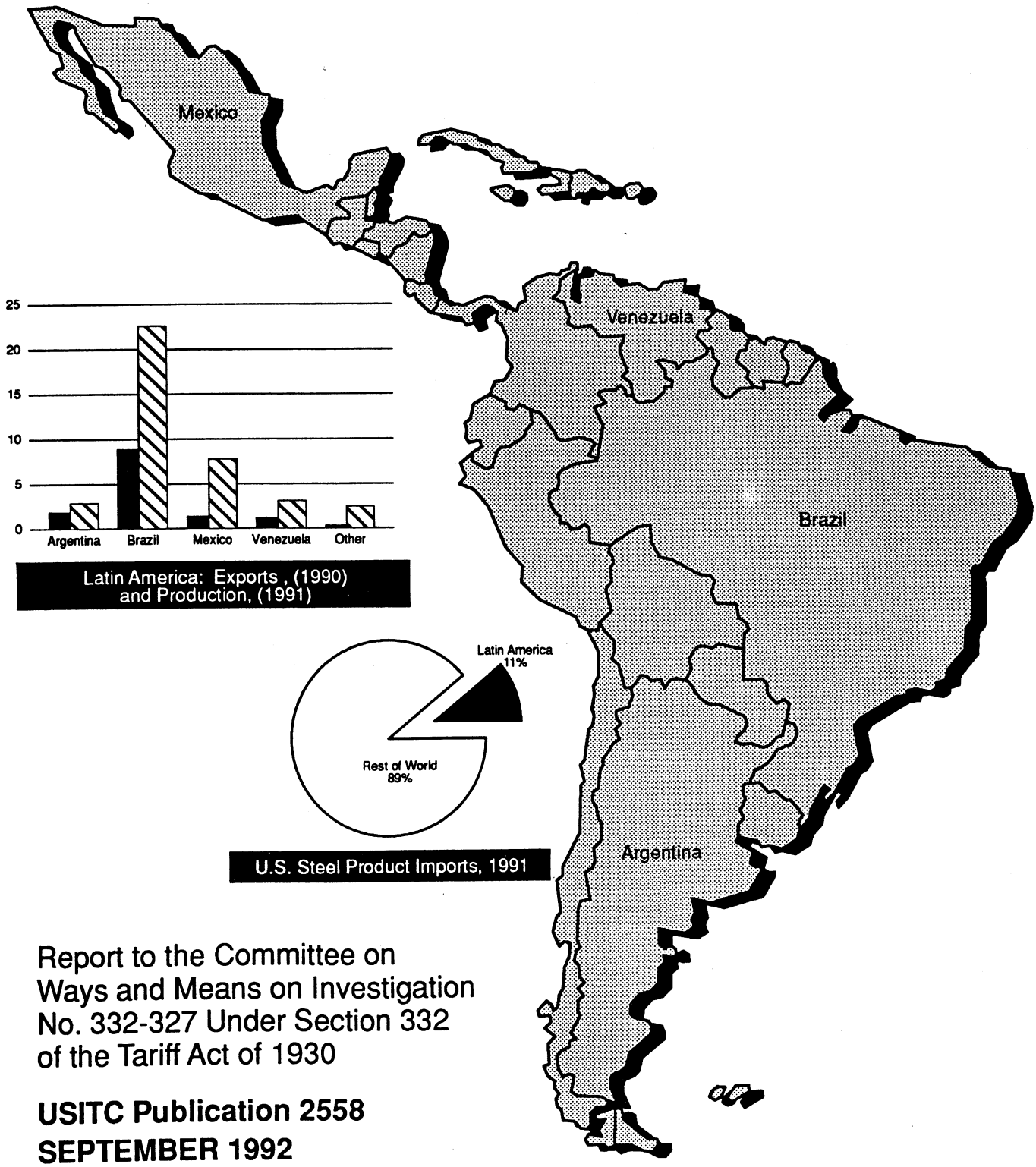
Spec Cat.

