percent; as a ratio to production, they *** from *** percent in 1990 to *** percent in 1992.

¹⁵⁰ For further details on the Z-line, see field visit memorandum of Mar. 22, 1993.

¹⁵¹ Dofasco added that ***.

The Industry in France (Plate, Hot-rolled Products, Cold-rolled Products, and Corrosion-resistant Products)

The Commission sent a questionnaire to Usinor-Sacilor, the largest steel producer in France and the only one named in the petition.¹⁵² The Commission received data from this firm, as well as data provided by Paturle Aciers, a nonintegrated producer of cold-rolled and corrosion-resistant products.¹⁵³

Plate

France's production of plate *** throughout the period examined; 1993 projections indicate *** in production (table 64). Reported capacity *** throughout the period and there are ***. Capacity utilization *** over *** percentage points from 1990 to 1992. Usinor-Sacilor reported that it ***.¹⁵⁴ Reported exports to the United States *** between 1990 and 1992, by a total of *** percent; as a ratio to production, they *** from *** percent in 1990 to *** percent in 1992. Data on plate submitted by Usinor-Sacilor make up *** percent, by volume, of exports of plate from France to the United States in 1992.

Table 64

Plate: France's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Hot-rolled products

Counsel for Usinor-Sacilor responded to the Commission's request for data concerning hot-rolled products. Data received constitute *** percent, by volume, of 1992 exports of hot-rolled products from France to the United States.

As seen from table 65, French production of hot-rolled products *** slightly in 1991 over its 1990 level, then *** in 1992; the 1992 production level was *** percent *** than that of 1990. Capacity *** over the 3-year period; therefore, utilization levels ***. Usinor-Sacilor reported that it ***.¹⁵⁵ As a share of production, exports to the United States *** throughout the period examined; in 1993, such exports are projected to account for just under *** percent of production.

¹⁵² Usinor Sacilor is owned by the Government of France.

¹⁵³ Paturle Aciers was not represented by counsel.

¹⁵⁴ Usinor-Sacilor reported, however, that ***.

¹⁵⁵ Usinor-Sacilor reported, however, that ***.

Table 65

Hot-rolled products: France's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

French exports to Canada of hot-rolled products are currently subject to an antidumping investigation. The petition was filed in September 1992.

Cold-rolled products

The Commission received data from two producers of cold-rolled products: Usinor-Sacilor and Paturle Aciers. Based on official U.S. import statistics, these firms' exports to the United States constituted *** percent, by volume, of total exports of French cold-rolled products to the United States in 1992.

France's production of cold-rolled products *** in 1991 by *** percent, then *** in 1992, *** by *** percent from its 1991 level; 1993 projections indicate *** (table 66). Reported capacity *** throughout the period; 1993 projections indicate ***. Because of ***, capacity utilization *** throughout the period examined, and is expected to *** in 1993. Usinor-Sacilor reported that it ***.¹⁵⁶

Table 66

Cold-rolled products: France's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Reported exports to the United States *** between 1990 and 1991, then *** in 1992 at a level *** percent *** their 1990 level; as a share of production, however, they ***. Home market shipments accounted for a *** share of shipments in 1992 than they had in 1990. In October 1992, the Government of Canada instituted an antidumping investigation concerning imports from France of cold-rolled products.

Corrosion-resistant products

As with cold-rolled products, both Usinor-Sacilor and Paturle Aciers submitted data in response to the Commission's questionnaire regarding corrosion-resistant products.¹⁵⁷ These data constitute *** percent, by volume, of official U.S. import statistics on imports of corrosion-resistant products from France in 1992.

¹⁵⁶ Usinor-Sacilor reported, however, that ***.

¹⁵⁷ Usinor-Sacilor also submitted separate data on its facilities producing clad plate. Those data are presented in app. I.

As seen from table 67, French production of corrosion-resistant products *** between 1990 and 1992, as did capacity. In 1993, however, production is expected to *** as capacity ***. Therefore, capacity utilization is expected to ***. Inventories were *** during the 3-year period.¹⁵⁸ Exports to the United States *** in 1991, and *** in 1992, ending up *** percent *** their 1990 level. French companies project ***. As a ratio to production and as a share of total shipments, exports to the United States *** between 1990 and 1992.

Table 67

Corrosion-resistant products: France's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

The Industry in Germany (Plate, Hot-rolled Products, Cold-rolled Products, and Corrosion-resistant Products)

The Commission sent questionnaires to six of the seven firms named in the petition as producing certain flat-rolled carbon steel products in Germany: Hoesch, Kloeckner, Thyssen, Krupp, Dillinger, and Preussag.¹⁵⁹ These firms, through their respective counsels, provided data on their operations in Germany. The Commission also received unsolicited responses from six German firms producing cold-rolled products: C.D. Waelzholz; Hugo Vogelsang GmbH & Co.; Eberle Kaltwalzwerk under Saegfabrik; Westig GmbH; Roechling Kaltwalzwerk KG; and Stahlwerk Unna Mueller GmbH & Co.¹⁶⁰

Officials of the European Community have estimated that 30 million metric tons of raw steel capacity must be permanently closed in the near term in order to address current overcapacity. A significant share of the capacity reductions are expected to be in Germany, which produces nearly one-third of the EC's raw steel.¹⁶¹ In March 1993, tens of thousands of steel workers marched on Bonn in response to estimates by industrialists that as many as 40,000 jobs in western Germany alone would have to be eliminated. Klockner-Werke has announced plans to close a 1.2-million-ton blast furnace in

¹⁵⁸ Usinor-Sacilor reported, however, that ***.

¹⁵⁹ The seventh firm, EKO Stahl AG of Brandenburg, Germany, was acquired by Krupp in 1992. Counsel for Preussag submitted data for Walzwerk Ilseburg, a German nonintegrated producer (reroller) of plate. Hoesch and Krupp are related to each other through their ownership by the same holding company: Fried. Krupp AG Hoesch-Krupp.

¹⁶⁰ These firms are small, nonintegrated companies primarily specializing in the production of hardened and tempered strip steels. These companies argued in their responses that their exports to the United States should not be subject to these investigations because the products in question are further worked than cold rolled by virtue of being hardened and tempered. Vogelsang submitted separate data regarding high-carbon steel; such data are presented in app. J.

¹⁶¹ C. Munford, "German Steel Bridles under EC Heavy Saddle", *American Metal Market*, Apr. 23, 1993.

Bremen.¹⁶² In April 1993, the recently merged Krupp-Hoesch firm announced plans to close Rheinhausen steelworks, one of the firm's three sites for raw steel production.¹⁶³ In eastern Germany, the Eko Stahl division of Krupp-Hoesch, near the Polish border, has applied to the EC for assistance to close 2 million tons of blast furnace capacity and to replace it with a minimill with a capacity of 865,000 tons per year.¹⁶⁴

Plate

The Commission received data on German operations producing plate from Preussag, Ilseburg, Krupp, Kloeckner, Dillinger, and Thyssen. These data make up 100 percent, by volume, of exports of plate from Germany to the United States in 1992, based on official U.S. import statistics.

As seen from table 68, German production of plate first increased slightly in 1991, then declined in 1992, for an overall drop during the period examined of 11 percent. Production is expected to decline further in 1993. Capacity to produce such products, by contrast, increased during the period examined. As production fell faster than capacity, capacity utilization ratios dropped sharply during the period examined, from 92 percent in 1990 to 71 percent in 1992. Exports to the United States showed a sharp decline in 1991, then continued to fall in 1992 to less than one-third their 1990 level. Exports to the United States are ***. As a share of production and of total shipments, exports to the United States fell from approximately 5 percent to less than 2 percent during the period examined. In September 1992, the Government of Canada instituted an antidumping investigation covering imports of plate from Germany, issuing an affirmative preliminary determination in January 1993.

Hot-rolled products

Five firms responded to the Commission's requests for data concerning hot-rolled products: Preussag, Krupp, Hoesch, Kloeckner, and Thyssen. Data received constitute 87 percent, by volume, of 1992 exports of hot-rolled products from Germany to the United States.

Production in Germany of hot-rolled products dropped by 6 percent between 1991 and 1992, after having been virtually unchanged in 1991 from 1990 levels (table 69). Production is expected to rebound in 1993, however. Capacity grew overall during the period examined; accordingly, utilization levels dropped, but remained over 90 percent through 1992. Exports to the United States declined substantially throughout the period examined. German firms intend ***.

¹⁶² The WEFA Group, *U.S. and World Steel Executive Report*, Feb. 1993.

¹⁶³ *Metal Bulletin*, Apr. 29, 1993.

¹⁶⁴ *American Metal Market*, Apr. 28, 1993.

Table 68

Plate: Germany's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93¹

Item	1990	1991	1992	Projected 1993
<i>Quantity (1,000 short tons)</i>				
Capacity.....	3,064	3,641	3,516	3,379
Production.....	2,813	2,828	2,499	2,240
End-of-period inventories...	***	108	85	***
Shipments:				
Home market.....	1,612	1,676	1,595	1,407
Exports to--				
The United States.....	135	69	40	***
All other markets.....	1,070	1,075	895	***
Total exports.....	1,205	1,144	935	828
Total shipments.....	2,816	2,820	2,530	2,235
<i>Ratios and shares (percent)</i>				
Capacity utilization.....	91.8	77.7	71.1	66.3
Inventories to production...	***	6.8	4.9	***
Inventories to				
total shipments.....	***	6.8	4.8	***
Exports to the United				
States to production.....	4.8	2.4	1.6	***
Share of total quantity of				
shipments:				
Home market.....	57.2	59.4	63.1	63.0
Exports to--				
The United States.....	4.8	2.4	1.6	***
All other markets.....	38.0	38.1	35.4	***

¹ 1993 data are projected.

Note.-- Because of rounding, figures may not add to the totals shown. Capacity utilization and inventory ratios are calculated from the unrounded data of firms providing both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 69

Hot-rolled products: Germany's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93¹

Item	1990	1991	1992	Projected 1993
<i>Quantity (1,000 short tons)</i>				
Capacity.....	14,783	14,714	14,884	14,855
Production ²	14,270	14,278	13,459	14,022
End-of-period inventories...	***	***	***	***
Shipments:				
Home market ²	10,293	10,905	10,423	10,857
Exports to--				
The United States.....	305	204	171	***
All other markets.....	2.949	2.679	2.663	***
Total exports.....	3.254	2.883	2.834	2.810
Total shipments.....	13.548	13.788	13.257	13.667
<i>Ratios and shares (percent)</i>				
Capacity utilization.....	96.5	97.0	90.4	94.4
Inventories to production...	***	***	***	***
Inventories to total ship- ments.....	***	***	***	***
Exports to the United States to production.....	2.1	1.4	1.3	***
Share of total quantity of shipments:				
Home market.....	76.0	79.1	78.6	79.4
Exports to--				
The United States.....	2.3	1.5	1.3	***
All other markets.....	21.8	19.4	20.1	***

¹ 1993 data are projected.

² Includes captive production and/or shipments for manufacture of downstream products (e.g., cold-rolled products).

Note.-- Because of rounding, figures may not add to the totals shown. Capacity utilization and inventory ratios are calculated from the unrounded data of firms providing both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Exports from Germany of hot-rolled products to Canada are currently subject to an antidumping investigation. The Canadian Government reached an affirmative final antidumping determination in April 1993, but has not yet ruled if these imports are injuring the Canadian industry. Injury must also be present for duties to be assessed.

Cold-rolled products

The Commission received data on German production of cold-rolled products from five integrated producers of cold-rolled products, as well as from six smaller firms that function as converters of hot-rolled bands into cold-rolled strip.¹⁶⁵ Based on official U.S. import statistics, these firms' exports to the United States constituted 76 percent, by volume, of total exports of German cold-rolled products to the United States in 1992.

As seen from table 70, German production of cold-rolled products declined slightly between 1990 and 1991, then fell further, at a faster rate, in 1992, but is expected to recover somewhat in 1993. Capacity to produce such products declined sharply throughout the period. Capacity utilization ratios showed a slightly increasing trend during the period examined, and are also expected to increase a few percentage points in 1993. Exports to the United States fluctuated irregularly during the 3-year period, ending up in 1992 at slightly below their 1990 level; in 1993, however, such exports are expected ***. The share of exports to the United States in total shipments showed no particular trend during 1990-92, nor did the relative importance of shipments to the home market or third countries in total shipments.

Exports from Germany of cold-rolled products to Canada are currently subject to an antidumping investigation, which was initiated by the Canadian Government in November 1992. Similarly, such exports are currently under investigation by the Government of Argentina, which reached a preliminary affirmative determination in November 1992.

Corrosion-resistant products

Four producers provided data on German production and sales of corrosion-resistant products: Preussag, Thyssen, Hoesch, and Krupp. Such data constitute *** percent, by volume, of official 1992 U.S. statistics for imports of corrosion-resistant products from Germany.

Corrosion-resistant production in Germany grew substantially from 1990 to 1991, with a smaller increase in 1992, representing an overall rise of 11 percent over its 1990 level (table 71). Capacity rose even faster than production during that period, resulting in a slight overall decline in utilization ratios. During 1990-92, home market shipments and total exports ***; export growth was *** in exports to the United States, which *** from

¹⁶⁵ These firms, Eberle, Vogelsang, C.D. Waelzholz, Roechling, Unna, and Westig, produce primarily hardened and tempered cold-rolled strip steel. Vogelsang identified its production and exports as "high-carbon" steel. Data submitted by Vogelsang are presented separately in app. J.

Table 70

Cold-rolled products: Germany's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93¹

Item	1990	1991	1992	Projected 1993
<i>Quantity (1,000 short tons)</i>				
Capacity.....	9,129	8,905	8,272	8,182
Production ²	6,788	6,632	6,439	6,573
End-of-period inventories....	***	***	***	***
Shipments:				
Home market ²	4,436	4,467	4,336	4,600
Exports to--				
The United States.....	266	244	254	***
All other markets.....	2,093	1,967	1,927	***
Total exports.....	2,359	2,211	2,182	1,877
Total shipments.....	6,795	6,678	6,518	6,477
<i>Ratios and shares (percent)</i>				
Capacity utilization.....	74.4	74.5	77.8	80.3
Inventories to production...	***	***	***	***
Inventories to total ship- ments.....	***	***	***	***
Exports to the United States to production.....	3.9	3.7	4.0	***
Share of total quantity of shipments:				
Home market.....	65.3	66.9	66.5	71.0
Exports to--				
The United States.....	3.9	3.6	3.9	***
All other markets.....	30.8	29.5	29.6	***

¹ 1993 data are projected.

² Includes captive production and/or shipments for manufacture of downstream products (e.g., corrosion-resistant products).

Note.-- Because of rounding, figures may not add to the totals shown. Capacity utilization and inventory ratios are calculated from the unrounded data of firms providing both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 71

Corrosion-resistant products: Germany's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93¹

Item	1990	1991	1992	Projected 1993
<i>Quantity (1,000 short tons)</i>				
Capacity.....	3,999	4,166	4,565	4,819
Production.....	3,483	3,722	3,852	3,910
End-of-period inventories....	***	***	***	***
Shipments:				
Home market.....	2,218	2,408	2,520	2,584
Exports to--				
The United States.....	***	***	***	***
All other markets.....	***	***	***	***
Total exports.....	1,219	1,260	1,323	1,348
Total shipments.....	3,437	3,668	3,843	3,932
<i>Ratios and shares (percent)</i>				
Capacity utilization.....	87.1	89.3	84.4	81.1
Inventories to production...	***	***	***	***
Inventories to total ship-				
ments.....	***	***	***	***
Exports to the United				
States to production.....	***	***	***	***
Share of total quantity of				
shipments:				
Home market.....	64.5	65.6	65.6	65.7
Exports to--				
The United States.....	***	***	***	***
All other markets.....	***	***	***	***

¹ 1993 data are projected.

Note.-- Because of rounding, figures may not add to the totals shown. Capacity utilization and inventory ratios are calculated from the unrounded data of firms providing both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

approximately *** tons in 1990 to *** tons in 1992. Such exports are projected to *** in 1993. As a share of production, such exports ***.

Kloeckner reported that it ***.¹⁶⁶ In 1994, Kloeckner plans ***. This *** will ***. Thyssen noted that ***. It added, however, that overall steel-making capacity will ***.¹⁶⁷

The Industry in Italy (Plate and Cold-rolled Products)

The Commission sent a questionnaire to counsel for Ilva and AFL Falck, the only Italian producers of plate and cold-rolled products. Both firms provided data in response to the requests.

Plate

Based on official U.S. import statistics, data provided by Ilva and Falck make up *** percent, by volume, of exports of plate from Italy to the United States in 1992 (table 72). Italian production of plate *** between 1990 and 1991, before *** in 1992, *** by *** percent over 1991 production. Such production is expected to *** in 1993. Utilization levels were *** throughout the period examined. Exports to the United States *** throughout the period, *** tons in 1992. Ilva projects ***. As a share of production, exports to the United States *** between 1990 and 1992, as the mix between home market and third country shipments ***.

Table 72

Plate: Italy's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Cold-rolled products

Data provided by Ilva and Falck make up *** percent, by volume, of imports of cold-rolled products from Italy into the United States during 1992, according to official statistics. Italian production of cold-rolled products *** in 1991 by *** percent, and *** trend in 1992; projections for 1993 indicate a *** (table 73). Reported capacity *** throughout the period. Capacity utilization *** percent during the period.

Table 73

Cold-rolled products: Italy's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

¹⁶⁶ ***.

¹⁶⁷ Thyssen also noted that ***.

Reported exports to the United States *** between 1990 and 1991, then *** in 1992; as a share of production, they *** percent during the period. Shares in total shipments of exports to the United States, exports to third countries, and home market shipments *** between 1990 and 1992.

Ilva noted in its response that in July 1991 it ***. Although Ilva also ***.

In addition, the Government of Italy has applied to the EC for assistance in privatizing Ilva, a state-owned steel firm. Although the request is still under negotiation, the European Commission has indicated that almost \$5 billion in debt could be written off under the firm's restructuring plan provided Ilva's annual steelmaking capacity is reduced by about 3 million metric tons.¹⁶⁸

The Industry in Japan (Hot-rolled Products, Cold-rolled Products, and Corrosion-resistant Products)

The Commission received data on the Japanese industry from seven firms, all of which were represented by counsel.¹⁶⁹ Except for Hitachi, whose production was limited to cold-rolled products, all firms submitted data on all three products subject to investigation.

Hot-rolled products

Reported Japanese exports to the United States, accounting for 92 percent of 1992 exports of hot-rolled products from Japan to the United States (according to official U.S. import statistics), dropped from approximately 205,000 short tons in 1990 to 135,000 tons in 1991, before levelling off somewhat in 1992 (table 74). Such exports are expected to fall further, by nearly 50 percent, in 1993. Japanese production of hot-rolled products fluctuated irregularly between 1990 and 1992, with the 1992 level only marginally less than that of 1990. Capacity showed an even smaller decline than production between 1990 and 1992; thus, utilization levels fell somewhat over the 3-year period.¹⁷⁰

As a share of total shipments, exports to the United States showed no particular trend but never exceeded 1 percent. Nor were any particular trends demonstrated by shipments to the Japanese or third-country markets with regard to their share of total shipments. Shipments were heavily concentrated in the Japanese home market during the period examined.

Kawasaki noted plans to ***. This *** is not, however, expected to have an impact on capacity because ***.

¹⁶⁸ *American Metal Market*, Apr. 5, 1993.

¹⁶⁹ These firms were: Hitachi, Kawasaki, Sumitomo, NKK, Nippon Steel, Nisshin, and Kobe. The firms also submitted data on four of the six like products for cold-rolled and corrosion-resistant products; those data are presented in app. K.

¹⁷⁰ ***.

Table 74

Hot-rolled products: Japan's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93¹

Item	1990	1991	1992	Projected 1993
<i>Quantity (1,000 short tons)</i>				
Capacity.....	53,716	53,470	52,721	53,121
Production ²	50,360	50,828	46,648	49,057
End-of-period inventories...	1,493	1,319	1,017	1,017
Shipments:				
Home market ²	48,326	49,380	45,278	45,798
Exports to--				
The United States ³	205	135	125	68
All other markets.....	1,653	1,486	1,547	3,191
Total exports.....	1,858	1,621	1,672	3,259
Total shipments.....	50,183	51,002	46,950	49,057
<i>Ratios and shares (percent)</i>				
Capacity utilization.....	93.8	95.1	88.5	92.3
Inventories to production...	3.0	2.6	2.2	2.1
Inventories to				
total shipments.....	3.0	2.6	2.2	2.1
Exports to the United				
States to production.....	.4	.3	.3	.1
Share of total quantity of				
shipments:				
Home market.....	96.3	96.8	96.4	93.4
Exports to--				
The United States.....	.4	.3	.3	.1
All other markets.....	3.3	2.9	3.3	6.5

¹ 1993 data are projected.

² Includes captive production and/or shipments for manufacture of downstream products (e.g., cold-rolled products).

³ Projected 1993 exports to the United States presume a negative injury determination in this investigation.

Note.-- Because of rounding, figures may not add to the totals shown. Capacity utilization and inventory ratios are calculated from the unrounded data of firms providing both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Cold-rolled products

All six integrated producers, along with Hitachi, submitted data concerning their cold-rolled facilities in Japan. Data provided by these firms concerning such facilities constituted 100 percent, by volume, of exports in 1992 of cold-rolled products from Japan to the United States. I-116

Japanese cold-rolled production decreased in 1992, by 8 percent, after having climbed slightly in 1991 (table 75). Capacity declined only marginally throughout the period; thus, utilization levels decreased overall, but are expected to stabilize in 1993.¹⁷¹ Exports to the United States decreased in 1991, before recovering somewhat in 1992. As a share of production, such exports changed little between 1990 and 1992.

Sumitomo reported that it would ***. By contrast, Kawasaki indicated that ***. Similarly, Nippon Steel noted that ***.

Corrosion-resistant products

All six integrated producers supplied data to the Commission on their operations in Japan producing corrosion-resistant products. Based on official U.S. import statistics, data submitted by Japanese corrosion-resistant producers make up 100 percent, by quantity, of 1992 exports of such products from Japan to the United States.

Japan's production of corrosion-resistant products increased slightly in 1991, before falling back in 1992, showing little overall change during the 1990-92 period (table 76). Production projections for 1993 indicate a slight recovery. Reported capacity climbed 12 percent between 1990 and 1992.¹⁷² Capacity utilization fell steadily throughout the period examined, but is expected to rebound in 1993. Reported exports to the United States dipped in 1991, but recovered in 1992 to a level above that of 1990. As a share of total shipments, exports to the United States showed little movement between 1990 and 1992. Shipments of corrosion-resistant products to third countries steadily increased their share of total shipments, while the share going to the home market fell.

Kobe reported in its response that, in January 1993, it began production of hot-dipped galvanized sheet in the United States as part of Pro-Tec Coating Co., a joint venture with USX Corp. NKK indicated that ***. ***.

NKK is also constructing a continuous galvanizing line at its Keihin Works, which is expected to have a monthly capacity of *** tons.¹⁷³ Sumitomo noted the ***. Finally, Nippon Steel will ***.¹⁷⁴

¹⁷¹ Japanese firms attributed reported decreases in capacity to a combination of gradual increases in production of higher quality products with lower productivity.

¹⁷² Nisshin noted ***.

¹⁷³ "Peak expenditure year for NKK," *Steel Times International*, July 1992.

¹⁷⁴ Nippon Steel noted that ***.

Table 75

Cold-rolled products: Japan's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93¹

Item	1990	1991	1992	Projected 1993
<i>Quantity (1,000 short tons)</i>				
Capacity.....	31,219	30,528	30,301	30,958
Production ²	27,739	28,180	25,818	26,462
End-of-period inventories...	867	816	726	706
Shipments:				
Home market ²	23,715	24,203	21,796	22,368
Exports to--				
The United States ³	778	598	625	265
All other markets.....	3.329	3.428	3.486	3.850
Total exports.....	4.107	4.026	4.111	4.115
Total shipments.....	27.822	28.229	25.907	26.483
<i>Ratios and shares (percent)</i>				
Capacity utilization.....	88.9	92.3	85.2	85.5
Inventories to production...	3.1	2.9	2.8	2.7
Inventories to				
total shipments.....	3.1	2.9	2.8	2.7
Exports to the United				
States to production.....	2.8	2.1	2.4	1.0
Share of total quantity of				
shipments:				
Home market.....	85.2	85.7	84.1	84.5
Exports to--				
The United States.....	2.8	2.1	2.4	1.0
All other markets.....	12.0	12.1	13.5	14.5

¹ 1993 data are projected.

² Includes captive production and/or shipments for manufacture of downstream products (e.g., corrosion-resistant products).

³ Projected 1993 exports to the United States presume a negative injury determination in this investigation.

Note.-- Because of rounding, figures may not add to the totals shown. Capacity utilization and inventory ratios are calculated from the unrounded data of firms providing both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 76

Corrosion-resistant products: Japan's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93¹

Item	1990	1991	1992	Projected 1993
Quantity (1,000 short tons)				
Capacity.....	10,746	11,678	12,037	11,859
Production.....	10,403	11,018	10,335	10,626
End-of-period inventories...	640	699	650	685
Shipments:				
Home market.....	8,526	8,953	7,975	8,185
Exports to--				
The United States ²	793	738	853	371
All other markets.....	993	1,270	1,556	2,034
Total exports.....	1,786	2,008	2,409	2,405
Total shipments.....	10,313	10,961	10,383	10,591
Ratios and shares (percent)				
Capacity utilization.....	96.8	94.3	85.9	89.6
Inventories to production...	6.2	6.3	6.3	6.4
Inventories to				
total shipments.....	6.2	6.4	6.3	6.5
Exports to the United				
States to production.....	7.6	6.7	8.3	3.5
Share of total quantity of				
shipments:				
Home market.....	82.7	81.7	76.8	77.3
Exports to--				
The United States.....	7.7	6.7	8.2	3.5
All other markets.....	9.6	11.6	15.0	19.2

¹ 1993 data are projected.

² Projected 1993 exports to the United States presume a negative injury determination in this investigation.

Note.-- Because of rounding, figures may not add to the totals shown. Capacity utilization and inventory ratios are calculated from the unrounded data of firms providing both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

The Industry in Korea (Plate, Hot-rolled Products, Cold-rolled Products, and Corrosion-resistant Products)

The petition named five firms producing certain flat-rolled carbon steel products in Korea. Four of these firms, Posco, Dongkuk, Dongbu, and Union, provided data through their counsel in response to the Commission's questionnaire.¹⁷⁵

Plate

Posco and Dongkuk provided data on their operations in Korea producing plate. Such data accounted for *** percent, by volume, of 1992 official statistics for imports of plate from Korea to the United States.

As can be seen from table 77, Korean firms' production of plate *** between 1990 and 1991, and *** between 1991 and 1992, for an *** of *** percent. Capacity also *** during the period examined; accordingly, capacity utilization ***.¹⁷⁶ Exports to the United States *** between 1990 and 1992, and are expected to total *** in 1993. Such exports accounted for less than *** percent of production in the 3-year period.

Table 77

Plate: Korea's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Hot-rolled products

Posco was the only producer of hot-rolled products in Korea that supplied data to the Commission, accounting for *** percent of official U.S. import statistics on imports of such products from Korea. Both production in Korea of hot-rolled products and capacity to produce such products *** between 1990 and 1992, and are expected to *** in 1993 (table 78). Production levels for 1992 were approximately *** than those of 1990. As capacity ***, capacity utilization levels ***, to over *** percent by 1992. Capacity utilization is expected to *** in 1993. As a share of production, exports to the United States *** throughout the period examined. Shares of exports to other destinations relative to total shipments also did *** during the 3-year period.

¹⁷⁵ Counsel also reported data on cold-rolled and corrosion-resistant products for two companies related to Posco: Pohang Steel Industries Co., Ltd. (PSI), and Pohang Coated Steel Co., Ltd. (POCOS). Accordingly, the Commission received data from a total of six firms.

¹⁷⁶ Dongkuk reported a significant *** in its plate capacity during the 3-year period because of ***. On the other hand, Dongkuk plans ***.

Table 78

Hot-rolled products: Korea's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

*** are due primarily to two events at Posco during the investigation period. In August 1990, Posco completed its No. 4 hot-strip mill at Kwangyang, which went into full operation during 1991. In July 1992, an additional hot-strip mill, Kwangyang No. 5, was completed; it is expected to ***.

Cold-rolled products

The Commission received data on Korean production of cold-rolled products from Posco and its related company PSI, as well as from Dongbu and Union. Based on official U.S. import statistics, these firms' exports to the United States constituted *** percent, by volume, of total exports of Korean cold-rolled products to the United States in 1992.

Cold-rolled production in Korea ***, by *** percent, during the 3-year period (table 79). Capacity also *** throughout the period; because production *** capacity, utilization levels ***, but will *** somewhat in 1993 as ***. Exports to the United States *** between 1990 and 1991, then *** in 1992 to a level *** that of 1990. Korea projects *** tons of exports of cold-rolled products to the United States in 1993. As a share of production, such exports *** between 1990 and 1992.

Table 79

Cold-rolled products: Korea's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Posco indicated that two cold-rolling lines at its Kwangyang facility were completed during 1991 (in January and September), ***.¹⁷⁷ PSI reported that it ***. ***.

Corrosion-resistant products

Counsel for Dongbu and Union, as well as Posco and its related companies POCOS and PSI, provided data on operations producing corrosion-resistant products in Korea. Data provided by these firms make up 92 percent, by volume, of exports of corrosion-resistant products from Korea to the United States in 1992, based on official U.S. import statistics.

Production in Korea of corrosion-resistant products grew substantially over the period examined, with 1992 production representing an overall rise of 46 percent over its 1990 level (table 80). Capacity also increased throughout the period, but at a slower rate than production, resulting in an overall rise in capacity utilization during the period. After a slight decline in 1991, exports to the United States grew in 1992 to a level nearly 25 percent above the 1990 total. As a share of production, however, such exports showed little direction during 1990-92. Exports to the United States are projected to fall by nearly one-half in 1993.

Table 80

Corrosion-resistant products: Korea's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93¹

Item	1990	1991	1992	Projected 1993
<i>Quantity (1,000 short tons)</i>				
Capacity.....	2,366	2,918	3,139	3,181
Production.....	2,017	2,676	2,944	2,992
End-of-period inventories...	128	191	156	133
Shipments:				
Home market.....	1,070	1,531	1,608	1,760
Exports to--				
The United States.....	138	113	170	91
All other markets.....	812	970	1,199	1,161
Total exports.....	950	1,083	1,369	1,252
Total shipments.....	2,020	2,614	2,977	3,012
<i>Ratios and shares (percent)</i>				
Capacity utilization.....	85.2	91.7	93.8	94.1
Inventories to production...	6.4	7.1	5.3	4.4
Inventories to total shipments.....	6.4	7.3	5.2	4.4
Exports to the United States to production.....	6.8	4.2	5.8	3.0
Share of total quantity of shipments:				
Home market.....	53.0	58.6	54.0	58.4
Exports to--				
The United States.....	6.8	4.3	5.7	3.0
All other markets.....	40.2	37.1	40.3	38.5

¹ 1993 data are projected.

Note.-- Because of rounding, figures may not add to the totals shown. Capacity utilization and inventory ratios are calculated from the unrounded data of firms providing both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Posco reported that in November 1990 it completed two corrosion-resistant lines at Kwangyang: an electrolytic galvanizing line and a pickling and oiling line. In June 1991, Posco completed a continuous galvanizing line at Kwangyang, which attained full production during 1992.

Union Steel plans to double the color-coated galvanizing capacity at its Pusan Works by adding a 100,000-ton-per-year line; start up is scheduled for July 1993.¹⁷⁸ According to a Union Steel official, 70 percent of the output of the plant will go to building applications in Korea; the remainder will be exported to Southeast Asia.¹⁷⁹

The Industry in Mexico (Plate and Corrosion-resistant Products)

Plate

AHMSA was the *** Mexican firm producing plate during the period examined, accounting for *** percent, by volume, of 1992 exports of plate from Mexico to the United States, according to official import statistics. AHMSA dedicates *** percent of its total output to plate production. Data on AHMSA, as provided by counsel, are presented in table 81.

Table 81

Plate: Mexico's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

As seen from the table, Mexican production of plate *** irregularly between 1990 and 1992, by *** percent overall, but is expected to *** to *** in 1993. Capacity to produce such products *** during the period examined. As a result, trends in capacity utilization ***. Exports to the United States ***, *** in 1992 to nearly *** their 1990 level and *** of 1991. As a share of production and of total shipments, exports to the United States *** from approximately *** percent to *** percent during the investigation period.

Corrosion-resistant products

IMSA and Galvak, two of the three producers of corrosion-resistant products in Mexico, provided data in response to the Commission's questionnaire.¹⁸⁰ Data provided by IMSA and Galvak make up *** percent, by volume, of exports of corrosion-resistant products from Mexico to the United States in 1992, based on official U.S. import statistics. Submitted data, as presented by the firms' respective counsel, are shown in table 82.

¹⁷⁸ "Union Steel Expands Color-Coating," *Metal Bulletin*, Apr. 2, 1992.

¹⁷⁹ Ibid.

¹⁸⁰ A third producer, Hylsa, was not represented by counsel and did not furnish data to the Commission.

Table 82

Corrosion-resistant products: Mexico's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Mexico's production of corrosion-resistant products *** between 1990 and 1991, then *** its *** in 1992, *** to approximately *** percent *** the 1990 level. Production is expected to *** in 1993. Capacity to produce such products also *** during the period examined. Because capacity *** than production, capacity utilization ratios *** between 1990 and 1992. Utilization rates are expected to *** to approximately *** percent in 1993.

Exports to the United States *** in 1991, but then *** in 1992. According to IMSA and Galvak, however, in 1993 exports to the United States will ***. As a share of production and as a share of total shipments, exports to the United States *** during the period examined.

In 1992, Galvak started operating a new galvanizing line that ***, and also indicated that in March 1993, it ***. It indicated, however, that ***.

In its response, IMSA provided separate data on the composition of its exports to the United States. It reported that during the period examined, *** percent, by volume, of its exports of corrosion-resistant products to the United States were products of U.S. origin under HTS No. 9802.00.60 (American goods returned after further processing). Table 82 presents data on the Mexican industry that exclude such exports.

The Industry in the Netherlands (Hot-rolled Products and Cold-rolled Products)

Hoogovens was the only producer and exporter of hot-rolled and cold-rolled products from the Netherlands to the United States during the period examined. Data reported by Hoogovens accounted for *** percent of exports of hot-rolled products and cold-rolled products to the United States in 1992 (based on official U.S. import statistics).

Hot-rolled products

As seen from table 83, production in the Netherlands of hot-rolled products *** in 1991 from its 1990 level, then *** in 1992; the 1992 production levels were approximately *** percent *** than those of 1990. Capacity also *** during the period examined, with utilization levels *** at a relatively *** level.¹⁸¹ As a share of production, exports to the United States *** throughout the period examined; this share is expected to ***, however, in 1993.

¹⁸¹ Hoogovens attributed ***.

Table 83

Hot-rolled products: Netherlands' capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * * * *

Cold-rolled products

Cold-rolled production in the Netherlands ***, by *** percent, during the 3-year period examined (table 84). Capacity *** throughout the period; thus, utilization levels ***, and are expected to *** in 1993, as capacity ***. Exports to the United States *** from 1990 to 1991, with a *** rate of *** in 1992. As a share of production, such exports *** between 1990 and 1992. Home market shipments *** throughout the period, and are forecast to show *** in 1993.

Table 84

Cold-rolled products: Netherlands' capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * * * *

The Industry in New Zealand (Corrosion-resistant Products)

NZS is the sole producer of corrosion-resistant products in New Zealand, accounting for *** percent of production and exports of corrosion-resistant products to the United States (based on official U.S. import statistics). This firm, through counsel, responded to the Commission's request for data.

As seen from table 85, New Zealand's production of corrosion-resistant products *** between 1990 and 1991, then *** in 1992, *** to *** its 1990 level. Production is expected to *** in 1993. Capacity to produce such products also *** during the period examined. Capacity utilization ratios *** in 1991, but *** in 1992; utilization rates are expected to *** percent in 1993. Exports to the United States *** in 1991, but then *** in 1992. NZS ***. As a ratio to production and as a share of total shipments, exports to the United States *** from *** percent to approximately *** percent during 1990-92.

Table 85

Corrosion-resistant products: New Zealand's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * * * *

NZS indicated that corrosion-resistant products made up *** percent of its total sales during its most recent fiscal year. NZS also noted that it will be ***. Although this ***, NZS indicated that it ***.

One of the two U.S. importers of NZS' corrosion-resistant products is a related firm, ***. Other than to the United States, NZS exports corrosion-resistant products primarily to ***.

The Industry in Poland (Plate)

The petition named one exporter of plate from Poland: Stalexport.¹⁸² During the period examined, this firm handled export transactions involving plate from three Polish mills: Huta Czestochowa, Huta Batory, and Huta Pokoj. In response to a request from the Commission, counsel for Stalexport and Huta Czestochowa provided data on these three mills. Combined data, which are presented in table 86, make up *** percent, by volume, of exports of Polish plate to the United States in 1992, based on official import statistics.

Counsel noted in the Polish industry's response that Polish raw steel production *** between 1989 and 1991. Industry-government discussions are continuing on restructuring and privatizing the industry; current plans call for the reduction of raw steelmaking capacity to between 10 and 11 million metric tons. Restructuring the industry includes the total shutdown of seven mills and the closure of parts of most of Poland's other steel mills. Production mix is to be rationalized; employment is to drop by an estimated 80,000 to 100,000 employees (up to 70 percent of 1991 total employment in Poland's iron and steel industry).¹⁸³ With respect to the three reporting Polish mills, counsel indicated that plate production accounts for between *** of their total sales. Under the industry's restructuring program Huta Batory is scheduled to be closed entirely; iron- and steelmaking operations at Huta Czestochowa are to cease; and the plate rolling mills at Labedy, Pokoj, and Ostrowiec are to be closed.

Polish plate production declined steadily from 1990 to 1992, representing an overall drop of 39 percent. Capacity also declined, but not as fast as production; therefore, capacity utilization fell during the investigation period. Home market shipments fell markedly, particularly between 1990 and 1991. Exports to the United States, while *** slightly in 1991 over their 1990 level, *** in 1992 to *** percent below their 1990 level. Poland ***. As a share of production, such exports constituted less than *** percent throughout the period examined, as sales to third countries claimed an *** share of total shipments.¹⁸⁴

¹⁸² Stalexport was a state trading organization under Poland's Communist government. It was commercialized in 1990 and continues to export on behalf of several Polish steel mills pursuant to commercial agreements.

¹⁸³ The restructuring plan was compiled on the basis of facility evaluations and economic studies made during 1991-92 by Hatch Associates, Stelco, and Ernst and Young (Toronto), "the Canadian Consortium." Funding for the industry study was provided under the World Bank's technical aid program; the program was apparently accepted by the Government of Poland in 1992.

¹⁸⁴ Third-country markets include Germany, Belgium, Ukraine, and the United Kingdom. Poland's exports, traditionally oriented toward East Germany and the former Soviet Union, fell following the events in Central and Eastern Europe after 1989 and the breakdown of intra-CMEA trade. These markets are uncertain because of currency constraints although Poland has tried to arrange barter

Table 86

Plate: Poland's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93¹

Item	1990	1991	1992	Projected 1993
<i>Quantity (1,000 short tons)</i>				
Capacity.....	***	1,301	1,142	1,145
Production.....	1,028	760	627	600
End-of-period inventories...	***	***	***	***
Shipments:				
Home market.....	801	529	463	450
Exports to--				
The United States.....	***	***	***	***
All other markets.....	***	***	***	***
Total exports.....	224	223	169	144
Total shipments.....	1,025	752	632	593
<i>Ratios and shares (percent)</i>				
Capacity utilization.....	***	58.4	54.9	52.4
Inventories to production...	***	***	***	***
Inventories to total shipments.....	***	***	***	***
Exports to the United States to production.....	***	***	***	***
Share of total quantity of shipments:				
Home market.....	78.2	70.3	73.3	75.8
Exports to--				
The United States.....	***	***	***	***
All other markets.....	***	***	***	***

¹ 1993 data are projected.

Note.-- Because of rounding, figures may not add to the totals shown. Capacity utilization and inventory ratios are calculated from the unrounded data of firms providing both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

¹⁸⁴ (...continued)

swaps (e.g., natural gas or iron ore for steel). Poland's exports to EFTA- and EC-member countries may be enhanced by trade agreements and association agreements signed in 1992.

The Industry in Romania (Plate)

Sidex SA Galati (Galati), one of the two producers of plate in Romania named in the petition, and Metalexportimport, the Romanian firm handling exports of plate, provided data, through counsel, in response to the Commission's questionnaire. These data account for *** exports of plate from Romania to the United States during 1992, according to official U.S. import statistics. Submitted data are presented in table 87.

Table 87

Plate: Romania's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Galati reported significant plans to modernize plate production in Romania over the next few years.¹⁸⁵ These include ***. Galati estimates that its program of technological restructuring meant to ensure improvements in steel quality will result ***.

Romania's production of plate *** in 1991, by *** percent, before *** in 1992; projections for 1993 indicate a *** in production ***. Reported capacity *** throughout the period. Capacity utilization *** throughout the period examined, but is expected to *** in 1993.¹⁸⁶

The steel sector has traditionally accounted for a significant proportion of Romanian exports to both CMEA and convertible currency markets, and Romania was subject to numerous antidumping actions during the 1980s in Europe, the United States, and Canada. Reported exports to the United States *** between 1990 and 1991, and *** only slightly in 1992. As a share of total shipments, exports to the United States *** overall during the investigation period, always staying *** percent. Shipments of plate to third countries, which constituted *** shipments throughout the period, steadily *** their share of total shipments. Exports of Romanian plate are currently subject to an antidumping order issued by the Government of Canada, which was put into effect during 1992.

¹⁸⁵ There were 28 enterprises producing iron and steel in Romania as of the end of 1990, of which the largest integrated steel complexes were at Galati, Hunedoara, Resita, and Tergoviste, accounting for over 90 percent of Romania's raw steel production in 1990. Galati alone accounted for nearly *** percent of Romania's raw steel production and over *** percent of Romania's production of flat-rolled products in 1990.

¹⁸⁶ The Romanian iron and steel industry is restructuring and has been adversely affected by the government's withdrawal of investment funds and the resultant need for bank loans by the industry. This has prevented some investments from being completed and hindered modernization efforts because most mills in the industry reportedly are not credit-worthy. In addition, Romanian producers were adversely affected by the collapse of intra-CMEA trade, the adoption of convertible currency payments for trade in iron ore and fuels, and the Gulf and Yugoslav civil wars, which restricted export demand and increased import costs.

The Industry in Spain (Plate and Cold-rolled Products)

The petition listed two firms, Ensidesa and AHV, as having production facilities in Spain capable of exporting plate and/or cold-rolled products to the United States. AHV was not represented by counsel in these investigations and data from this firm were not provided.¹⁸⁷ Counsel for Ensidesa supplied data on Ensidesa's plate and cold-rolled facilities in Madrid.¹⁸⁸ Data supplied by Ensidesa, based on official U.S. import statistics, accounted for *** and *** percent of 1992 exports to the United States of plate and cold-rolled products, respectively.

The Spanish Government has applied to the EC for assistance in restructuring and downsizing the integrated mills of the Spanish steel industry. Part of the plan is a proposal to build a thin-slab-casting plant at AHV's Sestao works, to replace the traditional facilities there. This plan is seen as being unlikely to gain EC approval. Siderurgia Integral (CSI), set up to manage Ensidesa and AHV, has begun to lay off "excess" employees in the face of weak domestic demand for steel.¹⁸⁹

Plate

Ensidesa reported *** in production of plate between 1990 and 1992, yet production is expected to *** in 1993 (table 88). Capacity *** throughout the period; as a result, capacity utilization ***, *** percent in 1992. Exports to the United States *** with production, accounting for a *** share of production in 1992 than they had in 1990.

Table 88

Plate: Spain's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Cold-rolled products

Production trends in the Spanish industry producing cold-rolled products were similar to those for plate (table 89). Production *** percent between 1990 and 1992; capacity also ***. Capacity utilization *** to *** percent by 1992. As a share of total shipments, exports to the United States ***, *** to just *** percent in 1991, then *** to *** percent in 1992. Exports to the United States are expected to *** by *** percent in 1993 from 1992 levels.

¹⁸⁷ The Commission also requested the American Embassy in Madrid to provide such data on the operations of the Spanish firms listed in the petition. The Commission did not receive a response to that request.

¹⁸⁸ Counsel noted that during the period of investigation, Ensidesa and AHV merged, which will lead to an overall reduction of Spanish capacity to produce the subject merchandise.

¹⁸⁹ *Metal Bulletin*, Apr. 26, 1993.

Table 89

Cold-rolled products: Spain's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

The Industry in Sweden (Plate and Corrosion-resistant Products)

The Commission sent a questionnaire to counsel for SSAB, the only Swedish producer of plate and corrosion-resistant products.

Plate

Based on official U.S. import statistics, data provided by SSAB make up *** percent, by volume, of exports of plate from Sweden to the United States in 1992. Swedish production of plate *** by *** percent, between 1990 and 1991 before *** in 1992 (table 90). Such production is expected to *** in 1993. Utilization levels were *** (*** percent) throughout the period examined.¹⁹⁰ Exports to the United States *** from 1990 to 1991, but *** somewhat in 1992. Such exports are projected to *** by over *** percent in 1993. As a share of production, exports to the United States *** between 1990 and 1992, but are projected to account for *** percent of production in 1993.

Table 90

Plate: Sweden's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Corrosion-resistant products

Data provided by SSAB make up *** percent, by volume, of exports of corrosion-resistant products from Sweden to the United States in 1992, based on official U.S. import statistics. Production in Sweden of corrosion-resistant products *** over the period examined, with 1992 production representing *** of *** percent over its 1990 level (table 91). Capacity also *** throughout the period, but at a *** rate than production, resulting in *** in capacity utilization during the period. During 1990-92, home market shipments *** as total exports ***; export *** was accounted for both by *** in exports to the United States, which *** from *** tons in 1990 to *** tons in 1992, and by *** in exports to third countries. Exports to the United States are projected to *** in 1993. As a share of production, such exports showed a *** between 1990 and 1992.

¹⁹⁰ Counsel for SSAB noted that any capacity increases resulted from productivity gains rather than through installation of new equipment.

Table 91

Corrosion-resistant products: Sweden's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

The Industry in the United Kingdom (Plate)

British Steel was by far the largest producer and exporter of plate from the United Kingdom to the United States during the period examined.¹⁹¹ Counsel for this firm provided data on British Steel's facilities in the United Kingdom in response to the Commission's questionnaire. These data, accounting for *** percent of exports of plate from the United Kingdom to the United States during 1992, are presented in table 92.

Table 92

Plate: United Kingdom's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

British Steel reported that plate made up only *** percent of its total sales in its most recent fiscal year. British Steel also noted that its subsidiary firm, Tuscaloosa Steel Corp. (Tuscaloosa), produces plate in the United States from slabs purchased and imported from British Steel.¹⁹²

As seen from the table, British production of plate *** between 1990 and 1992, by *** percent, but is expected to *** in 1993. Capacity to produce such products also *** during the period examined.¹⁹³ As production *** than capacity, capacity utilization ratios *** during the period examined, from *** percent in 1990 to *** percent in 1992. Exports to the United States showed a small *** in 1991, but then *** in 1992, to *** level. Exports to the United States are projected to be *** tons in 1993. As a share of production and of total shipments, exports to the United States *** from approximately *** percent to *** percent during the 3-year period.

¹⁹¹ British Steel was privatized in 1988, having successfully restructured its operations and modernized its facilities during the 1980s.

¹⁹² Tuscaloosa, located in Tuscaloosa, AL, is a stand-alone rolling mill (i.e., does not possess steelmaking capacity). As such, it relies on purchased slab for its production of hot-rolled products. The company was granted a limited exemption from VRA quotas for its imports of slab from British Steel.

¹⁹³ Counsel for British Steel noted that reported fluctuations in capacity are due to ***.

**CONSIDERATION OF THE CAUSAL RELATIONSHIP BETWEEN IMPORTS OF THE SUBJECT
MERCHANDISE AND THE ALLEGED MATERIAL INJURY**

U.S. Imports

This section presents annual data on countrywide imports of plate, hot-rolled products, cold-rolled products, and corrosion-resistant products, as compiled from official U.S. import statistics.¹⁹⁴ Data indicating the number of months in each calendar year in which imports of the subject merchandise from the subject countries were entered, along with monthly data for October 1991 through January 1993 regarding those countries and products for which Commerce made affirmative critical circumstances determinations, are presented in appendix L. Data showing the geographic dispersion of the value of such imports, along with the number of importers for each country and product, are presented in appendix M.

Plate

The volume of imports of plate from the subject countries showed an overall decrease between 1990 and 1992 (table 93). In value terms, such imports dropped sharply, by 19 percent, between 1990 and 1991, but slowed their decline slightly in 1992, reaching a value of approximately \$228 million. Of the 14 countries subject to investigation, all but Canada and Mexico showed overall declines in import value over the 3-year period. Unit values also generally fell for imports from subject sources during the period examined. Although Belgium accounted for the largest volume share of imports of plate from the subject sources in 1990, by 1992 Canada was by far the largest supplier, with import tonnage over twice as high as Sweden, the second-largest import source for plate.

Hot-rolled Products

Imports of hot-rolled products from subject sources, both in terms of quantity and value, fell between 1990 and 1991, but then rebounded strongly in 1992, by 27 and 19 percent, respectively, to a level higher than that of 1990 (table 94). Trends in unit values were mixed among subject countries, rising for Belgium and Japan, and falling for other subject countries. Overall, the average unit value of imports from subject sources declined.

¹⁹⁴ Import data presented here (and in the section of the report entitled "U.S. Market Penetration by Imports,") in tables include imports from South Africa. Petitioners filed countervailing duty petitions with Commerce against South Africa on May 13, 1993, and Commerce initiated on these cases on June 10, 1993 (58 F.R. 32515). Those cases are not, however, before the Commission because South Africa is not a "country under the agreement" under 19 U.S.C. 1671(b). Accordingly, for purposes of the textual discussion of the data in this section and the section of the report entitled "U.S. Market Penetration by Imports," the term "subject countries" does not include South Africa, because that country is not under investigation by the Commission. Import data presented in apps. C, L and M also do not include imports from South Africa.

Table 93

Plate: U.S. imports, by sources, 1990-92

Item	1990	1991	1992
<i>Quantity (short tons)</i>			
Belgium.....	114,073	87,654	48,951
Brazil.....	52,680	67,481	46,380
Canada.....	92,674	76,936	184,227
Finland.....	83,287	55,648	46,875
France.....	11,135	13,438	6,652
Germany.....	59,479	38,482	20,665
Italy.....	10,074	17,076	2,840
Korea.....	21,361	15,186	9,160
Mexico.....	41,520	19,343	59,993
Poland.....	25,546	38,357	24,605
Romania.....	31,650	36,428	18,078
Spain.....	68,136	69,560	54,054
Sweden.....	91,269	68,337	89,741
United Kingdom.....	43,489	34,869	21,276
Subtotal.....	746,373	638,795	633,497
South Africa.....	0	0	79,272
Subtotal.....	746,373	638,795	712,769
Other sources.....	103,830	56,022	74,857
Total.....	850,203	694,817	787,626
<i>Value (1,000 dollars)</i>			
Belgium.....	51,827	36,953	18,760
Brazil.....	21,512	26,920	16,295
Canada.....	36,329	29,810	62,607
Finland.....	36,591	22,587	18,020
France.....	6,049	6,743	3,386
Germany.....	26,736	17,207	11,172
Italy.....	4,158	6,624	1,128
Korea.....	8,724	5,572	3,079
Mexico.....	15,143	6,505	19,331
Poland.....	9,521	13,309	7,427
Romania.....	12,476	14,578	6,656
Spain.....	28,367	26,871	18,377
Sweden.....	41,200	29,479	33,968
United Kingdom.....	18,287	13,224	7,672
Subtotal.....	316,921	256,384	227,877
South Africa.....	0	0	26,218
Subtotal.....	316,921	256,384	254,095
Other sources.....	44,293	22,790	23,315
Total.....	361,215	279,174	277,410

Table continued on next page.

Table 93--Continued

Plate: U.S. imports, by sources, 1990-92

Item	1990	1991	1992
Unit value (per short ton)			
Belgium.....	\$454	\$422	\$383
Brazil.....	408	399	351
Canada.....	392	387	340
Finland.....	439	406	384
France.....	543	502	509
Germany.....	450	447	541
Italy.....	413	388	397
Korea.....	408	367	336
Mexico.....	365	336	322
Poland.....	373	347	302
Romania.....	394	400	368
Spain.....	416	386	340
Sweden.....	451	431	379
United Kingdom.....	421	379	361
Average.....	425	401	360
South Africa.....	-	-	331
Average.....	425	401	357
Other sources.....	427	407	311
Average.....	425	402	352

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 94

Hot-rolled products: U.S. imports, by sources, 1990-92

Item	1990	1991	1992
<i>Quantity (short tons)</i>			
Belgium.....	36,696	78,699	2,262
Brazil.....	136,550	93,708	155,737
Canada.....	597,053	597,372	975,660
France.....	454,364	270,720	399,024
Germany.....	304,089	242,909	197,253
Japan.....	197,889	151,248	135,846
Korea.....	619,091	716,634	880,301
Netherlands.....	213,966	240,137	288,220
Subtotal.....	2,559,698	2,391,427	3,034,304
South Africa.....	0	0	33,929
Subtotal.....	2,559,698	2,391,427	3,068,233
Other sources.....	326,209	226,937	303,054
Total.....	2,885,907	2,618,364	3,371,287
<i>Value (1,000 dollars)</i>			
Belgium.....	13,545	25,597	907
Brazil.....	43,200	31,031	46,748
Canada.....	238,419	220,923	319,421
France.....	172,130	97,284	139,385
Germany.....	110,952	91,062	71,154
Japan.....	85,927	66,566	62,340
Korea.....	223,103	246,748	291,209
Netherlands.....	72,068	76,575	90,300
Subtotal.....	959,345	855,786	1,021,464
South Africa.....	0	0	10,013
Subtotal.....	959,345	855,786	1,031,477
Other sources.....	110,690	74,290	97,193
Total.....	1,070,035	930,076	1,128,670
<i>Unit value (per short ton)</i>			
Belgium.....	\$369	\$325	\$401
Brazil.....	316	331	300
Canada.....	399	370	327
France.....	379	359	349
Germany.....	365	375	361
Japan.....	434	440	459
Korea.....	360	344	331
Netherlands.....	337	319	313
Average.....	375	358	337
South Africa.....	-	-	295
Average.....	375	358	336
Other sources.....	339	327	321
Average.....	371	355	335

Source: Compiled from official statistics of the U.S. Department of Commerce. ^{I-135}

Canada accounted for the largest volume of imports from subject sources in 1992, representing 32 percent of such imports, with Korea a close second.¹⁹⁵ Canada sells hot-rolled products primarily to the automotive industry. The imports are sold either directly to the automotive producers or to specialized auto service centers. Imports from Canada remained fairly constant from 1990 to 1991, but increased by 63 percent in 1992.¹⁹⁶ Approximately *** percent of imports of hot-rolled products from Canada in 1992 were captive shipments from IPSCO to its wholly owned plate mill in Camanche, IA.

Cold-rolled Products

As indicated in table 95, subject imports of cold-rolled products decreased slightly, by 6 percent in terms of volume, from 1990 to 1991, and then reversed direction in 1992, climbing to a level 5 percent higher than that of 1990. Accounting for the largest share of imports of cold-rolled products in 1992, imports from Japan declined between 1990 and 1991, but recovered somewhat in 1992.¹⁹⁷ Unit values of imports of cold-rolled products from Japan were consistently higher than those of imports from other subject sources, and increased steadily during the period examined. Except for Argentina, Austria, and Japan, unit values of subject imports fell throughout the 3-year period.

Corrosion-resistant Products

The volume of subject imports of corrosion-resistant products fell between 1990 and 1991, then increased sharply, by 33 percent, in 1992 (table 96). Supplying primarily the automotive market, Japan and Canada are the largest foreign sources of corrosion-resistant products, with quantity-based shares of 1992 subject imports of 39 and 22 percent, respectively. Japan is the major foreign supplier of coated sheet products to Japanese automobile manufacturers in the United States. Imports of corrosion-resistant products from Japan were fairly constant overall during the period examined, first declining in 1991, then increasing in 1992 to approximately their level of 1990.¹⁹⁸ Canada is the second-largest supplier; import volume from Canada

¹⁹⁵ Under a partnership agreement with Posco, UPI imports hot-rolled coil for its cold-reduction operations in Pittsburg, CA, through a related importer, Pohang Steel America, Inc. ***. The volume of imports from Korea increased 42 percent from 1990 to 1992.

¹⁹⁶ A Stelco official argued in the preliminary investigations that imports increased in 1992 because of the following reasons: the improvement of the North American automotive industry, the shift of automotive parts processors from Canada to the United States over the past two years, and a 5-month strike at Stelco and Algoma, resulting in low levels of production in 1991. Preliminary transcript, pp. 263-266.

¹⁹⁷ Japanese firms argue that their imports are specialty products that do not compete with U.S. or other foreign products. Posthearing brief of Willkie, Farr & Gallagher on behalf of NKK, Kobe, et al., pp. 16-17 & exhibit 2.

¹⁹⁸ Japanese producers argue that the U.S. steel industry was not able to supply products with the design and part specifications demanded by the

Table 95
Cold-rolled products: U.S. imports, by sources, 1990-92

Item	1990	1991	1992
<i>Quantity (short tons)</i>			
Argentina.....	27,809	70,302	33,779
Austria.....	87,703	66,714	2,330
Belgium.....	105,364	122,814	126,775
Brazil.....	143,084	139,366	139,764
Canada.....	138,046	144,669	238,973
France.....	125,405	129,280	125,290
Germany.....	322,280	247,326	335,533
Italy.....	40,992	44,526	47,749
Japan.....	441,842	370,834	378,546
Korea.....	119,089	111,127	172,639
Netherlands.....	156,206	153,441	172,441
Spain ¹	25,026	20,568	44,922
Subtotal.....	1,732,846	1,620,967	1,818,741
South Africa.....	0	0	44,379
Subtotal.....	1,732,846	1,620,967	1,863,122
Other sources.....	258,582	172,523	116,175
Total.....	1,991,428	1,793,490	1,979,297
<i>Value (1,000 dollars)</i>			
Argentina.....	10,918	28,253	14,446
Austria.....	37,507	26,300	2,129
Belgium.....	49,696	54,319	54,593
Brazil.....	62,109	62,562	59,963
Canada.....	78,079	76,245	110,024
France.....	63,346	61,503	60,259
Germany.....	183,375	130,371	166,315
Italy.....	18,223	19,127	19,512
Japan.....	259,772	221,032	232,856
Korea.....	54,907	49,802	72,633
Netherlands.....	70,368	65,302	71,881
Spain.....	12,163	10,115	19,544
Subtotal.....	900,464	804,931	884,157
South Africa.....	0	0	17,074
Subtotal.....	900,464	804,931	901,231
Other sources.....	132,046	94,051	71,756
Total.....	1,032,510	898,982	972,988

Table continued on next page.

¹⁹⁸ (...continued)

Japanese automobile manufacturers. During the past year, Japan entered into joint-venture agreements with U.S. steel producers to manufacture corrosion-resistant products in the United States that would be more responsive to the North American automotive market. TR, p. 884.

Table 95--Continued

Cold-rolled products: U.S. imports, by sources, 1990-92

Item	1990	1991	1992
	Unit value (per short ton)		
Argentina.....	\$393	\$402	\$428
Austria.....	428	394	914
Belgium.....	472	442	431
Brazil.....	434	449	429
Canada.....	566	527	461
France.....	505	476	481
Germany.....	569	527	495
Italy.....	445	430	409
Japan.....	588	596	615
Korea.....	461	448	421
Netherlands.....	450	426	417
Spain.....	486	492	437
Average.....	520	497	486
South Africa.....	-	-	385
Subtotal.....	520	497	484
Other sources.....	511	545	618
Average.....	518	501	492

¹ If data were adjusted to exclude imports of non-rectangular products ("circles"), import quantities would be 15,020, 10,195, and 32,347 short tons, respectively.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 96
Corrosion-resistant products: U.S. imports, by sources, 1990-92

Item	1990	1991	1992
<i>Quantity (short tons)</i>			
Australia.....	121,230	147,624	183,782
Brazil.....	21,937	16,259	15,522
Canada.....	180,030	245,091	451,082
France.....	59,087	70,786	94,523
Germany.....	161,712	137,767	189,192
Japan.....	838,598	681,563	824,743
Korea.....	124,220	124,897	193,513
Mexico.....	109,118	78,833	108,440
New Zealand.....	23,995	30,544	23,918
Sweden.....	11,100	19,991	28,752
Subtotal.....	1,651,027	1,553,355	2,113,467
South Africa.....	0	0	52,584
Subtotal.....	1,651,027	1,553,355	2,166,051
Other sources.....	182,180	162,520	161,902
Total.....	1,833,207	1,715,875	2,327,953
<i>Value (1,000 dollars)</i>			
Australia.....	82,377	94,020	112,968
Brazil.....	12,089	9,138	7,866
Canada.....	102,188	132,391	234,752
France.....	36,666	40,776	53,306
Germany.....	106,892	84,820	119,055
Japan.....	591,512	468,218	562,349
Korea.....	89,731	83,030	119,120
Mexico.....	74,817	51,922	68,393
New Zealand.....	17,465	18,303	14,314
Sweden.....	6,082	9,904	15,501
Subtotal.....	1,119,820	992,521	1,307,625
South Africa.....	0	0	24,742
Subtotal.....	1,119,820	992,521	1,332,367
Other sources.....	114,801	95,204	100,160
Total.....	1,234,621	1,087,726	1,432,527
<i>Unit value (per short ton)</i>			
Australia.....	\$680	\$637	\$615
Brazil.....	551	562	507
Canada.....	568	540	520
France.....	621	576	564
Germany.....	661	616	629
Japan.....	705	687	682
Korea.....	722	665	616
Mexico.....	686	659	631
New Zealand.....	728	599	598
Sweden.....	548	495	539
Average.....	678	639	619
South Africa.....	-	-	471
Subtotal.....	678	639	615
Other sources.....	630	586	619
Average.....	673	634	615

Source: Compiled from official statistics of the U.S. Department of Commerce.

nearly doubled between 1991 and 1992. Unit values fell overall for every country subject to investigation except Brazil and Sweden.

U.S. Imports of Niche Products

The Commission requested importers to provide data on their imports and U.S. shipments (company transfers, domestic shipments, and export shipments) of 68 plate, hot-rolled, cold-rolled, and corrosion-resistant niche products. Imports of such products are presented in tables 97-100 on a country-by-country basis, along with the percent of each country's total imports of plate, hot-rolled products, cold-rolled products, and corrosion-resistant products made up by such products. Total imports of each niche product, on a product-by-product basis, are presented in appendix F.

Table 97

Plate: U.S. imports of specified niche products, by sources and by products, 1990-92

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Table 98

Hot-rolled products: U.S. imports of specified niche products, by sources and by products, 1990-92

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Table 99

Cold-rolled products: U.S. imports of specified niche products, by sources and by products, 1990-92

* * * * *

Table 100

Corrosion-resistant products: U.S. imports of specified niche products, by sources and by products, 1990-92

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U.S. Market Penetration by Imports

For purposes of this report, data on market penetration by imports are measured alternatively with regard to total shipments by U.S. producers, whether such shipments are sold on the merchant market or are internally transferred, and total open-market shipments by U.S. producers. For a discussion of the underlying basis for this mode of presentation, see the section of this report entitled "Apparent U.S. Consumption."

Because the Commission received usable data from virtually all of the major known U.S. producers of flat-rolled carbon steel products, data

presented here on U.S. shipments are based on responses to Commission questionnaires. The Commission, however, did not collect data from U.S. importers regarding their shipments of imports of flat-rolled steel products. Therefore, official U.S. import statistics are used as a proxy for such shipments.¹⁹⁹ Accordingly, data on the penetration of the U.S. market by imports of certain flat-rolled carbon steel products are based both on data provided in response to Commission questionnaires and on official U.S. import statistics.

Plate

The penetration of the U.S. market for plate by imports of such products from the 14 subject countries, in terms of quantity, edged up slightly in 1991 from its 1990 base of 13.2 percent, but then declined slightly in 1992, ending up at 12.8 percent of the market (table 101). The market share of total imports, by contrast, demonstrated an increase throughout the period examined. Increases in market share among subject sources were achieved only by Canada, Mexico, and Sweden. Three countries (France, Italy, and Korea) had the smallest share of the market during the 3-year period.

When viewed in terms of the merchant market only, market penetration by the subject imports fell overall, both in terms of quantity and value (table 102). Despite a decline in subject import market share (in terms of volume) between 1991 and 1992, the share of the market taken by U.S. producers actually fell, owing to a small surge in imports from nonsubject sources. Trends in market shares of individual subject sources were similar to those exhibited when the entire U.S. market is examined.

Hot-rolled Products

As indicated in table 103, the subject countries' share of the quantity of total apparent consumption for hot-rolled products increased steadily from 5.0 percent in 1990 to 6.0 percent in 1992. Canada and Korea made the most substantial gains in market share during the 3-year period, Canada gaining 0.7 percent of the market (in quantity terms) between 1990 and 1992. Of the eight subject countries, only Canada, Korea, and France had market shares (in terms of value) of more than 1 percent of total consumption at any point during the period examined.

¹⁹⁹ Given the fact that there are over 1,000 importers of certain flat-rolled carbon steel products, complete coverage of import data through the questionnaire process would have been virtually impossible to attain. I-141

Table 101

Plate: Apparent U.S. consumption and market penetration, 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Apparent consumption.....	5.633	4.757	4.965
<i>Value (million dollars)</i>			
Apparent consumption.....	2.554	2.056	1.952
<i>Share of the quantity of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	84.9	85.4	84.1
U.S. imports from--			
Belgium.....	2.0	1.8	1.0
Brazil.....	.9	1.4	.9
Canada.....	1.6	1.6	3.7
Finland.....	1.5	1.2	.9
France.....	.2	.3	.1
Germany.....	1.1	.8	.4
Italy.....	.2	.4	.1
Korea.....	.4	.3	.2
Mexico.....	.7	.4	1.2
Poland.....	.5	.8	.5
Romania.....	.6	.8	.4
Spain.....	1.2	1.5	1.1
Sweden.....	1.6	1.4	1.8
United Kingdom.....	.8	.7	.4
Subtotal.....	13.2	13.4	12.8
South Africa.....	0	0	1.6
Subtotal.....	13.2	13.4	14.4
Other sources.....	1.8	1.2	1.5
Total.....	15.1	14.6	15.9
<i>Share of the value of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	85.9	86.4	85.8
U.S. imports from--			
Belgium.....	2.0	1.8	1.0
Brazil.....	.8	1.3	.8
Canada.....	1.4	1.5	3.2
Finland.....	1.4	1.1	.9
France.....	.2	.3	.2
Germany.....	1.0	.8	.6
Italy.....	.2	.3	.1
Korea.....	.3	.3	.2
Mexico.....	.6	.3	1.0
Poland.....	.4	.6	.4
Romania.....	.5	.7	.3
Spain.....	1.1	1.3	.9
Sweden.....	1.6	1.4	1.7
United Kingdom.....	.7	.6	.4
Subtotal.....	12.4	12.5	11.7
South Africa.....	0	0	1.3
Subtotal.....	12.4	12.5	13.0
Other sources.....	1.7	1.1	1.2
Total.....	14.1	13.6	14.2

Note.--Because of rounding, figures may not add to the totals shown; shares are computed from the unrounded figures.

I-142

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table 102

Plate: Apparent open-market U.S. consumption and market penetration, 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Apparent consumption.....	5.419	4.584	4.902
<i>Value (million dollars)</i>			
Apparent consumption.....	2.479	1.991	1.928
<i>Share of the quantity of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	84.3	84.8	83.9
U.S. imports from--			
Belgium.....	2.1	1.9	1.0
Brazil.....	1.0	1.5	.9
Canada.....	1.7	1.7	3.8
Finland.....	1.5	1.2	1.0
France.....	.2	.3	.1
Germany.....	1.1	.8	.4
Italy.....	.2	.4	.1
Korea.....	.4	.3	.2
Mexico.....	.8	.4	1.2
Poland.....	.5	.8	.5
Romania.....	.6	.8	.4
Spain.....	1.3	1.5	1.1
Sweden.....	1.7	1.5	1.8
United Kingdom.....	.8	.8	.4
Subtotal.....	13.8	13.9	12.9
South Africa.....	0	0	1.6
Subtotal.....	13.8	13.9	14.5
Other sources.....	1.9	1.2	1.6
Total.....	15.7	15.2	16.1
<i>Share of the value of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	85.4	86.0	85.6
U.S. imports from--			
Belgium.....	2.1	1.9	1.0
Brazil.....	.9	1.4	.8
Canada.....	1.5	1.5	3.2
Finland.....	1.5	1.1	.9
France.....	.2	.3	.2
Germany.....	1.1	.9	.6
Italy.....	.2	.3	.1
Korea.....	.4	.3	.2
Mexico.....	.6	.3	1.0
Poland.....	.4	.7	.4
Romania.....	.5	.7	.3
Spain.....	1.1	1.3	1.0
Sweden.....	1.7	1.5	1.8
United Kingdom.....	.7	.7	.4
Subtotal.....	12.8	12.9	11.8
South Africa.....	0	0	1.4
Subtotal.....	12.8	12.9	13.2
Other sources.....	1.8	1.1	1.2
Total.....	14.6	14.0	14.4

Note.--Because of rounding, figures may not add to the totals shown; shares are computed from the unrounded figures.

I-143

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table 103

Hot-rolled products: Apparent U.S. consumption and market penetration,
1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Apparent consumption.....	51.569	44.535	50.646
<i>Value (million dollars)</i>			
Apparent consumption.....	15.309	13.059	14.538
<i>Share of the quantity of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	94.4	94.1	93.3
U.S. imports from--			
Belgium.....	.1	.2	(¹)
Brazil.....	.3	.2	.3
Canada.....	1.2	1.3	1.9
France.....	.9	.6	.8
Germany.....	.6	.5	.4
Japan.....	.4	.3	.3
Korea.....	1.2	1.6	1.7
Netherlands.....	.4	.5	.6
Subtotal.....	5.0	5.4	6.0
South Africa.....	0	0	0.1
Subtotal.....	5.0	5.4	6.1
Other sources.....	.6	.5	.6
Total.....	5.6	5.9	6.7
<i>Share of the value of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	93.1	93.0	92.2
U.S. imports from--			
Belgium.....	.1	.2	(¹)
Brazil.....	.3	.2	.3
Canada.....	1.5	1.7	2.2
France.....	1.1	.7	.9
Germany.....	.7	.7	.5
Japan.....	.6	.5	.4
Korea.....	1.5	1.9	2.0
Netherlands.....	.5	.6	.6
Subtotal.....	6.3	6.6	7.0
South Africa.....	0	0	.1
Subtotal.....	6.3	6.6	7.0
Other sources.....	.7	.6	.7
Total.....	7.0	7.1	7.8

¹ Positive figure, but less than significant digits displayed.

Note.--Because of rounding, figures may not add to the totals shown; shares are computed from the unrounded figures.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Market penetration based on U.S. producers' open-market shipments is presented in table 104. As with the market as a whole, the share of the U.S. market of subject imports steadily increased from 13.2 percent in 1990 to 15.3 percent in 1992. Canada, Korea, and the Netherlands exhibited increases in market share during the 3-year period, while other subject countries either decreased their share or held constant. The share of nonsubject imports in total consumption showed no particular direction.

Cold-rolled Products

The penetration of the U.S. market for cold-rolled products (including captive shipments) by imports of such products from all sources remained fairly constant at between 8.5 and 9.0 percent in terms of value, and around 7 percent in terms of quantity (table 105). Combined imports from the 12 countries subject to investigation increased their market share in 1991, then held constant in 1992 at 6.4 percent in terms of quantity, and 7.9 percent in terms of value. Imports from Canada and Korea showed the greatest increase, whereas Japan, the largest subject supplier, saw its market share decline slightly. Imports from Argentina, Austria, Italy, and Spain had the smallest shares of the market during the period examined, ranging consistently below 0.5 percent.

When examination of the U.S. market is limited to open-market shipments, market penetration by the volume of subject imports first increased in 1991, then fell back in 1992 to a level 0.4 percentage points higher than that of 1990 (table 106). U.S. producers' market share remained virtually constant over the 3-year period. Increases in market share of subject imports were accounted for primarily by Canada and Korea, while the shares of Germany and Japan, the largest subject suppliers, showed little movement or declined.

Corrosion-resistant Products

U.S. market penetration by imports (in terms of quantity) of corrosion-resistant products from subject sources increased from 12.9 percent in 1990 to 13.6 percent in 1991, and continued its climb to 15.4 percent in 1992 (table 107). In terms of value, this ratio also demonstrated a consistent increase, with, however, most of the increase in market share occurring between 1991 and 1992. In terms of volume and value, U.S. producers steadily lost market share throughout the 3-year period. Despite the overall increase in market share for subject imports, Japan, by far the largest subject supplier, saw its share decline throughout the period. Canada achieved the largest increase in market share, more than doubling its quantity-based share of the market between 1990 and 1992. Brazil, New Zealand, and Sweden were the smallest suppliers to this market. The share of subject imports in open-market consumption of corrosion-resistant products, and trends in both individual and collective market shares of those imports, are virtually identical to those exhibited when the entire U.S. market is examined (table 108).

Table 104

Hot-rolled products: Apparent open-market U.S. consumption and market penetration, 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Apparent consumption.....	18.979	16.548	19.325
<i>Value (million dollars)</i>			
Apparent consumption.....	6.555	5.436	6.172
<i>Share of the quantity of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	84.8	84.2	82.6
U.S. imports from--			
Belgium.....	.2	.5	(¹)
Brazil.....	.7	.6	.8
Canada.....	3.1	3.6	5.0
France.....	2.4	1.6	2.1
Germany.....	1.6	1.5	1.0
Japan.....	1.0	.9	.7
Korea.....	3.3	4.3	4.6
Netherlands.....	1.1	1.5	1.5
Subtotal.....	13.5	14.5	15.7
South Africa.....	0	0	0.2
Subtotal.....	13.5	14.5	15.9
Other sources.....	1.7	1.4	1.6
Total.....	15.2	15.8	17.5
<i>Share of the value of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	83.7	82.9	81.7
U.S. imports from--			
Belgium.....	.2	.5	(¹)
Brazil.....	.7	.6	.8
Canada.....	3.6	4.1	5.2
France.....	2.6	1.8	2.3
Germany.....	1.7	1.7	1.2
Japan.....	1.3	1.2	1.0
Korea.....	3.4	4.5	4.7
Netherlands.....	1.1	1.4	1.5
Subtotal.....	14.6	15.7	16.6
South Africa.....	0	0	0.2
Subtotal.....	14.6	15.7	16.8
Other sources.....	1.7	1.4	1.5
Total.....	16.3	17.1	18.3

¹ Positive figure, but less than significant digits displayed.

Note.--Because of rounding, figures may not add to the totals shown; shares are computed from the unrounded figures.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table 105

Cold-rolled products: Apparent U.S. consumption and market penetration, 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Apparent consumption.....	28.620	25.370	28.481
<i>Value (million dollars)</i>			
Apparent consumption.....	11.620	10.243	11.257
<i>Share of the quantity of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	93.0	92.9	93.1
U.S. imports from--			
Argentina.....	.1	.3	.1
Austria.....	.3	.3	(¹)
Belgium.....	.4	.5	.4
Brazil.....	.5	.5	.5
Canada.....	.5	.6	.8
France.....	.4	.5	.4
Germany.....	1.1	1.0	1.2
Italy.....	.1	.2	.2
Japan.....	1.5	1.5	1.3
Korea.....	.4	.4	.6
Netherlands.....	.5	.6	.6
Spain.....	.1	.1	.2
Subtotal.....	6.1	6.4	6.4
South Africa.....	0	0	0.2
Subtotal.....	6.1	6.4	6.5
Other sources.....	.9	.7	.4
Total.....	7.0	7.1	6.9
<i>Share of the value of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	91.1	91.2	91.4
U.S. imports from--			
Argentina.....	.1	.3	.1
Austria.....	.3	.3	(¹)
Belgium.....	.4	.5	.5
Brazil.....	.5	.6	.5
Canada.....	.7	.7	1.0
France.....	.5	.6	.5
Germany.....	1.6	1.3	1.5
Italy.....	.2	.2	.2
Japan.....	2.2	2.2	2.1
Korea.....	.5	.5	.6
Netherlands.....	.6	.6	.6
Spain.....	.1	.1	.2
Subtotal.....	7.8	7.9	7.9
South Africa.....	0	0	0.2
Subtotal.....	7.8	7.9	8.1
Other sources.....	1.1	.9	.6
Total.....	8.9	8.8	8.6

¹ Positive figure, but less than significant digits displayed.

Note.--Because of rounding, figures may not add to the totals shown; shares are computed from the unrounded figures

I-147

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table 106
Cold-rolled products: Apparent open-market U.S. consumption and market penetration, 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Apparent consumption.....	14.109	12.390	14.271
<i>Value (million dollars)</i>			
Apparent consumption.....	6.664	5.763	6.452
<i>Share of the quantity of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	85.9	85.5	86.1
U.S. imports from--			
Argentina.....	.2	.6	.2
Austria.....	.6	.5	(¹)
Belgium.....	.7	1.0	.9
Brazil.....	1.0	1.1	1.0
Canada.....	1.0	1.2	1.7
France.....	.9	1.0	.9
Germany.....	2.3	2.0	2.4
Italy.....	.3	.4	.3
Japan.....	3.1	3.0	2.7
Korea.....	.8	.9	1.2
Netherlands.....	1.1	1.2	1.2
Spain.....	.2	.2	.3
Subtotal.....	12.3	13.1	12.7
South Africa.....	0	0	0.3
Subtotal.....	12.3	13.1	13.0
Other sources.....	1.8	1.4	0.9
Total.....	14.1	14.5	13.9
<i>Share of the value of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	84.5	84.4	84.9
U.S. imports from--			
Argentina.....	.2	.5	.2
Austria.....	.6	.5	(¹)
Belgium.....	.7	.9	.8
Brazil.....	.9	1.1	.9
Canada.....	1.2	1.3	1.7
France.....	1.0	1.1	.9
Germany.....	2.8	2.3	2.6
Italy.....	.3	.3	.3
Japan.....	3.9	3.8	3.6
Korea.....	.8	.9	1.1
Netherlands.....	1.1	1.1	1.1
Spain.....	.2	.2	.3
Subtotal.....	13.5	14.0	13.7
South Africa.....	0	0	0.3
Subtotal.....	13.5	14.0	14.0
Other sources.....	2.0	1.6	1.1
Total.....	15.5	15.6	15.1

¹ Positive figure, but less than significant digits displayed.

Note.--Because of rounding, figures may not add to the totals shown; shares are computed from the unrounded figures.

I-148

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table 107

Corrosion-resistant products: Apparent U.S. consumption and market penetration, 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Apparent consumption.....	12.795	11.489	13.562
<i>Value (million dollars)</i>			
Apparent consumption.....	7.786	6.801	7.826
<i>Share of the quantity of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	85.6	85.0	82.7
U.S. imports from--			
Australia.....	.9	1.3	1.4
Brazil.....	.2	.1	.1
Canada.....	1.4	2.1	3.4
France.....	.5	.6	.7
Germany.....	1.3	1.2	1.4
Japan.....	6.6	6.0	6.1
Korea.....	1.0	1.1	1.4
Mexico.....	.9	.7	.8
New Zealand.....	.2	.3	.2
Sweden.....	.1	.2	.2
Subtotal.....	12.9	13.6	15.7
South Africa.....	0	0	0.4
Subtotal.....	12.9	13.6	16.1
Other sources.....	1.4	1.4	1.2
Total.....	14.4	15.0	17.3
<i>Share of the value of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	84.1	84.0	81.7
U.S. imports from--			
Australia.....	1.1	1.4	1.4
Brazil.....	.2	.1	.1
Canada.....	1.3	1.9	3.0
France.....	.5	.6	.7
Germany.....	1.4	1.2	1.5
Japan.....	7.6	6.9	7.2
Korea.....	1.2	1.2	1.5
Mexico.....	1.0	.8	.9
New Zealand.....	.2	.3	.2
Sweden.....	.1	.1	.2
Subtotal.....	14.4	14.6	16.7
South Africa.....	0	0	0.3
Subtotal.....	14.4	14.6	17.0
Other sources.....	1.5	1.4	1.3
Total.....	15.9	16.0	18.3

Note.--Because of rounding, figures may not add to the totals shown; shares are computed from the unrounded figures.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table 108

Corrosion-resistant products: Apparent open-market U.S. consumption and market penetration, 1990-92

Item	1990	1991	1992
<i>Quantity (1,000 short tons)</i>			
Apparent consumption.....	12.343	11.088	13.213
<i>Value (million dollars)</i>			
Apparent consumption.....	7.582	6.613	7.694
<i>Share of the quantity of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	85.1	84.5	82.8
U.S. imports from--			
Australia.....	1.0	1.3	1.4
Brazil.....	.2	.1	.1
Canada.....	1.5	2.2	3.4
France.....	.5	.6	.7
Germany.....	1.3	1.2	1.4
Japan.....	6.8	6.1	6.2
Korea.....	1.0	1.1	1.5
Mexico.....	.9	.7	.8
New Zealand.....	.2	.3	.2
Sweden.....	.1	.2	.2
Subtotal.....	13.4	14.0	16.0
South Africa.....	0	0	0.4
Subtotal.....	13.4	14.0	16.4
Other sources.....	1.5	1.5	1.0
Total.....	14.9	15.5	17.4
<i>Share of the value of U.S. consumption (percent)</i>			
Producers' U.S. shipments....	83.7	83.6	81.4
U.S. imports from--			
Australia.....	1.1	1.4	1.5
Brazil.....	.2	.1	.1
Canada.....	1.3	2.0	3.1
France.....	.5	.6	.7
Germany.....	1.4	1.3	1.5
Japan.....	7.8	7.1	7.3
Korea.....	1.2	1.3	1.5
Mexico.....	1.0	.8	.9
New Zealand.....	.2	.3	.2
Sweden.....	.1	.1	.2
Subtotal.....	14.8	15.0	17.0
South Africa.....	0	0	0.3
Subtotal.....	14.8	15.0	17.3
Other sources.....	1.5	1.4	1.3
Total.....	16.3	16.4	18.6

Note.--Because of rounding, figures may not add to the totals shown; shares are computed from the unrounded figures.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Prices

Market Characteristics

Price lists for flat-rolled carbon steel products are published and distributed by the majority of U.S. mills; however, price lists were generally described as not being very useful given competitive conditions in the U.S. market, and discounts are frequently made from list price in order to meet competitive situations. List prices were most frequently identified as reference points from which to begin price negotiations on prospective sales. One steel service center representative stated that in the current market all prices are negotiated and his company purchases flat-rolled carbon steel products without reference to any price list.²⁰⁰

Most U.S. mills reported that they frequently give discounts off published list prices. Discounts are based on a number of different factors including competing quotes from importers or other domestic suppliers, the size of the sale, the existing capacity utilization rate of the mill, the expected profit margin on the sale, past experience and the anticipated volume of future orders from a particular customer, and the degree to which the product under consideration is specialized in terms of its chemistry, coating, width, gauge, and tolerance; in general, the more specialized the product, the smaller the discount. *** reported that "base" prices for commercial quality and standard dimension items are not published but rather are negotiated individually with each customer. *** uses price lists for "extra" attributes including width, thickness, length, finish, drawing quality, and coating. These extra charges are added to the negotiated base price. *** is one of the few responding mills that reported publishing price lists and adhering to these prices by not offering sales discounts to any of its customers. List prices change only when costs or conditions in the market change. Those domestic producers that do not publish price lists indicated that they negotiate prices with their customers based on competing price quotes, prevailing market prices, costs of production, and expected profit margins.

By contrast, very few importers reported publishing price lists for their sales of flat-rolled carbon steel products and instead tend to negotiate prices for each sale directly with the customer. Prices are based on factors similar to those considered by the domestic industry: the volume of a particular sale, raw material and production costs, expected profit margins, and competition from other suppliers. Several importers also reported that the foreign mills they represent can get involved in the negotiation process by setting a minimum price for a particular sale.

Both producers and importers sell flat-rolled carbon steel products based on contracts or purchase agreements that are negotiated between the buyer and seller and usually establish a set price that remains in effect for between 1 and 4 calendar quarters, although some purchase agreements with larger customers such as auto or appliance manufacturers can extend as long as 2 to 3

²⁰⁰ Statement of David Soble, president, Interstate Steel Co., preliminary transcript, p. 346.

years.²⁰¹ The quantities to be shipped over the duration of a purchase agreement are usually specified within some range, but the buyer is not penalized if the quantity originally ordered does not fall within this range. Prices are not normally negotiable while a purchase agreement is in effect, although a number of producers and importers did note that if conditions in the industry were to change significantly, the mill or the customer could renegotiate a new agreement. Sales agreements with a duration of more than 1 year are somewhat more flexible in terms of the prices and quantities involved and can often be renegotiated on an interim basis usually from quarter to quarter.

A substantial volume of sales are also made on a spot basis that involve one-time shipments with a predetermined price and quantity. Most sales of this nature also involve some form of purchase agreement between the buyer and seller, but the negotiated price usually remains in effect only until the agreed upon quantity is shipped. Contract sales are more commonly made to auto, appliance and other original equipment manufacturers, while spot sales are more often made to service centers and distributors. In some cases, spot sales are made to end users or service centers when a contract customer does not take delivery on the entire quantity of an order that was originally produced by the mill. Unlike the products with very specific tolerances, coatings, or chemical compositions, which are often specially produced and sold on contract to manufacturers and end users, the products sold on a spot basis are usually more standardized and can be put to a variety of end uses.