Steel: Semiannual Monitoring Report

Special Focus: Privatization in the Latin American Steel Industry



Latin America: Exports, (1990) and Production, (1991)

U.S. Steel Product Imports, 1991

Report to the Committee on Ways and Means on Investigation No. 332-327 Under Section 332 of the Tariff Act of 1930

USITC Publication 2558
SEPTEMBER 1992

UNITED STATES INTERNATIONAL TRADE COMMISSION

COMMISSIONERS

Don E. Newquist, Chairman
Peter S. Watson, Vice Chairman
David B. Rohr
Anne E. Brunsdale
Carol T. Crawford
Janet A. Nuzum

Office of Operations
Robert A. Rogowsky, Director

Office of Industries
Vern Simpson, Director

This report was prepared principally by

Nancy Fulcher
Sharon Greenfield
Stephanie Kaplan

under the direction of

Larry L. Brookhart, Division Chief
Mark A. Paulson, Branch Chief

Minerals and Metals Division
Iron and Steel Products Branch

with the assistance of

Patricia Augustine
Paul Daniels
Office of Information Resources Management

Address all communications to
Secretary to the Commission
United States International Trade Commission
Washington, DC 20436

PREFACE

On July 9, 1992, at the request of the Committee on Ways and Means, U.S. House of Representatives, and in accordance with the provisions of section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332 (g)), the United States International Trade Commission instituted investigation No. 332-327, Steel: Semiannual Monitoring Report. The purpose of these reports is to provide information concerning the status of, and prospects for, the U.S. steel industry in the post-VRA competitive environment, and covering the period from January 1991 through December 1994. An overview of the structure of this report, as well as notes on the report's product coverage and methodology, are presented in appendix A.

The products covered in this report were subject to import quotas under voluntary restraint agreements (VRAs) in effect from late 1984 through March 31, 1992. The President undertook the VRA program after the U.S. International Trade Commission made an affirmative determination under section 201 of the Trade Act of 1974 (19 U.S.C. 2251) with respect to imports of certain carbon steel products.[1] After receiving the Commission's report on that investigation, the President announced that he was not taking action under section 203 of the Trade Act, but instead would negotiate bilateral restraints with steel-exporting countries to limit U.S. imports of steel and to pursue a more vigorous policy of enforcement of the laws against unfair trade practices.[2] Congress subsequently passed the Steel Stabilization Act (title VII of the Trade and Tariff Act of 1984), which granted the President authority, for the 5-year period ending September 30, 1989, to enforce the terms of the bilateral steel agreements, but conditioned such authority on the President's making an annual affirmative determination that major steel companies were committing substantially all of their net cash flow from steel operations to reinvestment and modernization of their steel operations and that a certain level of funds were being committed to worker retraining.[3] In July 1989, the President proposed a 2-1/2 year extension of the program. Congress subsequently enacted the Steel Trade Liberalization Program Implementation Act extending the President's enforcement authority through March 31, 1992.[4]

As part of the Steel Trade Liberalization Program and the Bilateral Consensus Agreements that were negotiated under that umbrella, countries agreed to work towards a Multilateral Steel Agreement (MSA) that would address the underlying causes of unfair trade in steel by eliminating tariffs, nontariff measures such as quotas, and most subsidies in the steel sector. The United States and 34 other countries have participated in negotiations for an MSA under the general auspices of the General Agreement on Tariffs and Trade. The MSA negotiations were suspended on March 31, 1992, the same day that the VRA program expired. Since the end of the VRAs, unfair trade petitions have been filed on numerous items including wire rope, bar, steel rail and other steel products once covered by the VRAs. In addition, a large number of petitions were filed by the domestic industry on flat-rolled steel products from 21 countries. A list showing the status of unfair trade cases filed on steel products and raw materials during the past year is presented in appendix B.

The information and analysis in this report are for the purpose of this report only. Nothing in this report should be construed to indicate how the Commission would find in an investigation conducted under other statutory authority covering the same or similar matter.