Domestic mills reported selling the majority of their flat-rolled carbon steel products on an f.o.b. mill basis; however, some steel is also sold delivered to the customer's facility. A number of U.S. mills indicated that they sell flat-rolled carbon steel products on any terms requested by the customer or on whatever terms are necessary to meet competitive situations. Most of those mills that sell some of their product on a delivered basis usually separate out the freight charges on the sales invoice and charge them back to the customer.

The majority of domestic mills also sell flat-rolled carbon steel products on a freight-equalized basis. Under this program, if a mill decides to pursue a sale, it will meet the quoted delivered price from the mill nearest the customer that is capable of producing a competitive product. A producer effectively sells f.o.b. from the competing mill nearest to the purchaser. Several mills also reported that other disparities in freight costs that limit their price-competitiveness are also commonly absorbed on a sale. Freight is most commonly equalized on products which are more commodity in nature, and is usually not equalized on specialized products not available from many other suppliers.

²⁰¹ As a reflection of a possible trend in the industry, some service centers have offered certain auto parts manufacturers fixed prices on flat-rolled carbon steel for the life of a part that they produce. According to ***, such agreements can last as long as 15 years. He is confident, however, that this will be profitable over the long term with the entrance of more low-cost minimills into the market and overall declining prices for flat-rolled carbon steel products. Comments of May 18, 1993.

Importers reported selling roughly half of their products on an f.o.b. port-of-entry or U.S. storage facility basis, and half delivered to the customer; the type of arrangement for each sale depends primarily on the specific requests of each customer. Several importers of Canadian material (including a few Canadian mills) reported selling f.o.b. from the Canadian mill. Unlike domestic suppliers, most importers do not equalize the cost of freight to their customers' locations; the few that do freight-equalize reported that they do so in order to quote prices in a manner comparable to that of the domestic industry.

Producers and importers sell their products under roughly similar payment terms, although most importers require full payment within 30 days with no discounts for early payment, while most domestic mills offer a one-half-percent to three-quarters-percent discount for payment within 10 days. Both domestic mills and importers also offer a variety of other sales incentives such as roll-and-hold or terminal-release programs, usually for larger customers, through which the producer or importer will maintain a product in inventory for a set period of time. Other incentives include extended payment terms, waivers of price extras, and volume discounts.

Changes in List Prices

In early March 1993, three of the largest U.S. integrated mills, Inland, LTV, and USX, announced list price increases of \$20 per ton on hot-rolled, cold-rolled, and corrosion-resistant products that were intended to become effective on July 4, 1993.²⁰² These increases in list price follow previous increases of \$20 per ton that became effective in the first and second quarters of 1993. According to several service center representatives, by some time in April both of the 1993 list price increases for hot- and cold-rolled products had been accepted by service centers and manufacturers, and the average prices for these products from the major integrated mills were \$40-per-ton higher than at the end of 1992. Domestic steel mills were apparently unsuccessful in getting buyers to accept a first-quarter 1993 list price increase of \$20 per ton for corrosion-resistant products, but a second attempt at an increase in list price for the second quarter was reportedly holding in the early part of April.²⁰³ The ability of domestic producers to make the announced third-quarter price increase stick remains in question, however, and depends on possible strikes in the auto and steel industries that could occur in the third quarter of 1993, as well as on the pending antidumping and countervailing duty investigations.²⁰⁴

Nucor, which frequently changes its published list prices, announced price increases of \$15 per ton for both hot- and cold-rolled products on December 28, 1992, which brought base prices up to \$295 and \$420 per ton, respectively, for the two products. Nucor also increased its list prices on January 27, 1992, by \$10 per ton on hot-rolled, and \$15 per ton on cold-rolled, bringing the base prices for the two products up to \$305 and \$435 per ton, respectively. Finally, in a price list submitted with their

²⁰² *Wall Street Journal*, Mar. 9, 1993, p. A-3.

²⁰³ *American Metal Market*, May 19, 1993.

²⁰⁴ Comments of ***.

questionnaire, dated February 15, 1993, Nucor's list price was \$320 per ton for hot-rolled and \$450 per ton for cold-rolled products.

Lead Time Between Order and Delivery

The large majority of U.S. mills produce flat-rolled carbon steel based on orders received from service centers or end users, or on expected periodic shipments resulting from negotiated purchase agreements; production of flat-rolled carbon steel is never undertaken on speculation or to stock inventories. Lead times between order and delivery can vary somewhat among domestic mills depending on a number of factors such as the level of capacity utilization of a mill, the tonnage ordered, and the extent to which a product requires specific materials or production processes. With the exception of Canada, overall lead times for imported flat-rolled carbon steel are generally longer than for domestic products in the same categories. Most purchasers in their questionnaire responses estimated average lead times for each of the four categories of domestic flat-rolled carbon steel products within the ranges reported in the tabulation below:

	<u>Plate</u>	<u>Hot- rolled</u>	<u>Cold- rolled</u>	<u>Corrosion- resistant</u>
Argentina.....	(1)	(1)	4-6 months	(1)
Australia.....	(1)	(1)	(1)	4-5 months
Austria.....	(1)	(1)	3-5 months	(1)
Belgium.....	2-3 months	3-4 months	3-4 months	(1)
Brazil.....	3-5 months	3-6 months	3-5 months	4-6 months
Canada.....	1-2 months	1-2 months	2-3 months	2-3 months
Finland.....	2-3 months	(1)	(1)	(1)
France.....	3-5 months	3-5 months	3-5 months	3-4 months
Germany.....	3-4 months	4-5 months	3-4 months	4-5 months
Italy.....	4 months	(1)	4-5 months	(1)
Japan.....	(1)	4-6 months	4-6 months	4-6 months
Korea.....	2-3 months	2-3 months	3-4 months	3-5 months
Mexico.....	2-4 months	(1)	(1)	1-3 months
Netherlands.....	(1)	3-6 months	3-6 months	(1)
New Zealand.....	(1)	(1)	(1)	4 months
Poland.....	(2)	(1)	(1)	(1)
Romania.....	5-6 months	(1)	(1)	(1)
Spain.....	(2)	(1)	(2)	(1)
Sweden.....	3-4 months	(1)	(1)	3-4 months
United Kingdom..	3-5 months	(1)	(1)	(1)
United States...	3 wks.-2 mos.	3 wks.-3 mos.	3 wks.-3 mos.	6 wks.-3 mos.

¹ Product not subject to investigation.

² No information on lead times received from purchasers.

As with domestic production, very little of the flat-rolled carbon steel from the subject countries is imported on speculation. Instead, most importers receive orders from their customers in the United States (generally either end users or service centers ordering on behalf of their customers) and place these orders directly with the foreign mill. A small number of U.S. service centers, that also act as importers, do maintain some inventories of

commodity-type products for resale in the merchant market. This segment of the market is limited, however, because of the large cost associated with carrying inventories, and because of the somewhat inconsistent demand for commodity-type flat-rolled carbon steel products. A relatively small number of importers also order specific products on behalf of certain customers, warehouse the products in the United States, and release the product from inventory as requested by the customer. This type of arrangement is usually undertaken with larger manufacturers that wish to purchase flat-rolled carbon steel on a just-in-time basis.²⁰⁵

Lead times between order from the foreign mill and delivery for imported flat-rolled carbon steel products can vary considerably depending on the same factors as in the U.S. industry. An additional factor that can affect lead times is the geographic proximity to the United States of the subject foreign country. For example, some of the importing Canadian mills are actually closer to customers in the United States than are the domestic mills, and can fill orders in a relatively short amount of time. Conversely, mills in Australia or New Zealand have much longer lead times between order and delivery. Purchasers provided estimates on average lead times between the date on which an order is placed and the date on which the product is delivered to the purchaser's establishment for each of the four subject products from all of the subject countries.

Several purchasers reported that lead times from domestic mills have increased considerably during the first two quarters of 1993 compared to the same period in 1992. As an example, one service center representative reported that lead times for hot-rolled products from most domestic mills have been 3 weeks on average for the past 5 years, but have increased to as much as 12 weeks since the end of January 1993.²⁰⁶ Another buyer for a container manufacturing company reported that lead times have increased from 1 month to 2 months since the beginning of 1993, and his company has had supplies for the first quarter of 1993 from one domestic mill cut to 80 percent of the total for the same period in 1992.²⁰⁷

Factors Considered When Making Purchase Decisions

Purchasers, in their questionnaire responses, ranked the following factors as critical, very important, somewhat important, and not important when buying each of the four categories of flat-rolled carbon steel. Figures 1-4 summarize these responses.

²⁰⁵ For example, Thyssen, a large importer from Germany, reported that it warehouses its imported product in Detroit for just-in-time shipments to customers in the auto industry. Preliminary transcript, p. 399.

²⁰⁶ Comments of ***.

²⁰⁷ ***, May 17, 1993.

Key to figures 1-4

L- Range of supplier's product line
 C- Prearranged contracts
 P- Price
 SQ- Supplier's qualification on certain products
 A- Current availability
 Q- Product quality
 R- Long-standing relationships with certain domestic or foreign suppliers
 LT- Lead time between order and delivery
 F- Freight charges
 JIT- The ability to ship just in time

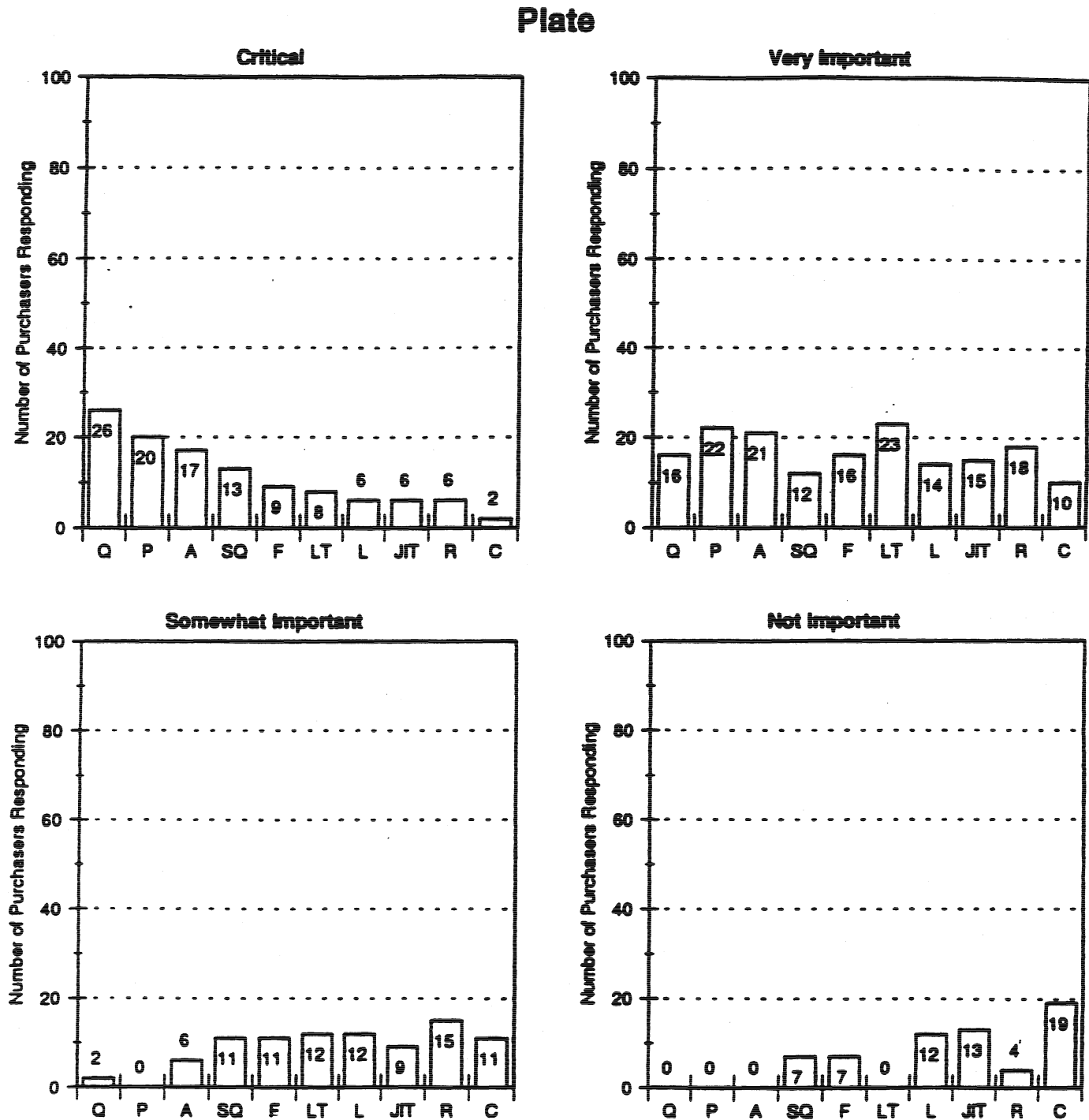
The following tabulation lists reasons cited by purchasers as to why they have purchased flat-rolled carbon steel products from domestic sources when comparable products from any of the subject countries were available at a lower delivered price:²⁰⁸

<u>Reason</u>	<u>Number of purchasers responding</u>
Shorter lead times between order and delivery.....	48
Buy-American policies.....	26
Smaller minimum order size.....	25
More reliable supply.....	24
Better technical assistance.....	11
Greater availability.....	9
Long-standing relationship with domestic suppliers.....	6
Better quality.....	5
Better service.....	5
Domestic product ordered by customer.....	2
To maintain an additional source of supply.....	2
Less damage in transit.....	2
More flexibility in production.....	1
Better return policies.....	1

An additional 16 purchasers reported that the question was not applicable, and 7 reported that domestic and imported products of comparable quality are usually priced the same.

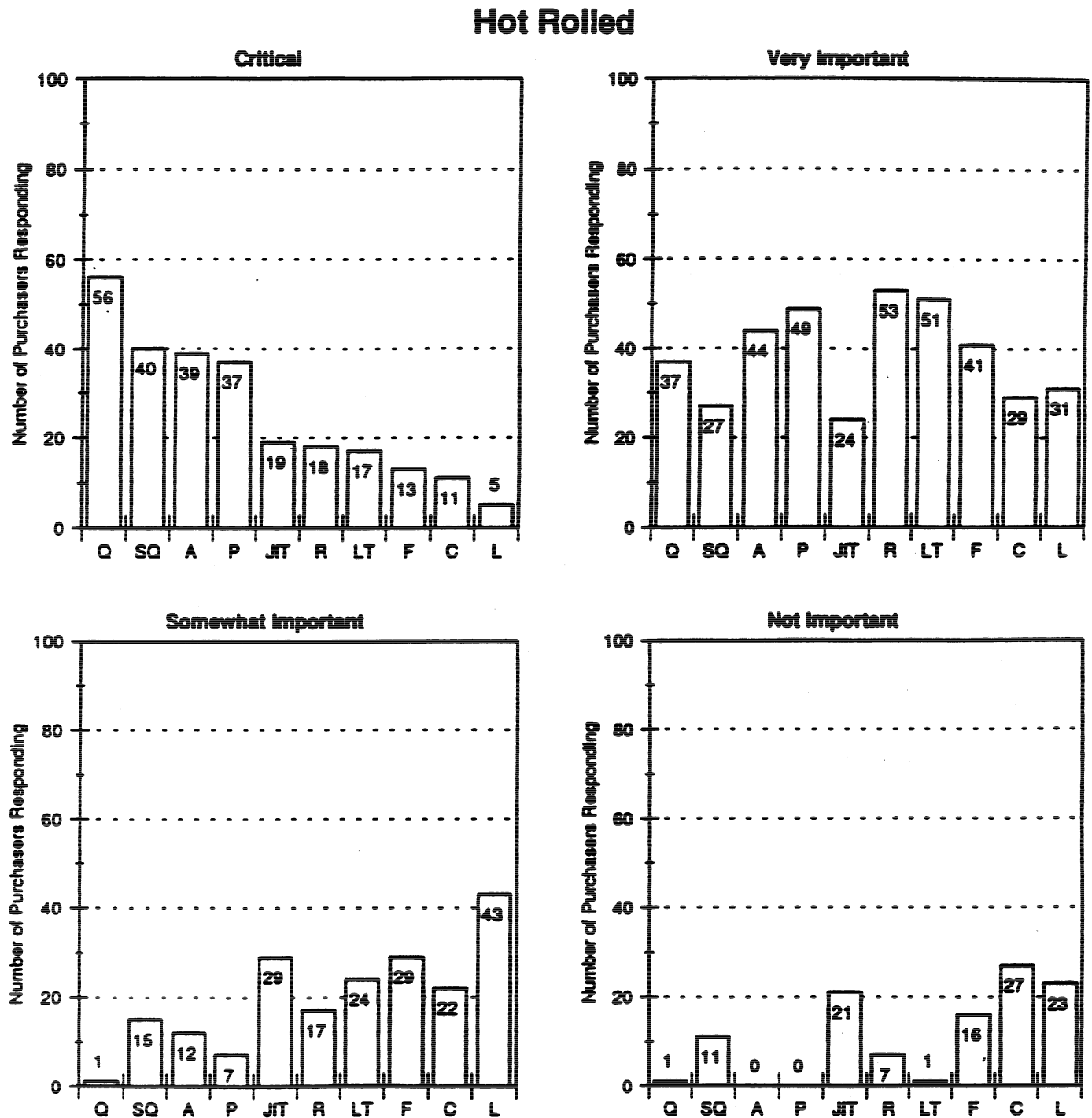
²⁰⁸ A number of purchasers provided more than one reason for purchasing the domestic products over the subject foreign products.

Figure 1: Factors considered by purchasers when making purchase decisions for plate



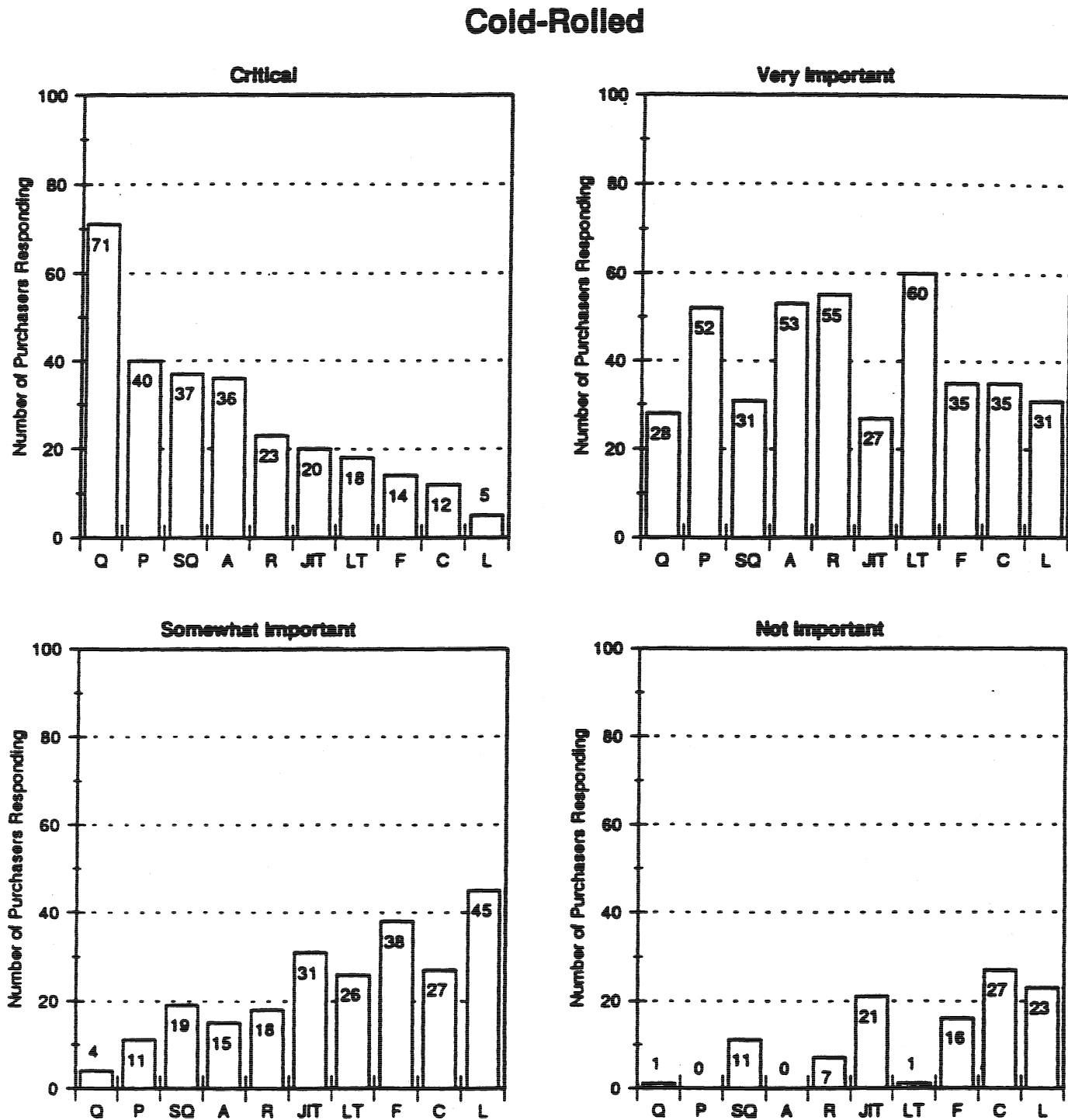
Source: Compiled from data submitted in response to questionnaires of the U.S International Trade Commission.

Figure 2: Factors considered by purchasers when making purchase decisions for hot-rolled products



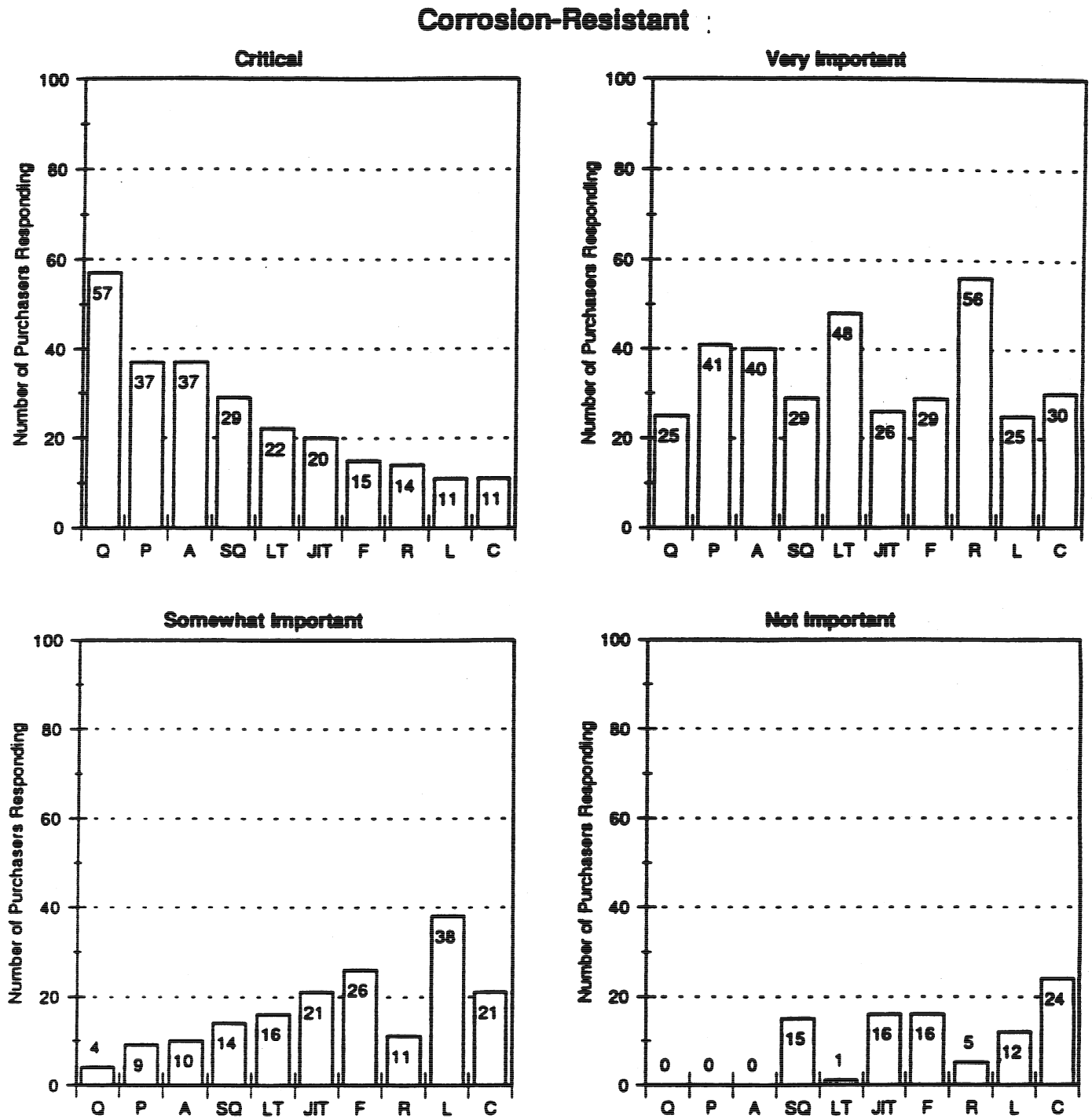
Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Figure 3: Factors considered by purchasers when making purchase decisions for cold-rolled products



Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Figure 4: Factors considered by purchasers when making purchase decisions for corrosion-resistant products



Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Purchasers were also asked why they have purchased any of the four categories of flat-rolled carbon steel from subject foreign suppliers even though a comparable domestic product was available at a lower delivered price. The following tabulation summarizes these responses:²⁰⁹

<u>Reason</u>	<u>Number of purchasers responding</u>
Better quality.....	36
More reliable supply.....	7
Better technical support.....	6
To maintain an additional source of supply.....	6
Shorter lead times between order and delivery.....	6
Imported product ordered by customer.....	5
Smaller minimum order size.....	4
Relationship with the foreign mill.....	2
Placed on allocation by domestic mills.....	2

An additional 44 purchasers reported that they did not and/or would not purchase any flat-rolled carbon steel from foreign sources if a comparable domestic product were available at a lower price, and 11 reported that they bought the imported product because a comparable product was not available from domestic mills. Several purchasers also stated that because of the increased risks associated with buying foreign steel due to factors such as longer lead times, more inconsistent delivery, larger minimum order sizes, the potential for exchange rate fluctuations, and a greater possibility of rust or damage in transit, most foreign products must be priced between \$20 and \$40 per ton below comparable domestic products before they will consider buying the imported product.²¹⁰

Overall Demand for Certain Flat-rolled Carbon Steel Products

Purchasers provided somewhat mixed responses regarding the question of whether their overall demand for each of the four subject products has increased, decreased, or remained the same over the past 5 years. The following tabulation contains a summary of purchaser responses for each of the four subject products, in number of respondents:

	<u>Increased</u>	<u>Decreased</u>	<u>Remained the same</u>
Plate.....	15	15	15
Hot-rolled....	40	31	26
Cold-rolled...	47	20	38
Corrosion-resistant...	53	11	23

²⁰⁹ A number of purchasers provided more than one reason for purchasing the subject foreign products over the domestic products.

²¹⁰ Comments of ***.

Reasons cited for increased demand for plate generally included an expanded market share through the development of new products, more aggressive sales efforts, and the departure of competitors from certain regions of the country. Declines in demand were generally attributed to the recession and its effect on construction and manufacturing activity.

Increases in overall demand for hot-rolled products were attributed to an increased demand in the automotive and auto parts markets and the introduction of new end products that use hot-rolled steel as an input. Declines in demand were explained by cyclical economic trends, the substitution of cold-rolled and corrosion-resistant products for hot-rolled products in some applications, engineering changes requiring fewer hot-rolled products in the same products, and greater competition from foreign suppliers.

Increased demand for cold-rolled products over the past 5 years is reportedly due to increased auto production in the United States--especially from the Japanese transplants, a switch from hot-rolled to cold-rolled in some end products, and cyclical economic trends. Reductions in demand were accounted for by an increased demand for corrosion-resistant products and cyclical economic trends.

Greater demand for corrosion-resistant products was explained by a shift from hot-rolled and cold-rolled to corrosion-resistant products, increased supply localization efforts by some of the foreign transplant auto makers manufacturing in the United States, and cyclical economic factors. The primary reason cited for any decline in demand for corrosion-resistant products over the past 5 years was cyclical economic factors affecting construction and manufacturing activity.

Quality Comparisons

The large majority of purchasers reported that domestic and subject imported flat-rolled carbon steel products with similar grades and specifications are generally employed in the same range of end uses. Regarding product quality, the majority of plate purchasers reported that most domestic and subject imported products are comparable. Only slightly more than half, however, of the responding hot-rolled, cold-rolled, and corrosion-resistant purchasers reported that the domestic and subject imported products are comparable in quality. Most of the remainder of this group indicated that the imported products are superior in quality to the domestic product. Table 109 summarizes these responses.²¹¹

²¹¹ Quality differences reported in questionnaire responses are included in this section only if the purchaser identified specific reasons for the characterization. Figures reported in parentheses indicate the number of purchasers reporting for each category; no parentheses means only one response. The characterizations represent a cumulation of responses from all responding purchasers.

Table 109

Certain flat-rolled carbon steel products: Purchasers' comparisons of domestic and imported product quality, by products and by countries

Product quality	Plate	Hot-rolled	Cold-rolled	Corrosion-resistant
Imported product inferior to domestic product	Canada (shape) Romania (shape, laminations)	Brazil (inferior shape) Canada (shape)	Argentina (finish) Brazil (gauge control, surface) Italy (surface, gauge control)	Canada (overall quality) Mexico (strength, flatness)
Imported product comparable to domestic product	Belgium (4) Brazil (5) Canada (5) Finland (2) France (3) Germany (5) Korea (4) Mexico (2) Spain Sweden United Kingdom	Belgium Brazil (8) Canada (12) France Germany (7) Japan (2) Korea (3) Netherlands (2)	Austria (2) Belgium Brazil (4) Canada (6) France (5) Germany (9) Japan (6) Korea (9) Netherlands	Australia (3) Brazil Canada (7) France (7) Germany (5) Japan (8) Korea (7) New Zealand (3) Sweden (3)
Imported product superior to domestic product	Finland (flatness, cleanliness, surface) France (low sulphur content, easily normalized) Germany (chemistry) Japan (flatness, cleanliness, surface, physical properties) Korea (flatness, finish, surface)	Belgium (finish, gauge control, hardness) Canada (surface, hardness, shape, gauge control) France (9) (surface, shape, finish, gauge control, cleanliness, formability) Japan (flatness, cleanliness, surface, physical properties) Korea (flatness, finish, surface)	Austria (finish) Belgium (2) (gauge control, flatness, surface quality) Brazil (2) (surface, gauge control, temper rolling, shape) Canada (3) (surface, flatness, gauge control, hardness, paint adhesion)	Australia (4) (surface, flatness, gauge control, edge, shape, coating uniformity) France (2) (drawability, finish, gauge control, cleanliness) Germany (flatness, gauge control, surface, coating adherence)

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Table continued on next page.

Table 109--Continued

Certain flat-rolled carbon steel products: Purchasers' comparisons of domestic and imported product quality, by products and by countries

Product quality	Plate	Hot-rolled	Cold-rolled	Corrosion-resistant
Imported product superior to domestic product--Continued		<p>Germany (4) (surface, shape, gauge control, cleanliness, formability, fewer inclusions)</p> <p>Japan (10) (surface, finish, shape, gauge control, internal cleanliness, strength)</p> <p>Korea (3) (surface, gauge control, hardness, shape)</p> <p>Netherlands (surface, cleanliness)</p>	<p>France (3) (size range, shape, consistency, flatness, surface)</p> <p>Germany (5) (flatness, gauge control, shape, finish, surface)</p> <p>Italy (surface, gauge control)</p> <p>Japan (23) (size ranges, flatness, surface, gauge control hardness, formability, cleanliness, yield, mechanical properties, shape)</p> <p>Korea (2) (gauge control)</p> <p>Netherlands (shape, gauge control)</p>	<p>Japan (23) (flatness, edge, shape, gauge control, mechanical properties, product consistency, drawability, spangle, coating consistency, cleanliness, resistance to corrosion, rejection rate)</p> <p>Korea (4) (gauge control, drawability, spangle, surface, coating uniformity)</p> <p>Mexico (gauge control)</p>

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Certification and Prequalification

Well over half of all purchasers providing questionnaire responses reported that they or their customers require their suppliers to become certified or prequalified in order to ensure that the flat-rolled carbon steel products they purchase meet all of their internal quality and performance standards necessary to produce an end product. The type of qualification process and the extent of the testing can vary considerably depending on the product and the intended end use. Auto manufacturers, which tend to purchase primarily cold-rolled and corrosion-resistant products, generally have the most stringent requirements among all categories of end users; the process of getting a product from a particular mill qualified can reportedly take between 6 months and 2 years for companies such as ***, and can cost as much as \$50,000 to \$150,000 for sample materials, testing, and travel between the mill and the auto plant.²¹² Other purchasers reported the qualification process ranging between 1 and 3 months and costing between \$500 and \$3,000, while many of the least exacting buyers reported that they have no formal qualification process that would require any additional time or expense. These purchasers only require the mill to provide documentation on the steel, certifying that the product contains all of the required chemistry, gauge, coating, etc.

With these qualification requirements, most purchasers typically maintain a few approved suppliers and do not readily switch suppliers from order to order because of a lower quoted price or for any other single factor. Approximately half of all purchasers reported that they switched suppliers at some time during the past 5 years, typically from one or two suppliers to one or two other suppliers. Some of the reasons cited for switching suppliers include quality, service, reliability of delivery, availability, price, and the need to maintain additional sources of supply. Purchasers reported switching from foreign to domestic, domestic to foreign, and among foreign and domestic suppliers with no clear trend evident. A few purchasers did note that they have switched from foreign to domestic sources to comply with domestic content requirements, and a few others reported that they have switched to domestic sources because of concern over the pending antidumping and countervailing duty investigations.

Sales of Nonprime Material

An estimated 4-10 percent of the production of an average mill consists of secondary quality or nonprime material that may have been damaged in production, or may not meet all of the specifications of the customer that originally ordered the product.²¹³ The quality of product categorized as nonprime can vary widely. For example, among the highest quality nonprime material, a "field reject" is a coil that for some reason does not meet all of the specifications required by an end user such as an auto maker and can be sold into the secondary market. Rather than take the coil back when it is rejected, a mill will usually attempt to find a new buyer through a broker or a service center. Such a product, with quality as good as most prime

²¹² ***.

²¹³ The volume of the nonprime material of any mill depends on the particular mill and the type of product being produced. Preliminary transcript, pp. 157-59.

material, can be sold with all of the documentation on the chemistry, tolerances, etc., but most mills will not accept returns or provide any additional sales support on such products. According to one service center representative who deals primarily in seconds, higher quality seconds of this nature are usually discounted between 10 and 30 percent off prime prices.²¹⁴ In most cases, discounted prices for nonprime material usually have little effect on prices for prime material because the products are not customer qualified and cannot be readily substituted for prime coils. One mill representative reported that, even if prices for higher quality nonprime material were discounted by 50 percent off of the price for prime, none of the major end users in industries such as construction, automobiles, or appliances would purchase it unless the supplier were qualified and the product was produced to their specifications.²¹⁵

At the other end of the spectrum of second quality or nonprime material are "salvage grade" coils that may be undersized, damaged in processing or shipping, or may contain other flaws such as a wavy edge or an incorrect chemistry or coating that make it not salable as prime material. These coils are sold mostly to service centers that process them into usable products (by slitting a coil to width and removing a damaged edge, for example). If a salvage grade coil is not damaged, it can at times be resold to customers that do not require any documentation or certification for the steel they purchase. Prices for these types of coils tend to correspond closely with prices for scrap material (since scrap is its ultimate destination if no buyer can be found on the merchant market) and can be priced as low as \$120 per ton.

Sales of Slab

Approximately one-fourth of all responding purchasers, most of which are service centers, reported that they bought some quantity of flat-rolled carbon steel from U.S. mills as part of a slab offering or a slab rolling over the past 5 years. Most of these purchasers reported annual purchases of domestic slab offerings ranging between 1 and 10 percent of total purchases. Slab offerings occur when mills have excess slab on hand that was not needed by a customer or that did not meet all of a customer's specifications, usually on chemistry. While rejected by the original customer, in most cases the coils produced from the slab offering can be sold as prime material to another customer with less exacting specifications. One service center representative stated that he purchases coils on slab offerings, slits them to width as ordered by his customers, and ships them along with other slit-to-width coils not purchased based on a slab offering. The two products are identical in quality and both meet all of his customer's specifications.²¹⁶

Slabs are usually offered through lists that are distributed by the mills to potential buyers, sometimes as frequently as once per day. The lists contain information such as the size of the slab, the chemistry, the ASTM specifications to which it was originally cast, and any other relevant information. A slab can be purchased outright by a rolling mill, but in most cases, the mill selling the slab will roll it to a customer's required width

²¹⁴ USITC telephone conversation with ***, Apr. 26, 1993.

²¹⁵ USITC telephone conversation with ***, Apr. 23, 1993.

²¹⁶ Comments of ***.

and gauge.²¹⁷ Buyers are usually required to take larger quantities in a single purchase--usually around 2,000 tons per sale--than under a normal sales arrangement. Prices for slabs are commonly discounted by 5 to 20 percent off of the normal price for a comparable product not sold through a slab offering, and the mills are usually less flexible in terms of the widths that can be produced because the slab is already cast. Purchasers provided mixed responses as to whether the prices for slab offerings tend to affect prices for prime products sold through normal channels; somewhat more than half of all responding purchasers indicated that prevailing market prices are driven down by discounted slab offerings. As an example, *** reported that slabs create a low-price pool of product and diminish the prime market discipline. Alternatively, *** reported that prices for prime material are not greatly affected by slab offerings because they are not available at all times, and most mills already discount heavily on most of their products anyway. Other buyers indicated that any discounts that are received are often offset by increased scrap and yield loss for the end product in which the slab is used. One purchaser, ***.

In contrast to the domestic industry, excess slab is not commonly offered by importers. Only two purchasers reported buying imported slab over the past 5 years.

Transportation Costs

The majority of producers and importers reported that U.S. inland transportation costs for flat-rolled carbon steel products are a significant factor in their customers' purchase decisions, and the cost of inland transportation can affect a producer's or importer's price competitiveness, depending on the particular product and the location of the customer. Most purchasers indicated that U.S. inland transportation costs generally account for between 3 and 10 percent of the total delivered cost of any of the four subject flat-rolled products. Because of the substantial cost of transportation, many importers reported that the products they import are generally more competitive in coastal regions of the United States near their ports of entry than in inland markets where most of the domestic mills are located. Imported products can also be price competitive in the Great Lakes region and parts of the inland Southeast where transportation by barge on the St. Lawrence Seaway and the Mississippi River is relatively inexpensive. Domestic producers reported that they maintain somewhat of a competitive advantage in inland areas where most of the mills and a number of large customers are located. Many producers did, however, report that competition with imports occurs in all regions of the United States. A number of producers and importers also indicated that freight advantages usually only occur on commercial quality products with standard dimensions and tolerances. Specialty products that are produced by a limited number of domestic or foreign mills are frequently shipped to all markets in the United States and freight advantages are not as important a factor for sales of these products.

²¹⁷ One purchaser, ***, stated that slabs are most often sold as hot-rolled product. If the overall market, however, is weak and the cold-rolling and/or coating facilities of the mill have excess capacity, the mill may also be willing to roll the slab further into cold-rolled products, and in some instances it can even be coated. USITC telephone conversation, Apr. 23, 1993.

Most domestic producers and importers were able to provide information regarding the distances from their mills or ports-of-entry of the customers to whom they ship flat-rolled carbon steel products. Virtually all of the responding producers and importers reported selling the majority of their products to customers within 500 miles of the mill. Respondents in both groups reported some portion of their sales to customers further than 500 miles from the mill, but these volumes usually only account for between 5 and 15 percent of total sales. Producers and importers estimated inland transportation costs (in dollars per ton) for sales within the specified distances from their mills or ports of entry, as shown in the following tabulation:²¹⁸

<u>Distance shipped</u>	<u>Estimated freight</u>
Less than 100 miles.....	10-20
100-500 miles.....	15-45
Greater than 500 miles...	35-60

The cost and availability of freight for shipments from the mill or port of entry to the customer's location was the single factor most commonly identified by producers and importers as defining their market areas. Other factors reported to be important in determining where sales are made include the degree to which the product is specialized, competition from other suppliers within a region, the quality of the product, and long-standing relationships with particular customers.

Questionnaire Price Data

The Commission requested U.S. producers, importers, and purchasers to provide quarterly total quantity and total net f.o.b. value data for sales or purchases during January 1990 through December 1992 of the 18 representative flat-rolled carbon steel products listed below.²¹⁹ Producer, importer, and purchaser data were requested separately for two market segments:

²¹⁸ Does not include transportation via inland waterways.

²¹⁹ The 18 products used for direct price comparisons were selected in an attempt to represent items with the largest volumes of domestic and subject foreign producers' U.S. shipments, and which most accurately represent competitive conditions between domestic and subject foreign products in the U.S. market. Counsel to both petitioners and respondents were given the opportunity to comment on, and provide revisions or alternatives to, a preliminary list of products for price comparisons contained in draft versions of the Commission's questionnaires. To every extent possible, staff attempted to address the concerns of all parties regarding product definitions, expected coverage, or the extent of direct competition between domestic and foreign products. Counsel to petitioners and respondents were also given the opportunity at the questionnaire drafting stage to comment on the total quantity and total net f.o.b. value methodology used by the Commission to collect pricing data. All parties were in general agreement on the use of this methodology.

manufacturers/end users and distributors/service centers. The products for which pricing data were collected are as follows:

Unless otherwise specified in the product definition, carbon steel plate is not high-strength, is not mill-proprietary, is not heat treated and has not been tested to any specifications other than those stated.

Product 1: Hot-rolled carbon steel plate, ASTM A-36 or equivalent as rolled, sheared edge, not heat treated, not cleaned or oiled, in cut lengths, over 72" through 96" in width, 0.5" through 0.99" in thickness.

Product 2: Hot-rolled carbon steel plate, ASTM A-36 or equivalent as rolled, sheared edge, not heat treated, not cleaned or oiled, in cut lengths, 60" to 70" in width, 0.1875" through 0.249" in thickness.

Product 3: Hot-rolled carbon steel plate, ASTM A-516, Grade 70, normalized, trimmed edges, not cleaned or oiled, in cut lengths, over 72" through 120" in width, 1.51" through 3.0" in thickness.

Product 4: Hot-rolled carbon steel plate, high strength low alloy (HSLA), ASTM A-572, Grade 50, sheared edges, not cleaned or oiled, in cut lengths, over 72" through 120" in width, 0.5" through 1.5" in thickness.

Unless otherwise specified in the product definition, hot-rolled carbon steel sheet is a hot-rolled, unpickled, mill edge, coiled product that is not high strength, is not mill proprietary, and does not include any of the following processes: pickling, oiling, temper rolling, side trimming, or cropping back to gauge.

Product 5: Hot-rolled carbon steel sheet, in coils, commercial quality, trimmed edges, pickled and oiled, temper rolled, 40" to under 60" in width, 0.061" through 0.089" in thickness.

Product 6: Hot-rolled carbon steel sheet, in coils, commercial quality, untrimmed edges, not pickled and oiled, not temper rolled, 60" to under 72" in width, 0.090" through 0.179" in thickness.

Product 7: Hot-rolled carbon steel sheet, in coils, high strength low alloy (HSLA), ASTM A-607, Type 1, columbium bearing, class 1, Grade 50 XK, mill edges, not pickled and oiled, 48" to 77" in width, 0.1875" to 0.5" in thickness.

Unless otherwise specified in the product definition, cold-rolled carbon steel sheet is a cold-reduced product that is temper rolled and annealed, is not dead flat, is not high strength, and is not mill proprietary.

Product 8: Cold-rolled carbon steel sheet, in coils, commercial quality, class 1, regular or matte finish, 40" to under 60" in width, 0.019" to under 0.022" in thickness.

Product 9: Cold-rolled carbon steel sheet, in coils, commercial quality, class 1, regular or matte finish, 40" to under 60" in width, 0.044" to under 0.06" in thickness.

Product 10: Cold-rolled carbon steel sheet, in coils, pickled and oiled, with a carbon content of 0.5 percent or more, 36" to 51" in width, 0.015" to 0.065" in thickness, SAE 1050 or 1075.

Product 11: Cold-rolled carbon steel sheet, in coils, class 1, DQSK (ASTM A-620), not interstitial free, 40" to under 60" in width, 0.03" to 0.07" in thickness.

Product 12: Cold-rolled carbon steel sheet, in coils, pickled and oiled, 31" to 38" in width, 0.0058" to 0.011" in thickness, ASTM A-625.

Unless otherwise specified in the product definition, corrosion-resistant carbon steel sheet is a coated product that is temper rolled and annealed, is not dead flat, is not pre-painted, has no organic coating, is not high strength and is not mill proprietary.

Product 13: Hot-dipped galvanized carbon steel sheet, in coils, ASTM A-642, DQSK, minimum spangle, G-40 to G-60 coating weight (70-G/70-G to 90-G/90-G in metric coating weight), 40" to 70" in width, 0.028" to under 0.06" in thickness.

Product 14: Aluminum-zinc alloy coated carbon steel sheet, in coils, hot-dipped, structural quality, ASTM A-792, Grade 50-A or 50-B, AZ55, 40" to 49" in width, 0.019" to 0.0219" in thickness. This product has a coating of 55 percent aluminum, 43.5 percent zinc, and 1.5 percent silicon, and has a variety of product names worldwide including "Galvalume," "Zincalume," "Aluzink," "Zincalut," and "Zalutite."

Product 15: Aluminized or aluminum coated carbon steel sheet, in coils, ASTM A-463, Type 1, commercial quality, T-140 coating, 40" to 50" in width, 0.017" through 0.019" in thickness. This product is hot-dipped, with an aluminum-silicon coating consisting of 5 to 11 percent silicon, and the balance aluminum.

Product 16: Hot-dipped galvanized carbon steel sheet, in coils, ASTM A-446, Grade E, G60, regular or minimum spangle, not annealed, 40" to 50" in width, 0.015" to under 0.017" in thickness.

Product 17: Hot-dipped zinc-iron (galvannealed) carbon steel sheet, in coils, ASTM A-642, A-50 or lower coating weight, DQSK, 40" to 70" in width, 0.028" to 0.06" in thickness.

Product 18: Electrolytically zinc-nickel coated carbon steel sheet, in coils, without organic coating, DQSK, 40" to under 60" in width, 0.022" to under 0.044" in thickness.

Eighteen U.S. producers reported total quarterly quantity and total net f.o.b. value data for sales of flat-rolled carbon steel products between January 1990 and December 1992.²²⁰ Although no producers reported data for all

²²⁰ *** are the *** of the petitioning group that did not report any pricing information. *** is believed not to produce any of the 18 sample products.
 ***. ***.

products or all quarters requested, several of the larger integrated mills such as *** reported data for most of the 18 products listed above.

A total of 72 importers reported total quarterly quantity and total net f.o.b. value data for sales of the subject flat-rolled carbon steel products between January 1990 and December 1992. Importers tended to report data for one or two products from several of the subject countries, although several importers such as *** reported data for close to 20 country, product, and distribution channel combinations.

Eighty-three purchasers also provided total quantity and total net f.o.b. value data for flat-rolled carbon steel purchases between January 1990 and December 1992.

The total quantity and total net f.o.b. value data reported in the questionnaire responses were used to create weighted-average prices for all quarterly sales or purchases by each responding U.S. producer, importer or purchaser.²²¹ Due to the large volume of pricing data contained in this section, narrative information on a product and country basis will be kept to a minimum. Tables 110-113 contain summaries of the number of instances of underselling and overselling, and the range of margins for each product from each country. These tables separately represent data from the producer/importer price comparisons, and the purchaser price comparisons.²²² Tables displaying weighted-average prices, total quarterly shipments, the number of questionnaire responses, and margins of under- and overselling for U.S. producers and importers are presented in appendix N.

In general, weighted-average prices for the four domestic and subject imported plate products sold to distributors/service centers and manufacturers/end users showed slight downward trends between January 1990 and December 1992.²²³ Weighted-average prices for domestic hot-rolled products sold to the two different distribution channels also declined slightly between 1990 and 1992. Subject foreign hot-rolled products followed similar trends, with the exception of one product from France and two products each from Germany and Japan, which increased slightly between 1990 and 1992. Domestic and subject imported cold-rolled product weighted-average prices generally

²²¹ These weighted-average prices may also be referred to as unit values. They average prices over all sales or purchases in a quarter, rather than just the largest single quarterly sale or purchase.

²²² Staff also separately examined purchaser price data on a per-company basis. Comparisons were made for purchasers that bought a specific product from both domestic and subject foreign sources in the same quarter. The number of instances of over- and underselling were found not to be significantly different from those observed in the weighted-average purchaser price data.

²²³ Weighted-average price trends for any of the four subject imported products are somewhat more difficult to characterize because of missing data points for some quarters, and because fewer companies reported data for any one period, thus causing slightly more erratic trend lines.

Table 110

Certain flat-rolled carbon steel products: Number of instances of under/overselling and ranges of margins for sales to manufacturers/end users, by products and by countries, Jan. 1990-Dec. 1992

Country	Plate				Hot-rolled			
	Under Range		Over Range		Under Range		Over Range	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Belgium.....	0	0	1	65.6	1	4.1	0	0
Brazil.....	0	0	5	9.4-34.8	0	0	1	1.3
Canada.....	10	2.3-32.9	4	2.4-16.0	5	4.0-11.4	19	1.1-97.9
Finland.....	2	2.6-25.7	1	0.4	(¹)	(¹)	(¹)	(¹)
France.....	9	0.8-11.7	4	0.5-5.0	4	5.6-21.3	15	2.9-28.8
Germany.....	9	0.9-23.7	6	1.2-19.3	2	0.7-1.5	8	9.0-41.9
Italy.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Japan.....	(¹)	(¹)	(¹)	(¹)	0	0	25	13.5-78.2
Korea.....	2	10.9-12.8	0	0	6	0.9-9.6	8	1.9-34.3
Mexico.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Netherlands..	(¹)	(¹)	(¹)	(¹)	0	0	0	0
Poland.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Romania.....	9	1.9-47.5	1	24.5	(¹)	(¹)	(¹)	(¹)
Spain.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Sweden.....	5	4.9-27.6	2	2.5-4.3	(¹)	(¹)	(¹)	(¹)
U.K.....	12	2.7-26.5	0	0	(¹)	(¹)	(¹)	(¹)

	Cold-rolled				Corrosion-resistant			
	Under Range		Over Range		Under Range		Over Range	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Argentina....	1	30.8	0	0	(¹)	(¹)	(¹)	(¹)
Australia....	(¹)	(¹)	(¹)	(¹)	0	0	2	2.8-53.6
Austria.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Belgium.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Brazil.....	3	0.3-8.5	0	0	0	0	0	0
Canada.....	14	0.2-40.8	20	1.2-28.0	1	6.6	11	9.0-43.9
France.....	14	0.1-7.3	9	0.9-7.2	0	0	5	1.2-5.5
Germany.....	17	1.0-21.1	16	1.2-23.7	0	0	24	16.1-38.0
Italy.....	8	1.0-19.5	0	0	(¹)	(¹)	(¹)	(¹)
Japan.....	5	0.8-6.1	39	3.3-65.6	9	1.5-20.5	34	1.2-95.6
Korea.....	11	0.2-23.6	11	0.8-19.9	2	25.3-26.7	10	53.4-92.6
Mexico.....	(¹)	(¹)	(¹)	(¹)	0	0	0	0
Netherlands..	9	9.3-30.7	3	8.5-22.2	(¹)	(¹)	(¹)	(¹)
New Zealand..	(¹)	(¹)	(¹)	(¹)	1	13.7	1	12.2
Spain.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Sweden.....	(¹)	(¹)	(¹)	(¹)	0	0	0	0

¹ Product from this country not subject to investigation.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 111

Certain flat-rolled carbon steel products: Number of instances of under/overselling and ranges of margins for sales to distributors/service centers, by products and by countries, Jan. 1990-Dec. 1992

Country	Plate				Hot-rolled			
	Under Range		Over	Range	Under Range		Over	Range
	No.	Percent			No.	Percent		
Belgium.....	8	0.2-10.5	10	1.5-51.9	2	5.4-6.2	12	3.0-61.5
Brazil.....	18	0.4-26.6	7	0.8-53.6	8	1.2-10.2	8	0.2-21.3
Canada.....	1	0.8	11	0.7-15.9	3	11.5-17.0	18	0.7-45.3
Finland.....	23	1.1-23.3	8	1.6-8.8	(¹)	(¹)	(¹)	(¹)
France.....	15	1.9-21.3	3	0.5-24.7	1	1.0	31	0.3-38.1
Germany.....	24	0.4-19.6	9	1.0-43.8	1	0.1	23	0.8-38.3
Italy.....	6	15.4-27.6	0	0	(¹)	(¹)	(¹)	(¹)
Japan.....	(¹)	(¹)	(¹)	(¹)	0	0	24	3.7-55.2
Korea.....	0	0	13	2.9-39.4	2	1.1-1.8	22	3.4-44.0
Mexico.....	2	2.0-3.8	0	0	(¹)	(¹)	(¹)	(¹)
Netherlands..	(¹)	(¹)	(¹)	(¹)	14	0.2-11.3	16	0.7-18.3
Poland.....	8	0.1-11.5	2	0.3-0.9	(¹)	(¹)	(¹)	(¹)
Romania.....	3	6.2-23.7	0	0	(¹)	(¹)	(¹)	(¹)
Spain.....	20	1.8-23.2	2	0.8-2.1	(¹)	(¹)	(¹)	(¹)
Sweden.....	22	5.2-29.3	4	1.3-18.2	(¹)	(¹)	(¹)	(¹)
U.K.....	21	1.1-23.5	3	0.3-0.5	(¹)	(¹)	(¹)	(¹)
	Cold-rolled				Corrosion-resistant			
	Under Range		Over	Range	Under Range		Over	Range
	No.	Percent			No.	Percent		
Argentina....	9	1.3-22.3	1	7.4	(¹)	(¹)	(¹)	(¹)
Australia....	(¹)	(¹)	(¹)	(¹)	0	0	0	0
Austria ²	12	0.2-11.2	10	0.5-16.8	(¹)	(¹)	(¹)	(¹)
Belgium.....	8	0.6-7.7	23	0.8-11.5	(¹)	(¹)	(¹)	(¹)
Brazil.....	21	0.7-14.4	1	0.9	0	0	0	0
Canada.....	0	0	7	11.3-39.9	2	14.7-24.5	0	0
France.....	7	0.4-2.8	17	0.1-19.0	10	2.6-16.0	3	0.5-14.2
Germany.....	21	0.2-19.4	12	0.6-14.6	1	3.9	2	14.3-20.0
Italy.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Japan.....	0	0	33	0.8-62.1	13	1.6-25.1	1	0.1
Korea.....	7	1.0-16.7	23	0.2-39.3	9	5.0-30.2	3	3.5-93.4
Mexico.....	(¹)	(¹)	(¹)	(¹)	0	0	0	0
Netherlands..	13	0.9-11.2	2	4.2-6.2	(¹)	(¹)	(¹)	(¹)
New Zealand..	(¹)	(¹)	(¹)	(¹)	1	11.3	5	8.5-15.2
Spain.....	19	0.8-12.9	0	0	(¹)	(¹)	(¹)	(¹)
Sweden.....	(¹)	(¹)	(¹)	(¹)	4	12.3-26.7	2	9.1-9.8

¹ Product from this country not subject to investigation.

² In one instance the Austrian and U.S. cold-rolled products were priced the same.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 112

Certain flat-rolled carbon steel products: Number of instances of under/overselling and ranges of margins for purchases reported by manufacturers/end users, by products and by countries, Jan. 1990-Dec. 1992

Country	Plate				Hot-rolled			
	Under Range		Over	Range	Under Range		Over	Range
	No.	Percent			No.	Percent		
Belgium.....	0	0	0	0	0	0	4	2.4-4.9
Brazil.....	0	0	0	0	5	1.5-13.0	7	0.1-14.9
Canada.....	4	2.5-2.7	9	7.1-43.9	5	15.4-33.0	13	2.7-33.2
Finland.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
France.....	0	0	0	0	1	1.1	1	7.6
Germany.....	0	0	0	0	0	0	12	0.1-10.6
Italy.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Japan.....	(¹)	(¹)	(¹)	(¹)	0	0	12	24.6-36.3
Korea.....	2	3.0-29.7	3	2.3-6.6	0	0	0	0
Mexico.....	1	14.1	0	0	(¹)	(¹)	(¹)	(¹)
Netherlands..	(¹)	(¹)	(¹)	(¹)	12	2.4-6.9	2	3.2-23.9
Poland.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Romania.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Spain.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Sweden.....	0	0	12	2.6-12.5	(¹)	(¹)	(¹)	(¹)
U.K.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
<hr/>								
	Cold-rolled				Corrosion-resistant			
	Under Range		Over	Range	Under Range		Over	Range
	No.	Percent			No.	Percent		
Argentina....	0	0	12	4.0-20.4	(¹)	(¹)	(¹)	(¹)
Australia....	(¹)	(¹)	(¹)	(¹)	0	0	0	0
Austria.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Belgium.....	8	7.4-19.6	0	0	(¹)	(¹)	(¹)	(¹)
Brazil.....	8	5.6-22.9	12	4.0-20.4	0	0	0	0
Canada.....	3	10.1-14.3	0	0	20	1.9-9.2	1	56.6
France.....	5	2.7-23.5	5	2.2-9.3	0	0	4	20.9-21.9
Germany.....	9	1.3-19.2	14	1.2-44.5	4	4.3-5.1	16	6.4-18.5
Italy.....	8	10.6-20.9	0	0	(¹)	(¹)	(¹)	(¹)
Japan.....	12	1.3-6.4	48	9.1-53.8	1	11.4	25	0.5-42.6
Korea.....	18	0.1-19.8	14	0.5-23.6	0	0	0	0
Mexico.....	(¹)	(¹)	(¹)	(¹)	0	0	4	27.9-29.0
Netherlands..	0	0	0	0	(¹)	(¹)	(¹)	(¹)
New Zealand..	(¹)	(¹)	(¹)	(¹)	0	0	0	0
Spain.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Sweden.....	(¹)	(¹)	(¹)	(¹)	0	0	0	0

¹ Product from this country not subject to investigation.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

Table 113

Certain flat-rolled carbon steel products: Number of instances of under/overselling and ranges of margins for purchases reported by distributors/service centers, by products and by countries, January 1990-December 1992

Country	Plate				Hot-rolled			
	Under Range		Over Range		Under Range		Over Range	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Belgium.....	12	0.1-26.4	5	1.5-24.2	0	0	0	0
Brazil.....	1	1.9	3	8.3-13.4	1	0.1	5	0.8-26.2
Canada.....	0	0	3	18.6-24.0	1	16.2	6	3.5-91.7
Finland ²	10	3.2-33.0	6	2.8-13.6	(¹)	(¹)	(¹)	(¹)
France.....	5	1.5-7.7	7	0.7-36.4	1	0.7	14	0.4-26.0
Germany.....	12	0.5-20.7	7	0.3-12.2	1	35.1	19	4.3-57.9
Italy.....	0	0	2	1.7-2.3	(¹)	(¹)	(¹)	(¹)
Japan.....	(¹)	(¹)	(¹)	(¹)	0	0	6	22.2-47.2
Korea.....	1	0.2	10	3.3-11.8	1	0.3	10	1.1-35.5
Mexico.....	4	4.0-16.0	0	0	(¹)	(¹)	(¹)	(¹)
Netherlands..	(¹)	(¹)	(¹)	(¹)	0	0	0	0
Poland.....	6	1.6-13.5	5	4.3-11.0	(¹)	(¹)	(¹)	(¹)
Romania.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Spain.....	10	1.1-22.7	1	2.2	(¹)	(¹)	(¹)	(¹)
Sweden.....	16	0.3-22.6	6	0.4-12.0	(¹)	(¹)	(¹)	(¹)
U.K.....	3	1.3-14.8	1	1.6	(¹)	(¹)	(¹)	(¹)
	Cold-rolled				Corrosion-resistant			
	Under Range		Over Range		Under Range		Over Range	
	No.	Percent	No.	Percent	No.	Percent	No.	Percent
Argentina....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Australia....	(¹)	(¹)	(¹)	(¹)	4	0.1-5.1	14	1.3-31.4
Austria.....	2	3.0-4.7	2	0.6-23.7	(¹)	(¹)	(¹)	(¹)
Belgium.....	0	0	0	0	(¹)	(¹)	(¹)	(¹)
Brazil.....	12	4.7-41.0	3	4.1-22.8	0	0	1	2.1
Canada.....	8	1.1-14.4	6	2.7-43.0	2	6.0-21.3	4	0.4-10.2
France.....	15	0.2-8.7	21	0.1-43.3	0	0	0	0
Germany.....	24	0.2-29.3	22	0.4-32.4	0	0	0	0
Italy.....	4	5.6-10.0	1	2.5	(¹)	(¹)	(¹)	(¹)
Japan.....	8	0.9-10.9	31	1.1-131.5	0	0	0	0
Korea.....	2	1.1-11.5	10	3.6-39.7	4	0.8-6.1	5	3.0-28.0
Mexico.....	(¹)	(¹)	(¹)	(¹)	0	0	4	7.5-10.7
Netherlands..	0	0	0	0	(¹)	(¹)	(¹)	(¹)
New Zealand..	(¹)	(¹)	(¹)	(¹)	0	0	7	1.4-34.6
Spain.....	7	4.9-12.1	4	3.0-32.1	(¹)	(¹)	(¹)	(¹)
Sweden.....	(¹)	(¹)	(¹)	(¹)	0	0	0	0

¹ Product from this country not subject to investigation.

² In one instance the Finnish and U.S. plate products were priced the same.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

showed flat or slightly declining trends between 1990 and 1992, although trends for the imported products were somewhat less consistent than for the domestic products. Finally, weighted-average prices for both the domestic and subject imported corrosion-resistant products also showed steady or slightly downward trends between 1990 and 1992.

Exchange Rates

Quarterly data reported by the International Monetary Fund indicate that the currencies of the principal countries supplying flat-rolled carbon steel products to the United States fluctuated widely in relation to the U.S. dollar over the period from January-March 1990 through October-December 1992.²²⁴ Movements in the value of individual currencies ranged from a 20.3-percent appreciation for the Japanese yen to a depreciation of over 99 percent for the Brazilian cruzeiro. After correcting for the effects of relative inflation rates, movements in currency exchange rates during the periods for which data were collected ranged from an appreciation of 48.5 percent for the Argentine peso to a 36.9-percent depreciation for the Brazilian cruzeiro. Exchange rate and price data pertaining to the countries supplying the products covered in these investigations are presented in table 114.

Lost Sales and Lost Revenues

In the final investigations, 11 U.S. producers reported 266 allegations of lost sales and 437 allegations of lost revenues involving the 4 subject flat-rolled carbon steel products.²²⁵ These allegations totaled 518,929 tons of the four subject products for lost sales and 373,252 tons for lost revenues. The total value of all reported lost sales was \$334,512,341 and the total value of all reported lost revenues was \$32,474,423 (tables 115-116).^{226 227} For plate, 385 allegations of lost sales and lost revenues were reported in the final investigations for a total of 235,363 tons with a

²²⁴ *International Financial Statistics*, May 1993.

²²⁵ Counsel for petitioners submitted lost sales and lost revenue allegations for the four subject products on behalf of ***. The remaining members of the petitioning group, ***, did not submit any lost sales or lost revenue allegations. Lost sales and lost revenue allegations were also received from *** nonpetitioning domestic mills: ***. Please see USITC Publication 2549 for additional allegations submitted in the preliminary investigations.

²²⁶ Additional allegations were received that lacked at least some of the necessary information such as quantities, country of origin, or accepted price per ton on a lost revenue allegation. One producer, ***, provided only a general product category and a country of origin in its allegations. Since these allegations would not be possible for a buyer to confirm, they are not considered to be legitimate lost sale or lost revenue allegations and are not included in the reported totals.

²²⁷ When allegations were made within a range of quantities or values, the reported totals in the report represent the midpoint of that range. When the date of an allegation was described as "ongoing," this was counted as a single allegation.

Table 114

Exchange rates:¹ Nominal exchange rates of selected currencies² in U.S. dollars, real exchange rates, and producer price indicators in the specified countries,³ indexed by quarters, Jan. 1990-Dec. 1992

Period	<u>Argentina</u>				<u>Australia</u>			<u>Austria</u>			<u>Belgium</u>		
	U.S.	Pro-	Nominal	Real	Pro-	Nominal	Real	Pro-	Nominal	Real	Pro-	Nominal	Real
	ducer	ducer	exchange	exchange	ducer	exchange	exchange	ducer	exchange	exchange	ducer	exchange	exchange
	price	price	rate	rate	price	rate	rate	price	rate	rate	price	rate	rate
	index	index	index	index	index	index	index	index	index	index	index	index	index
1990:													
Jan.-Mar...	100.0	100.0	100.00	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr.-June...	99.8	183.8	66.83	123.1	98.3	100.3	98.8	100.7	100.8	101.7	98.7	102.0	100.8
July-Sept...	101.6	237.3	59.33	138.5	101.6	105.6	105.6	99.9	106.2	104.4	99.7	107.7	105.6
Oct.-Dec...	104.7	272.4	63.76	165.7	109.7	102.2	107.1	102.2	112.8	110.1	101.2	113.9	110.1
1991:													
Jan.-Mar...	102.5	377.7	40.15	147.9	101.3	101.6	100.4	102.6	110.6	110.6	99.1	112.0	108.3
Apr.-June...	101.5	427.1	34.48	144.6	98.5	100.8	97.8	102.9	97.5	98.9	98.3	99.0	95.8
July-Sept...	101.4	432.7	34.25	145.8	99.2	102.1	99.9	100.5	97.0	96.2	98.9	98.3	95.9
Oct.-Dec...	101.5	432.5	34.21	145.7	99.7	102.4	100.6	100.2	103.9	102.5	99.1	105.4	102.9
1992:													
Jan.-Mar...	101.3	433.7	34.21	146.5	100.1	98.3	97.2	102.0	104.4	105.1	98.1	105.9	102.6
Apr.-June...	102.3	440.2	34.23	147.2	101.7	99.0	98.4	102.3	104.8	104.7	98.0	106.2	101.7
July-Sept...	102.8	449.6	34.23	149.7	105.2	95.5	97.7	100.5	115.6	113.0	96.7	117.1	110.1
Oct.-Dec...	102.9	446.4	34.23	148.5	105.9	91.2	93.9	100.5	109.3	106.7	95.9	110.7	103.1
	<u>Brazil</u>				<u>Canada</u>			<u>Finland</u>			<u>France</u>		
	U.S.	Pro-	Nominal	Real	Pro-	Nominal	Real	Pro-	Nominal	Real	Pro-	Nominal	Real
	ducer	ducer	exchange	exchange	ducer	exchange	exchange	ducer	exchange	exchange	ducer	exchange	exchange
	price	price	rate	rate	price	rate	rate	price	rate	rate	price	rate	rate
	index	index	index	index	index	index	index	index	index	index	index	index	index
1990:													
Jan.-Mar...	100.0	100.0	100.00	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr.-June...	99.8	193.7	48.13	93.4	100.2	101.0	101.4	100.8	100.9	101.9	99.8	101.6	101.6
July-Sept...	101.6	260.6	35.39	90.8	100.3	102.6	101.2	101.9	106.5	106.7	100.0	107.3	105.6
Oct.-Dec...	104.7	389.8	20.29	75.6	101.5	101.9	98.8	103.0	111.1	109.3	101.1	113.4	109.6
1991:													
Jan.-Mar...	102.5	634.3	11.73	72.6	101.2	102.3	101.0	102.2	108.3	107.9	100.7	110.1	108.1
Apr.-June...	101.5	822.3	9.20	74.5	99.6	102.9	101.0	101.7	97.7	97.9	99.2	97.6	95.3
July-Sept...	101.4	1155.4	6.70	76.4	98.8	103.4	100.8	101.4	94.7	94.8	98.5	96.8	94.0
Oct.-Dec...	101.5	2118.3	3.32	69.2	98.2	104.2	100.8	101.7	95.3	95.4	97.5	103.3	99.2
1992:													
Jan.-Mar...	101.3	4096.3	1.69	68.2	98.7	100.5	97.9	102.4	90.4	91.4	97.7	104.1	100.4
Apr.-June...	102.3	7089.3	0.95	65.7	99.4	99.0	96.2	102.7	91.2	91.6	98.0	105.4	101.0
July-Sept...	102.8	13396.3	0.53	69.1	100.2	98.4	95.9	102.5	95.9	95.6	97.7	115.6	109.9
Oct.-Dec...	102.9	23530.5 ^a	0.28	63.1 ^b	101.5	93.7	92.4	103.7	80.5	81.1	96.0	109.0	101.6

See footnotes at end of table.

Table 114--Continued

Exchange rates:¹ Nominal exchange rates of selected currencies² in U.S. dollars, real exchange rates, and producer price indicators in the specified countries,³ indexed by quarters, Jan. 1990-Dec. 1992

Period	Germany				Italy			Japan			Korea		
	U.S.	Pro-	Nominal	Real	Pro-	Nominal	Real	Pro-	Nominal	Real	Pro-	Nominal	Real
	ducer	ducer	exchange	exchange	ducer	exchange	exchange	ducer	exchange	exchange	ducer	exchange	exchange
	price	price	rate	rate	price	rate	rate	price	rate	rate	price	rate	rate
	index	index	index	index	index	index	index	index	index	index	index	index	index
1990:													
Jan.-Mar...	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr.-June...	99.8	100.5	100.8	101.4	100.3	101.8	102.2	100.8	95.3	96.2	102.2	97.2	99.5
July-Sept...	101.6	101.0	106.1	105.5	101.2	106.6	106.1	100.8	101.8	101.0	103.6	96.5	98.4
Oct.-Dec...	104.7	101.7	112.7	109.4	102.7	111.3	109.2	101.4	113.1	109.6	106.3	96.5	98.1
1991:													
Jan.-Mar...	102.5	102.0	110.5	109.9	104.2	109.3	111.0	101.6	110.5	109.5	107.9	95.7	100.7
Apr.-June...	101.5	102.8	97.5	98.7	104.0	97.4	99.8	101.1	106.9	106.5	108.1	95.2	101.4
July-Sept...	101.4	103.9	96.9	99.4	104.4	96.3	99.2	100.8	107.8	107.2	108.7	94.1	101.0
Oct.-Dec...	101.5	104.1	103.8	106.4	104.8	102.5	105.8	100.1	114.2	112.6	109.6	91.7	98.9
1992:													
Jan.-Mar...	101.3	104.1	104.4	107.3	105.7	103.0	107.4	99.8	115.2	113.5	110.5	90.1	98.3
Apr.-June...	102.3	104.9	104.7	107.3	106.2	103.0	106.9	99.8	113.5	110.7	111.7	88.1	96.2
July-Sept...	102.8	104.9	115.6	117.9	106.3	110.7	114.5	99.7	118.4	114.8	112.6	87.7	96.0
Oct.-Dec...	102.9	104.6	109.1	110.9	107.1 ⁵	92.3	96.1 ⁵	98.4	120.3	115.1	108.8	87.9	93.0
	Mexico				Netherlands			New Zealand			Poland		
	U.S.	Pro-	Nominal	Real	Pro-	Nominal	Real	Pro-	Nominal	Real	Pro-	Nominal	Real
	ducer	ducer	exchange	exchange	ducer	exchange	exchange	ducer	exchange	exchange	ducer	exchange	exchange
	price	price	rate	rate	price	rate	rate	price	rate	rate	price	rate	rate
	index	index	index	index	index	index	index	index	index	index	index	index	index
1990:													
Jan.-Mar...	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr.-June...	99.8	106.6	96.8	103.4	100.4	100.9	101.5	101.0	97.5	98.6	101.4	100.0	101.5
July-Sept...	101.6	112.8	94.2	104.5	101.3	106.2	105.8	100.9	102.6	101.9	104.6	100.0	102.9
Oct.-Dec...	104.7	118.7	92.0	104.3	101.5	112.5	109.1	102.5	102.3	100.2	110.8	100.0	105.8
1991:													
Jan.-Mar...	102.5	125.4	90.7	111.0	101.7	110.4	109.5	101.8	100.7	100.0	150.6	100.0	146.9
Apr.-June...	101.5	130.2	89.6	114.9	102.1	97.5	98.1	101.7	98.5	98.7	154.8	91.4	139.4
July-Sept...	101.4	134.0	88.5	117.0	104.1	97.0	99.6	101.9	96.7	97.2	159.5	84.1	132.3
Oct.-Dec...	101.5	138.4	87.7	119.5	104.6	104.0	107.1	102.5	94.5	95.4	164.1	85.5	138.2
1992:													
Jan.-Mar...	101.3	144.6	87.7	125.3	105.4	104.6	108.8	103.1	91.6	93.3	188.9	78.1	145.6
Apr.-June...	102.3	148.2	86.9	125.9	105.9	104.8	108.5	103.6	91.0	92.1	196.7	69.5	133.5
July-Sept...	102.8	151.4	86.8	127.9	106.1	115.6	119.3	104.4	91.5	92.8	203.5	69.6	137.8
Oct.-Dec...	102.9	154.5	86.2	129.4	105.8	109.3	112.4	105.3	88.6	90.7	210.9	63.3	129.8

See footnotes at end of table.

Table 114--Continued

Exchange rates:¹ Nominal exchange rates of selected currencies² in U.S. dollars, real exchange rates, and producer price indicators in the specified countries,³ indexed by quarters, Jan. 1990-Dec. 1992

Period	Spain				Sweden			United Kingdom		
	U.S. pro-ducer price index	Pro-ducer price index	Nominal exchange rate index	Real exchange rate index ⁴	Pro-ducer price index	Nominal exchange rate index	Real exchange rate index ⁴	Pro-ducer price index	Nominal exchange rate index	Real exchange rate index ⁴
1990:										
Jan.-Mar.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Apr.-June.....	99.8	100.0	103.9	104.1	100.0	101.0	101.2	102.1	101.0	103.3
July-Sept.....	101.6	100.3	110.6	109.1	101.7	105.5	105.6	103.1	112.3	113.9
Oct.-Dec.....	104.7	101.7	114.9	111.6	104.3	109.7	109.3	104.2	117.4	116.9
1991:										
Jan.-Mar.....	102.5	102.0	114.0	113.4	103.4	108.3	109.3	106.2	115.2	119.3
Apr.-June.....	101.5	101.7	101.4	101.6	102.6	98.7	99.7	108.1	103.0	109.7
July-Sept.....	101.4	102.1	99.9	100.6	103.4	97.2	99.2	108.8	101.7	109.1
Oct.-Dec.....	101.5	102.3	105.8	106.6	102.6	103.3	104.4	109.3	107.1	115.3
1992:										
Jan.-Mar.....	101.3	103.1	106.8	108.7	102.6	104.5	105.8	110.9	106.9	117.0
Apr.-June.....	102.3	103.3	107.6	108.7	102.6	105.6	105.8	112.1	109.0	119.4
July-Sept.....	102.8	103.3	114.6	115.2	101.7	114.9	113.7	112.5	114.9	125.8
Oct.-Dec.....	102.9	103.7	98.5	99.3	103.4	98.7	99.2	113.1	95.3	104.7

¹ Exchange rates expressed in U.S. dollars per unit of foreign currency.

² Data for Romania do not reflect the market value of the leu. Therefore, an accurate summary of quarterly movements in the Romanian exchange rate cannot be presented.

³ Producer price indicators--intended to measure final product prices--are based on period-average quarterly indices presented in line 63 of the International Financial Statistics.

⁴ The real exchange rate is derived from the nominal rate adjusted for relative movements in producer prices in the United States and the specified country.

Note.--Jan.-Mar. 1990 = 100. The real exchange rates, calculated from precise figures, cannot in all instances be derived accurately from previously rounded nominal exchange rate and price indices.

Source: International Monetary Fund, International Financial Statistics, May 1993.

Table 115

Certain flat-rolled carbon steel products: Number, quantity (in tons), and total delivered value (in U.S. dollars) of lost sales alleged by U.S. producers in the final investigations, by sources, Jan. 1990-Dec. 1992

* * * * *

Table 116

Certain flat-rolled carbon steel products: Number, quantity (in tons) and total delivered value (in U.S. dollars) of lost revenues alleged by U.S. producers in the final investigations, by sources, Jan. 1990-Dec. 1992

* * * * *

total value of \$61,335,536, and involving all 14 countries subject to investigation.²²⁸ For hot-rolled products, 80 allegations of lost sales and lost revenues were reported involving 6 of the countries, totaling 208,010 tons with a value of \$26,020,083.²²⁹ For cold-rolled products, 176 allegations of lost sales and lost revenues were reported involving all 12 countries subject to investigation for a total of 374,934 tons, valued at \$240,047,955.²³⁰ For corrosion-resistant products, 62 allegations of lost sales and lost revenues were reported involving 8 of the 10 countries under investigation, totaling 73,874 tons valued at \$39,583,190.²³¹

In the preliminary and final investigations combined, the Commission contacted a total of 55 purchasers accounting for 148 allegations of lost sales and revenues.²³² The allegations involving these purchasers totaled 491,753 tons and \$257,598,455 for the four subject flat-rolled carbon steel products under investigation (table 117). These purchasers accounted for 66,800 tons and \$18,403,063 of plate products, 171,510 tons and \$61,698,202 of hot-rolled products, 101,200 tons and \$81,000,200 of cold-rolled products, and 152,243 tons and \$96,502,100 of corrosion-resistant products.

Table 117

Certain flat-rolled carbon steel products: Lost sale and revenue results combined for the preliminary and final investigations, by products and sources

* * * * *

Overall, 36 of the allegations investigated were confirmed and 69 allegations were denied in the preliminary and final investigations combined. In 31 of the allegations purchasers could not recall the specific sale and in 12 allegations the purchaser reported that other factors besides price

²²⁸ France, Italy, Korea, and Romania were only cited in lost revenue allegations for plate products.

²²⁹ No allegations were received involving imports of hot-rolled products from Belgium or Japan.

²³⁰ Spain was only cited in lost revenue allegations for cold-rolled and plate products.

²³¹ No allegations were received involving imports of corrosion-resistant products from Mexico or New Zealand.

²³² A total of 9 purchasers acting on a request from *** submitted form letters to the Commission confirming lost revenue information submitted for *** on behalf of counsel for the petitioners. For plate products, these letters involve 1 allegation, 300 tons, and \$29,640 for Belgium; 38 allegations, 19,310 tons, and \$1,994,920 for Canada; 7 allegations, 1,175 tons, and \$98,290 for France; 8 allegations, 2,020 tons, and \$187,150 for Korea; 2 allegations, 1,500 tons, and \$82,500 for Poland; and 1 allegation, 900 tons, and \$100,100 for Sweden. For hot-rolled products, these letters involved 1 allegation, 600 tons, and \$82,800 for Canada; and 3 allegations, 3,100 tons, and \$412,900 for the Netherlands. The allegations on hot-rolled products from the Netherlands, which were confirmed in a letter from ***, were ***. A number of lost revenue allegations are not included in these totals because they lack sufficient information, such as the quantity involved or the initial price quote.

resulted in its purchase of the foreign product.²³³ The confirmed allegations accounted for 80,554 tons valued at \$41,521,410. The denied allegations accounted for 195,270 tons valued at \$120,571,183.

Most of those purchasers that confirmed the lost sales allegations stated that their decisions were based on the availability of a lower priced flat-rolled product for sale in their markets; several noted that they buy the foreign product when it is priced \$20 or more per ton below the domestic product. This seems to be an approximate price differential sufficient to cover all of the risks associated with purchasing offshore such as inconsistent delivery, damage in transit, longer lead times, etc. Fewer allegations of lost revenues could be directly confirmed. Virtually all of the purchasers contacted reported that they would never directly shop a foreign quote around to domestic producers to try to get them to lower their prices. They stated that this would be bad business, and they would quickly lose their suppliers. Instead, most domestic and foreign suppliers have very good market information and know the prices for both domestic and foreign products that are being quoted at any particular time.

Purchasers gave a variety of reasons for denying any of the particular allegations. A few reported that the foreign quote was never as low or the domestic quote was never as high as was reported. Several others stated that they did not buy the imported product during the period that was alleged (e.g., a quarter or a year), and two reported the quantities alleged on a particular day were larger than their total purchases for a full year. One purchaser, ***, reported that it gets quotes on foreign material from ***, but does not act on them because the freight from the port makes the products more expensive on a delivered basis than comparable products from ***. Two purchasers, ***, reported that they did not purchase the foreign product to replace any domestic sources, but rather added a fourth supplier, ***, because business for the two companies was expanding. These companies try to divide all of their purchases evenly among their four suppliers and they have a target price that varies by only \$5 per ton. All suppliers must fall into this range or they will not be considered. *** recalled the specifics of one lost sale allegation but denied it, saying that his firm, quoting a price for hot-rolled steel from *** to an end user, also lost the sale to another unknown supplier. Finally, *** denied two allegations involving France. He stated that with U.S. market prices falling over the past 3 years, the French product was more often priced higher than the domestic product because buyers must lock into prices as much as 5 to 6 months in advance of delivery for foreign products and by the time the product is received, the market price may have fallen considerably. He said that *** is usually forced to meet lower price quotes from domestic mills. He also denied one allegation from Brazil, stating that all of the material in the allegation was rejected by his company because of poor quality.

Among purchasers that cited reasons other than price for purchasing the foreign product, a few reported that the particular product they purchased was not available from the domestic suppliers in the quantities needed, and several others cited quality reasons for going offshore. One purchaser, ***,

²³³ One purchaser reported that the U.S. producer informed him that it expected labor problems and that he should find another supplier for the second quarter.

stated that inland freight is \$40 per ton from the domestic supplier and \$15 per ton from the port of entry, which equals the price differential between the domestic and imported products reported in the lost sale allegation.

All of the purchasers contacted by the Commission reported that they buy some foreign product for their steel requirements. Their purchases of the foreign flat-rolled carbon steel ranged between a minor portion of their overall purchases to 100 percent of their requirements.²³⁴ Reasons for purchasing the foreign steel product included quality, availability, price, delivery, service, long-term relationship, the only supply source for the specific application, and to insure additional supply sources.

Most of the purchasers reported that they bought foreign steel from more than one source, although no purchaser reported buying the product from every country under investigation. Purchasers reported buying from between one and four foreign suppliers to meet their steel needs. They stated that as long as the quality is acceptable, the foreign products compete against each other as well as against the U.S. product. The majority of service centers reported that most of their customers did not care about the country of origin of the steel product as long as the quality was good.²³⁵

²³⁴ Three purchasers reported buying foreign steel for 100 percent of their steel requirements. They stated that there was no qualified U.S. mill that could make the specific product for their application.

²³⁵ Although one service center purchaser reported that customer requests for steel from a specific country represented 40 percent of its total purchases, it reported buying U.S.-produced steel for 98 percent of its overall steel requirements.

APPENDIX A
FEDERAL REGISTER NOTICES OF THE COMMISSION

[Investigations Nos. 701-TA-319-332, 334, 336-342, 344, and 347-353 (Final)]

Certain Flat-Rolled Carbon Steel Products From Austria, Belgium, Brazil, France, Germany, Italy, Korea, Mexico, New Zealand, Spain, Sweden, and the United Kingdom; Institution of Final Countervailing Duty Investigations

AGENCY: United States International Trade Commission.

ACTION: Institution of final countervailing duty investigations.

SUMMARY: The Commission hereby gives notice of the institution of final countervailing duty investigations Nos. 701-TA-319-332, 334, 336-342, 344, and 347-353 (Final) under section 705(b) of the Tariff Act of 1930 (19 U.S.C. 1671d(b)) (the Act) to determine whether an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports of certain flat-rolled carbon steel products (as indicated in the table below), provided for in headings/subheadings 7206, 7209, 7210.31, 7210.39, 7210.41, 7210.49, 7210.80, 7210.70, 7210.90, 7211, 7212.21, 7212.29, 7212.30, 7212.40, 7212.50, and 7212.60 of the Harmonized Tariff Schedule of the United States, that the U.S. Department of Commerce (Commerce) has preliminarily found to have been subsidized by the Governments of the following countries:

Country	Cut-to-length plate	Hot-rolled sheet and strip	Cold-rolled sheet and strip	Corrosion-resistant sheet
Austria			701-TA-335	
Belgium	701-TA-319	701-TA-328	701-TA-337	
Brazil	701-TA-320	701-TA-330	701-TA-338	701-TA-347
France	701-TA-321	701-TA-331	701-TA-339	701-TA-348
Germany	701-TA-322	701-TA-332	701-TA-340	701-TA-349
Italy	701-TA-323		701-TA-341	
Korea	701-TA-324	701-TA-334	701-TA-342	701-TA-350
Mexico	701-TA-325			701-TA-351
New Zealand				701-TA-352
Spain	701-TA-326		701-TA-344	
Sweden	701-TA-327			701-TA-353
United Kingdom	701-TA-328			

Pursuant to a request from petitioner under section 705(a)(1) of the Act (19 U.S.C. 1671d(a)(1)), Commerce has extended the date for its final

determinations to coincide with those to be made in the ongoing antidumping investigations on certain carbon steel flat-rolled products from the above-

listed countries and, in addition, has extended the date for its final determination on corrosion-resistant carbon steel flat-rolled products from

New Zealand to coincide with the final determinations in other investigations on those products. Accordingly, the Commission will not establish a schedule for the conduct of the countervailing duty investigations until Commerce makes preliminary determinations in the antidumping investigations (currently scheduled for January 26, 1993).