---

[1] Report to the President on Investigation No. TA-201-51, USITC Pub. No. 1553, July 1984.

[2] Exec. Commun. 4046, Sept. 18, 1984 (H. Doc. 98-263).

[3] Pub. L. 98-573, Oct. 30, 1984, 98 Stat. 3043.

[4] Pub. L. 101-221, Dec. 12, 1989, 103 Stat. 1886 (19 U.S.C. 2253 note).

CONTENTS

CONTENTS

Tables--Continued

CONTENTS

Tables--Continued

CONTENTS

Tables--Continued

PRIVATIZATION IN THE LATIN AMERICAN STEEL INDUSTRY

One of the most significant trends to emerge in the global steel industry in recent years is the privatization of state-owned steel companies. Privatization has occurred particularly in Eastern Europe, especially in the former German Democratic Republic, Eastern Asia, and Latin America. Among these regions, Latin American governments were the first to embrace privatization fully as part of market reform. As a result, the movement towards privatization has progressed more rapidly in this region. The problems encountered in the privatization process may be indicative of problems that other countries are likely to face in reducing state influence in their steel industries.

Privatization in the Latin American steel industry has resulted in expanded steelmaking capacity, increased privately held industry concentration, and opened opportunities for foreign investors. Privatization has also created opportunities for certain U.S. exporters and equipment and material supply firms. This article examines the background to privatization, details of this process, general implications of the privatization movement, and effects of privatization on the U.S. steel industry. General information about the Latin American steel industry is presented in table A and detailed information about the firms affected by the recent privatization movement, the status of privatization, terms of sale, and future plans for the facilities is presented in table B. Both tables follow at the end of this article.

Background to Privatization

Under economic policies in effect in several Latin American countries during the 1960s, the steel industry was made an integral part of a state-run economy. In some, the steel industry was nationalized because it was viewed as being of key importance to the developing economy; in others, nationalization was an attempt to keep debt-ridden, unprofitable mills in operation. However, strong economic growth in Latin America during the 1970s gave way to economic crisis in the 1980s, both due in part to acquisition of large government debt. The policies of the 1960s and 1970s resulted in large, foreign held public debts, high inflation, inefficient state-owned enterprises, a lack of incentives for entrepreneurs, distorted capital markets, and industrial products that were not always competitive in world markets. These conditions, combined with capital flight, low domestic savings, inflation, and a sharp drop in world demand for several important Latin American export commodities, led to the adoption of new domestic economic policies, some under IMF supervision.

Under these new policies, several Latin American governments are seeking to replace longstanding economic policies based on import substitution and government intervention with market-oriented initiatives intended to foster the development of more open and competitive economies. Recent economic reforms have emphasized increased competitiveness in world markets, reduced government subsidies, and improved incentives for production in the domestic economy. Reforms have focused on fiscal conservatism, privatization of state enterprises, reduced restrictions on foreign investment, and encouragement of regional economic cooperation. These reforms have proved politically difficult in most Latin American countries, although there is a growing consensus in the region to let market forces determine prices and the allocation of resources.[1]

Regional Trade Accords

Privatization in the Latin American steel industry has been bolstered by government efforts to ease the transition. Despite a reduction of general trade and investment barriers, preferential trade measures as well as trade and investment restrictions have been and are being enacted to support the newly independent steel mills. Certain of these measures are discussed later in this article. Several regional trade accords include arrangements involving steel trade. Such agreements help assure hesitant governments that newly privatized steel companies will find markets for their products and have the opportunity to improve their international competitive standing.