For further information concerning the conduct of these investigations, hearing procedures, and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and C (19 CFR part 207).

EFFECTIVE DATE: December 7, 1992.

FOR FURTHER INFORMATION CONTACT: Jonathan Seiger (202-205-3183) or Vera Libeau (202-205-3176), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000.

SUPPLEMENTARY INFORMATION:

Background

These investigations are being instituted as a result of affirmative preliminary determinations by the Department of Commerce, under section 703 of the Act (19 U.S.C. 1671b), that certain benefits constituting subsidies are being provided to manufacturers, procedures, or exporters in Austria, Belgium, Brazil, France, Germany, Italy, Korea, Mexico, New Zealand, Spain, Sweden, and the United Kingdom of certain carbon steel flat-rolled products (cut-to-length plate, hot-rolled sheet and strip, cold-rolled sheet and strip, and/or corrosion-resistant sheet and strip). The investigations were requested in a petition filed on June 30, 1992, by counsel for Armco Steel Co., L.P.; Bethlehem Steel Corp.; Geneva Steel; Gulf States Steel, Inc. of Alabama; Inland Steel Industries, Inc.; Laclede Steel Co.; LTV Steel Co., Inc.; Lukens Steel Co.; National Steel Corp.; Sharon Steel Corp.; USX Corp./U.S. Steel Group; and WCI Steel, Inc. (not all companies are petitioners in all cases).

Participation in the Investigations and Public Service List

Persons wishing to participate in the investigations as parties must file an entry of appearance with the Secretary

to the Commission, as provided in § 201.11 of the Commission's rules, not later than twenty-one (21) days after publication of this notice in the Federal Register. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to these investigations upon the expiration of the period for filing entries of appearance.

Identification of Competition Arguments

Persons wishing to raise arguments during these investigations that specific subject imported steel products do not compete with products of the domestic industries (i.e., "niche product" arguments) are requested to provide a written, non-business-proprietary description (including tariff classification) of each steel product in question no later than the date for filing entries of appearance. Please note that this request pertains not only to products and countries covered by Commerce's preliminary subsidy determinations but also to products and countries for which preliminary antidumping determinations are pending.

Limited Disclosure of Business Proprietary Information (BPI) Under an Administrative Protective Order (APO) and BPI Service List

Pursuant to § 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in these final investigations available to authorized applicants under the APO issued in the investigations, provided that the application is made not later than twenty-one (21) days after the publication of this notice in the Federal Register. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

Authority: These investigations are being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to § 207.20 of the Commission's rules.

Issued: December 16, 1992.

By order of the Commission.

Paul R. Barden,

Acting Secretary.

[FR Doc. 92-30690 Filed 12-17-92; 9:45 am]

ILLUSTRATION CODE 7200-00-01

[Investigations Nos. 701-TA-319-332, 334, 336-342, 344, 347-353 and 731-TA-573-579, 581-592, 594-597, 599-609, and 612-619 (Final)]

Certain Flat-Rolled Carbon Steel Products From Argentina, et al.

AGENCY: United States International Trade Commission.

ACTION: Institution and scheduling of final antidumping investigations and scheduling of the ongoing countervailing duty investigations.

SUMMARY: The Commission hereby gives notice of the institution of final antidumping duty investigations Nos. 731-TA-573-579, 581-592, 594-597, 599-609, and 612-619 (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. 1673d(b)) (the Act) to determine whether an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry in the

United States is materially retarded, by reason of imports of certain flat-rolled carbon steel products (as indicated in the table below), provided for in headings/subheadings 7208, 7209, 7210:31, 7210:39, 7210:41, 7210:49, 7210:60, 7210:70, 7210:90, 7211, 7212:21, 7212:29, 7212:30, 7212:40, 7212:50, 7212:60, 7214, 7215, and 7217 of the Harmonized Tariff Schedule of the United States, that the U.S. Department of Commerce (Commerce) has preliminarily found to have been sold at less than fair value by firms in the following countries:

Country	Cut-to-length plate	Hot-rolled sheet and strip	Cold-rolled sheet and strip	Corrosion-resistant sheet
Argentina			731-TA-597	
Australia				731-TA-612
Austria			731-TA-599	
Belgium	731-TA-573	731-TA-598	731-TA-600	
Brazil	731-TA-574	731-TA-599	731-TA-601	731-TA-613
Canada	731-TA-575	731-TA-590	731-TA-602	731-TA-614
Finland	731-TA-576			
France	731-TA-577	731-TA-591	731-TA-603	731-TA-615
Germany	731-TA-578	731-TA-592	731-TA-604	731-TA-616
Italy	731-TA-579		731-TA-605	
Japan		731-TA-594	731-TA-606	731-TA-617
Korea	731-TA-581	731-TA-595	731-TA-607	731-TA-618
Mexico	731-TA-582			731-TA-619
Netherlands		731-TA-596	731-TA-608	
Poland	731-TA-583			
Romania	731-TA-584			
Spain	731-TA-585		731-TA-609	
Sweden	731-TA-586			
United Kingdom	731-TA-587			

The Commission also gives notice of the schedule to be followed in these antidumping investigations and the ongoing countervailing duty investigations regarding imports of certain flat-rolled carbon steel products from Austria, Belgium, Brazil, France, Germany, Italy, Korea, Mexico, New Zealand, Spain, Sweden, and the United Kingdom (invs. Nos. 701-TA-319-332, 334, 336-342, 344, and 347-353 (Final), which the Commission instituted effective December 18, 1992 (57 FR 60247). The schedules for the subject investigations will be identical, pursuant to Commerce's alignment of its final subsidy and dumping determinations (57 FR 57730-57821, December 7, 1992).

For further information concerning the conduct of these investigations, hearing procedures, and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and C (19 CFR part 207).

EFFECTIVE DATE: February 4, 1993.

FOR FURTHER INFORMATION CONTACT: Jonathan Seiger (202-205-3183) or Vera Libeau (202-205-3176), Office of

Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000.

SUPPLEMENTARY INFORMATION:

Background

The subject antidumping investigations are being instituted as a result of affirmative preliminary determinations by the Department of Commerce that imports of certain carbon steel flat-rolled products (cut-to-length plate, hot-rolled sheet and strip, cold-rolled sheet and strip, and/or corrosion-resistant sheet and strip) from Argentina, Australia, Austria, Belgium, Brazil, Canada, Finland, France, Germany, Italy, Japan, Korea, Mexico, the Netherlands, Poland, Romania, Spain, Sweden, and the United Kingdom are being sold in the United States at less than fair value within the meaning of section 733 of the Act (19

U.S.C. 1673b). The Commission instituted the subject countervailing duty investigations on December 18, 1992 (57 FR 60247). The investigations were requested in a petition filed on June 30, 1992, by counsel for Armco Steel Co., L.P.; Bethlehem Steel Corp.; Geneva Steel; Gulf States Steel, Inc. of Alabama; Inland Steel Industries, Inc.; Laclede Steel Co.; LTV Steel Co., Inc.; Lukens Steel Co.; National Steel Corp.; Sharon Steel Corp.; USX Corp./U.S. Steel Group; and WCI Steel, Inc. (not all companies are petitioners in all cases). On November 25, 1992, the United Steelworkers of America, AFL-CIO/CLC, entered an appearance as a co-petitioner in these investigations.

Participation in the Investigations and Public Service List

Any person having already filed an entry of appearance in the countervailing duty investigations is considered a party in the antidumping investigations. Any other persons wishing to participate in the investigations as parties must file an entry of appearance with the Secretary to the Commission, as provided in § 201.11 of the Commission's rules, not

later than twenty-one (21) days after publication of this notice in the Federal Register. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to the investigations upon the expiration of the period for filing entries of appearance.

Limited Disclosure of Business Proprietary Information (BPI) Under an Administrative Protective Order (APO) and BPI Service List

Pursuant to § 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in these final investigations available to authorized applicants under the APO issued in the investigations, provided that the application is made not later than twenty-one (21) days after the publication of this notice in the Federal Register. A separate service list will be maintained by the Secretary for these parties authorized to receive BPI under the APO.

Staff Report

The prehearing staff report in these investigations will be placed in the nonpublic record on April 6, 1993, and a public version will be issued thereafter, pursuant to § 207.21 of the Commission's rules.

Hearing

The Commission will hold a hearing in connection with these investigations beginning at 9:30 a.m. on April 19, 1993, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before April 2, 1993. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 9:30 a.m. on April 9, 1993, at the U.S. International Trade Commission Building. Oral testimony and written materials to be submitted at the public hearing are governed by §§ 201.6(b)(2), 201.13(f), and 207.23(b) of the Commission's rules. Parties are strongly encouraged to submit as early in the investigations as possible any requests to present a portion of their hearing testimony *in camera*.

Written Submissions

Each party is encouraged to submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of § 207.22 of the Commission's rules; the deadline for

filing is April 13, 1993. Parties may also file written testimony in connection with their presentation at the hearing, as provided in § 207.23(b) of the Commission's rules, and posthearing briefs, which must conform with the provisions of § 207.24 of the Commission's rules. The deadline for filing posthearing briefs is April 27, 1993; witness testimony must be filed no later than three (3) days before the hearing. In addition, any person who has not entered an appearance as a party to the investigations may submit a written statement of information pertinent to the subject of the investigations on or before April 27, 1993. All written submissions must conform with the provisions of § 201.8 of the Commission's rules; any submissions that contain BPI must also conform with requirements of §§ 201.6, 207.3, and 207.7 of the Commission's rules.

In accordance with §§ 201.16(c) and 207.3 of the rules, each document filed by a party to the investigations must be served on all other parties to the investigations (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

Authority: These investigations are being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to § 207.20 of the Commission's rules.

Issued: February 11, 1993.

By order of the Commission.

Paul E. Barden,

Acting Secretary.

[FR Doc. 93-3802 Filed 2-17-93; 8:45 am]

~~SALES CODE 700-00-0~~

205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000.

SUPPLEMENTARY INFORMATION: On December 7, 1992, and February 4, 1993, the Commission instituted the subject investigations and established a schedule for their conduct (57 FR 60247, December 18, 1992; 58 FR 8974, February 18, 1993). Subsequently, the Department of Commerce extended the date for its final determinations in the investigations from April 12, 1993 to June 21, 1993 (58 FR 7071, February 4, 1993, e.g.). The Commission, therefore, is revising its schedule in the investigations to conform with Commerce's new schedule.

The Commission's new schedule for the investigations is as follows: requests to appear at the hearing must be filed with the Secretary to the Commission not later than June 17, 1993; the prehearing conference will be held at the U.S. International Trade Commission Building at 9:30 a.m. on June 24, 1993; the prehearing staff report will be placed in the nonpublic record on June 11, 1993; the deadline for filing prehearing briefs is June 18, 1993; the hearing will be held at the U.S. International Trade Commission Building at 9:30 a.m. on June 29 & 30, 1993; and the deadline for filing posthearing briefs is July 7, 1993.

For further information concerning these investigations see the Commission's notice on investigations cited above and the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and C (19 CFR part 207).

Authority: These investigations are being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to section 207.20 of the Commission's rules.

By order of the Commission.

Issued: March 12, 1993.

Paul R. Barden,

Acting Secretary.

[FR Doc. 93-6261 Filed 3-17-93; 8:45 am]

BILLING CODE 7020-02-01

INTERNATIONAL TRADE COMMISSION

(Investigations Nos. 701-TA-319-332, 334, 336-342, 344, 347-353 and 731-TA-673-579, 581-592, 594-597, 599-609, and 612-619 (Final))

Certain Flat-Rolled Carbon Steel Products from Argentina, Australia, Austria, Belgium, Brazil, Canada, Finland, France, Germany, Italy, Japan, the Republic of Korea (Korea), Mexico, the Netherlands, New Zealand, Poland, Romania, Spain, Sweden, and the United Kingdom

AGENCY: United States International Trade Commission.

ACTION: Revised schedule for the subject investigations.

EFFECTIVE DATE: March 12, 1993.

FOR FURTHER INFORMATION CONTACT: Jonathan Seiger (202-205-3183), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20438. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-

APPENDIX B
CALENDAR OF THE PUBLIC HEARING

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject : CERTAIN FLAT ROLLED CARBON STEEL PRODUCTS FROM ARGENTINA, AUSTRALIA, AUSTRIA, BELGIUM, BRAZIL, CANADA, FINLAND, FRANCE, GERMANY, ITALY, JAPAN, THE REPUBLIC OF KOREA (KOREA), MEXICO, THE NETHERLANDS, NEW ZEALAND, POLAND, ROMANIA, SPAIN, SWEDEN, AND THE UNITED KINGDOM

Inv. Nos. : 701-TA-319-332, 334, 336-342, 344 AND 347-353 (Final)
731-TA-573-579, 581-592, 594-597, 599-609 and 612-619 (Final)

Date and Time : June 29 & 30, 1993 - 9:30 a.m.

Sessions were held in connection with the investigations in the Main Hearing Room 101 of the United States International Trade Commission, 500 E St., S.W., Washington, DC.

CONGRESSIONAL APPEARANCES:

The Honorable Orrin G. Hatch, U. S. Senator, State of Utah

The Honorable John D. Rockefeller IV, U. S. Senator, State of West Virginia

The Honorable Ralph Regula, U.S. Congressman, Sixteenth District, State of Ohio, and Vice Chairman of the Congressional Steel Caucus

The Honorable Peter J. Visclosky, U.S. Congressman, First District, State of Indiana, and Chair of the Executive Committee

The Honorable Helen Delich Bentley, U. S. Congresswoman, Second District, State of Maryland, and Vice-Chair of the Executive Committee

The Honorable George Miller, U. S. Congressman, Seventh District, State of California

The Honorable Bill Baker, U. S. Congressman, Tenth District, State of California

Opening Remarks

Petitioners (Counselor Lighthizer,
and Counselor Wolff)

Respondents (Counselor Barringer)

**In support of Imposition of
Countervailing/Antidumping Duties:**

GROUP 1

**Dewey Ballantine
Washington, D.C.**

and

**Skadden, Arps Slate, Meagher & Flom
Washington, D.C.**

On behalf of

**Armco Steel Company, L.P.
Bethlehem Steel Corporation
Geneva Steel
Gulf States Steel Inc. of Alabama
Inland Steel Industries, Inc.
LTV Steel Company, Inc.
Laclede Steel Company
Lukens Steel Company
National Steel Corporation
Sharon Steel Corporation
U.S. Steel Group, a unit of USX Corporation
WCI Steel, Inc.**

Gary Hoff, Engineer, Armco Steel Co., L.P.

**Curtis H. Barnette, Chairman and Chief Executive
Officer, Bethlehem Steel Corp.**

**Tom Goedeke, Technical Services Manager,
Bethlehem Steel Corp.**

**Dave Melcher, Program Manager, Product
Applications, Bethlehem Steel Corp.**

**Roland Moore, Product Line Manager, Bethlehem
Steel Corp.**

**Dave Roberts, General Manager, Bethlehem Steel
Corp.**

**Robert J. Grow, Chief Executive Officer,
Geneva Steel**

**Phil Jones, Vice President for Customer Service and
Marketing, Geneva Steel**

**Dennis Nolan, Director of Integrated Manufacturing,
Geneva Steel**

**Bob McKeough, Manager, Commercial Sales,
Inland Steel Industries, Inc.**

**In support of Imposition of
Countervailing/Antidumping Duties:**

**Bob Judd, Scientist, Product Development,
Inland Steel Industries, Inc.**

**William Ristau, General Manager of Sales,
Commercial and Industrial, Inland Steel
Industries, Inc.**

Bob Buck, Senior Vice President, LTV Steel Co., Inc.

**Richard Snyder, Assistant General Manager,
Sales, LTV Steel Company, Inc.**

**Jack Crossett, Manager of Marketing Development
and Technical Services, LTV Steel Co. Inc.**

Robert Insetta, Plate Manager, Lukens Steel Co.

**Mike Markward, Specialty Products Manager,
Lukens Steel Co.**

**John Vigilante, Director of Sales
Coordination, National Steel Corporation**

**Thomas J. Usher, President, U.S. Steel Group, a
Unit of USX Corporation**

**Reuben Perin, Executive Vice President,
Commercial, U.S. Steel Group, a Unit of USX
Corporation**

**John D. Ewing, Managing Director of Business
Development, U.S. Steel Group, a Unit of
USX Corporation**

**J. Upton Hudson, General Manager and Planning,
U.S. Steel Group, a Unit of USX Corporation**

**Donald L. Foster, Director of Marketing, Flat
Rolled Products, U.S. Steel Group, a Unit of
USX Corporation**

**Dan Emanuele, Manager of Customer Technical
Services, WCI Steel, Inc.**

**Lynn Williams, International President,
United Steelworkers of America**

**Andrew P. Wechsler, Principal & Managing
Director, Law & Economics Consulting Group**

**In support of Imposition of
Countervailing/Antidumping Duties:**

**Peter van Leuwen, Law & Economics Consulting
Group**

**Jeffrey C. Anspacher, Sr. Economist and Project
Manager, Law & Economics Group**

**Roger P. Hickey, Sr. Financial Consultant
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Prof. F. Gerard Adams, University of Pennsylvania

**Prof. Sanford J. Grossman, Wharton School of
Business, University of Pennsylvania**

Prof. Raymond S. Hartman, University of California

Prof. Tracy Murray, University of Arkansas

Prof. Katherine Schipper, University of Chicago

Prof. Richard J. Fruehan, Carnegie Mellon Univ.

**Robert H. Kotrba, Vice President,
Alpha Steel Corporation**

**Robert L. Proch, Vice President & General Manager,
New Process Steel Corp.**

Robert E. Heltzel, Jr., President, Kenilworth Steel

James A. Daniell, President, American Strip Steel

**Steven E. Holtschlag, President,
Consolidated Systems, Inc.**

**Brendan McCormick, President and Chief Operating
Officer, Thompson Steel**

Joel T. Mazur, Sales Manager, Nextech

**Joseph Sjogren, Vice President, Sales-Marketing,
Theis Precision Steel Corp.**

**James E. DeClusin, Executive Vice President,
California Steel Industries**

**Richard F. Kuntz, Staff Supervisor, Commercial
Analysis, U.S. Steel Group, a Unit of USX
Corporation**

**In support of Imposition of
Countervailing/Antidumping Duties:**

Brent Bartlett

Dewey Ballantine:

Alan W. Wolff)
Michael H. Stein)--OF COUNSEL
Thomas R. Howell)
Susan B. Hester, Economist
William A. Noellert, Economist
(except WCI Steel, Inc)

Skadden, Arps, Slate, Meagher & Flom

Robert E. Lighthizer)
John J. Mangan)--OF COUNSEL
(except Sharon Steel Corp.)

GROUP 2 (Appeared as part of Group 1)

Collier, Shannon, Rill & Scott

Washington, D.C.

On behalf of

United Steelworkers of America

AFL-CIO/CLC

Pittsburgh, PA

**Mr. Lynn R. Williams, President of the
United Steel Workers of America**

David A. Hartquist--OF COUNSEL

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

HOT ROLLED CARBON STEEL PRODUCTS

GROUP 3

Morrison & Foerster

Washington, D.C.

On behalf of

Pohang Iron and Steel Co., Ltd.

Dongbu Steel Co., Ltd.

Dongkuk Steel Mill Co., Ltd.

Union Steel Manufacturing Co., Ltd.

Trade Resources Company

Dr. Seth Kaplan

Richard Boltuck

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

Brookings Institute

Robert Crandall, Senior Fellow

**Donald B. Cameron)
Julie C. Mendoza)--OF COUNSEL
Alan K. Palmer)**

**Weil, Gotshal & Manges
Washington, D.C.
On behalf of**

USS-POSCO Industries

**Leonard H. Chuderewicz, President,
USS-POSCO Industries**

**Joseph Stanton, President, United Steelworkers of
America, Local No. 1440**

**M. Jean Anderson)
Bruce H. Turnbull)--OF COUNSEL
Douglas A. Nave)**

**Weil, Gotshal & Manges
Washington, D.C.
On behalf of**

Usinor Sacilor

David Soble, President, Interstate Steel Co.

A. Paul Victor)--OF COUNSEL

**Arent, Fox, Kintner, Plotkin & Kahn
Washington, D.C.
On behalf of**

Preussag Stahl AG

Stephen L. Gibson)--OF COUNSEL

**Hogan & Hartson
Washington, D.C.
On behalf of**

**Algoma Steel, Inc.
Krupp AG
Hoesch Stahl AG**

Mark McConnell)--OF COUNSEL

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

**O'Melveny & Myers
Washington, D.C.
On behalf of**

Sidmar NV

**Bruce Hirsch)
Gary N. Horlick)--OF COUNSEL
Lea Anderson)**

**Paul, Weiss, Rifkind, Wharton & Garrison
Washington, D.C.
On behalf of**

IPSCO, Inc.

George Kleinfeld--OF COUNSEL

**Powell, Goldstein, Frazer & Murphy
Washington, D.C.
On behalf of**

**Hoogovens Groep, BV; and
N.V.W. (USA), Inc.**

**Seth Thomas, Director of Technical Services,
Thomas Steel Strip Corp**

Jay Rose, President, A.J. Rose Manufacturing Co.

Parker Stacy, President, N.V.W. (USA), Inc.

**Peter O. Suchman--OF COUNSEL
Elizabeth C. Hafner**

**Rogers & Wells
Washington, D.C.
On behalf of**

Dofasco

William Silverman--OF COUNSEL

**Steptoe & Johnson
Washington, D.C.
On behalf of**

Nippon Steel Corporation

**Edward Krauland)--OF COUNSEL
Daniel Plaine)**

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

**Willkie, Farr, & Gallagher
Washington, D.C.
On behalf of**

**Kobe Steel, Ltd.
Nisshin Steel Co., Ltd.
NKK Corporation
Stelco, Inc.**

**Linda Withrow, California Industrial Products, Inc.
Stephen D. Abouaf, Oregon Metal Slitters, Inc.**

**William Barringer)
Christopher Dunn)---OF COUNSEL
Ken Pierce)**

**Wilmer, Cutler & Pickering
Washington, D.C.
On behalf of**

**Sumitomo Metals Industries
Commission of the European Communities**

Deidre Maloney--OF COUNSEL

**Howrey & Simon
Washington, D.C.
On behalf of**

Kawasaki Steel Corporation

Callie Pappas--OF COUNSEL

COLD-ROLLED CARBON STEEL PRODUCTS

GROUP 4

**Willkie Farr & Gallagher
Washington, D.C.
On behalf of**

**Kobe Steel, Ltd.
NKK Corporation
Nisshin Steel Co., Ltd.**

**Kenneth Button, Economic Consulting Services, Inc.
David Soble, President, Interstate Steel Co.
Greg Estell, Precision Metalforming Association
Craig Dulworth, Material Manager, Harvard Industries
Leo Hawk, Superior Metal Products
Robert Pierson, American Steel & Aluminum**

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

Willkie Farr & Gallagher--Continued
Washington, D.C.
On behalf of

Kobe Steel, Ltd.
NKK Corporation
Nisshin Steel Co., Ltd.

James R. Lozelle, Precision Metalforming Association
Robert Pierson, American Steel & Aluminum
Robert Livingston, American Steel & Aluminum

William H. Barringer)
Kenneth J. Pierce)--OF COUNSEL
Daniel L. Porter)
Matthew Nicely)
Jacqueline A. Weisman)

Rogers & Wells
Washington, D.C.
On behalf of

Dofasco

William Silverman--OF COUNSEL

Howrey & Simon
Washington, D.C.
On behalf of

Hitachi Metals America, Ltd.

Michael A. Hertzberg)--OF COUNSEL
Maria Tan Pederson)

Mudge Rose Guthrie Alexander & Ferdon
Washington, D.C.
On behalf of

Aceros Parana S.A.I.C.
Propulsora Siderurgica S.A.I.C.

Hector Page, International Operations Manager
Propulsora

David P. Houlihan)
Jeffrey S. Neeley)--OF COUNSEL
Richard G. King)

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

**O'Melveny & Myers
Washington, D.C.
On behalf of**

Sidmar N.V.

Peggy A. Clarke--OF COUNSEL

**Weil, Gotshal & Manges
Washington, D.C.
On behalf of**

Usinor Sacilor

David Soble, President, Interstate Steel Co.

A. Paul Victor--OF COUNSEL

**Rogers & Wells
Washington, D.C.
On behalf of**

ILVA S.p.A.

William Silverman--OF COUNSEL

**Powell, Goldstein, Frazer & Murphy
Washington, D.C.
On behalf of**

**Hoogovens Groep BV;
and N.V.W. (USA), Inc.**

**Ralph Iorio, President, ITT Automotive
Division of ITT
Peter Wais, President, Pinole Point Steel Co.
John Fortunato, Purchasing Manager, Haworth
Manufacturing, Inc.**

**Peter O. Suchman)--OF COUNSEL
Elizabeth C. Hafner)**

**George V. Egge, Jr. P.C.
Washington, D.C.
On behalf of**

**The Government of Spain
Empresa Nacional Siderurgica S.A.
Union de Empresas Siderurgicas
Altos Hornos de Vizcaya**

George V. Egge, Jr.--OF COUNSEL

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

**Ackerson & Bishop
Washington, D.C.
On behalf of**

**The Government of Spain
Empresa Nacional Siderurgica S.A.
Union de Empresas Siderurgicas
Altos Hornos de Vizcaya**

Frederick P. Waite--OF COUNSEL

**Barnes Richardson & Colburn
Washington, D.C.
On behalf of**

Voest Alpine Stahl AG

Gunter von Conrad--OF COUNSEL

**Morrison & Foerster
Washington, D.C.
On behalf of**

**Korean Iron and Steel Association
Pohang Iron and Steel Co. Ltd.
Dong Bu Steel Co., Ltd.
Union Steel Manufacturing Co. Ltd.**

**Donald B. Cameron)
Julie C. Mendoza)--OF COUNSEL
Alan K. Palmer)
G. Brian Busey)**

**Steptoe & Johnson
Washington, D.C.
On behalf of**

Nippon Steel Corporation

**Daniel J. Plaine)
Edward J. Krauland)--OF COUNSEL
Gracia M. Berg)**

**Willkie, Farr, & Gallagher
Washington, D.C.
On behalf of**

**Stelco, Inc.
Stelco, U.S.A., Inc.**

Christopher Dunn--OF COUNSEL

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

**Wilmer, Cutler, & Pickering
Washington, D.C.
On behalf of**

Sumitomo Metal Industries, Ltd.

Deirdre Maloney--OF COUNSEL

**Howrey & Simon
Washington, D.C.
On behalf of**

Kawasaki Steel Corporation

Callie Georgeann Pappas--OF COUNSEL

CORROSION-RESISTANT FLAT-ROLLED PRODUCTS

GROUP 5

Appearing on behalf of this entire group:

Robert Crandall, Brookings Institute

**Bruce Malashevich,
Economic Consulting Services, Inc.**

**O'Melveny & Myers
Washington, D.C.
On behalf of**

**Broken Hill Proprietary Company Ltd.
BHP Trading, Inc.
SupraCote, Inc.
ASC Pacific, Inc.**

Richard L. Wechsler, President BIEC

**Herbert L. Harris, Vice President of
Materials Control, SupraCote, Inc.**

James R. Lozelle, Edgewood Tool & Mfg. Co.

**Kermit W. Almstedt)
F. Amanda DeBusk)--OF COUNSEL**

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

Dickstein, Shapiro & Morin
Washington, D.C.
On behalf of

Companhia Siderurgica Nacional (CSN)

Arthur J. Lafave III--OF COUNSEL

Rogers & Wells
Washington, D.C.
On behalf of

Dofasco Inc.

William Silverman--OF COUNSEL

Willkie Farr & Gallagher
Washington, D.C.
On behalf of

Industrias Monterrey S.A. de C.V. (IMSA)

Santiago Clariond, President, IMSA

Walter J. Spak--OF COUNSEL

Willkie Farr & Gallagher
Washington, D.C.
On behalf of

Kobe Steel, Ltd.
Nisshin Steel Co., Ltd.
NKK Corporation

William H. Barringer)	
Kenneth J. Pierce	)	--OF COUNSEL
Matthew R. Nicely)	
Jacqueline Weisman)	

Howrey & Simon
Washington, D.C.
On behalf of

Kawasaki Steel Corporation

Callie Pappas--OF COUNSEL

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

**Morrison & Foerster
Washington, D.C.
On behalf of**

**Korean Iron and Steel Association
Pohang Iron and Steel Co., Ltd.
Dong Bu Steel Co., Ltd.
Dongkuk Steel Mill Co., Ltd.
Union Steel Manufacturing Co., Ltd.**

**Donald B. Cameron)
Julie C. Mendoza)--OF COUNSEL
Alan K. Palmer)
G. Brian Busey)**

**O'Melveny & Myers
Washington, D.C.
On behalf of**

New Zealand Steel

Craig L. McKee--OF COUNSEL

**Steptoe & Johnson
Washington, D.C.
On behalf of**

Nippon Steel Corporation

Edwin Coles, AutoAlliance International

Douglas Sauer, Diamond-Star Motors

Martha J. Trammell, Nissan Manufacturing Corp. USA

Stephen Abouaf, Oregon Metal Slitters

Vincent van de Walle, Olson Metals

Rod Stepp, M&M Manufacturing

**James A. Ritchie, President,
Beadex Manufacturing Co., Inc.**

Kathy Bunker

**Daniel J. Plaine)
Edward J. Krauland)--OF COUNSEL
Gracia M. Berg)
Michelle A. Fishburne)**

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

Willkie, Farr, & Gallagher
Washington, D.C.
On behalf of

Stelco, Inc.
Stelco U.S.A., Inc.

Christopher Dunn--OF COUNSEL

Winthrop, Stimson, Putnam & Roberts
Washington, D.C.
On behalf of

SSAB Svenskt Stal AB

Bo Legelius, Vice President, General Counsel,
SSAB Svenskt Stal AB

Torsten Sandin, President, SSAB Tunnplat

Louis H. Kurrelmeyer)--OF COUNSEL
Mark Monborne)

Sharretts, Paley, Carter & Blauvelt
New York, NY
Washington, D.C.
On behalf of

Thyssen Stahl AG
Thyssen Stahl Detroit Co.
Thyssen Inc.

Gail T. Cumins)--OF COUNSEL
Beatrice A. Brickell)

Weil, Gotshal & Manges
Washington, D.C.
On behalf of

Usinor Sacilor
Creusot-Marrel, Inc.

Dr. Galen Hodge, Hayes International

Roger Squire, Project Sales Manager,
Creusot-Loire

Jeffrey P. Bialos)--OF COUNSEL
Angela J. Paolini Ellard)

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

**Precision Metalforming Association
Richmond Heights, OH**

R. Gregory Estell, Industry Relations Manager

**C. D. Walzholz Co.
Unser Zeichen DO/GO
Germany**

V. Dornis, Export Sales Manager

CUT-TO-LENGTH PLATE

GROUP 6

Appearing on behalf of this entire group:

**Trade Resources Company
Seth T. Kaplan
Richard Boltuck**

**Wilmer, Cutler & Pickering
Washington, D.C.
On behalf of**

**Sumitomo Metals Industries
Commission of the European Communities**

Deidre Maloney--OF COUNSEL

**Weil, Gotshal & Manges
Washington, D.C.
On behalf of**

Usinor-Sacilor

**Jeffrey P. Bialos)
M. Jean Anderson)--OF COUNSEL
Angela Paolini Ellard)
A. Paul Victor)**

**LeBoeuf, Lamb, Leiby & MacRae
Washington, D.C.
On behalf of**

AG der Dillinger Huttenwerke

**Pierre F. de Ravel d' Esclapon)--OF COUNSEL
John J. Kenkel)**

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

**Ackerson & Bishop
Washington, D.C.
On behalf of**

**Rautaruukki Oy
Empresa Nacional Siderurgica, S.A.**

Frederick P. Waite--OF COUNSEL

**Winthrop, Stimson, Putnam & Roberts
Washington, D.C.
On behalf of**

SSAB Svenskt Staal AB

Louis H. Kurrelmeyer--OF COUNSEL

**Rogers & Wells
Washington, D.C.
On behalf of**

**Ilva Sp.A
Ilva USA, Inc.**

William Silverman--OF COUNSEL

**Powell, Goldstein, Frazer & Murphy
Washington, D.C.
On behalf of**

Caterpillar, Inc.

Wallis G. Hines, Jr., Steel Buyer

William C. Lane, Governmental Affairs Representative

**Richard M. Belanger)--OF COUNSEL
D. Christine Wood)**

**Ackerson & Bishop
Washington, D.C.
On behalf of**

**Altos Hornos de Vizcaya (AHV)
Empresa Nacional Siderurgia S.A. (Ensidesa)
Union de Empresas Siderurgicas (UNESID)**

Frederick P. Waite--OF COUNSEL

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

**Ackerson & Bishop
Washington, D.C.
On behalf of**

Rautaruukki Oy

Frederick P. Waite--OF COUNSEL

**Willkie, Farr, & Gallagher
Washington, D.C.
On behalf of**

USIMINAS

COSIPA

**William H. Barringer)--OF COUNSEL
Christopher P. Stokes)**

GROUP 7 - OTHER PARTIES

**LeBoeuf, Lamb, Leiby & MacRae
Washington, D.C.
On behalf of**

Forges de Clabecq S.A.

Melvin S. Schwechter--OF COUNSEL

**Herzfeld & Rubin
Washington, D.C.
On behalf of**

Stalexport

Huta Czystochowa

Theodore Ness--OF COUNSEL

**Shearman & Sterling
Washington, D.C.
On behalf of**

Altos Hornos de Mexico

**Jeffrey Winton)--OF COUNSEL
Robert Herzstein)**

**In Opposition to the Imposition of
Countervailing/Antidumping Duties:**

**DeKieffer, Dibble, & Horgan
Washington, D.C.
On behalf of**

Metalexportimport S.A.

J. Kevin Horgan--OF COUNSEL

GROUP 8 - OTHER INTERESTED PERSONS

**United Steelworkers of America
Canadian Members
Toronto, Ontario, Canada**

Leo W. Gerard, National Director for Canada

**C. D. Walzholz Co.
Unser Zeichen DO/GO
Germany**

H.-M. Walzholz-Junius, President

V. Dornis, Export Sales Manager

APPENDIX C
SUMMARY DATA

Table C-1
 Plate: Summary data concerning the U.S. market, 1990-92

(Quantity=1,000 short tons, value=million dollars, unit values, unit labor costs, and unit COGS are per short ton, period changes=percent, except where noted)						
Item	Reported data			Period changes		
	1990	1991	1992	1990-92	1990-91	1991-92
U.S. consumption quantity:						
Amount.....	5,633	4,757	4,965	-11.9	-15.5	+4.4
Producers' share ¹	84.9	85.4	84.1	-0.8	+0.5	-1.3
Importers' share: ¹						
Subject sources.....	13.3	13.4	12.8	-0.5	+0.2	-0.7
Other sources.....	1.8	1.2	3.1	+1.3	-0.7	+1.9
Total.....	15.1	14.6	15.9	+0.8	-0.5	+1.3
U.S. consumption value:						
Amount.....	2,554	2,056	1,952	-23.6	-19.5	-5.0
Producers' share ¹	85.9	86.4	85.8	-0.1	+0.6	-0.6
Importers' share: ¹						
Subject sources.....	12.4	12.5	11.7	-0.7	+0.1	-0.8
Other sources.....	1.7	1.1	2.5	+0.8	-0.6	+1.4
Total.....	14.1	13.6	14.2	+0.1	-0.6	+0.6
U.S. importers' imports from--						
Subject sources:						
Imports quantity.....	746	639	633	-15.1	-14.4	-0.8
Imports value.....	317	256	228	-28.1	-19.1	-11.1
Unit value.....	\$425	\$401	\$360	-15.3	-5.5	-10.4
Ending inventory qty.....	69	50	22	-67.6	-27.8	-55.1
Other sources:						
Imports quantity.....	104	56	154	+48.4	-46.0	+175.1
Imports value.....	44	23	50	+11.8	-48.5	+117.3
Unit value.....	\$427	\$407	\$321	-24.7	-4.6	-21.0
Ending inventory qty.....	-	-	-	-	-	-
All sources:						
Imports quantity.....	850	695	787	-7.4	-18.3	+13.4
Imports value.....	361	279	277	-23.2	-22.7	-0.6
Unit value.....	\$425	\$402	\$352	-17.1	-5.4	-12.3
U.S. producers'--						
Ending capacity quantity.....	7,413	7,347	6,958	-6.1	-0.9	-5.3
Production quantity.....	4,915	4,219	4,342	-11.7	-14.2	+2.9
Capacity utilization ¹	66.3	57.4	62.4	-3.9	-8.9	+5.0
U.S. shipments:						
Quantity.....	4,783	4,062	4,177	-12.7	-15.1	+2.8
Value.....	2,192	1,776	1,675	-23.6	-19.0	-5.7
Unit value.....	\$458	\$437	\$401	-12.5	-4.6	-8.3
Export shipments:						
Quantity.....	105	141	136	+29.1	+34.3	-3.8
Exports/shipments ¹	2.2	3.4	3.2	+1.0	+1.2	-0.2
Value.....	45	55	50	+11.4	+20.7	-7.7
Unit value.....	\$430	\$387	\$371	-13.8	-10.1	-4.0
Ending inventory quantity.....	222	231	243	+9.5	+4.1	+5.2
Inventory/shipments ¹	4.6	5.5	5.6	+1.1	+1.0	+0.1
Production workers.....	3,743	3,557	3,515	-6.1	-5.0	-1.2
Hours worked (1,000s).....	7,785	7,340	7,331	-5.8	-5.7	-0.1
Total comp. (\$1,000).....	195,270	191,133	199,890	+2.4	-2.1	+4.6
Hourly total compensation.....	\$25.08	\$26.04	\$27.27	+8.7	+3.8	+4.7
Productivity (tons/hour).....	0.6	0.6	0.6	-6.1	-9.0	+3.2
Unit labor costs.....	\$39.88	\$45.49	\$46.17	+15.8	+14.1	+1.5
Net sales--						
Quantity.....	4,688	3,990	4,073	-13.1	-14.9	+2.1
Value.....	2,183	1,770	1,652	-24.3	-18.9	-6.7
Cost of goods sold (COGS).....	1,890	1,662	1,660	-12.2	-12.1	-0.1
Gross profit (loss).....	293	108	(9)	-103.0	-63.1	-108.2
SG&A expenses.....	82	79	75	-8.6	-3.0	-5.8
Operating income (loss).....	211	29	(84)	-139.6	-86.4	-392.0
Capital expenditures.....	33	65	29	-11.4	+96.5	-54.9
Unit COGS.....	\$403	\$416	\$408	+1.1	+3.3	-2.1
COGS/sales ¹	86.6	93.9	100.5	+13.9	+7.3	+6.6
Op. income (loss)/sales ¹	9.7	1.6	(5.1)	-14.7	-8.0	-6.7

¹ 'Reported data' are in percent and 'period changes' are in percentage point.

Note.--Period changes are derived from the unrounded data. Period changes involving negative period data are positive if the amount of the negativity decreases and negative if the amount of the negativity increases. Because of rounding, figures may not add to the totals shown. Unit values and other ratios are calculated from the unrounded figures, using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table C-2

Hot-rolled products: Summary data concerning the U.S. market, 1990-92

(Quantity=1,000 short tons, value=million dollars, unit values, unit labor costs, and unit COGS are per short ton, period changes=percent, except where noted)

Item	Reported data			Period changes		
	1990	1991	1992	1990-92	1990-91	1991-92
U.S. consumption quantity:						
Amount.....	51,569	44,535	50,646	-1.8	-13.6	+13.7
Producers' share ¹	94.4	94.1	93.3	-1.1	-0.3	-0.8
Importers' share ¹						
Subject sources.....	5.0	5.4	6.0	+1.0	+0.4	+0.6
Other sources.....	.6	.5	.7	(²)	-0.1	+0.2
Total.....	5.6	5.9	6.7	+1.1	+0.3	+0.8
U.S. consumption value:						
Amount.....	15,309	13,059	14,538	-5.0	-14.7	+11.3
Producers' share ¹	93.0	92.9	92.2	-0.8	-0.1	-0.6
Importers' share ¹						
Subject sources.....	6.3	6.6	7.0	+0.8	+0.3	+0.5
Other sources.....	.7	.6	.7	(²)	-0.2	+0.2
Total.....	7.0	7.1	7.8	+0.8	+0.1	+0.6
U.S. importers' imports from--						
Subject sources:						
Imports quantity.....	2,560	2,391	3,034	+18.5	-6.6	+26.9
Imports value.....	959	856	1,021	+6.5	-10.8	+19.4
Unit value.....	\$375	\$358	\$337	-10.2	-4.5	-5.9
Ending inventory qty.....	45	51	47	+4.9	+12.8	-7.1
Other sources:						
Imports quantity.....	326	227	337	+3.3	-30.4	+48.5
Imports value.....	111	74	107	-3.1	-32.9	+44.3
Unit value.....	\$339	\$327	\$318	-6.2	-3.5	-2.8
Ending inventory qty.....	-	-	-	-	-	-
All sources:						
Imports quantity.....	2,886	2,618	3,371	+16.8	-9.3	+28.8
Imports value.....	1,070	930	1,129	+5.5	-13.1	+21.4
Unit value.....	\$371	\$355	\$335	-9.7	-4.2	-5.7
U.S. producers'--						
Ending capacity quantity.....	60,611	57,145	59,646	-1.6	-5.7	+4.4
Production quantity.....	49,818	44,003	47,944	-3.8	-11.7	+9.0
Capacity utilization ¹	82.2	77.0	80.4	-1.8	-5.2	+3.4
U.S. shipments:						
Quantity.....	48,683	41,917	47,274	-2.9	-13.9	+12.8
Value.....	14,239	12,129	13,409	-5.8	-14.8	+10.6
Unit value.....	\$292	\$289	\$284	-3.0	-1.1	-2.0
Export shipments:						
Quantity.....	993	2,215	582	-41.4	+123.1	-73.7
Exports/shipments ¹	2.0	5.0	1.2	-0.8	+3.0	-3.8
Value.....	383	623	167	-56.3	+62.6	-73.1
Unit value.....	\$386	\$281	\$288	-25.5	-27.1	+2.2
Ending inventory quantity.....	1,886	1,746	1,852	-1.8	-7.4	+6.1
Inventory/shipments ¹	3.9	4.1	3.9	+0.1	+0.2	-0.1
Production workers.....	17,639	16,685	16,177	-8.3	-5.4	-3.0
Hours worked (1,000s).....	37,248	44,428	33,823	-9.2	+19.3	-23.9
Total comp. (\$1,000).....	933,048	916,918	937,242	+0.4	-1.7	+2.2
Hourly total compensation.....	\$25.05	\$20.64	\$27.71	+10.6	-17.6	+34.3
Productivity (tons/hour).....	1.1	0.8	1.2	+5.0	-26.7	+43.2
Unit labor costs.....	\$22.36	\$25.16	\$23.58	+5.4	+12.4	-6.3
Net sales--						
Quantity.....	46,174	40,782	44,416	-3.8	-11.7	+8.9
Value.....	14,902	12,101	13,052	-12.4	-18.8	+7.9
Cost of goods sold (COGS).....	14,100	12,843	13,608	-3.5	-8.9	+6.0
Gross profit (loss).....	803	(743)	(557)	-169.4	-192.5	+25.0
SG&A expenses.....	763	709	744	-2.5	-7.1	+4.9
Operating income (loss).....	39	(1,452)	(1,301)	(³)	(³)	+10.4
Capital expenditures.....	283	230	140	-50.3	-18.8	-38.8
Unit COGS.....	\$305	\$315	\$306	+0.3	+3.1	-2.7
COGS/sales ¹	94.6	106.1	104.3	+9.7	+11.5	-1.9
Op.income (loss)/sales ¹	0.3	(12.0)	(10.0)	-10.2	-12.3	+2.0

¹ 'Reported data' are in percent and 'period changes' are in percentage point.² An increase of less than 0.05 percentage points.³ A decrease of 1,000 percent or more.

Note.--Period changes are derived from the unrounded data. Period changes involving negative period data are positive if the amount of the negativity decreases and negative if the amount of the negativity increases. Because of rounding, figures may not add to the totals shown. Unit values and other ratios are calculated from the unrounded figures, using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table C-3

Cold-rolled products: Summary data concerning the U.S. market, 1990-92

(Quantity=1,000 short tons, value=million dollars, unit values, unit labor costs, and unit COGS are per short ton, period changes=percent, except where noted)

Item	Reported data			Period changes		
	1990	1991	1992	1990-92	1990-91	1991-92
U.S. consumption quantity:						
Amount.....	28,620	25,370	28,481	-0.5	-11.4	+12.3
Producers' share ¹	93.0	92.9	93.1	(²)	-0.1	+0.1
Importers' share: ¹						
Subject sources.....	6.1	6.4	6.4	+0.3	+0.3	(³)
Other sources.....	.9	.7	.6	-0.3	-0.2	-0.1
Total.....	7.0	7.1	6.9	(³)	+0.1	-0.1
U.S. consumption value:						
Amount.....	11,620	10,243	11,257	-3.1	-11.8	+9.9
Producers' share ¹	91.1	91.2	91.4	+0.2	+0.1	+0.1
Importers' share: ¹						
Subject sources.....	7.7	7.9	7.9	+0.1	+0.1	(³)
Other sources.....	1.1	.9	.8	-0.3	-0.2	-0.1
Total.....	8.9	8.8	8.6	-0.2	-0.1	-0.1
U.S. importers' imports from--						
Subject sources:						
Imports quantity.....	1,733	1,621	1,819	+5.0	-6.5	+12.2
Imports value.....	900	805	884	-1.8	-10.6	+9.8
Unit value.....	\$520	\$497	\$486	-6.4	-4.4	-2.1
Ending inventory qty.....	117	109	110	-6.2	-6.6	+0.5
Other sources:						
Imports quantity.....	259	173	161	-37.9	-33.3	-6.9
Imports value.....	132	94	89	-32.7	-28.8	-5.6
Unit value.....	\$511	\$545	\$553	+8.3	+6.8	+1.5
Ending inventory qty.....	-	-	-	-	-	-
All sources:						
Imports quantity.....	1,991	1,793	1,979	-0.6	-9.9	+10.4
Imports value.....	1,033	899	973	-5.8	-12.9	+8.2
Unit value.....	\$518	\$501	\$492	-5.2	-3.3	-1.9
U.S. producers'--						
Ending capacity quantity.....	33,172	33,409	34,428	+3.8	+0.7	+3.1
Production quantity.....	27,254	23,676	26,589	-2.4	-13.1	+12.3
Capacity utilization ¹	82.2	70.9	77.2	-4.9	-11.3	+6.4
U.S. shipments:						
Quantity.....	26,629	23,576	26,502	-0.5	-11.5	+12.4
Value.....	10,587	9,344	10,284	-2.9	-11.7	+10.1
Unit value.....	\$398	\$396	\$388	-2.4	-0.3	-2.1
Export shipments:						
Quantity.....	221	224	228	+3.1	+1.4	+1.7
Exports/shipments ¹	0.8	0.9	0.9	(²)	+0.1	-0.1
Value.....	112	110	113	+0.8	-2.3	+3.2
Unit value.....	\$508	\$488	\$495	-2.7	-4.0	+1.3
Ending inventory quantity.....	2,122	1,975	1,813	-14.5	-6.9	-8.2
Inventory/shipments ¹	8.0	8.5	6.9	-1.2	+0.4	-1.6
Production workers.....	13,227	11,502	12,254	-7.4	-13.0	+6.5
Hours worked (1,000s).....	27,319	23,266	24,957	-8.6	-14.8	+7.3
Total comp. (\$1,000).....	675,275	615,582	689,962	+2.2	-8.8	+12.1
Hourly total compensation.....	\$24.72	\$26.46	\$27.65	+11.8	+7.0	+4.5
Productivity (tons/hour).....	0.9	0.9	0.9	+6.2	+0.9	+5.3
Unit labor costs.....	\$28.95	\$30.72	\$30.49	+5.3	+6.1	-0.8
Net sales--						
Quantity.....	24,713	21,706	24,560	-0.6	-12.2	+13.1
Value.....	11,044	9,084	10,125	-8.3	-17.7	+11.5
Cost of goods sold (COGS).....	10,165	9,052	10,042	-1.2	-10.9	+10.9
Gross profit (loss).....	880	32	83	-90.6	-96.3	+157.0
SG&A expenses.....	501	479	480	-4.2	-4.5	+0.3
Operating income (loss).....	378	(447)	(397)	-205.0	-218.0	+11.0
Capital expenditures.....	348	213	186	-46.5	-38.7	-12.7
Unit COGS.....	\$411	\$417	\$409	-0.6	+1.4	-2.0
COGS/sales ¹	92.0	99.6	99.2	+7.1	+7.6	-0.5
Op.income (loss)/sales ¹	3.4	(4.9)	(3.9)	-7.3	-8.3	+1.0

¹ 'Reported data' are in percent and 'period changes' are in percentage point.² An increase of less than 0.05 percentage points.³ A decrease of less than 0.05 percentage points.

Note.--Period changes are derived from the unrounded data. Period changes involving negative period data are positive if the amount of the negativity decreases and negative if the amount of the negativity increases. Because of rounding, figures may not add to the totals shown. Unit values and other ratios are calculated from the unrounded figures, using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table C-4

Corrosion-resistant products: Summary data concerning the U.S. market, 1990-92

(Quantity=1,000 short tons, value=million dollars, unit values, unit labor costs, and unit COGS are per short ton, period changes=percent, except where noted)

Item	Reported data			Period changes		
	1990	1991	1992	1990-92	1990-91	1991-92
U.S. consumption quantity:						
Amount.....	12,795	11,489	13,563	+6.0	-10.2	+18.0
Producers' share ¹	85.7	85.1	82.8	-2.8	-0.6	-2.2
Importers' share: ¹						
Subject sources.....	12.9	13.5	15.6	+2.7	+0.6	+2.1
Other sources.....	1.4	1.4	1.6	+0.2	(²)	+0.2
Total.....	14.3	14.9	17.2	+2.8	+0.6	+2.2
U.S. consumption value:						
Amount.....	7,786	6,801	7,826	+0.5	-12.6	+15.1
Producers' share ¹	84.1	84.0	81.7	-2.4	-0.1	-2.3
Importers' share: ¹						
Subject sources.....	14.4	14.6	16.7	+2.3	+0.2	+2.1
Other sources.....	1.5	1.4	1.6	+0.1	-0.1	+0.2
Total.....	15.9	16.0	18.3	+2.4	+0.1	+2.3
U.S. importers' imports from--						
Subject sources:						
Imports quantity.....	1,651	1,553	2,113	+28.0	-5.9	+36.1
Imports value.....	1,120	993	1,308	+16.8	-11.4	+31.7
Unit value.....	\$678	\$639	\$619	-8.8	-5.8	-3.2
Ending inventory qty.....	124	133	211	+70.9	+7.8	+58.5
Other sources:						
Imports quantity.....	182	163	214	+17.7	-10.8	+32.0
Imports value.....	115	95	125	+8.8	-17.1	+31.2
Unit value.....	\$630	\$586	\$582	-7.6	-7.0	-0.6
Ending inventory qty.....	-	-	-	-	-	-
All sources:						
Imports quantity.....	1,833	1,716	2,328	+27.0	-6.4	+35.7
Imports value.....	1,235	1,088	1,433	+16.0	-11.9	+31.7
Unit value.....	\$673	\$634	\$615	-8.6	-5.9	-2.9
U.S. producers'--						
Ending capacity quantity.....	13,752	14,258	14,983	+9.0	+3.7	+5.1
Production quantity.....	11,288	9,941	11,450	+1.4	-11.9	+15.2
Capacity utilization ¹	82.1	69.7	76.4	-5.7	-12.4	+6.7
U.S. shipments:						
Quantity.....	10,962	9,774	11,235	+2.5	-10.8	+15.0
Value.....	6,551	5,714	6,393	-2.4	-12.8	+11.9
Unit value.....	\$599	\$589	\$575	-4.1	-1.7	-2.4
Export shipments:						
Quantity.....	242	238	235	-2.9	-1.6	-1.3
Exports/shipments ¹	2.2	2.4	2.0	-0.1	+0.2	-0.3
Value.....	154	155	153	-0.8	+0.4	-1.2
Unit value.....	\$639	\$651	\$652	+2.2	+2.0	+0.2
Ending inventory quantity.....	1,398	1,376	1,409	+0.8	-1.5	+2.4
Inventory/shipments ¹	12.8	14.2	12.6	-0.2	+1.4	-1.6
Production workers.....	10,129	9,680	9,942	-1.8	-4.4	+2.7
Hours worked (1,000s).....	20,366	19,025	20,113	-1.2	-6.6	+5.7
Total comp. (\$1,000).....	512,376	516,930	564,673	+10.2	+0.9	+9.2
Hourly total compensation.....	\$25.16	\$27.17	\$28.08	+11.6	+8.0	+3.3
Productivity (tons/hour).....	0.5	0.4	0.5	+3.1	-5.3	+8.8
Unit labor costs.....	\$53.47	\$60.95	\$57.86	+8.2	+14.0	-5.1
Net sales--						
Quantity.....	10,789	9,526	11,048	+2.4	-11.7	+16.0
Value.....	6,513	5,615	6,312	-3.1	-13.8	+12.4
Cost of goods sold (COGS).....	5,780	5,357	5,959	+3.1	-7.3	+11.2
Gross profit (loss).....	733	258	353	-51.8	-64.8	+37.1
SG&A expenses.....	286	286	276	-3.4	-0.2	-3.2
Operating income (loss).....	447	(28)	77	-82.8	-106.3	+375.0
Capital expenditures.....	557	541	246	-55.8	-2.9	-54.5
Unit COGS.....	\$536	\$562	\$539	+0.7	+5.0	-4.1
COGS/sales ¹	88.7	95.4	94.4	+5.7	+6.7	-1.0
Op.income (loss)/sales ¹	6.9	(0.5)	1.2	-5.6	-7.4	+1.7

¹ 'Reported data' are in percent and 'period changes' are in percentage point.² A decrease of less than 0.05 percentage points.

Note.--Period changes are derived from the unrounded data. Period changes involving negative period data are positive if the amount of the negativity decreases and negative if the amount of the negativity increases. Because of rounding, figures may not add to the totals shown. Unit values and other ratios are calculated from the unrounded figures, using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission and from official statistics of the U.S. Department of Commerce.

Table C-5

Ultra-thin steel: Summary data concerning the U.S. market, 1990-92

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Table C-6

Cold-rolled motor lamination steel: Summary data concerning the U.S. market, 1990-92

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Table C-7

High-carbon steel: Summary data concerning the U.S. market, 1990-92

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Table C-8

Clad plate: Summary data concerning the U.S. market, 1990-92

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Table C-9

Automotive steel: Summary data concerning the U.S. market, 1990-92

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Table C-10

Aluminum-zinc coated steel: Summary data concerning the U.S. market, 1990-92

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APPENDIX D
EXCERPTS FROM THE HARMONIZED TARIFF SCHEDULE

D-3
HARMONIZED TARIFF SCHEDULE of the United States (1993)
Annotated for Statistical Reporting Purposes

XV
72-9

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
				General	Special	
II. IRON AND NONALLOY STEEL						
7206		Iron and nonalloy steel in ingots or other primary forms (excluding iron of heading 7203):				
7206.10.00	00	Ingots.....	kg.....	4.2%	Free (E,IL,J) 2.1% (CA)	20%
7206.90.00	00	Other.....	kg.....	4.2%	Free (A,E,IL,J) 2.1% (CA)	20%
7207		Semifinished products of iron or nonalloy steel: Containing by weight less than 0.25 percent of carbon:				
7207.11.00	00	Of rectangular (including square) cross section, the width measuring less than twice the thickness.....	kg.....	4.2%	Free (E,IL,J) 2.1% (CA)	20%
7207.12.00		Other, of rectangular (other than square) cross section.....		4.2%	Free (E,IL,J) 2.1% (CA)	20%
	10	Having a width measuring less than four times the thickness.....	kg			
	50	Having a width measuring at least four times the thickness.....	kg			
7207.19.00		Other.....		4.2%	Free (E,IL,J) 2.1% (CA)	20%
	30	Of circular cross section.....	kg			
	90	Other.....	kg			
7207.20.00		Containing by weight 0.25 percent or more of carbon.....		4.2%	Free (E,IL,J) 2.1% (CA)	20%
		Of rectangular (including square) cross section:				
	25	Having a width measuring less than four times the thickness.....	kg			
	45	Having a width measuring at least four times the thickness.....	kg			
	75	Of circular cross section.....	kg			
	90	Other.....	kg			
7208		Flat-rolled products of iron or nonalloy steel, of a width of 600 mm or more, hot-rolled, not clad, plated or coated:				
		In coils, not further worked than hot-rolled, of high-strength steel:				
7208.11.00	00	Of a thickness exceeding 10 mm.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7208.12.00	00	Of a thickness of 4.75 mm or more but not exceeding 10 mm.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7208.13		Of a thickness of 3 mm or more but less than 4.75 mm:				
7208.13.10	00	Pickled.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4c/kg + 20%
7208.13.50	00	Other.....	kg.....	4.9%	Free (E,IL,J) 2.4% (CA)	20%
7208.14		Of a thickness of less than 3 mm:				
7208.14.10	00	Pickled.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4c/kg + 20%
7208.14.50	00	Other.....	kg.....	4.9%	Free (E,IL,J) 2.4% (CA)	20%

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HARMONIZED TARIFF SCHEDULE of the United States (1993)

Annotated for Statistical Reporting Purposes

XV
72-10

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				General	Special	2
7208 (con.)		Flat-rolled products of iron or nonalloy steel, of a width of 600 mm or more, hot-rolled, not clad, plated or coated (con.): Other, in coils, not further worked than hot- rolled:				
7208.21		Of a thickness exceeding 10 mm:				
7208.21.10	00	Pickled.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7208.21.50	00	Other.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7208.22		Of a thickness of 4.75 mm or more but not exceeding 10 mm:				
7208.22.10	00	Pickled.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7208.22.50	00	Other.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7208.23		Of a thickness of 3 mm or more but less than 4.75 mm:				
7208.23.10	00	Pickled.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7208.23.50		Other.....		4.9%	Free (E,IL,J) 2.4% (CA)	20%
	30	With untrimmed edges.....	kg			
	80	Other.....	kg			
7208.24		Of a thickness of less than 3 mm:				
7208.24.10	00	Pickled.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7208.24.50		Other.....		4.9%	Free (E,IL,J) 2.4% (CA)	20%
	30	With untrimmed edges.....	kg			
	80	Other.....	kg			
		Not in coils, not further worked than hot- rolled, of high-strength steel:				
7208.31.00	00	Universal mill plate.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7208.32.00	00	Other, of a thickness exceeding 10 mm....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7208.33		Other, of a thickness of 4.75 mm or more but not exceeding 10 mm:				
7208.33.10	00	Pickled.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7208.33.50	00	Other.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7208.34		Other, of a thickness of 3 mm or more but less than 4.75 mm:				
7208.34.10	00	Pickled.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7208.34.50	00	Other.....	kg.....	4.9%	Free (E,IL,J) 2.4% (CA)	20%
7208.35		Other, of a thickness of less than 3 mm:				
7208.35.10	00	Pickled.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7208.35.50	00	Other.....	kg.....	4.9%	Free (E,IL,J) 2.4% (CA)	20%
		Other, not in coils, not further worked than hot-rolled:				
7208.41.00	00	Universal mill plate.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7208.42.00	00	Other, of a thickness exceeding 10 mm....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7208.43.00	00	Other, of a thickness of 4.75 mm or more but not exceeding 10 mm.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7208.44.00	00	Other, of a thickness of 3 mm or more but less than 4.75 mm.....	kg.....	4.9%	Free (E,IL,J) 2.4% (CA)	20%
7208.45.00	00	Other, of a thickness of less than 3 mm.....	kg.....	4.9%	Free (E,IL,J) 2.4% (CA)	20%
7208.90.00	00	Other.....	kg.....	5%	Free (E,IL,J) 2.5% (CA)	20%

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HARMONIZED TARIFF SCHEDULE of the United States (1993)
Annotated for Statistical Reporting Purposes

XV
72-11

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
				General	Special	
7209		Flat-rolled products of iron or nonalloy steel, of a width of 600 mm or more, cold-rolled (cold- reduced), not clad, plated or coated: In coils, not further worked than cold-rolled (cold-reduced), of high-strength steel:				
7209.11.00	00	Of a thickness of 3 mm or more.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.12.00		Of a thickness exceeding 1 mm but less than 3 mm.....	.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
	30	Annealed.....	kg			
	90	Other.....	kg			
7209.13.00		Of a thickness of 0.5 mm or more but not exceeding 1 mm.....	.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
	30	Annealed.....	kg			
	90	Other.....	kg			
7209.14.00		Of a thickness of less than 0.5 mm.....	.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
	30	Annealed.....	kg			
	90	Other.....	kg			
		Other, in coils, not further worked than cold-rolled (cold-reduced):				
7209.21.00	00	Of a thickness of 3 mm or more.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.22.00	00	Of a thickness exceeding 1 mm but less than 3 mm.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.23.00	00	Of a thickness of 0.5 mm or more but not exceeding 1 mm.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.24		Of a thickness of less than 0.5 mm:				
7209.24.10	00	Of a thickness of less than 0.361 mm (blackplate).....	kg.....	3.2%	Free (E,IL,J) 1.6% (CA)	20%
7209.24.50	00	Other.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
		Not in coils, not further worked than cold-rolled (cold-reduced), of high- strength steel:				
7209.31.00	00	Of a thickness of 3 mm or more.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.32.00	00	Of a thickness exceeding 1 mm but less than 3 mm.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.33.00	00	Of a thickness of 0.5 mm or more but not exceeding 1 mm.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.34.00	00	Of a thickness of less than 0.5 mm.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
		Other, not in coils, not further worked than cold-rolled (cold-reduced):				
7209.41.00	00	Of a thickness of 3 mm or more.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.42.00	00	Of a thickness exceeding 1 mm but less than 3 mm.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.43.00	00	Of a thickness of 0.5 mm or more but not exceeding 1 mm.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.44.00	00	Of a thickness of less than 0.5 mm.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7209.90.00	00	Other.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%

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D-6-
HARMONIZED TARIFF SCHEDULE of the United States (1993)

XV
72-12

Annotated for Statistical Reporting Purposes

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
				General	Special	
7210		Flat-rolled products of iron or nonalloy steel, of a width of 600 mm or more, clad, plated or coated:				
		Plated or coated with tin:				
7210.11.00	00	Of a thickness of 0.5 mm or more.....	kg.....	3.5%	Free (E,IL,J) 1.7% (CA)	6%
7210.12.00	00	Of a thickness of less than 0.5 mm.....	kg.....	3.5%	Free (E,IL,J) 1.7% (CA)	6%
7210.20.00	00	Plated or coated with lead, including terne- plate.....	kg.....	4%	Free (E,IL,J) 2% (CA)	6%
		Electrolytically plated or coated with zinc:				
7210.31.00	00	Of high-strength steel.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	21.5%
7210.39.00	00	Other.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	21.5%
		Otherwise plated or coated with zinc:				
7210.41.00	00	Corrugated.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	21.5%
7210.49.00		Other.....		6.5%	Free (E,IL,J) 3.2% (CA)	21.5%
	30	Of high-strength steel.....	kg			
	90	Other.....	kg			
7210.50.00	00	Plated or coated with chromium oxides or with chromium and chromium oxides.....	kg.....	5.7%	Free (E,IL,J) 2.8% (CA)	4%
7210.60.00	00	Plated or coated with aluminum.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	21.5%
7210.70		Painted, varnished or coated with plastics:				
7210.70.30	00	Not coated or plated with metal and not clad.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7210.70.60		Other.....		6.5%	Free (E,IL,J) 3.2% (CA)	21.5%
	30	Zinc coated or plated: Electrolytically coated or plated.....	kg			
	60	Other.....	kg			
	90	Other.....	kg			
7210.90		Other:				
7210.90.10	00	Clad.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	30%
		Other:				
7210.90.60	00	Electrolytically coated or plated with base metal.....	kg.....	5.7%	Free (E,IL,J) 2.8% (CA)	4%
7210.90.90	00	Other.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	21.5%

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HARMONIZED TARIFF SCHEDULE of the United States (1993)
Annotated for Statistical Reporting Purposes

XV
72-13

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				General	Special	2
7211		Flat-rolled products of iron or nonalloy steel, of a width of less than 600 mm, not clad, plated or coated:				
		Not further worked than hot-rolled, of high-strength steel:				
7211.11.00	00	Universal mill plate.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7211.12.00	00	Other, of a thickness of 4.75 mm or more.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7211.19		Other:				
7211.19.10	00	Of a width of less than 300 mm.....	kg.....	5.7%	Free (E,IL,J) 2.6% (CA)	25%
7211.19.50	00	Other.....	kg.....	4.9%	Free (E,IL,J) 2.4% (CA)	20%
7211.21.00	00	Other, not further worked than hot-rolled: Universal mill plate.....	kg.....	6%	Free (E,IL,J) 3% (CA)	20%
7211.22.00		Other, of a thickness of 4.75 mm or more.....	.....	6%	Free (E,IL,J) 3% (CA)	20%
	45	Not in coils.....	kg			
	90	Other.....	kg			
7211.29		Other:				
7211.29.10	00	Of a width of less than 300 mm: Of a thickness exceeding 1.25 mm.....	kg.....	5.7%	Free (E,IL,J) 2.6% (CA)	25%
7211.29.30	00	Other.....	kg.....	3.4%	Free (E,IL,J) 1.7% (CA)	25%
7211.29.50	00	Other: Pickled.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7211.29.70		Other.....	.....	4.9%	Free (E,IL,J) 2.4% (CA)	20%
	30	In coils: With untrimmed edges.....	kg			
	60	Other.....	kg			
	90	Other.....	kg			
7211.30		Not further worked than cold-rolled (cold-reduced), of high-strength steel:				
7211.30.10		Of a width of less than 300 mm: Of a thickness exceeding 0.25 mm.....	.....	3.4%	Free (E,IL,J) 1.7% (CA)	25%
	30	Of a width less than 51 mm, in coils.....	kg			
7211.30.30	90	Other.....	kg			
7211.30.30	00	Other.....	kg.....	2.4%	Free (E,IL,J) 1.2% (CA)	25%
7211.30.50	00	Other.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%

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HARMONIZED TARIFF SCHEDULE of the United States (1993)

Annotated for Statistical Reporting Purposes

XV
72-14

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1	2	3
				General	Special	
7211 (con.)		Flat-rolled products of iron or nonalloy steel, of a width of less than 600 mm, not clad, plated or coated (con.):				
		Other, not further worked than cold-rolled (cold-reduced):				
7211.41		Containing by weight less than 0.25 percent of carbon:				
		Of a width of less than 300 mm:				
7211.41.10	00	Of a thickness exceeding 1.25 mm.....	kg.....	5.7%	Free (E, IL, J) 2.8% (CA)	25%
7211.41.30		Of a thickness exceeding 0.25 mm but not exceeding 1.25 mm.....	.....	3.4%	Free (E, IL, J) 1.7% (CA)	25%
	30	Of a width less than 51 mm, in coils.....	kg			
	90	Other.....	kg			
7211.41.50	00	Of a thickness not exceeding 0.25 mm.....	kg.....	2.4%	Free (E, IL, J) 1.2% (CA)	25%
7211.41.70		Other.....	.....	5.1%	Free (E, IL, J) 2.5% (CA)	0.4¢/kg + 20%
	30	Of a thickness exceeding 1.25 mm.....	kg			
	60	Of a thickness exceeding 0.25 mm but not exceeding 1.25 mm.....	kg			
	90	Of a thickness not exceeding 0.25 mm.....	kg			
7211.49		Other:				
		Of a width of less than 300 mm:				
7211.49.10		Of a thickness exceeding 0.25 mm.....	.....	3.4%	Free (E, IL, J) 1.7% (CA)	25%
	30	Of a width less than 51 mm, in coils.....	kg			
	90	Other.....	kg			
7211.49.30	00	Other.....	kg.....	2.4%	Free (E, IL, J) 1.2% (CA)	25%
7211.49.50		Other.....	.....	5.1%	Free (E, IL, J) 2.5% (CA)	0.4¢/kg + 20%
	30	Of a thickness exceeding 1.25 mm.....	kg			
	60	Of a thickness exceeding 0.25 mm but not exceeding 1.25 mm.....	kg			
	90	Of a thickness not exceeding 0.25 mm.....	kg			
7211.90.00	00	Other.....	kg.....	5.1%	Free (E, IL, J) 2.5% (CA)	20%

HARMONIZED TARIFF SCHEDULE of the United States (1993)

Annotated for Statistical Reporting Purposes

XV
72-15

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				General	Special	2
7212		Flat-rolled products of iron or nonalloy steel, of a width of less than 600 mm, clad, plated or coated:				
7212.10.00	00	Plated or coated with tin.....	kg.....	3.5%	Free (E,IL,J) 1.7% (CA)	6%
7212.21.00	00	Electrolytically plated or coated with zinc: Of high-strength steel.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	21.5%
7212.29.00	00	Other.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	21.5%
7212.30		Otherwise plated or coated with zinc: Of a width of less than 300 mm:				
7212.30.10		Of a thickness exceeding 0.25 mm or more.....		3.4%	Free (E,IL,J) 1.7% (CA)	25%
	30	Of a width less than 51 mm, in coils.....	kg			
	90	Other.....	kg			
7212.30.30	00	Other.....	kg.....	2.4%	Free (E,IL,J) 1.2% (CA)	25%
7212.30.50	00	Other.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	21.5%
7212.40		Painted, varnished or coated with plastics: Of a width of less than 300 mm.....	kg.....	3.4%	Free (E,IL,J) 1.7% (CA)	25%
7212.40.10	00					
7212.40.50	00	Other.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	0.4¢/kg + 20%
7212.50.00	00	Otherwise plated or coated.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	21.5%
7212.60.00	00	Clad.....	kg.....	6.5%	Free (E,IL,J) 3.2% (CA)	30%
7213		Bars and rods, hot-rolled, in irregularly wound coils, of iron or nonalloy steel:				
7213.10.00	00	Concrete reinforcing bars and rods.....	kg.....	4.9%	Free (E,IL,J) 2.4% (CA)	20%
7213.20.00	00	Of free-cutting steel.....	kg.....	1.9%	Free (E,IL,J) 0.9% (CA)	5.5%
		Other, containing by weight less than 0.25 percent of carbon:				
7213.31		Of circular cross section measuring less than 14 mm in diameter:				
7213.31.30	00	Not tempered, not treated and not partly manufactured.....	kg.....	1.9%	Free (E,IL,J) 0.9% (CA)	5.5%
7213.31.60	00	Other.....	kg.....	2.3%	Free (E,IL,J) 1.1% (CA)	6%
7213.39.00		Other.....		1.9%	Free (E,IL,J) 0.9% (CA)	5.5%
	30	Of circular cross section: With a diameter of 14 mm or more but less than 19 mm.....	kg			
	60	With a diameter of 19 mm or more.....	kg			
	90	Other.....	kg			

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HARMONIZED TARIFF SCHEDULE of the United States (1993)

Annotated for Statistical Reporting Purposes

XV
72-16

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
				General	Special	
7213 (con.)		Bars and rods, hot-rolled, in irregularly wound coils, of iron or nonalloy steel (con.):				
		Other, containing by weight 0.25 percent or more but less than 0.6 percent of carbon:				
7213.41		Of circular cross section measuring less than 14 mm in diameter:				
7213.41.30	00	Not tempered, not treated and not partly manufactured.....	kg.....	1.9%	Free (E,IL,J) 0.9% (CA)	5.5%
7213.41.60	00	Other.....	kg.....	2.3%	Free (E,IL,J) 1.1% (CA)	6%
7213.49.00		Other.....		1.9%	Free (E,IL,J) 0.9% (CA)	5.5%
		Of circular cross section:				
	30	With a diameter of 14 mm or more but less than 19 mm.....	kg			
	60	With a diameter of 19 mm or more.....	kg			
	90	Other.....	kg			
7213.50.00		Other, containing by weight 0.6 percent or more of carbon.....		1.9%	Free (E,IL,J) 0.9% (CA)	5.5%
		Of circular cross section:				
	20	With a diameter of less than 14 mm..	kg			
	40	With a diameter of 14 mm or more but less than 19 mm.....	kg			
	60	With a diameter of 19 mm or more....	kg			
	80	Other.....	kg			
7214		Other bars and rods of iron or nonalloy steel, not further worked than forged, hot-rolled, hot-drawn or hot-extruded, but including those twisted after rolling:				
7214.10.00	00	Forged.....	kg.....	4.7%	Free (E,IL,J) 2.3% (CA)	20%
7214.20.00	00	Concrete reinforcing bars and rods.....	kg.....	4.9%	Free (E,IL,J) 2.4% (CA)	20%
7214.30.00	00	Of free-cutting steel.....	kg.....	4.7%	Free (E,IL,J) 2.3% (CA)	20%
7214.40.00		Other, containing by weight less than 0.25 percent of carbon.....		4.7%	Free (E,IL,J) 2.3% (CA)	20%
	10	Flats.....	kg			
	30	Rounds.....	kg			
	50	Other.....	kg			
7214.50.00		Other, containing by weight 0.25 percent or more but less than 0.6 percent of carbon.....		4.7%	Free (E,IL,J) 2.3% (CA)	20%
	10	Flats.....	kg			
	30	Rounds.....	kg			
	50	Other.....	kg			
7214.60.00		Other, containing by weight 0.6 percent or more of carbon.....		4.7%	Free (E,IL,J) 2.3% (CA)	20%
	10	Flats.....	kg			
	30	Rounds.....	kg			
	50	Other.....	kg			

HARMONIZED TARIFF SCHEDULE of the United States (1993)

Annotated for Statistical Reporting Purposes

XV
72-17

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
				General	Special	
7215		Other bars and rods of iron or nonalloy steel: Of free-cutting steel, not further worked than cold-formed or cold-finished.....	kg.....	7.5%	Free (E,IL,J) 3.7% (CA)	0.3¢/kg + 20%
7215.10.00	00					
7215.20.00	00	Other, not further worked than cold-formed or cold-finished, containing by weight less than 0.25 percent of carbon.....	kg.....	7.5%	Free (E,IL,J) 3.7% (CA)	0.3¢/kg + 20%
7215.30.00	00	Other, not further worked than cold-formed or cold-finished, containing by weight 0.25 percent or more but less than 0.6 percent of carbon.....	kg.....	7.5%	Free (E,IL,J) 3.7% (CA)	0.3¢/kg + 20%
7215.40.00	00	Other, not further worked than cold-formed or cold-finished, containing by weight 0.6 percent or more of carbon.....	kg.....	7.5%	Free (E,IL,J) 3.7% (CA)	0.3¢/kg + 20%
7215.90		Other:				
7215.90.10	00	Plated or coated with metal: Hot cold-formed.....	kg.....	3.2%	Free (E,IL,J) 1.6% (CA)	0.4¢/kg + 20%
7215.90.30	00	Cold-formed.....	kg.....	7.5%	Free (E,IL,J) 3.7% (CA)	0.3¢/kg + 20%
7215.90.50	00	Other.....	kg.....	7.5%	Free (A,E,IL,J) 3.7% (CA)	0.3¢/kg + 20%
7216		Angles, shapes and sections of iron or nonalloy steel:				
7216.10.00		U, I or H sections, not further worked than hot-rolled, hot-drawn or extruded, of a height of less than 80 mm.....	.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
	10	U sections.....	kg			
	50	Other.....	kg			
		L or I sections, not further worked than hot- rolled, hot-drawn or extruded, of a height of less than 80 mm:				
7216.21.00	00	L sections.....	kg.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
7216.22.00	00	I sections.....	kg.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
		U, I or H sections, not further worked than hot-rolled, hot-drawn or extruded, of a height of 80 mm or more:				
7216.31.00	00	U sections.....	kg.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
7216.32.00	00	I sections (standard beams).....	kg.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
7216.33.00		H sections.....	.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
	30	Weighing not more than 11.3 kg per 30.5 cm, with a web depth measuring 102 mm to 356 mm.....	kg			
	60	Weighing more than 11.3 kg but not more than 27.2 kg per 30.5 cm, with a web depth measuring 203 mm to 457 mm.....	kg			
	90	Other.....	kg			
7216.40.00		L or I sections, not further worked than hot- rolled, hot-drawn or extruded, of a height of 80 mm or more.....	.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
	10	L sections.....	kg			
	50	Other.....	kg			
7216.50.00	00	Other angles, shapes and sections, not further worked than hot-rolled, hot-drawn or extruded.....	kg.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
7216.60.00	00	Angles, shapes and sections, not further worked than cold-formed or cold-finished.....	kg.....	4.9%	Free (A,E,IL,J) 2.4% (CA)	20%
7216.90.00	00	Other.....	kg.....	4.4%	Free (E,IL,J) 2.2% (CA)	20%

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HARMONIZED TARIFF SCHEDULE of the United States (1993)

Annotated for Statistical Reporting Purposes

XV
72-18

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
				General	Special	
7217		Wire of iron or nonalloy steel: Containing by weight less than 0.25 percent of carbon:				
7217.11		Not plated or coated, whether or not polished:				
		Flat wire:				
7217.11.10	00	Of a thickness not exceeding 0.25 mm.....	kg.....	4.2%	Free (E,IL,J) 2.1% (CA)	25%
7217.11.20	00	Of a thickness exceeding 0.25 mm but not exceeding 1.25 mm.....	kg.....	3.2%	Free (E,IL,J) 1.6% (CA)	25%
7217.11.30	00	Of a thickness exceeding 1.25 mm.....	kg.....	5.1%	Free (E,IL,J) 2.5% (CA)	25%
7217.11.50		Round wire:				
		With a diameter of less than 1.5 mm.....	.....	5.3%	Free (E,IL,J) 2.6% (CA)	25%
	20	Heat treated: With a diameter of less than 1.0 mm.....	kg			
	40	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
	60	Other: With a diameter of less than 1.0 mm.....	kg			
	80	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
7217.11.70		With a diameter of 1.5 mm or more.....	.....	1.5%	Free (E,IL,J) 0.7% (CA)	7%
	30	Heat treated.....	kg			
	90	Other.....	kg			
7217.11.90	00	Other wire.....	kg.....	5.5%	Free (E,IL,J) 2.7% (CA)	25%
7217.12		Plated or coated with zinc:				
7217.12.10	00	Flat wire.....	kg.....	5.2%	Free (E,IL,J) 2.6% (CA)	26%
7217.12.30		Round wire:				
		With a diameter of less than 1.5 mm.....	.....	5.3%	Free (E,IL,J) 2.6% (CA)	25%
	30	With a diameter of less than 1.0 mm.....	kg			
	60	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
7217.12.50	00	With a diameter of 1.5 mm or more.....	kg.....	1.5%	Free (E,IL,J) 0.7% (CA)	7%
7217.12.70	00	Other wire.....	kg.....	5.6%	Free (E,IL,J) 2.8% (CA)	25%
7217.13		Plated or coated with other base metals:				
7217.13.10	00	Flat wire.....	kg.....	5.2%	Free (E,IL,J) 2.6% (CA)	26%
7217.13.30		Round wire:				
		With a diameter of less than 1.5 mm.....	.....	5.3%	Free (E,IL,J) 2.6% (CA)	25%
	30	With a diameter of less than 1.0 mm.....	kg			
	60	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
7217.13.50	00	With a diameter of 1.5 mm or more.....	kg.....	1.5%	Free (E,IL,J) 0.7% (CA)	7%
7217.13.70	00	Other wire.....	kg.....	5.6%	Free (E,IL,J) 2.8% (CA)	25%

HARMONIZED TARIFF SCHEDULE of the United States (1993)

Annotated for Statistical Reporting Purposes

XV
72-19

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
				General	Special	
7217 (con.)		Wire of iron or nonalloy steel (con.): Containing by weight less than 0.25 percent of carbon (con.):				
7217.19		Other:				
7217.19.10	00	Coated with plastics.....	kg.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
7217.19.50	00	Other.....	kg.....	5.3%	Free (E,IL,J) 2.6% (CA)	35%
		Containing by weight 0.25 percent or more but less than 0.6 percent of carbon:				
7217.21		Not plated or coated, whether or not polished:				
7217.21.10	00	Flat wire.....	kg.....	3.2%	Free (E,IL,J) 1.6% (CA)	25%
7217.21.30		Round wire.....	.....	5.3%	Free (E,IL,J) 2.6% (CA)	25%
		Heat treated:				
	15	With a diameter of less than 1.0 mm.....	kg			
	30	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
	45	With a diameter of 1.5 mm or more.....	kg			
		Other:				
	60	With a diameter of less than 1.0 mm.....	kg			
	75	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
	90	With a diameter of 1.5 mm or more.....	kg			
7217.21.50	00	Other.....	kg.....	5.5%	Free (E,IL,J) 2.7% (CA)	25%
7217.22		Plated or coated with zinc:				
7217.22.10		Round wire.....	.....	5.3%	Free (E,IL,J) 2.6% (CA)	25%
	15	With a diameter of less than 1.0 mm.....	kg			
	30	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
	50	With a diameter of 1.5 mm or more.....	kg			
7217.22.50	00	Other.....	kg.....	5.2%	Free (E,IL,J) 2.6% (CA)	26%
7217.23		Plated or coated with other base metals:				
7217.23.10		Round wire.....	.....	5.3%	Free (E,IL,J) 2.6% (CA)	25%
	15	With a diameter of less than 1.0 mm.....	kg			
	30	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
	50	With a diameter of 1.5 mm or more.....	kg			
7217.23.50	00	Other.....	kg.....	5.2%	Free (E,IL,J) 2.6% (CA)	26%
7217.29		Other:				
7217.29.10	00	Coated with plastics.....	kg.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
7217.29.50	00	Other.....	kg.....	5.3%	Free (E,IL,J) 2.6% (CA)	35%

HARMONIZED TARIFF SCHEDULE of the United States (1993)

Annotated for Statistical Reporting Purposes

XV
72-20

Heading/ Subheading	Stat. Suf- fix	Article Description	Units of Quantity	Rates of Duty		
				1		2
				General	Special	
7217 (con.)		Wire of iron or nonalloy steel (con.): Containing by weight 0.6 percent or more of carbon:				
7217.31		Not plated or coated, whether or not polished:				
7217.31.10	00	Flat wire.....	kg.....	3.2%	Free (E,IL,J) 1.6% (CA)	25%
7217.31.30		Round wire.....	.....	5.3%	Free (E,IL,J) 2.6% (CA)	25%
	15	Heat treated: With a diameter of less than 1.0 mm.....	kg			
	30	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
	45	With a diameter of 1.5 mm or more.....	kg			
	60	Other: With a diameter of less than 1.0 mm.....	kg			
	75	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
	90	With a diameter of 1.5 mm or more.....	kg			
7217.31.50	00	Other.....	kg.....	5.5%	Free (E,IL,J) 2.7% (CA)	25%
7217.32		Plated or coated with zinc:				
7217.32.10		Round wire.....	.....	5.3%	Free (E,IL,J) 2.6% (CA)	25%
	15	With a diameter of less than 1.0 mm.....	kg			
	30	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
	50	With a diameter of 1.5 mm or more.....	kg			
7217.32.50	00	Other.....	kg.....	5.2%	Free (E,IL,J) 2.6% (CA)	25%
7217.33		Plated or coated with other base metals:				
7217.33.10		Round wire.....	.....	5.3%	Free (E,IL,J) 2.6% (CA)	25%
	15	With a diameter of less than 1.0 mm.....	kg			
	30	With a diameter of 1.0 mm or more but less than 1.5 mm.....	kg			
	50	With a diameter of 1.5 mm or more.....	kg			
7217.33.50	00	Other.....	kg.....	5.2%	Free (E,IL,J) 2.6% (CA)	26%
7217.39		Other:				
7217.39.10	00	Coated with plastics.....	kg.....	0.9%	Free (E,IL,J) 0.4% (CA)	2%
7217.39.50	00	Other.....	kg.....	5.3%	Free (E,IL,J) 2.6% (CA)	35%

APPENDIX E
COMMERCE'S FINAL SUBSIDY AND LTFV DETERMINATIONS

Subsidies¹

Plate

Belgium

Commerce investigated three Belgian producers of plate: S.A. Forges de Clabecq (Clabecq), S.A. Fabrique de Fer de Charleroi (Fabfer), and S.A. Cockerill Sambre (Cockerill).² Based on its investigation, Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
Cash grants under the Economic Expansion Law of 1970.....	0.11 (Cockerill) 0.46 (Fabfer)
Government funding of early retirement pensions.....	0.50
Assumption of debt.....	19.25 (Cockerill) 2.34 (Clabecq)
Debt conversions.....	2.97 (Clabecq) 1.24 (Cockerill)
Equity infusions.....	2.01 (Cockerill) 0.31 (Clabecq)
SNCI loans.....	0.37 (Clabecq, Cockerill)
The "Invests".....	0.03 (Clabecq)
SNSN loans.....	0.03 (Cockerill)
FSNW loan.....	0.03 (Cockerill)
Exemption from the Capital Registration Tax...	0.40 (Cockerill)
ECSC article 54 loans.....	0.04 (Cockerill)
ECSC redeployment aid: Article 56(2)(b).....	0.01 (Cockerill)
European Social Fund (ESF).....	<u>0.18</u> (Cockerill)
All programs.....	0.96 (Fabfer) 6.52 (Clabecq) 24.17 (Cockerill) 6.52 (all others)

Brazil

Commerce investigated two Brazilian producers of plate: Usinas Siderurgicas de Minas Gerais (USIMINAS) and Companhia Siderurgica Paulista (COSIPA). Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

¹ The rates presented in the tabulations below do not reflect changes made by Commerce subsequent to July 20, 1993 (table 7 in the body of this report does reflect such changes). Programs considered to be export subsidies are so noted.