In South America, the steel industry associations of Brazil, Argentina, Uruguay, and Paraguay have signed an agreement to promote trade in steel as part of the creation of Mercosur, a southern common market.[2] The steel agreement, which has been signed by the relevant industries and presented to their governments to be incorporated into Mercosur, is principally designed to equalize tariffs, but also includes plans to integrate the region's steel

industries, eliminate subsidies, abolish price controls, and guarantee access to raw materials. The agreement also seeks to establish "industrial complementation programs" among producers in different countries in the common market to allow them to take advantage of economies of scale and increased product specialization.[3]

The Andean Group, comprising Bolivia, Colombia, Ecuador, Peru, and Venezuela, has established a steel committee with private and public sector representatives to boost regional steel trade, production, and the interchange of raw materials, and to examine the possibility of complementary production. In addition, Venezuela and Colombia have established a 3-year "administered trade" plan for steel in response to Colombia's request for protection of its fledgling steel industry. The plan regulates certain sensitive Venezuelan steel exports to Colombia by a system of quotas in exchange for guaranteed access by Venezuela to Colombia's iron ore and coal resources.[4]

Under the auspices of the Group of Three integration effort (Mexico, Venezuela, and Colombia), Altos Hornos de México (Ahmsa) and Siderurgica del Orinoco (Sidor) of Venezuela have signed a cooperation agreement that should result in increased production, improved quality, and expanded international markets for both parties. In addition to providing information on international markets, both companies will share technology and assist in personnel training.[5]

Details of Privatization

The Instituto Latinoamericano del Fierro y el Acero (ILAFA) indicates that the privatization of steel mills in Mexico, Brazil, and Argentina will significantly influence the Latin American steel industry in the near future. However, as privatization has occurred throughout the region, many Latin American governments have found themselves facing labor unrest and political turmoil.[6]

As privatization efforts have progressed throughout the region, Latin American governments have taken various steps to increase the attractiveness of state steel firms to private buyers. Such steps have included reducing and refinancing debt, cutting employment, and arranging more flexible payment terms for private investors.

The large debt burdens carried by many state-owned companies have been the largest barrier to privatization. In Mexico, Ahmsa and Siderurgica Lazero Cardenas (Sicartsa) carried debt of almost $400 million in 1990.[7] In Brazil, many parastatal firms also have large debts; for example, Cia Siderurgica Nacional (CSN) and Cia Siderúrgica Paulista (Cosipa) owe $2 billion and $1.1 billion respectively.[8]

In an effort to facilitate privatization, some governments have helped state steel firms reduce or refinance their debt. In Brazil, a pre-privatization financial rehabilitation by BNDES (the economic and social development bank) eliminated $12.8 million in debt owed by Cia Siderúrgica do Nordeste (Cosinor), easing its sale.[9] In the attempt to make Sidor more attractive to buyers, the Venezuelan government has assumed $870 million and refinanced $580 million of the company's $1.6 billion in foreign debt.[10]

In order to make state steel companies more attractive to private buyers, governments have attempted to increase their efficiency even before offering them for sale. In many cases, such efforts, concentrated on reducing employment, have resulted in labor opposition, sometimes leading to demonstrations and strikes.

In Mexico, the payrolls of the two largest firms, Ahmsa and Sicartsa, were cut significantly prior to privatization in November 1990.[11] Additional cuts after privatization have further exacerbated already tense labor relations. In May 1992, reportedly in reaction to the announcement of the lay-off of 900 temporary employees, a clash between rival union factions at Ahmsa injured 100, forcing the state government to temporarily assume responsibility for public order. Although Ahmsa's new owners, a consortium dominated by Grupo Acerero del Norte (GAN) were able to avert a scheduled strike, this came at the cost of significantly hampering GAN's ability to increase efficiency at Ahmsa. Under the agreement, Ahmsa will reinstate 850 of the laid-off workers, reopen a mine that was closed in 1991, and offer a 15-percent salary increase.[12] Although such actions may preserve relations with the union, they

are also expected to hinder the planned introduction of the efficiency program established with the Government prior to privatization.