² Cockerill did not respond to Commerce's questionnaire; accordingly, Commerce used the best information available (BIA), which was information submitted in the petition.

	<u>Amount</u> <u>(percent ad valorem)</u>
Equity infusions ¹	43.12 (COSIPA)
	3.45 (USIMINAS)
Fiscal benefits by virtue of CDI.....	0.36 (USIMINAS)
IPI rebate program under Law 7554/86.....	0.58 (COSIPA)
	2.00 (USIMINAS)
Exemption of IPI and duties on imports under	
Decree-Law 2324.....	0.19 (USIMINAS)
BNDES financing.....	0.96 (COSIPA)
	<u>0.07</u> (USIMINAS)
All programs.....	44.66 (COSIPA)
	6.07 (USIMINAS)
	21.84 (all others)

¹ Commerce determined both companies to be unequityworthy.

France

Usinor Sacilor was the only company investigated by Commerce regarding its allegedly subsidized sales of plate.³ Commerce determined that Usinor Sacilor received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
Equity infusions ¹	10.91
Outstanding loans discovered at verification....	0.01
Long-term loans.....	0.35
Grants in the form of cancellation of debt	
by Marine-Wendel and DNEL.....	0.05
ECSC article 54 loans.....	0.16
ECSC redeployment aid: Article 56(2)(b).....	0.01
Grants in the form of shareholders' advances....	<u>3.97</u>
All programs.....	15.49

¹ Commerce determined Usinor Sacilor to be unequityworthy in 1978 and during the period 1981-88.

Germany

Commerce selected the following firms as respondent companies for imports of plate from Germany: AG der Dillinger Huettenwerke (Dillinger), Walzwerk Ilseburg GmbH (Ilseburg), Preussag Stahl AG (Preussag), and Thyssen Stahl AG (Thyssen). Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

³ The Government of France nationalized the two existing French steelmakers, Usinor and Sacilor, in 1978. Usinor-Sacilor, the combined firm, accounts for all steelmaking capability in France.

	<u>Amount</u> <u>(percent ad valorem)</u>
Capital investment grants.....	0.44 (Preussag) 0.36 (Thyssen) 0.15 (Dillinger)
Investment premium act.....	0.29 (Preussag) 0.06 (Dillinger) ¹
Joint scheme: Improvement of regional economic structure: GA investment grants and other GA subsidies.....	0.11 (Ilsenburg)
Special subsidies for companies in the zonal border area.....	0.95 (Preussag)
Aid for closure of steel operations.....	0.07 (Thyssen)
Joint program: Upswing East.....	0.67 (Ilsenburg)
Treuhandanstalt subsidies.....	0.02 (Ilsenburg)
Subsidies related to the Saarstahl/Dillinger merger.....	14.63 (Dillinger)
ECSC redeployment aid: Article 56(2)(b).....	0.03 (Preussag) 0.07 (Thyssen)
All programs.....	1.72 (Preussag) 0.50 (Thyssen) 0.80 (Ilsenburg) 14.84 (all others)

¹ Based on BIA.

Italy

Commerce investigated two Italian producers of plate: Ilva, S.p.A. (Ilva) and Acciaierie e Ferriere Lombarde Falck S.p.A. (Falck). Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
Equity infusions into Italsider/Nuova Italsider/Ilva and extinguishment of equity infusions.....	24.80 (Ilva) ¹
Debt forgiveness in connection with the 1981 restructuring plan.....	5.63 (Ilva)
Debt forgiveness in connection with the 1987-88 restructuring plan.....	20.78 (Ilva)
Interest contributions under the Sabatini Law...	0.26 (Ilva)
Early retirement.....	6.83 (Ilva)
	0.95 (Falck)
Exemptions for ILOR and IRPEG Taxes.....	0.83 (Ilva)
Law 675/77 -- Preferential lending, interest contributions, capital grants, personnel retraining, and VAT reduction.....	6.61 (Ilva)
	0.09 (Falck)
Interest grants for "indirect debts" under Law 750/81.....	0.49 (Ilva)
Urban redevelopment packages law 181.....	0.20 (Ilva)
Grants to Ilva.....	0.23 (Ilva)
Interest subsidies under law 193/1984.....	0.47 (Falck)
Closure payments.....	1.55 (Falck)
Social security exemptions.....	1.63 (Ilva)
Capital grants/interest rate reductions under law 902.....	0.29 (Ilva)
Interest subsidies under law 617/81.....	0.69 (Ilva)
Exchange risk guarantee program.....	0.51 (Ilva)
	0.21 (Falck)
ECSC article 54 loans.....	2.63 (Ilva)
ECSC redeployment aid: Article 56(2)(b).....	0.09 (Ilva)
ESF grants.....	<u>0.44</u> (Ilva)
All programs.....	3.71 (Falck)
	72.91 (all others)

¹ Commerce determined Ilva to be unequityworthy.

Korea

Commerce determined that producers or exporters of plate in Korea receive benefits that constitute subsidies within the meaning of the countervailing duty law. Commerce found that two firms, Pohang Iron & Steel Company (Posco) and Dongkuk Steel Co., Inc., (Dongkuk), received benefits under the following programs:⁴

⁴ Commerce did not establish separate rates for each firm because each firm's individual rate was not significantly different from the overall countrywide rate.

	<u>Amount</u> <u>(percent ad valorem)</u>
Government equity infusions in Posco ¹	0.10
Loans inconsistent with commercial considerations (including preferential access to foreign loans).....	2.82
Government infrastructure assistance for Posco's integrated steel mill at Kwangyang Bay.....	0.44
Reserve for export loss and reserve for overseas market development ²	0.02
Unlimited deduction of overseas entertainment expenses.....	0.005
Reserve for interest.....	0.02
Duty drawback.....	0.005
Preferential utility rates.....	<u>0.05</u>
All programs.....	3.46 (all firms)

¹ Commerce found Posco to be unequityworthy during the period in which equity infusions occurred.

² Export subsidy.

Mexico

Commerce selected Altos Hornos de Mexico SA (AHMSA) as the respondent company for imports of plate from Mexico. Commerce determined that AHMSA received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
GOM equity infusions to AHMSA ¹	6.14
GOM assumption and deferrals of AHMSA's foreign debt payments.....	6.86
1988 and 1990 debt restructuring.....	4.00
Bancomext short-term export financing ²	0.02
Bancomext short-term import financing ²	0.07
NAFINSA long-term loans.....	0.03
IMIS research and development.....	0.18 ³
Preprivatization layoff financing.....	<u>2.95</u>
All programs.....	20.26

¹ Commerce determined that AHMSA was unequityworthy during the period when equity infusions occurred (1979-87).

² Export subsidy.

³ BIA.

Spain

Because Empresa Nacional Siderurgica, S.A. (ENSIDESA) represented over 85 percent of exports of plate from Spain to the United States during the period of investigation, Commerce limited its investigation to ENSIDESA. Commerce determined that ENSIDESA received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
Long-term loans from Bank of Industrial Credit (BCI) under Law 60/78.....	3.62
Royal Decree 878/81.....	3.15
1984 Council of Ministers Meeting ¹	16.17
Grants under the 1987 government-delegated Commission on Economic Affairs.....	6.64
Contributions made to INI special finance accounts.	5.40
Deferral of social security and other tax obligations.....	0.13
ECSC Article 54 loans.....	<u>1.72</u>
All programs.....	36.86

¹ Programs include equity infusions, loan guarantees, share "issue premiums", grants provided to "decrease financial charges" and "compensate for losses", and amounts held in a special INI finance account. Commerce found ENSIDESA to be unequityworthy during the period when equity infusions occurred.

Sweden

SSAB Svenskt Stal Aktiebolag (SSAB) was the only company investigated by Commerce regarding its allegedly subsidized sales of plate. Commerce determined that SSAB received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
1978 Equity infusion ¹	1.56
Grant to NJA.....	0.24
TCOJ railway grant.....	0.16
Structural loans.....	0.37
Reconstruction loans.....	1.92
Special employment subsidies for the steel industry.....	0.01
Grants for temporary employment for public works...	<u>0.01</u>
All programs.....	4.27

¹ Commerce found SSAB to be unequityworthy during the periods when the equity infusions occurred.

United Kingdom

Commerce investigated two British producers of plate: British Steel plc (BSC) and Glynwed Steels Limited (Glynwed). Glynwed did not respond to Commerce's questionnaire; therefore, for programs that were not specific to BSC, Commerce used BIA to establish a deposit rate for Glynwed. Commerce determined that British producers of plate received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
Government equity infusions into BSC ¹	8.63 (BSC)
Cancelled NLF debt.....	0.71 (BSC)
Regional development grants.....	0.35
Transportation assistance.....	<u>0.07</u> (BSC)
All programs.....	0.66 (Glynwed)
	9.76 (all others)

¹ Commerce found BSC to be unequityworthy during the periods when the equity infusions occurred.

Hot-rolled Products**Belgium**

Commerce investigated three Belgian producers of hot-rolled products: Clabecq, Sidmar, and Cockerill.⁵ Based on its investigation, Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

⁵ Cockerill did not respond to Commerce's questionnaire; accordingly, Commerce used BIA, which was information submitted in the petition.

	<u>Amount</u> <u>(percent ad valorem)</u>
Cash grants under the Economic Expansion Law of 1970.....	0.11 (Cockerill)
Government funding of early retirement pensions.....	3.06 (Cockerill)
Assumption of debt.....	19.25 (Cockerill)
	0.04 (All other)
Debt conversions.....	0.05 (All other)
	1.24 (Cockerill)
Equity infusions.....	2.01 (Cockerill)
	0.01 (All other)
SNCI loans.....	0.37 (Cockerill)
	0.01 (All other)
The "Invests".....	0.97 (All other)
SNSN loans.....	0.03 (Cockerill)
FSNW loan.....	0.03 (Cockerill)
Exemption from the Capital Registration Tax...	0.40 (Cockerill)
ECSC article 43 loans and loan guarantees.....	0.04 (Cockerill)
ECSC redeployment aid: Article 56(2)(b).....	0.01 (Cockerill)
Water purification subsidies.....	<u>0.04</u> (All other)
All programs.....	24.17 (Cockerill)
	1.12 (all others) ¹

¹ Commerce did not establish separate rates for Clabecq and Sidmar because neither firm's individual rate was significantly different from the overall countrywide rate.

Brazil

Commerce selected USIMINAS, COSIPA, and Companhia Siderurgica Nacional (CSN) as respondent companies for imports of hot-rolled products from Brazil. Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
Equity infusions ¹	28.10 (CSN)
	43.12 (COSIPA)
	3.45 (USIMINAS)
IPI rebate program under law 7554/86.....	2.04 (CSN)
	0.58 (COSIPA)
	2.00 (USIMINAS)
Exemption of IPI and duties on imports under decree-law 2324 ²	0.01 (CSN)
	0.19 (USIMINAS)
BNDES financing.....	0.24 (CSN)
	0.07 (USIMINAS)
	<u>0.96</u> (COSIPA)
All programs.....	44.66 (COSIPA)
	5.71 (USIMINAS)
	30.39 (all others) ^{E-10}

¹ Commerce determined all three companies to be unequityworthy.

² Export subsidy.

France

Usinor Sacilor was the only company investigated by Commerce regarding its allegedly subsidized sales of hot-rolled products. Commerce did not distinguish between classes or kinds of merchandise in calculating estimated subsidies attributable to each program used by Usinor Sacilor. Accordingly, for a list of programs and the estimated net subsidy attributable to each, see the listing under "Plate."

Germany

Commerce investigated four German producers of hot-rolled products: Hoesch Stahl AG (Hoesch), Kloeckner Stahl GmbH (Kloeckner), Preussag, and Thyssen. Based on its investigation, Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:⁶

	<u>Amount</u> <u>(percent ad valorem)</u>
Capital investment grants.....	0.45
Structural improvement aids.....	0.25
Investment premium act.....	0.05
Special subsidies for companies in the zonal border area.....	0.17
Ruhr District Action Program.....	0.01
Aid for closure of steel operations.....	0.03
ECSC redeployment aid: Article 56(2)(b).....	0.08
ECSC Article 54 loans.....	<u>0.02</u>
All programs.....	1.06

Korea

Posco was the only company investigated by Commerce regarding its allegedly subsidized sales of hot-rolled products. Commerce determined that Posco received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

⁶ Commerce did not establish separate rates for each firm because each firm's individual rate was not significantly different from the overall countrywide rate.

	<u>Amount</u> <u>(percent ad valorem)</u>
Government equity infusions in Posco ¹	0.16
Loans inconsistent with commercial considerations (including preferential access to foreign loans).....	3.64
Government infrastructure assistance for POSCO's integrated steel mill at Kwangyang Bay.....	0.74
Reserve for export loss and reserve for overseas market development ²	0.02
Unlimited deduction of overseas entertainment expenses.....	0.005
Reserve for investment.....	0.04
Duty drawback.....	0.005
Preferential utility rates.....	<u>0.03</u>
All programs.....	4.64

¹ Commerce found Posco to be unequityworthy during the period in which equity infusions occurred.

² Export subsidy.

Cold-rolled Products

Austria

Because Voest-Alpine Stahl Linz Ges.m.b.H (VA Linz) was the only producer of cold-rolled products in Austria during the period of investigation, Commerce limited its investigation to VA Linz. Commerce determined that VA Linz received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
Equity infusions to Voest-Alpine AG (VAAG) in 1978-84, and in 1986 ¹	0.84
Equity infusions to VA Linz (1987).....	0.10
Grants to VAAG (1978-86).....	2.26
Assumption of losses at restructuring by VAAG on behalf of VA Linz.....	<u>2.84</u> ²
All programs.....	6.04

¹ Commerce found VAAG (the predecessor to VA Linz) to be unequityworthy during these periods.

² BIA.

Belgium

Commerce investigated two Belgian producers of cold-rolled products: Sidmar and Cockerill.⁷ Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
Cash grants under the Economic Expansion Law of 1970.....	0.11 (Cockerill)
Government funding of early retirement pensions.....	0.50 (Cockerill)
Assumption of debt.....	19.25 (Cockerill)
Debt conversions.....	1.24 (Cockerill)
Equity infusions.....	2.01 (Cockerill)
SNCI loans.....	0.37 (Cockerill)
SNSN loans.....	0.03 (Cockerill)
The "Invests".....	0.99 (all other)
FSNW loan.....	0.03 (Cockerill)
Exemption from the Capital Registration Tax...	0.40 (Cockerill)
ECSC article 43 loans.....	0.04 (Cockerill)
ECSC redeployment aid.....	0.01 (Cockerill)
Water purification subsidies.....	<u>0.04</u> (all other)
All programs.....	24.17 (Cockerill)
	1.03 (all others)

Brazil

USIMINAS, COSIPA, and CSN were the respondent companies for imports of cold-rolled products from Brazil. Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

⁷ Cockerill did not respond to Commerce's questionnaire; accordingly, Commerce used BIA, which was information submitted in the petition. E-13

	<u>Amount</u> <u>(percent ad valorem)</u>
Equity infusions ¹	19.20 (CSN) 43.12 (COSIPA) 3.45 (USIMINAS)
IPI rebate program under law 7554/86.....	1.56 (CSN) 0.58 (COSIPA) 2.00 (USIMINAS)
Exemption of IPI and duties on imports under Decree-Law 2324 ²	0.11 (CSN) 0.19 (USIMINAS)
BNDES financing.....	0.37 (CSN) 0.07 (USIMINAS) <u>0.96</u> (COSIPA)
All programs.....	44.66 (COSIPA) 5.71 (USIMINAS) 21.24 (CSN) 30.39 (all others)

¹ Commerce determined all three companies to be unequityworthy.

² Export subsidy.

France

Usinor Sacilor was the only company investigated by Commerce regarding its allegedly subsidized sales of cold-rolled products. Commerce did not distinguish between classes or kinds of merchandise in calculating estimated subsidies attributable to each program used by Usinor Sacilor. Accordingly, for a list of programs and the estimated net subsidy attributable to each, see the listing under "Plate," supra.

Germany

Commerce investigated four German producers of cold-rolled products: Hoesch, Kloeckner, Preussag, and Thyssen. Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:^a

^a Commerce did not establish separate rates for each firm because each firm's individual rate was not significantly different from the overall countrywide rate.

	<u>Amount</u> <u>(percent ad valorem)</u>
Capital investment grants.....	0.39
Structural improvement aids.....	0.22
Investment premium act.....	0.02
Special subsidies for companies in the zonal border area.....	0.07
Ruhr District Action Program.....	0.01
Aid for closure of steel operations.....	0.04
ECSC redeployment aid: Article 56(2)(b).....	0.07
ECSC article 54 loans.....	<u>0.02</u>
All programs.....	0.84

Italy

Commerce investigated two Italian producers of cold-rolled products: Ilva and Falck. Commerce did not distinguish between classes or kinds of merchandise in calculating estimated subsidies attributable to each program used by these firms. Accordingly, for a list of programs and the estimated net subsidy attributable to each, see the listing under "Plate."

Korea

Commerce investigated three Korean producers of cold-rolled products: Posco, Dongbu Corporation (Dongbu), and Union Steel Manufacturing Co., Ltd. (Union). Based on its investigation, Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:⁹

⁹ Commerce did not establish separate rates for each firm because each firm's individual rate was not significantly different from the overall countrywide rate.

	<u>Amount</u> <u>(percent ad valorem)</u>
Government equity infusions in Posco ¹	0.13
Loans inconsistent with commercial considerations (including preferential access to foreign loans).....	2.94
Government infrastructure assistance for Posco's integrated steel mill at Kwangyang Bay.....	0.58
Reserve for export loss and reserve for overseas market development ²	0.04
Unlimited deduction of overseas entertainment expenses.....	0.005
Reserve for investment.....	0.03
Duty drawback.....	0.01
Preferential utility rates.....	<u>0.03</u>
All programs.....	3.76

¹ Commerce found Posco to be unequityworthy during the period in which equity infusions occurred.

² Export subsidy.

Spain

Commerce limited its investigation to ENSIDESA, the largest Spanish producer and exporter of cold-rolled products. Commerce determined that ENSIDESA received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
Long-term loans from Bank of Industrial Credit (BCI) under Law 60/78.....	3.62
Royal Decree 878/81.....	3.15
1984 Council of Ministers Meeting ¹	16.17
Grants under the 1987 government delegated Commission on Economic Affairs.....	6.64
Contributions made to INI special finance accounts.	5.40
Deferral of social security and other tax obligations.....	0.13
ECSC Article 54 loans.....	<u>1.72</u>
All programs.....	36.86

¹ Programs include equity infusions, loan guarantees, share "issue premiums, grants provided to "decrease financial charges" and "compensate for losses", and amounts held in a special INI finance account. Commerce found ENSIDESA to be unequityworthy during the period when equity infusions occurred.

Corrosion-resistant products

Brazil

CSN was the only respondent company for imports of corrosion-resistant products from Brazil. Commerce determined that CSN received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
Equity infusions ¹	28.10
IPI rebate program under law 7554/86.....	2.04
Exemption of IPI and duties on imports under Decree-Law 2324 ²	0.01
BNDES financing.....	<u>0.24</u>
All programs.....	30.39

¹ Commerce determined CSN to be unequityworthy in all periods in which equity infusions occurred.

² Export subsidy.

France

Usinor Sacilor was the only company investigated by Commerce regarding allegedly subsidized sales of corrosion-resistant products. Commerce did not distinguish between classes or kinds of merchandise in calculating estimated subsidies attributable to each program used by Usinor Sacilor. Accordingly, for a list of programs and the estimated net subsidy attributable to each, see the listing under "Plate," supra.

Germany

Commerce investigated three German producers of cold-rolled products: Hoesch, Preussag, and Thyssen. Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:¹⁰

	<u>Amount</u> <u>(percent ad valorem)</u>
Capital investment grants.....	0.39
Structural improvement aids.....	0.05
Special subsidies for companies in the zonal border area.....	0.01
Aid for closure of steel operations.....	0.06
ECSC redeployment aid under Article 56(2)(b)....	<u>0.08</u>
All programs.....	0.59

¹⁰ Commerce did not establish separate rates for each firm because each firm's individual rate was not significantly different from the overall country-wide rate.

Korea

Commerce selected Posco, Union, and Dongbu as respondent companies for imports of corrosion-resistant products from Korea. Based on its investigation, Commerce determined that these firms received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:¹¹

	<u>Amount</u> <u>(percent ad valorem)</u>
Government equity infusions in Posco ¹	0.07
Loans inconsistent with commercial considerations (including preferential access to foreign loans).....	1.83
Government infrastructure assistance for Posco's integrated steel mill at Kwangyang Bay.....	0.30
Reserve for export loss and reserve for overseas market development ²	0.09
Unlimited deduction of overseas entertainment expenses.....	0.005
Reserve for investment.....	0.02
Duty drawback.....	0.01
Preferential utility rates.....	<u>0.02</u>
All programs.....	2.34

¹ Commerce found Posco to be unequityworthy during the period in which equity infusions occurred.

² Export subsidy.

Mexico

Commerce investigated two Mexican producers of corrosion-resistant products: Hojalata y Lamina SA de CV (Hylsa) and Industrias Monterrey SA (IMSA). Because Hylsa refused to respond to Commerce's questionnaire, Commerce used BIA to establish a deposit rate for Hylsa. Commerce determined that IMSA and Hylsa received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

¹¹ Commerce did not establish separate rates for each firm because each firm's individual rate was not significantly different from the overall countrywide rate.

	<u>Amount</u> <u>(percent ad valorem)</u>
GOM equity infusions (1987), debt/equity swap, and debt exchanges ¹	31.64 (Hylsa) ²
FONEI.....	0.14 (Hylsa) ²
	0.36 (IMSA)
Bancomext short-term export financing ³	0.11 (Hylsa) ²
Bancomext short-term import financing ³	0.07 (Hylsa) ²
NAFINSA long-term loans.....	1.05 (Hylsa) ²
	0.005 (IMSA)
IMIS research and development.....	0.24 (Hylsa) ²
PITEX duty-free imports for companies that export ³	11.85 (Hylsa) ²
	5.34 (IMSA)
Article 15 and 94 loans.....	1.24 (Hylsa) ²
FONEI-like NAFINSA financing.....	0.50 (Hylsa) ²
NAFINSA loan guarantees.....	0.50 (Hylsa) ²
Accelerated depreciation.....	<u>0.50</u> (Hylsa) ²
All programs.....	47.84 (Hylsa)
	5.71 (all others)

¹ Commerce determined that Hylsa was unequityworthy during the periods when equity infusions occurred.

² BIA.

³ Export subsidy.

New Zealand

BHP New Zealand Steel Limited (NZS) was the only company investigated by Commerce regarding allegedly subsidized sales of corrosion-resistant products. Commerce determined that NZS received benefits that constitute subsidies within the meaning of the countervailing duty law under the following programs:

	<u>Amount</u> <u>(percent ad valorem)</u>
1985 Government Debt/Equity Conversion.....	19.09
1986 Government Debt/Equity Conversion.....	13.78
1986 Government purchase of preferred shares.....	<u>3.60</u>
All programs.....	36.57

Sweden

SSAB was the only company investigated by Commerce regarding allegedly subsidized sales of corrosion-resistant products. Commerce did not distinguish between classes or kinds of merchandise in calculating estimated subsidies attributable to each program used by SSAB. Accordingly, for a list of programs and the estimated net subsidy attributable to each, see the listing under "Plate."

LTFV Sales

On July 9, 1993, Commerce published in the *Federal Register* its final determinations that certain flat-rolled carbon steel products from Argentina, Australia, Austria, Belgium, Brazil, Canada, Finland, France, Germany, Italy, Japan, Korea, Mexico, the Netherlands, Poland, Romania, Spain, Sweden, and the United Kingdom are being, or are likely to be, sold in the United States at LTFV. Commerce's determinations were based on examinations of sales during the period January 1, 1992 through June 30, 1992. For each of the companies investigated, Commerce compared the United States price (USP) with the foreign market value (FMV) of such or similar merchandise. As detailed below, a substantial majority of Commerce's determinations were based on BIA.

Argentina

Commerce made an affirmative determination on sales of cold-rolled products by the only Argentine producer from whom it requested information: Sociedad Mixta Siderurgia Argentina (SOMISA). SOMISA failed to provide a deficiency response and Commerce assigned it a rates based on BIA, the highest of the margins calculated based on the information provided in the petition.

Australia

Commerce made an affirmative determination on sales of corrosion-resistant products by the only Australian producer from whom it requested information: Broken Hill Proprietary Company, Ltd. (BHP). Commerce used BIA because BHP had substantial and pervasive deficiencies in its questionnaire response.

Austria

Commerce made an affirmative determination on sales of cold-rolled products by the only Austrian producer from whom it requested information: VA Linz. Because VA Linz failed to report all its home market sales to Commerce, Commerce derived VA Linz' deposit rate using BIA, which was price and constructed value information provided in the petition. The Department calculated BIA as the average of all the LTFV margins alleged in the petition.

Belgium

In order to account for at least 60 percent of exports of the subject merchandise (plate, hot-rolled products, and cold-rolled products) to the United States during the period of investigation, Commerce requested data from Sidmar, Cockerill, and Clabecq. In addition, Fabfer submitted a voluntary response for its sales of plate and hot-rolled products. Commerce made affirmative determinations for Fabfer and Clabecq with respect to plate, for Sidmar and Cockerill with respect to hot-rolled products, and for Sidmar with respect to cold-rolled products.

For plate from Clabecq and Fabfer, Commerce based USP on purchase price, because the subject merchandise was sold to unrelated purchasers in the United

States prior to importation. Because Sidmar attempted to comply with Commerce's request for sales of hot-rolled and cold-rolled products, Commerce assigned the average, class-or-kind-specific margin calculated on information in the petition. Because Cockerill did not respond to its questionnaire on hot-rolled products, Commerce assigned as BIA the highest margin calculated based on information in the petition.

For Clabecq and Fabfer, Commerce based FMV on home market price for plate. For Cockerill and Sidmar, Commerce used BIA to establish FMV for Cockerill's hot-rolled products and for Sidmar's cold-rolled products.

Brazil

Commerce investigated sales of the subject merchandise by the three Brazilian firms named in the petition: COSIPA, CSN, and USIMINAS.¹² Commerce found margins for sales of plate by COSIPA and USIMINAS, for sales of corrosion-resistant products by CSN, and for sales of hot- and cold-rolled products from all three companies.

Commerce used BIA for all three companies and for all three products. Because COSIPA declined to answer Commerce's questionnaire, BIA was the highest of the dumping margins calculated in the petition or the highest dumping margin calculated for either of the other two companies investigated with respect to a particular product. Commerce determined that CSN's response was unverifiable because it maintains a "financial cost accounting system." With respect to USIMINAS, Commerce discovered at verification that there were serious, irreparable flaws in its submissions.

For CSN and USIMINAS, Commerce based USP on purchase price because the subject merchandise was sold to unrelated purchasers in the United States before importation. Commerce calculated FMV using home market prices for both companies and for all products. Where insufficiently similar merchandise was sold in the home market in any particular month, Commerce used constructed value to establish FMV, basing constructed value, because of Brazil's hyperinflation, on monthly data. Constructed value was also used for products without an adequate number of home market sales at prices above cost of production.

Canada

In order to account for at least 60 percent of exports of the subject merchandise to the United States during the period of investigation, Commerce requested data from IPSCO, Inc. (for plate), from Sidbec-Dosco, Inc. and Cold Metal Products, Inc. (CMP) (for cold-rolled products), from Dofasco, Inc. (for all products except plate), and from Stelco, Inc. (for all products). In addition, the Department accepted voluntary responses from IPSCO with respect to hot-rolled products. Commerce made affirmative determinations for Stelco

¹² COSIPA originally claimed that it did not export to the United States during the period of investigation; however, Commerce sent this firm a questionnaire after it detected shipments during the second half of the period.

and IPSCO with respect to plate, for Dofasco, IPSCO, and Stelco with respect to hot-rolled products, for CMP, Dofasco, Sidbec-Dosco, and Stelco with respect to cold-rolled products, and for Dofasco and Stelco with respect to corrosion-resistant products.

The Department used BIA to establish Stelco's margin for plate because Stelco refused to cooperate with the Department and did not respond to the Department's questionnaire concerning cost of production. Because Sidbec cooperated but failed to provide a timely response, Commerce used the highest calculated rate found for any firm for the same class or kind of merchandise. In addition, Commerce used partial BIA in situations where firms (CMP, Sidbec-Dosco, and Stelco) did not provide constructed value data for sales where no similar merchandise could be found in the home market, and for some of CMP's and Stelco's ESP sales transactions. BIA was based alternatively on information from the petition, or on the highest rate calculated for each company with respect to a particular class or kind of merchandise.

Finland

Commerce made an affirmative determination on sales of plate by the only Finnish producer from whom it requested information: Rautaruukki Oy. Commerce based USP on purchase price because Rautaruukki's sales of plate were made to unrelated purchasers in the United States prior to importation. FMV was based on home market price, which was calculated based on prices charged to unrelated customers in the home market. Commerce did not include sales to one related party in its analysis because it found that such sales were not made at arm's length.

France

Because Usinor Sacilor accounted for over 60 percent of exports of the subject merchandise to the United States during the period of investigation, Commerce limited its investigation to this firm. With regard to all four products, USP was partly based on purchase prices, when the merchandise was sold to unrelated purchasers in the U.S., and partly on ESP, in cases where Usinor Sacilor sold to related parties in the United States. Commerce based FMV on home market prices to unrelated resellers in France and/or arm's length prices to related customers.

Germany

Commerce investigated sales of the subject merchandise by four of the seven German firms named in the petition: Preussag, Kloeckner, Thyssen, and Dillinger. Commerce found margins for sales of plate by Dillinger, for sales of hot-rolled products by Kloeckner and Preussag, for sales of cold-rolled products by Kloeckner and Thyssen, and for sales of corrosion-resistant products by Thyssen.

Commerce based its determinations on BIA for sales of hot-rolled steel by Preussag and Kloeckner, and for sales of cold-rolled steel by Kloeckner. Commerce used BIA for Kloeckner because it failed to report transaction prices for many home market sales. Preussag failed to provide a complete listing of

home market sales. As Commerce considered these respondents to be "cooperative," both USP and FMV were based on information in the petition.

For Thyssen and Dillinger, Commerce based USP on ESP, because all sales to the first unrelated purchaser took place after importation into the United States, or on purchaser price, respectively. FMV was based on home market prices to unrelated customers. Commerce used BIA selectively to establish FMV where similar merchandise was not sold in the home market.

Italy

As Ilva accounted for more than 60 percent of sales of plate and cold-rolled products to the United States during the period of investigation, Commerce limited its investigation to that firm. Ilva failed to provide an adequate response to Commerce's questionnaire regarding either product. Accordingly, Commerce's results are based on BIA. Because, among other deficiencies, Ilva failed to respond to a supplemental questionnaire regarding cost of production, Commerce considered Ilva to be an uncooperative respondent, and based BIA on the highest of the margins alleged in the petitions concerning imports of plate and cold-rolled products from Italy.

Commerce based USP on information in the petitions, primarily derived from IM-145 import statistics. For cold-rolled products, Commerce based FMV on petitioner's estimates of constructed value. For plate, Commerce calculated FMV using a market research report on price quotes in the Italian market.

Japan

In order to account for at least 60 percent of exports of the subject merchandise to the United States during the period of investigation, Commerce requested data from Nippon Steel, NKK, and Sumitomo (for hot-rolled and cold-rolled products), and from Kawasaki and Nippon Steel (for corrosion-resistant products). Commerce made affirmative determinations for all firms from whom it requested information.

For two of the firms investigated, Kawasaki and Sumitomo, Commerce based its results on BIA. The Department used BIA for Kawasaki because it refused to respond to the Department's cost-of-production questionnaire and Sumitomo withdrew from the investigation completely. Accordingly, as it considered Kawasaki and Sumitomo to be uncooperative respondents, Commerce applied BIA based on the higher of (1) the highest calculated rate for each class or kind of merchandise for any Japanese firm or (2) the highest margin alleged in the petition on hot-rolled and cold-rolled products from Japan.

For NKK and Nippon Steel, Commerce based USP on purchase price, because the subject merchandise was sold to unrelated trading companies in Japan for export to the United States and/or to unrelated customers in the United States prior to importation. In addition, for Nippon, Commerce used BIA for all U.S. sales affected by the incorrect strength categorization by Nippon. For these sales, Commerce based FMV on home market price.

Korea

Commerce investigated sales of the subject merchandise by two of the five Korean firms named in the petition: Dongkuk (for plate) and Posco (for all other products). Commerce made affirmative determinations for all firms and products investigated.

Commerce based USP, for both Posco and Dongkuk, on purchase price, when the subject merchandise was sold to unrelated purchasers in the United States prior to importation. For certain sales by Posco, where sales to the first unrelated purchaser took place after importation into the United States, Commerce used ESP. For hot-rolled products, Commerce used BIA for certain sales by Posco, because Posco failed to provide data on sales by a related U.S. party.

Commerce generally used home market prices to establish FMV. Commerce, however, found a significant number of home market sales by Posco to have been made at below the cost of production. In such cases, Commerce used constructed value.

Commerce also adjusted the cash deposit rates to compensate for export subsidies it had found in the companion countervailing duty cases. The adjustments comprised 0.02 percent *ad valorem* for plate and hot-rolled products, 0.10 percent *ad valorem* for corrosion-resistant products, and 0.05 percent *ad valorem* for cold-rolled products.

Mexico

As AHMSA and Industrias Monterrey, S.A. (IMSA) accounted for more than 60 percent of sales of plate and corrosion-resistant products, respectively, to the United States during the period of investigation, Commerce limited its investigation to those firms. AHMSA withdrew from the investigation regarding plate. Accordingly, Commerce's results are based on BIA which, because AHMSA was considered an uncooperative respondent, was based on the highest adjusted margin alleged in the petition. Commerce used purchase price for IMSA's sales to unrelated parties and compared USP and FMV based on a concordance. Commerce used constructed value when no match was available. For IMSA's sales to related parties, Commerce used a combination of a database provided by IMSA and BIA.

For both firms, Commerce adjusted the cash deposit rates to compensate for export subsidies it had found in the companion countervailing duty cases. The adjustments were 0.09 percent *ad valorem* for plate and 5.71 percent *ad valorem* for corrosion-resistant products.

Netherlands

Because Hoogovens Groep BV (Hoogovens) accounted for over 60 percent of exports of the subject merchandise (hot- and cold-rolled products) to the United States during the period of investigation, Commerce limited its investigation to this firm. Commerce based USP on purchase price, when the subject merchandise was sold to unrelated purchasers in the United States prior to importation. For certain sales by Hoogovens, Commerce used ESP to

establish USP, where such sales to the first unrelated purchaser took place after importation. Commerce excluded all U.S. sales of second-quality merchandise because these sales amounted to an insignificant portion of total U.S. sales.

Commerce based FMV on home market prices to unrelated purchasers. Commerce conducted an investigation into whether home market sales were made below cost of production, but did not find that more than 90 percent of comparable sales were below cost of production.

Poland

Commerce made an affirmative determination on sales of plate by the two Polish exporters from which it requested information: PHZ Stalexport and Huta Czysta. These firms were responsible for gathering production and sales information from all companies in Poland known to export plate to the United States. Commerce determined to revoke Poland's non-market-economy status retroactive to Jan. 1, 1992.

Commerce based USP on purchase price to unrelated purchasers in the United States. Because Commerce did not revoke Poland's NME country status until June 21, 1993, it based FMV on cost of production, as valued in a surrogate country.

Romania

Metalexportimport (MEI) accounted for 100 percent of exports of plate from Romania to the United States during the period of investigation; thus, Commerce limited its investigation to this firm. Because MEI attempted to cooperate but failed to respond in a timely fashion to Commerce's questionnaire, Commerce considered MEI to be a cooperative respondent and based BIA on the average of all margins calculated in the petition.

Commerce calculated USP based on actual price quotations contained in the petition. Using production costs in countries such as Argentina, Chile, and Turkey, Commerce calculated FMV using the factors-of-production approach.

Spain

Because ENSIDESA accounted for over 60 percent of exports of the subject merchandise (plate and cold-rolled products) to the United States during the period of investigation, Commerce limited its investigation to this firm. Because ENSIDESA failed to respond to the cost-of-production questionnaire, Commerce used BIA. Commerce considered ENSIDESA to be uncooperative and used the highest margin in the petition for cold-rolled products and used ENSIDESA's calculated margin for plate because it was higher than that in the petition.

Sweden

Commerce made an affirmative determination on sales of plate by the only Swedish producer from whom it requested information: SSAB. Because SSAB did not respond adequately to Commerce's questionnaire, Commerce based its determination on BIA. As SSAB did respond to most of Commerce's requests for data, it considered SSAB to be substantially cooperative, and based BIA on the average of all alleged margins in the petition concerning plate from Sweden. Commerce based both USP and FMV on list prices contained in the petition.

United Kingdom

As BSC accounted for more than 60 percent of sales of plate to the United States during the period of investigation, Commerce limited its investigation to that firm. BSC refused to respond to Commerce's questionnaire. Accordingly, Commerce's results are based on BIA which, because BSC was considered an uncooperative respondent, was based on the highest adjusted margin alleged in the petition.

Commerce calculated USP based on average customs values of plate imported into the United States from the United Kingdom, and calculated FMV based on home market prices provided in the petition.

Critical Circumstances Determinations

Commerce made final affirmative critical circumstances determinations for the following country/product combinations: plate from Korea, Poland, Romania, and Spain; hot-rolled products from Belgium and Japan (Sumitomo only); cold-rolled products from Japan (Sumitomo only) and Spain; and corrosion-resistant products from Japan (Kawasaki only) and Mexico. Monthly data for these country/product combinations for the period October 1991, through January 1993, are presented in appendix L.

APPENDIX F
DATA ON SPECIALIZED PRODUCTS

PRODUCT DESCRIPTIONS

Product 1.--Hot-rolled carbon steel plate, ASTM A516 Grade 70, as rolled, trimmed, sheared or flame-cut edges, not cleaned or clad, in cut lengths, over 155" through 200" in width, 3/8" through 5" in thickness, entered under subheading 7208.32.00 of the HTS.

Product 2.--Hot-rolled carbon steel plate, ASTM A516 HIC resistant, per N.A.C.E. TM-02-84 with test solutions Ph3 per N.A.C.E. TMO-177, meeting acceptance criteria for plates >4" thick of CLR <=15, CTR <=5 and CSR <=2 as well as for plates >3/8" of CLR <=10, CTR <=3 and CSR <=1, entered under subheading 7208.32.00 of the HTS.

Product 3.--Hot-rolled carbon steel cut-to-length plate, certified to API-2H-50 normalized with supplemental requirements: S1, S3, S4, S5, certified to ASTM A633 Grade C normalized, certified to SCME SA537 Class 1 normalized, certified to ABS EH36Z through 2" thickness, equal to 72" through 120" in width, over 1/2" thick, entered under subheading 7208.32.00 of the HTS.

Product 4.--Hot-rolled carbon steel plate, ASTM A36 as rolled, sheared or flame-cut edge, not heat-treated, not cleaned or oiled, in cut lengths, equal to or over 55" through 120" in width, over 6" in thickness with plate unit weights greater than or equal to 11 metric tons, entered under statistical reporting number 7208.42.00 of the Harmonized Tariff Schedule of the United States (HTS).

Product 5.--Hot-rolled carbon steel plate, high strength low alloy (HSLA), ASTM A656 Grade 80 Type 7 modified tensile 100,000 to 125,000 ksi, 1/3 A6 flatness tolerance, not quenched and not tempered, with bending properties 1/4-1/2T without cracking, 96" in width, 188" in length, 1/2" in thickness, entered under subheading 7208.32.00 of the HTS.

Product 6.--Hot-rolled carbon steel plate, ASTM A516 as rolled, whether or not normalized, sheared or flame-cut edge, in cut lengths, equal to or exceeding 1.5" through 4" in thickness, 72" through 120" in width with plate unit weights greater than or equal to 11 metric tons, entered under statistical reporting number 7208.32.0000 of the HTS.

Product 7.--Hot-rolled carbon steel plate, ASTM A516 as rolled, or normalized, with sheared or flame-cut edge, in cut lengths, equal to or exceeding 155" in width, 3/8" through 4" in thickness, entered under subheading 7208.32.00 of the HTS.

Product 8.--Hot-rolled carbon steel plate, ASTM A572, high strength low alloy (HSLA), as rolled or normalized, sheared or flame-cut edge, in cut lengths, 1.5" through 4" in thickness, 72" through 120" in width, with plate unit weights greater than or equal to 11 metric tons, entered under statistical reporting number 7208.32.0000 of the HTS.

Product 9.--[duplicate of Product 5 in original questionnaire].

Product 10.--Hot-rolled carbon steel plate, ASTM A516 Grade 70, normalized, with trimmed, sheared or flame-cut edges, not cleaned and not oiled, in cut lengths, 96" to 120" in width, exceeding 240" in length and 3" in thickness, entered under subheading 7208.32.00 of the HTS.

Product 11.--Hot-rolled carbon steel plate, ASTM A572 Grade 50, entered under statistical reporting number 7208.32.0000 of the HTS.

Product 12.--Hot-rolled carbon steel plate, ASTM A572 Grade 50, with individual plate unit weights exceeding 11 metric tons, entered under statistical reporting numbers 7208.32.0000 and 7208.42.0000 of the HTS.

Product 13.--Hot-rolled floor plates, 0.057 to 0.500 inches in thickness, in cut lengths, not pickled, 36-79" in width, Commercial Quality or High Strength Low Alloy, entered under statistical reporting numbers 7208.13.5009, 7208.14.5008, 7208.21.5009, 7208.22.5008, 7208.23.5000, 7208.23.50301, 7208.23.50908, 7208.33.5005, 7208.34.5004, and 7208.35.5003 of the HTS.

Product 14.--Hot-rolled carbon steel flat products of a width of 14 inches or less, with a carbon content of 0.78 to 0.83 percent by weight with a low non-metallic inclusion rating between 1 and 2 according to ASTM E45 (A, B, C, and D), complete decarburization (no carbide banding) and free of internal and external defects, with a minimum tensile strength of 185,000 psi, used to produce high fatigue cold-rolled steel for seatbelt retractor spring applications, entered under subheading 7211.29.50 of the HTS.

Product 15.--Hot-rolled carbon steel flat products, in coils, commercial quality to SAE 1006 chemistry, continuous cast, aluminum-killed, vacuum-degassed, milled edges, suitable for battery cans ("ultra-clean steel"), entered under subheading 7208.24.10 of the HTS.

Product 16.--Hot-rolled carbon steel flat products, high carbon (carbon content equal to or greater than 0.50 percent), processed through vacuum re-melting and meeting ASTM E45 cleanliness standard, entered under subheadings 7208.13.00, 7208.14.00, and 7211.19.00 of the HTS.

Product 17.--Hot-rolled carbon steel flat products, of high tensile strength equal to or greater than 50,000 pounds psi and used for automotive parts, entered under subheadings 7208.13.00 and 7208.14.00 of the HTS.

Product 18.--Hot-rolled carbon steel flat products, with gauge not exceeding 1.5 millimeters (0.060 inches), and with a width not less than 40 inches, entered under subheading 7208.24.00 of the HTS.

Product 19.--Hot-rolled carbon steel flat products, with a carbon content less than 0.01 percent ("ultra-low carbon steel"), entered under subheading 7208.24.00 of the HTS.

Product 20.--Hot-rolled carbon steel flat products of a width of 14 inches or less, with a carbon content between 0.68 and 0.80 percent by weight, with a low non-metallic inclusion rating of maximum 3 according to ASTM E45, complete decarburization (carbide banding limited to maximum .002 inches), having a high bending strength, used to produce high fatigue cold-rolled steel for piston rings, entered under subheading 7211.29.50 of the HTS.

Product 21.--Hot-rolled carbon steel flat products with a non-metallic inclusion rating of maximum 2 per ASTM E45, a carbon content between 0.90 and 1.05 percent by weight, complete decarburization (carbide banding limited to maximum .001 inches), and having high bending and impact fatigue strength, used to produce shock absorbers, entered under subheading 7211.29.50 of the HTS.

Product 22.--Hot-rolled carbon steel flat products with a non-metallic inclusion rating of maximum 2 per ASTM E45, a carbon content between 0.90 and 1.05 percent by weight, complete decarburization (carbide banding limited to maximum .001 inches), and having high bending and impact fatigue strength, used to produce cold-rolled steel for disposable blade products, entered under subheading 7211.29.50 of the HTS.

Product 23.--Hot-rolled carbon steel sheet, in coils, high carbon grades (AISI1050-1075), pickled or black, .070-.300" in thickness, 28-72" in width, mill or cut edge, with improved internal cleanliness and reduced crown, for re-rolling applications, entered under statistical reporting numbers/subheadings 7208.12.00, 7208.13.00, 7208.13.10, 7208.14.10, 7208.14.50, 7208.21.10, 7208.21.50, 7208.22.10, 7208.22.50, 7208.23.10, 7208.23.50, 7208.23.50301, 7208.23.50908, 7208.24.10005, 7208.24.50, 7208.24.5030, and 7208.24.5090 of the HTS.

Product 24.--Hot-rolled carbon steel sheet, HSLA line pipe grades, in heavy coils for large OD ERW pipe mills, grades X42, 500B, X52, X56, or X60; .100 to .625 inches in thickness, entered under subheadings 7208.13.50 and 7208.14.50 of the HTS.

Product 25.--Hot-rolled carbon steel sheet, extra wide widths in coils CQ or HS or HSLA, or PVQ, not pickled, mill edge or cut edge, 80-84" wide, .120" to .625" in thickness, entered under statistical reporting numbers/subheadings 7208.12.00, 7208.13.00, 7208.13.10, 7208.14.50, 7208.21.10, 7208.21.50, 7208.22.10, 7208.22.50, 7208.23.10, 7208.23.50, 7208.23.5030, and 7208.23.5090 of the HTS.

Product 26.--Hot-rolled carbon steel sheet, "Class A" Panel stock, pickled and oiled, commercial quality, mill edge or cut edge, in coils, 30" to 84" in width, .054 through .250" in thickness, with improved surface roughness for painted applications, entered under statistical reporting numbers/subheadings 7208.13.10, 7208.14.10, 7208.21.1008, 7208.22.1007, and 7208.23.1000 of the HTS.

Product 27.--Hot-rolled carbon steel flat products, with a PIW (pounds-per-inch-width) of 1000 or greater (with a minus tolerance of 1 percent), with a width between 24" and 56", with a gauge greater than 0.08" and less than or equal to 0.18", with a maximum gauge variation compared to nominal gauge of +/- .002" or less, entered under statistical reporting numbers 7208.23.5030 and 7208.24.5030 of the HTS.

Product 28.--Hot-rolled carbon steel flat products, with a PIW of 1000 or greater (with a minus tolerance of 1 percent), with a width between 24" and 56", with a gauge greater than 0.10" and less than or equal to 0.18", with a maximum gauge variation compared to nominal gauge of +/- 2% or less, entered under statistical reporting numbers 7208.23.5030 and 7208.24.5030 of the HTS.

Product 29.--Hot-rolled carbon steel flat products, with a PIW of 1000 or greater (with a minus tolerance of 1 percent), with a width between 24" and 56", with a gauge greater than 0.08" and less than or equal to 0.10", with a maximum gauge variation compared to nominal gauge of +/- .002" or less, with a maximum nitrogen content of 0.0050 wt%, a carbon content of 0.020-.050 wt%, and total aluminum content of .005-.030 wt%, entered under statistical reporting number 7208.24.5030 of the HTS.

Product 30.--Cold-rolled carbon steel flat products ("cold-reduced blackplate"), in coils, MR, matte finish, oiled, trimmed edges, temper 2, 30" to 40" in width, 0.0135" thick, with a maximum gauge variation of plus or minus 0.0003", entered under statistical reporting number 7209.24.1004 of the HTS.

Product 31.--Full-hard cold-rolled carbon steel sheet, in coils, unannealed, commercial metallurgical specifications SAE 1008 through 1020, intended to make galvanized specification ASTM grades A-446 D and E, width 27" to under 50", thickness 0.0140" to under 0.0181", entered under statistical reporting number 7209.24.50 of the HTS.

Product 32.--Cold-rolled carbon steel flat products, e.g., ASTM A366 and A625, RA 0.1 micrometers or less, gloss 500 or more, ("ultra-bright"), entered under subheadings 7209.13.00, 7209.14.00, 7209.22.00, 7209.23.00, and 7209.24.00 of the HTS.

Product 33.--Cold-rolled carbon steel flat products, dead flat, made generally to ASTM specifications such as A366, 25 percent or less of distortion, as allowed by ASTM flatness standards such as under A568, entered under subheadings 7209.13.00, 7209.22.00, 7209.23.00, 7209.24.00, 7209.43.00, 7211.30.00, and 7211.41.00 of the HTS.

Product 34.--Cold-rolled carbon steel flat products, with gauge less than 0.195 mm (0.0077"), with maximum 5 percent tolerance, such as ASTM A625, ("ultra-thin"), entered under subheadings 7209.14.00 and 7209.24.00 of the HTS.

Product 35.--Cold-rolled carbon steel flat products, with tensile strength 100 kg./f/mm or greater, entered under subheadings 7209.12.00 and 7209.22.00 of the HTS.

Product 36.--Cold-rolled carbon steel flat products, with carbon content equal to or less than 0.005 percent, entered under subheadings 7209.22.00, 7209.23.00, 7209.24.00, and 7211.41.00 of the HTS.

Product 37.--Cold-rolled carbon steel sheet, in coils, Class 1, commercial bright, surface roughness of max. 6 micro inches, 36" to 62" in width, 0.014" to 0.0118" in thickness, entered under subheadings 7209.21.00, 7209.22.00, and 7209.23.00 of the HTS.

Product 38.--Cold-rolled carbon steel flat products ("hardened carbon steel"), with a carbon content of 0.65 percent or more, that have been processed through vacuum melting and a hardening and tempering furnace in addition to traditional cold-rolled processing, having high bending and impact fatigue strength, used for flapper valves in automotive compressors and shock absorbers and other applications, having a tensile strength of 152/mm² or more and hardness of 450 or more by Vickers hardness number, entered under statistical reporting numbers/subheadings 7211.30.1030, 7211.30.1090, and 7211.30.30 of the HTS.

Product 39.--Aluminized carbon steel sheet, in coils, commercial quality, T140 coating, 40" to 50" in width, 0.020" through 0.078" in thickness, entered under subheading 7210.60.00 of the HTS.

Product 40.--Hot-dipped galvanized carbon steel sheet, of high-strength steel, in coils, ASTM A446, Grade C or D, G60 or G90, regular or minimum spangle, 36" to under 60" in width, 0.028" to under 0.060" in thickness, entered under statistical reporting number 7210.49.0030 of the HTS.

Product 41.--Corrosion-resistant carbon steel flat products, ASTM A-525, thin gauge, either 0.0149 inches or 0.0120 inches in thickness, in rolls and sheets, either 36" or 48" in width, and in belts of varying width, entered under subheadings 7210.41.00, 7210.49.00, and 7212.30.00 of the HTS.

Product 42.--Corrosion-resistant carbon steel flat products, ASTM A-755, pre-painted with polyester and covered with polyethylene, 0.037" in thickness, 36" in width, in sheets, entered under subheading 7212.40.00 of the HTS.

Product 43.--Corrosion-resistant carbon steel sheet, double layered zinc-iron coated, whether hot-dipped or electrolytically coated, in coils, 0.022" to under 0.063" in thickness, entered under subheadings 7210.49.00, 7210.39.00, and 7210.31.00 of the HTS.

Product 44.--Corrosion-resistant carbon steel sheet, electrolytically zinc-nickel coated, with an organic coating, in coils, 0.022" to under 0.091" in thickness, entered under subheadings 7210.31.00 and 7210.39.00 of the HTS.

Product 45.--Corrosion-resistant carbon steel sheet, ultra-thin, with gauge equal to or less than 0.012", entered under subheadings 7210.49.00, 7210.39.00, and 7210.31.00 of the HTS.

Product 46.--Corrosion-resistant carbon steel sheet, pure zinc electrogalvanized, with fingerprint-free organic coating, in coils, entered under subheadings 7210.31.00 and 7210.39.00 of the HTS.

Product 47.--Corrosion-resistant carbon steel flat products, galvanized, with gauge less than or equal to 0.014", entered under subheadings 7210.41.00, 7210.49.00, and 7212.30.00 of the HTS.

Product 48.--Hot-rolled cut-to-length carbon steel plate, bevelled, conforming to ASTM designations 516-70 or A-612, or American Association of Railroads standard TC-128, used to produce reservoirs, pressure vessels, railway cars, tanks, vats, casks, drums, and similar containers for the storage, treatment and/or transportation of any materials, entered under subheading 7208.90.00 of the HTS.

Product 49.--Hot-rolled cut-to-length carbon steel plate, bevelled, of any dimension, used to produce reservoirs, pressure vessels, railway cars, tanks, vats, casks, drums, and similar containers for the storage, treatment and/or transportation of any materials, entered under subheading 7208.90.00 of the HTS.

Product 50.--Hot-rolled cut-to-length carbon steel plate, bevelled, of any dimension, used to produce pipe and tube products, entered under subheading 7208.90.00 of the HTS.

Product 51.--Hot-rolled cut-to-length carbon steel plate, bevelled, of any dimension, regardless of end use, entered under subheading 7208.90.00 of the HTS.

Product 52.--Hot-rolled carbon steel flat products with a very low non-metallic inclusion rating; a carbon content between 1.21-1.35; having a fully sorbitic microstructure, having very light grain boundary carbide, carbide network and microsegregation; having no carbide streaking and lamellar pearlite; AISI rating 10125, less than 14 inches in width, used to produce cold-rolled steel for carbon bandsaw blade applications, entered under statistical reporting numbers 7211.29.3000 of the HTS.

Product 53.--Cold-rolled black plate in coils, ASTM A625-76, with size range .0072" through .0141" nominal thickness, 24" to 48" in width, with target base sheet roughness under 3.3 micro inches Ra, intended to be electroplated for highly ornamental applications, entered under subheadings/statistical reporting numbers 7209.24.10, 7209.24.5000, 7209.23.0000, and 7209.22.0000 of the HTS.

Product 54.--Cold-rolled steel sheet in coils, ASTM A366, with size range .0142" through .050" minimum (theoretical minimum weight) thickness, 24 to 48 inches in width, with target base sheet roughness under 3.3 micro inches Ra, intended to be electroplated for highly ornamental applications, entered under subheadings/statistical reporting numbers 7209.24.10, 7209.24.5000, 7209.23.0000, and 7209.22.0000 of the HTS.

Product 55.--Cold-rolled carbon steel sheet, with a width greater than 0.5 inches but not more than 1.25 inches, a thickness of between 0.015 and 0.040 inches, a carbon content of 0.15-0.38 percent, a manganese content of 0.3-1.5 percent, with trace quantities of residual non-alloy elements, coated with water-based paint, sold in both ribbon wound or oscillated wound coils of less than 125 pounds, entered under statistical reporting numbers 7211.41.3030, 7212.40.1000, 7217.11.2000, 7217.19.5000, and 7217.29.5000 of the HTS.

Product 56.--Cold-rolled spherodized steel ("annealed spring steel"), with width of between 36-50 inches, thickness of between 0.010-0.093 inches, carbon content of 0.48-0.80 percent, manganese content of 0.40-0.90 percent, phosphorous content of no more than 0.040 percent, sulphur content of no more than 0.050 percent, light matte finish, sold in coils of less than 125 pounds, entered under statistical reporting numbers 7209.12.0030, 7209.13.0030, 7209.14.0030, 7209.22.0000, 7209.23.0000, 7209.24.1000, and 7209.24.50 of the HTS.

Product 57.--Cold-rolled blackplate coils, .0149" in thickness (128# basis wt), 48.625" in width, 10 max micro inches (RA) surface, necessary for production of "SP-95" or other products consisting of a silver-sputtered polyester film laminated to cold-rolled blackplate, entered under statistical reporting number 7209.24.1000 of the HTS.

Product 58.--Cold-rolled carbon steel sheet in coil, ASTM A366-91 (finish as per section 4.1.4), luster finish, surface roughness of 0 to 5 micro inches RMS maximum (by exception), 0.015" to 0.038" thick, 24.5" to 28.5" wide, tempered (RB65 maximum, B45 minimum)(by exception to ASTM A366-91), carbon content 1008 or less, entered under subheading 7209.24.00 of the HTS.

Product 59.--Cold-rolled carbon steel sheet in coil, ASTM A625-68 to A625-76 (finish as per section 4.1.1), single reduced blackplate, bright finish (7A), surface roughness of 4 micro inches RMS maximum, 0.008" to 0.0149" thick, 24.5" to 28.5" wide, tempered (RB65 maximum, B45 minimum), carbon content 1008 or less, entered under subheading 7209.24.00 of the HTS.

Product 60.--Cold-rolled carbon steel sheet, ASTM A366, excel bright ("ultra bright") finish, surface roughness 2 to 6 micro inches RMS, 0.020" to 0.050" thick, 25" to 48" wide, entered under statistical reporting numbers 7209.22.0000 and 7209.23.0000 of the HTS.

Product 61.--Cold-rolled carbon steel sheets, ASTM A366, bright brushed finish, surface roughness of 30 to 60 micro inches RMS, 0.020" to 0.050" thick, 25" to 48" wide, entered under statistical reporting numbers 7209.22.0000 and 7209.23.0000 of the HTS.

Product 62.--Cold-rolled tin mill black plate, type DT-1, ASTM A625, surface roughness 6 to 10 micro inches RMS, 0.014" to 0.020" thick, 24" to 33" wide, entered under subheading 7209.24.00 of the HTS.

Product 63.--Electrolytically zinc-nickel coated carbon steel sheet, in coils, 36" to under 60" width, and 2.0mm thickness and above, entered under statistical reporting numbers 7210.31.00 and 7210.39.00 of the HTS.

Product 64.--Hot-dipped galvanized carbon steel sheet, in coils, of high-tensile specification (tensile minimum 390 N/mm²) with deep drawing quality for use in automotive applications, entered under statistical reporting number 7210.49.0030 of the HTS.

Product 65.--Hot-dipped galvanized Zn-Fe alloy plus special chromate treatment, of ASTM A527/LFQ, coating weight A25, 0.015" thick (no deviation), 38.375" wide, entered under subheading 7210.49.0090 of the HTS.

Product 66.--Corrosion-resistant carbon steel sheet, coated with electrolytic zinc plus special organic chromate and special complex layers, ASTM A591/LFQ, coating weight .06 oz./sq. ft., 0.012" thick (no deviation), 37.5" wide, entered under subheading 7210.39.0000 of the HTS.

Product 67.--Pre-painted hot-dipped galvanized carbon steel sheet, ASTM A642-85, coating weight G-60 with .2 mil epoxy primer (both sides) and .8 mil polyester finish (one side) both applied by continuous reverse roll coating method, 0.009" thick (no deviation), 20.413" to 31.57" wide; MCA-HQ specifications of tensile strength 66,850 to 73,950 PSI, yield point 56,900 to 64,000 PSI, and elongation of 20 to 26 percent, entered under statistical reporting numbers 7210.70.6060 and 7212.30.5000 of the HTS.

Product 68.--Hot-rolled floor plates, 0.057 to 0.500 inches in thickness, in coils, not pickled, 36-79" in width, Commercial Quality or High Strength Low Alloy, entered under statistical reporting numbers 7208.13.5009, 7208.14.5008, 7208.21.5009, 7208.22.5008, 7208.23.5000, 7208.23.50301, 7208.23.50908, 7208.33.5005, 7208.34.5004, and 7208.35.5003 of the HTS.

Table F-1

Plate: U.S. shipments of domestically-produced specified niche products, U.S. imports of such products, apparent U.S. consumption, market penetration, and unit values of such products, by products and countries, 1990-92

* * * * *

Table F-2

Hot-rolled products: U.S. shipments of domestically-produced specified niche products, U.S. imports of such products, apparent U.S. consumption, market penetration, and unit values of such products, by products and countries, 1990-92

* * * * *

Table F-3

Cold-rolled products: U.S. shipments of domestically-produced specified niche products, U.S. imports of such products, apparent U.S. consumption, market penetration, and unit values of such products, by products and countries, 1990-92

* * * * *

Table F-4

Corrosion-resistant products: U.S. shipments of domestically-produced specified niche products, U.S. imports of such products, apparent U.S. consumption, market penetration, and unit values of such products, by products and countries, 1990-92

* * * * *

APPENDIX G

**COMMENTS RECEIVED FROM U.S. PRODUCERS ON THE
IMPACT OF IMPORTS OF CERTAIN FLAT-ROLLED CARBON STEEL
PRODUCTS FROM THE SUBJECT COUNTRIES ON THEIR GROWTH,
INVESTMENT, ABILITY TO RAISE CAPITAL, AND
EXISTING DEVELOPMENT EFFORTS**

The Commission requested U.S. producers to describe and explain the actual and potential negative effects, if any, of imports of certain flat-rolled carbon steel products from the subject countries on their growth, investment, ability to raise capital, and development and production efforts (including efforts to develop a derivative or improved version of their product).

Actual Negative Effects

* * * * *

Anticipated Negative Effects

* * * * *

Influence of Imports on Capital and Investment

* * * * *

APPENDIX H
DATA ON AUSTRALIAN PRODUCTION, ETC., OF ALUMINUM-ZINC ALLOY

Table H-1

Aluminum-zinc alloy: Australia's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

APPENDIX I
DATA ON FRENCH PRODUCTION, ETC., OF CLAD PLATE

Table I-1

Clad plate: France's capacity, production, end-of-period inventories,
capacity utilization, and shipments, 1990-93

* * * * *

APPENDIX J
DATA ON GERMAN PRODUCTION, ETC., OF HIGH-CARBON STEEL

Table J-1

High-carbon steel: Germany's capacity, production, end-of-period inventories,
capacity utilization, and shipments, 1990-93

* * * * *

APPENDIX K

**DATA ON JAPANESE PRODUCTION, ETC., OF ULTRATHIN STEEL,
COLD-ROLLED MOTOR LAMINATION STEEL, HIGH-
CARBON STEEL, AND AUTOMOTIVE STEEL**

Table K-1

Ultrathin steel: Japan's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Table K-2

Cold-rolled motor lamination steel: Japan's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Table K-3

High-carbon steel: Japan's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

Table K-4

Automotive steel: Japan's capacity, production, end-of-period inventories, capacity utilization, and shipments, 1990-93

* * * * *

APPENDIX L
MONTHLY IMPORT DATA

Table L-1
 Certain flat-rolled carbon steel products: Number of months with imports, by
 sources and products, 1990-92

Country/product	1990	1991	1992
Argentina:			
Cold-rolled products.....	3	10	6
Australia:			
Corrosion-resistant products....	12	12	12
Austria:			
Cold-rolled products.....	12	12	12
Belgium:			
Plate.....	12	12	12
Hot-rolled products.....	12	12	8
Cold-rolled products.....	12	12	12
Brazil:			
Plate.....	11	12	12
Hot-rolled products.....	12	12	12
Cold-rolled products.....	12	12	12
Corrosion-resistant products....	8	8	10
Canada:			
Plate.....	12	12	12
Hot-rolled products.....	12	12	12
Cold-rolled products.....	12	12	12
Corrosion-resistant products....	12	12	12
Finland:			
Plate.....	11	12	11
France:			
Plate.....	12	12	12
Hot-rolled products.....	12	12	12
Cold-rolled products.....	12	12	12
Corrosion-resistant products....	12	12	12
Germany:			
Plate.....	12	12	12
Hot-rolled products.....	12	12	12
Cold-rolled products.....	12	12	12
Corrosion-resistant products....	12	12	12
Italy:			
Plate.....	9	11	5
Cold-rolled products.....	11	12	12
Japan:			
Hot-rolled products.....	12	12	12
Cold-rolled products.....	12	12	12
Corrosion-resistant products....	12	12	12
Korea:			
Plate.....	12	12	11
Hot-rolled products.....	12	12	12
Cold-rolled products.....	12	12	12
Corrosion-resistant products....	12	12	12
Mexico:			
Plate.....	12	10	12
Corrosion-resistant products....	12	12	12
Netherlands:			
Hot-rolled products.....	12	12	12
Cold-rolled products.....	12	12	12
New Zealand:			
Corrosion-resistant products....	12	8	7
Poland:			
Plate.....	8	8	9
Romania:			
Plate.....	8	12	12
Spain:			
Plate.....	10	9	8
Cold-rolled products.....	11	11	12
Sweden:			
Plate.....	12	12	11
Corrosion-resistant products....	8	12	12
United Kingdom:			
Plate.....	12	12	12

L-3

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table L-2

Certain flat-rolled carbon steel products: U.S. monthly imports, by sources, Oct. 1991-Jan. 1993

Product/source/period	Quantity	Value
	Short tons	1,000 dollars
Plate:		
Korea:		
1991:		
October.....	1,143	430
November.....	1,176	405
December.....	828	264
1992:		
January.....	623	241
February.....	313	99
March.....	801	257
April.....	313	105
May.....	516	176
June.....	22	7
July.....	777	243
August.....	3,313	1,110
September.....	0	0
October.....	1,592	557
November.....	780	250
December.....	110	34
1993:		
January.....	963	312
Poland:		
1991:		
October.....	0	0
November.....	5,579	1,891
December.....	6,023	2,044
1992:		
January.....	159	55
February.....	1,984	655
March.....	3,090	979
April.....	2,966	866
May.....	0	0
June.....	0	0
July.....	482	152
August.....	1,775	528
September.....	5,553	1,733
October.....	7,525	2,109
November.....	0	0
December.....	1,071	349
1993:		
January.....	0	0

Table continued on next page.

Table L-2--Continued

Certain flat-rolled carbon steel products: U.S. monthly imports, by sources, Oct. 1991-Jan. 1993

Product/source/period	Quantity	Value
	Short tons	1,000 dollars
Plate--Continued:		
Romania:		
1991:		
October.....	3,807	1,612
November.....	1,266	504
December.....	856	341
1992:		
January.....	3,002	1,146
February.....	717	276
March.....	2,184	892
April.....	535	206
May.....	440	169
June.....	1,056	407
July.....	639	242
August.....	1,531	618
September.....	131	49
October.....	121	45
November.....	6,473	2,108
December.....	1,249	497
1993:		
January.....	2	7
Spain:		
1991:		
October.....	0	0
November.....	7,384	2,670
December.....	10,885	3,887
1992:		
January.....	0	0
February.....	8,137	2,793
March.....	0	0
April.....	4,207	1,418
May.....	4,942	1,672
June.....	0	0
July.....	9,053	3,075
August.....	4,386	1,488
September.....	10	4
October.....	666	228
November.....	22,654	7,698
December.....	0	0
1993:		
January.....	0	0

Table continued on next page.

Table L-2--Continued

Certain flat-rolled carbon steel products: U.S. monthly imports, by sources, Oct. 1991-Jan. 1993

Product/source/period	Quantity	Value
	Short tons	1,000 dollars
Hot-rolled products:		
Belgium:		
1991:		
October.....	173	72
November.....	22	12
December.....	105	46
1992:		
January.....	0	0
February.....	0	0
March.....	362	155
April.....	0	0
May.....	113	45
June.....	0	0
July.....	868	338
August.....	111	46
September.....	139	53
October.....	103	40
November.....	544	213
December.....	22	17
1993:		
January.....	0	0
Korea:		
1991:		
October.....	83,068	27,681
November.....	67,414	19,834
December.....	54,655	18,949
1992:		
January.....	59,573	20,670
February.....	93,683	30,182
March.....	23,259	9,916
April.....	59,944	29,973
May.....	51,106	21,425
June.....	63,671	21,480
July.....	79,791	26,926
August.....	74,444	21,863
September.....	62,874	18,066
October.....	139,966	40,659
November.....	106,830	31,396
December.....	65,158	18,654
1993:		
January.....	131,518	39,815

Table continued on next page.

Table L-2--Continued

Certain flat-rolled carbon steel products: U.S. monthly imports, by sources, Oct.
1991-Jan. 1993

Product/source/period	Quantity	Value
	Short tons	1,000 dollars
Hot-rolled products--Continued		
Japan:		
1991:		
October.....	***	***
November.....	***	***
December.....	***	***
1992:		
January.....	***	***
February.....	***	***
March.....	***	***
April.....	***	***
May.....	***	***
June.....	***	***
July.....	***	***
August.....	***	***
September.....	***	***
October.....	***	***
November.....	***	***
December.....	***	***
1993:		
January.....	***	***
Cold-rolled products:		
Japan:		
1991:		
October.....	***	***
November.....	***	***
December.....	***	***
1992:		
January.....	***	***
February.....	***	***
March.....	***	***
April.....	***	***
May.....	***	***
June.....	***	***
July.....	***	***
August.....	***	***
September.....	***	***
October.....	***	***
November.....	***	***
December.....	***	***
1993:		
January.....	***	***

Table continued on next page.

Table L-2--Continued

Certain flat-rolled carbon steel products: U.S. monthly imports, by sources,
October 1991-January 1993

Product/source/period	Quantity	Value
	Short tons	1,000 dollars
Cold-rolled products--Continued		
Spain:		
1991:		
October.....	0	0
November.....	1,225	648
December.....	796	396
1992:		
January.....	51	48
February.....	6,119	2,755
March.....	19	16
April.....	4,291	1,991
May.....	7,141	3,092
June.....	34	31
July.....	7,741	3,466
August.....	3,374	1,381
September.....	6	6
October.....	6,693	2,859
November.....	9,446	3,892
December.....	8	7
1993:		
January.....	5	5
Corrosion-resistant products:		
Japan:		
1991:		
October.....	***	***
November.....	***	***
December.....	***	***
1992:		
January.....	***	***
February.....	***	***
March.....	***	***
April.....	***	***
May.....	***	***
June.....	***	***
July.....	***	***
August.....	***	***
September.....	***	***
October.....	***	***
November.....	***	***
December.....	***	***
1993:		
January.....	***	***

Table continued on next page.

Table L-2--Continued

Certain flat-rolled carbon steel products: U.S. monthly imports, by sources,
October 1991-January 1993

Product/source/period	Quantity	Value
	Short tons	1,000 dollars
Corrosion-resistant products--Continued		
Mexico:		
1991:		
October.....	5,722	3,653
November.....	7,398	4,878
December.....	5,508	3,487
1992:		
January.....	7,507	4,835
February.....	9,213	6,029
March.....	9,431	6,224
April.....	5,554	3,651
May.....	11,489	7,399
June.....	7,649	4,831
July.....	7,956	4,962
August.....	6,018	3,513
September.....	10,443	5,988
October.....	12,514	7,201
November.....	14,144	8,894
December.....	6,521	4,865
1993:		
January.....	12,204	8,793

¹ Not available.

Source: Japan data: Provided by counsels for Sumitomo and Kawasaki; Other data:
Compiled from official statistics of the U.S. Department of Commerce.

APPENDIX M
GEOGRAPHIC DISPERSION OF THE SUBJECT IMPORTS
FROM THE SUBJECT COUNTRIES

REGIONS

Region I: Districts of Portland, ME; St. Albans, VT; Boston, MA; Providence, RI; Ogdensburg, NY; Buffalo, NY; New York, NY; JFK Airport, NY; Newark Airport, NJ; Philadelphia, PA; Baltimore, MD; Norfolk, VA; Charlotte, NC; Charleston, SC; and Savannah, GA.

Region II: Districts of Pembina, ND; Minneapolis, MN; Duluth, MN; Milwaukee, WI; Detroit, MI; Chicago, IL; Cleveland, OH; and St. Louis, MO.

Region III: Districts of Tampa, FL; Mobile, AL; New Orleans, LA; Laredo, TX; San Juan, PR; Miami, FL; and Houston-Galveston, TX.

Region IV: Districts of San Diego, CA; Los Angeles, CA; San Francisco, CA; Columbia-Snake, OR; Seattle, WA; Great Falls, MT; and Honolulu, HI.

Table M-1

Plate: Geographic distribution of dollar value of imports, in percent, by sources, 1990-92

Country/region	1990	1991	1992
Belgium:			
Region I.....	22.0	18.7	17.2
Region II.....	11.3	10.5	9.2
Region III.....	63.9	68.7	72.9
Region IV.....	2.8	2.1	0.7
Brazil:			
Region I.....	28.5	25.5	18.0
Region II.....	20.2	20.7	22.5
Region III.....	42.9	37.5	42.5
Region IV.....	8.4	16.4	17.0
Canada:			
Region I.....	36.6	36.1	39.2
Region II.....	59.1	54.3	55.5
Region III.....	0.0	0.0	0.0
Region IV.....	4.2	9.6	5.3
Finland:			
Region I.....	19.0	26.6	19.4
Region II.....	46.8	33.4	32.1
Region III.....	34.1	40.0	48.5
Region IV.....	0.0	0.0	0.0
France:			
Region I.....	14.0	7.5	26.0
Region II.....	35.2	15.8	48.3
Region III.....	36.4	69.9	14.2
Region IV.....	14.4	6.8	11.5
Germany:			
Region I.....	7.9	18.8	15.0
Region II.....	18.9	11.0	9.7
Region III.....	68.6	63.4	68.5
Region IV.....	4.6	6.9	6.8
Italy:			
Region I.....	8.4	6.4	16.6
Region II.....	30.5	30.2	0.0
Region III.....	61.1	63.4	83.4
Region IV.....	0.0	0.0	0.0
Korea:			
Region I.....	5.1	13.4	23.3
Region II.....	0.0	0.0	0.0
Region III.....	0.0	1.3	0.0
Region IV.....	94.9	85.3	76.7
Mexico:			
Region I.....	0.0	0.0	0.0
Region II.....	0.0	0.0	0.0
Region III.....	100.0	99.2	98.8
Region IV.....	0.0	0.7	1.2

Table continued on next page.

Table M-1--Continued

Plate: Geographic distribution of dollar value of imports, in percent, by sources, 1990-92

Country/region	1990	1991	1992
Poland:			
Region I.....	18.4	20.7	19.8
Region II.....	40.3	11.2	6.6
Region III.....	41.3	68.0	73.6
Region IV.....	0.0	0.0	0.0
Romania:			
Region I.....	11.0	16.8	30.7
Region II.....	0.0	0.0	0.0
Region III.....	89.0	83.2	69.3
Region IV.....	0.0	0.0	0.0
Spain:			
Region I.....	10.3	10.5	3.4
Region II.....	26.3	29.2	14.7
Region III.....	63.4	60.3	81.9
Region IV.....	0.0	0.0	0.0
Sweden:			
Region I.....	4.3	3.2	5.5
Region II.....	39.0	32.2	12.4
Region III.....	56.6	64.5	82.0
Region IV.....	(¹)	(¹)	0.2
United Kingdom:			
Region I.....	1.7	12.9	18.6
Region II.....	46.3	30.3	22.0
Region III.....	43.3	51.3	55.7
Region IV.....	8.6	5.5	3.8

¹ Positive figure, but less than significant digits displayed.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table M-2

Hot-rolled products: Geographic distribution of dollar value of imports, in percent, by sources, 1990-92

Country/region	1990	1991	1992
Belgium:			
Region I.....	26.6	35.0	19.4
Region II.....	40.6	9.5	58.9
Region III.....	23.3	54.0	17.7
Region IV.....	9.5	1.6	3.9
Brazil:			
Region I.....	14.1	30.0	18.1
Region II.....	20.9	13.2	13.1
Region III.....	54.1	38.3	49.6
Region IV.....	10.9	18.5	19.2
Canada:			
Region I.....	30.9	29.2	24.8
Region II.....	68.4	69.5	74.7
Region III.....	0.0	0.3	0.1
Region IV.....	0.7	1.0	0.4
France:			
Region I.....	13.5	16.9	16.5
Region II.....	44.0	43.1	32.5
Region III.....	34.8	28.6	45.0
Region IV.....	7.7	11.5	6.0
Germany:			
Region I.....	30.8	31.0	40.2
Region II.....	33.7	33.1	26.9
Region III.....	23.8	23.0	21.0
Region IV.....	11.7	12.9	11.9
Japan:			
Region I.....	22.6	28.8	31.5
Region II.....	13.7	5.6	9.6
Region III.....	26.3	30.1	25.7
Region IV.....	37.4	35.5	33.2
Korea:			
Region I.....	0.3	0.4	0.1
Region II.....	(¹)	0.0	(¹)
Region III.....	2.8	2.6	2.1
Region IV.....	96.9	97.0	97.8
Netherlands:			
Region I.....	18.7	20.8	26.4
Region II.....	74.8	72.0	65.3
Region III.....	3.2	1.7	2.6
Region IV.....	3.3	5.5	5.8

¹ Positive figure, but less than significant digits displayed.

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table M-3
Cold-rolled products: Geographic distribution of dollar value of imports, in percent, by sources, 1990-92

Country/region	1990	1991	1992
Argentina:			
Region I.....	12.5	22.0	9.0
Region II.....	43.2	43.8	36.4
Region III.....	20.0	19.0	16.7
Region IV.....	24.3	15.2	37.9
Austria:			
Region I.....	31.0	36.9	41.2
Region II.....	62.1	42.0	58.8
Region III.....	6.7	21.1	0.0
Region IV.....	0.2	0.0	0.0
Belgium:			
Region I.....	17.6	24.4	22.4
Region II.....	77.6	73.5	73.7
Region III.....	2.7	0.3	0.1
Region IV.....	2.1	1.8	3.8
Brazil:			
Region I.....	41.0	42.0	29.3
Region II.....	31.0	24.1	23.2
Region III.....	22.2	28.3	31.5
Region IV.....	5.8	5.6	16.0
Canada:			
Region I.....	60.3	55.7	57.5
Region II.....	39.6	42.4	41.1
Region III.....	0.0	1.8	1.3
Region IV.....	0.1	0.1	0.1
France:			
Region I.....	33.2	43.3	42.7
Region II.....	43.2	30.9	35.1
Region III.....	19.4	21.2	16.9
Region IV.....	4.3	4.6	5.3
Germany:			
Region I.....	34.6	39.8	43.0
Region II.....	51.9	40.8	33.5
Region III.....	9.6	15.7	17.0
Region IV.....	4.0	3.8	6.5
Italy:			
Region I.....	24.1	36.1	45.7
Region II.....	38.4	24.5	18.3
Region III.....	37.3	39.2	30.5
Region IV.....	0.2	0.2	5.6
Japan:			
Region I.....	29.7	32.9	34.0
Region II.....	23.4	23.4	24.3
Region III.....	24.0	27.1	26.1
Region IV.....	23.0	16.5	15.6
Korea:			
Region I.....	15.2	20.2	10.0
Region II.....	0.0	(¹)	(¹)
Region III.....	30.7	45.7	56.3
Region IV.....	54.1	34.1	33.7
Netherlands:			
Region I.....	18.2	18.4	21.9
Region II.....	44.3	37.9	42.1
Region III.....	0.6	1.3	1.0
Region IV.....	36.9	42.4	35.0
Spain:			
Region I.....	50.1	50.0	37.0
Region II.....	5.1	5.7	17.4
Region III.....	44.7	44.3	45.6
Region IV.....	0.1	(¹)	0.0

¹ Positive figure, but less than significant digits displayed.

M-7

Source: Compiled from official statistics of the U.S. Department of Commerce.

Table M-4

Corrosion-resistant products: Geographic distribution of dollar value of imports, in percent, by sources, 1990-92

Country/region	1990	1991	1992
Australia:			
Region I.....	0.4	0.6	0.7
Region II.....	0.0	0.0	0.0
Region III.....	19.2	31.8	29.9
Region IV.....	80.4	67.6	69.4
Brazil:			
Region I.....	22.3	34.5	7.2
Region II.....	8.6	1.4	0.0
Region III.....	57.3	64.2	78.7
Region IV.....	11.8	0.0	14.1
Canada:			
Region I.....	30.7	31.1	28.7
Region II.....	69.1	68.8	71.1
Region III.....	0.2	(¹)	0.3
Region IV.....	(¹)	(¹)	(¹)
France:			
Region I.....	16.7	27.9	24.4
Region II.....	27.4	30.8	36.3
Region III.....	43.0	35.7	31.4
Region IV.....	13.0	5.8	7.9
Germany:			
Region I.....	24.9	32.2	24.2
Region II.....	65.8	59.6	69.5
Region III.....	8.1	7.9	6.1
Region IV.....	1.1	0.3	0.2
Japan:			
Region I.....	22.7	24.4	24.0
Region II.....	13.9	15.4	22.7
Region III.....	30.8	36.2	32.2
Region IV.....	32.6	24.0	21.1
Korea:			
Region I.....	24.1	28.7	28.9
Region II.....	(¹)	(¹)	0.1
Region III.....	37.2	38.9	36.8
Region IV.....	38.8	32.4	34.3
Mexico:			
Region I.....	0.0	0.0	0.0
Region II.....	0.0	0.0	0.0
Region III.....	100.0	100.0	99.9
Region IV.....	0.0	0.0	(¹)
New Zealand:			
Region I.....	0.0	0.0	0.0
Region II.....	0.0	16.3	0.0
Region III.....	17.1	32.5	8.9
Region IV.....	82.9	51.2	91.1
Sweden:			
Region I.....	38.2	15.8	29.2
Region II.....	60.4	45.1	13.4
Region III.....	1.4	28.4	37.3
Region IV.....	0.0	10.6	20.1

¹ Positive figure, but less than significant digits displayed.

Table M-5

Certain flat-rolled carbon steel products: Number of importers, by country and by product type, 1992

Country	Plate	Hot-rolled	Cold-rolled	Corrosion-resistant
Argentina.....	(¹)	(¹)	1	(¹)
Australia.....	(¹)	(¹)	(¹)	8
Austria.....	(¹)	(¹)	4	(¹)
Belgium.....	16	5	6	(¹)
Brazil.....	10	17	30	10
Canada.....	46	77	51	56
Finland.....	12	(¹)	(¹)	(¹)
France.....	4	3	8	5
Germany.....	6	15	35	14
Italy.....	2	(¹)	3	(¹)
Japan.....	(¹)	16	26	35
Korea.....	3	13	19	29
Mexico.....	5	(¹)	(¹)	11
Netherlands.....	(¹)	1	5	(¹)
New Zealand.....	(¹)	(¹)	(¹)	1
Poland.....	6	(¹)	(¹)	(¹)
Romania.....	2	(¹)	(¹)	(¹)
Spain.....	1	(¹)	3	(¹)
Sweden.....	15	(¹)	(¹)	5
United Kingdom.....	3	(¹)	(¹)	(¹)

¹ Imports of specified product from specified country are not subject to investigation by the Commission.

Source: Compiled from the Customs Net Import File.

APPENDIX N

**WEIGHTED-AVERAGE PRICES, QUANTITIES, NUMBER OF COMPANIES
REPORTING, AND MARGINS OF UNDERSELLING/OVERSELLING OF U.S.-
PRODUCED AND IMPORTED PRODUCTS**

**PART I: PRODUCER/IMPORTER DATA ON PRODUCTS
SOLD TO MANUFACTURERS/END USERS**

Table N-1

Plate: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 1 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-2

Plate: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 2 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-3

Plate: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 3 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-4

Plate: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 4 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-5

Hot-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 5 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-6

Hot-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 6 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-7

Hot-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 7 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-8

Cold-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 8 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-9

Cold-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 9 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-10

Cold-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 10 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-11

Cold-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 11 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-12

Cold-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 12 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-13

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 13 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-14

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 14 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-15

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 15 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-16

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 16 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-17

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 17 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-18

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 18 sold to manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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**PART II: PRODUCER/IMPORTER DATA ON PRODUCTS
SOLD TO DISTRIBUTORS/SERVICE CENTERS**

Table N-19

Plate: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 1 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-20

Plate: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 2 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-21

Plate: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 3 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-22

Plate: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 4 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-23

Hot-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 5 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-24

Hot-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 6 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-25

Hot-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 7 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-26

Cold-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 8 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-27

Cold-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 9 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-28

Cold-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 10 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-29

Cold-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 11 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-30

Cold-rolled products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 12 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-31

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 13 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-32

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 14 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-33

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 15 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-34

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 16 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-35

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 17 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-36

Corrosion-resistant products: Weighted-average net f.o.b. unit values, total quantities, number of companies reporting, and margins of underselling (overselling) of U.S.-produced and imported product 18 sold to distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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**PART III: PURCHASER DATA ON PRODUCTS PURCHASED
BY MANUFACTURERS/END USERS**

Table N-37

Plate: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 1 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-38

Plate: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 2 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-39

Hot-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 5 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-40

Hot-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 6 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-41

Hot-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 7 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-42

Cold-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 8 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-43

Cold-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 9 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-44

Cold-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 10 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-45

Cold-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 11 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-46

Cold-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 12 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-47

Corrosion-resistant products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 13 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-48

Corrosion-resistant products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 14 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-49

Corrosion-resistant products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 16 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-50

Corrosion-resistant products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 17 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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Table N-51

Corrosion-resistant products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 18 reported by manufacturers/end users, by quarters, Jan. 1990-Dec. 1992

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**PART IV: PURCHASER DATA ON PRODUCTS PURCHASED
BY DISTRIBUTORS/SERVICE CENTERS**

Table N-52

Plate: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 1 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-53

Plate: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 2 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-54

Plate: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 3 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-55

Plate: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 4 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-56

Hot-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 5 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-57

Hot-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 6 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-58

Hot-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 7 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-59

Cold-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 8 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-60

Cold-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 9 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-61

Cold-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 10 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-62

Cold-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 11 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-63

Cold-rolled products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 12 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-64

Corrosion-resistant products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 13 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-65

Corrosion-resistant products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 14 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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Table N-66

Corrosion-resistant products: Weighted-average net f.o.b. prices, total quantities, number of companies reporting, and margins of underselling (overselling) for purchases of U.S.-produced and imported product 16 reported by distributors/service centers, by quarters, Jan. 1990-Dec. 1992

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