Privatization efforts in Brazil also have met with worker unrest, complicated by already high unemployment. The most notable was legal action by the trade union, Central Geral dos Trabalhadores, against the sale of Usinas Siderúrgicas de Minas Gerais (Usiminas), protesting the minimum sale price established by the government. According to the union, the works were worth significantly more due to Usiminas' status as Brazil's second-largest steel plant, the works' profitability, and government investment of over $7.0 billion.[13]

In Argentina, government efforts to reduce the workforce from 11,500 to 7,000 employees at Sociedad Mixta Siderurgica Argentina (Somisa), which is the major source of employment in its area, led to demonstrations and a short strike.[14] In Venezuela, discussions about privatizing Sidor, the largest steel company in the country, have met with vocal opposition from both the labor union and the pro-labor political party in Bolivar State.[15]

In an attempt to attract purchasers of state steel firms, certain governments have been forced to broaden the acceptable instruments of payment. Such efforts have served to attract domestic investors with limited financial capital. For example, in Brazil, shares in privatized companies can now be acquired using cruzados novos (Brazil's previous currency), which were frozen in the banks at the time of the government's economic reforms; debts denominated in cruzados novos; debentures issued by Siderbrás[16] to its creditors; Privatization Certificates which Brazilian financial institutions have recently been obliged to purchase; and Deposit Facility Agreements (representing Brazil's foreign debt).[17] The Mexican Government has also broadened its terms of acceptable payment to include negotiated debt and investment commitments.

In Brazil, the political difficulties of President Fernando Collar de Mello, and his potential succession by Vice President Itamar Franco, may lead to a delay in, or even end to, the privatization movement. Franco has been openly critical of how privatization has been carried out. Although he is not expected to renationalize firms that have already been sold, scheduled privatization plans may be eliminated while other forms of protection for the steel industry are increased.[18]

Implications of Privatization

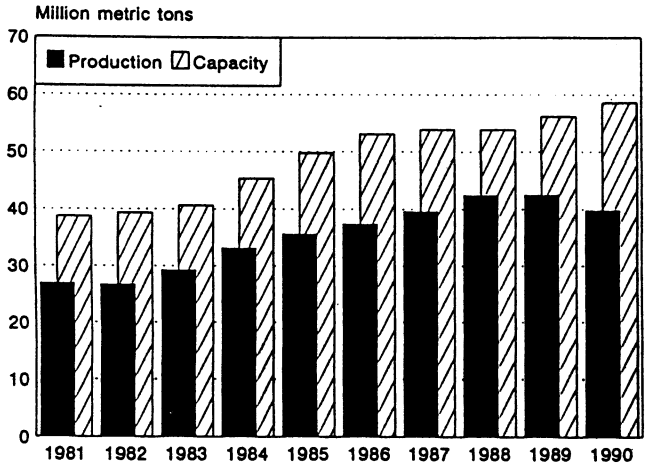
The privatization movement has had two principal effects on the Latin American steel industry. First, the new owners of Latin American steel companies, both to meet purchase commitments and to increase the efficiency and competitiveness of their new properties, have made investments which will significantly increase Latin American steelmaking capacity and quality. Second, as a result of privatization, concentration in the private steel industry has increased significantly, both within countries and the Latin American region as a whole. However, although Latin American governments have eliminated certain restrictions to foreign investment, foreign participation in the region's steel industry so far has been limited.

Growing Capacity

The owners of newly privatized steel mills throughout Latin America have committed significant amounts of investment capital to modernize facilities, increase production capacity, improve efficiency, and boost competitiveness. In Mexico, where investment commitments were an acceptable means of payment for parastatal firms, the new owners' purchase agreements included over $6 million in planned facility improvements and investments for Ahmsa, Sicartsa, and the newly renamed Ispat Méxicana (formerly Sibalsa). Additional investments are planned, designed to increase capacity of the three firms by up to 3 million tons. In Brazil, the Gerdau Group plans to invest $30 million in modernizing Aços Finos Piratini.

These investments are taking place against a backdrop of excess steelmaking capacity in the Latin American region and worldwide. In 1990, on a worldwide basis, producers operated at 79 percent of steelmaking capacity; in the same year, Latin American producers operated at only 67 percent of capacity (see figure A).[19] The introduction of new capacity may worsen this situation, and given concurrent efforts to increase production and boost efficiency and profits, fierce competition among

Figure A
Latin American steel industry: Production and capacity, 1981-1990



Source: The WEFA Group, Conquering World Steel Markets, vol. 3, 1990, p. 1.8.

Latin American mills seems likely. Moreover, several owners of the newly privatized mills have announced that they intend to export their increased production. Although some new owners have announced plans to retire older, inefficient equipment, a net capacity gain is expected.

Increased Concentration

Privatization has allowed some existing companies to gain market share in certain product lines, or to expand their lines of production through purchase of government-owned facilities. Although concentration of ownership is not a new phenomenon in Latin America, where governments have often dominated steel production, concentration of ownership in private hands may lead to different conduct than occurred when concentration resulted from government ownership. In some countries, such as Brazil, concentration resulting from government ownership was linked with price suppression, instead of the typical oligopolistic result of higher prices.

In Brazil several firms have been very active in acquiring stock in newly privatized companies. The Gerdau Group has purchased three recently-privatized mills, adding to the four it already owned. These purchases have greatly extended Gerdau's involvement in the merchant long products sector,[20] and allowed it to expand into production of specialty steels. Two Brazilian banks (Bozano Simonsen and Unibanco) and Companhia Vale do Rio Doce (CVRD) were involved in the purchase of both Usiminas and CST. Recently-privatized Usiminas is reportedly evaluating the purchase of Acesita and Açominas, which would lead to further concentration of the Brazilian steel industry.[21]

This increase in concentration may give rise to further declines in price competition, which may be encouraged further by the removal of some restrictions on domestic steel prices. Traders suggest that the tendency toward cartelization may be accentuated if privatized mills also enter the steel distribution field.

It is important to note, however, that cartelization should present a threat only if Latin American markets are protected from international competition. The general reduction in tariffs and elimination of other import barriers that have accompanied the privatization movement in most countries may help balance the effects of increased concentration.

In Argentina, concern that privatization of Somisa, the country's biggest producer, might lead to creation of a monopoly in the steel industry has led to government action. Under rules for Somisa's sale,

the two major private steel companies, Acindar and Techint, will not be permitted to make a joint bid for Somisa. Both firms have expressed interest in bidding for the integrated plant, but it is not known whether they were planning to bid together or separately. Usiminas (Brazil) has also expressed interest in participating in Somisa's privatization, which would increase existing ties between the Argentine and Brazilian industries.[22]

The tendency towards cartelization may also be encouraged by the formation of regional trade pacts that encourage regional cooperation. Some traders theorize that the establishment of Mercosur in 1995 may lead to Brazilian-Argentine cartels, in which producers in the two countries have an "unofficial agreement" to charge the same price for similar products. Mercosur will apparently have no mechanism to prevent cartels.[23] Moreover, complementary production clauses in Mercosur and the steel committee established by the Andean Group may contribute to the development of regional steel cartels.

Foreign Investment

Privatization of much of the Latin American industry reflects, in part, increasing globalization in the steel industry. However, although foreign investors have indicated interest in participating in the privatization auctions, and have been actively courted by Latin American governments, significant foreign participation has not occurred. In certain cases, although foreign investors have expressed interest in acquiring Latin American facilities, their bids have not won them the properties, leading some to suggest the mills have been overvalued.

The majority of foreign interest in the Latin American steel industry has been European. French special steelmaker Aubert & Duval is a participant in the consortium that purchased Altos Hornos Zapla (Argentina).[24] Hoogovens (Netherlands) is a minority partner in the consortium that purchased Ahmsa (Mexico). India's Ispat purchased Sibalsa, now renamed Ispat Méxicana (Mexico). An unspecified foreign group is reportedly interested in purchasing Acesita (Brazil). Japanese and German partners are reportedly interested in Somisa (Argentina), while the Venezuelan government hopes to attract foreign interest for Sidor's pipe plant.

To encourage foreign participation in the privatization process, some Latin American governments have eased certain restrictive regulations, although other barriers remain. For example, in Brazil the period of time that foreign capital involved in the privatization process must remain in the country has been reduced. In the case of Usiminas, foreign investors must keep capital in the firm for 3 years; for new privatizations, the period has been reduced to 2 years. However, foreign ownership in the Brazilian steel industry remains limited to 40 percent of equity. Argentina has liberalized its foreign investment regulations, lifting general restrictions on profit remittances and capital repatriation. In Venezuela, the adoption of Decree 727 in 1990 allowed unrestricted capital movement, unlimited profit remittances, full capital repatriation, and free access to credit and capital markets.[25]

Despite attempts by Latin American governments to encourage participation, U.S. firms have hesitated to invest in the region. So far U.S. investment in the newly privatized firms has been limited to the presence of Mission Energy of California and Southern California Utilities as minority partners in the consortium that purchased Ahmsa (Mexico). Both companies' participation in the project reportedly stemmed from interest in potential electricity co-generation projects using coal from the Ahmsa mines.[26]

U.S. investment in the Latin American steel industry has remained small for several reasons. First, the U.S. steel industry, particularly the integrated sector, has limited financial resources for overseas expansion. Second, excess world capacity makes such investment commercially undesirable. Third, investors in general remain concerned about economic and political stability in the region. Fourth, with the exception of Brazil, markets in most Latin American countries are still relatively small. The only U.S. steel company with operations in Latin America, Armco Inc., is considering downsizing its Latin American division as part of its corporate reorganization.[27]

Effects of Privatization on the United States

Privatization of the Latin American steel industry will likely affect future U.S.-Latin American trade in steel and U.S. investment in the Latin American steel industry. Privatization, combined with other economic liberalization measures recently adopted by Latin American nations, has significantly improved the climate for foreign trade. Lower tariffs and the elimination of other trade barriers, such as import licenses, have provided U.S. exports with increased market access. However, the anticipated growth in production capacity in the region, combined with aggressive attempts by previously private and newly privatized firms to maintain domestic market share, may force prices too low for U.S. products to remain competitive in the Latin American market.

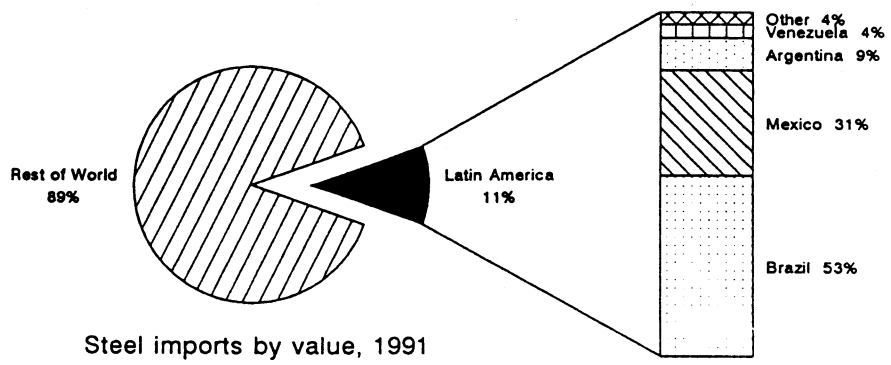
Competitiveness is of particular concern in the case of Mexico, which historically has been an important market for U.S. steel exports. Ahmsa's privatization and resulting efforts to recapture home market share from foreign and domestic competitors, combined with efforts by Mexico's other major flat-rolled producer, Hylsa, to retain market share, have resulted in intense competition and declining prices.[28] Given recently filed Mexican antidumping suits against U.S. exporters, unattractively low prices may lead to an erosion of this market.

Prospects for U.S. steel exports to Latin America appear most promising for specialty products not produced in the region or not produced in either sufficient quantity or the required quality. For price-sensitive, commercial-grade products, such as rebar and wire rod, export opportunities are less favorable and local producers often have lower production costs. Local producers also have a natural advantage in transportation costs, which is especially important for sales of low value-added products.

Prospects for U.S. trade with the region could be enhanced if industry restructuring includes specialization of production. Traditionally, the state-owned steel companies in Latin American countries produced a wide range of products to meet virtually all domestic needs. However, if steelmakers shut down noncompetitive facilities and specialize in specific product areas,[29] local steel consumers would have to import products that are no longer produced. Conversely, specialization of production would lead to increased exports of those specialized products.

In addition to increased competition for market share in the Latin American market, U.S. producers may find themselves confronting increased exports of Latin American steel to the U.S. market. Many newly privatized mills are targeting exports as the means to increasing production. ILAFA predicts that Latin American exports will increase by 3 percent in 1992, to a record of 15.7 million tons.[30] Given its geographic location and historical status as an importer of Latin American steel (see figure B), the United States seems to be a likely market for at

Figure B
U.S. steel imports from Latin America, by country and as a percentage of total, 1991



Steel imports by value, 1991

Note.--Because of rounding, figures may not add to 100 percent.

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

least a portion of this export increase. Based on past exports to the United States, increased shipments from Latin America are most likely to be composed of flat-rolled and semifinished products and pipes and tubes.

Although U.S. firms may not find investment opportunities in Latin America appealing, commercial opportunities associated with privatization exist. According to Ahmsa of Mexico's new director, commercial opportunities for U.S. firms in these ventures are considerable. However, he noted that while the company is favorably disposed towards U.S. technology, American firms have not been "particularly aggressive" in pursuing sales. Nevertheless, GAN-Ahmsa International is already purchasing close to $1 million daily in U.S. goods and services. Much of the new capital equipment needed for modernization of the Mexican industry is likely to be purchased in the United States, partially under a $235 million loan guarantee granted by the U.S. Export-Import Bank.[31]

Conclusion

Privatization is well advanced in Mexico, Brazil, and Argentina and seems likely to advance in Venezuela and Peru. As parastatal steel companies are bought by private owners, new investment will likely contribute to regional overcapacity, leading to increased competition for domestic market share, lower domestic prices, and increased exports. As a result, U.S. steel producers may find it difficult to maintain market share in the area, while facing increased exports from the region. Although U.S. steel firms have been hesitant to take advantage of opportunities to increase investment in the region, commercial opportunities resulting from privatization exist.

Despite the benefits of privatization, the current program will not necessarily create a stable steel industry in Latin America. For privatization to be successful, other economic reforms, including elimination of tariff barriers and price controls, modernization of labor laws, and access to competitive credit markets are considered to be necessary. As Latin America attempts to establish a profitable, private sector steel industry, it is likely to highlight the problems and benefits for other regions beginning to embrace privatization.

Stephanie Kaplan
202-205-3436

[1] For more information about these reforms, see U.S. International Trade Commission, *U.S. Market Access in Latin America: Recent Liberalization Measures and Remaining Barriers (With a Special Case Study on Chile)* (investigation No. 332-318), USITC publication 2521, June 1992.

[2] Mercosur is scheduled to come into effect in January 1995.

[3] Protocolo Adicional al Aap. ce Nro. 18, Aceurdo Sectorial Siderúrgico, Nov. 29, 1991.

[4] USITC, *U.S. Market Access in Latin America*, USITC publication 2521, p. 3-6.

[5] U.S. Department of State Telegram, July 1, 1992, Caracas, message reference No. 07108.

[6] Christopher Llamado, "Latin America," in The WEFA Group, *U.S. and World Steel Executive Report*, May 31, 1992, p. 165.

[7] T.M. Scarnati, "Mexican Steel: From a Subsidized Industry to a Free Market Competitor," *Iron & Steelmaker*, June 1992, pp. 27-28.

[8] U.S. Department of State Telegram, Mar. 16, 1992, Brasilia, message reference No. 02714 and "Brazil Gears Up for Privatization," *Metal Bulletin*, Mar. 9, 1992, p. 32.

[9] Diana Kinch, "Steel Privatization Benefits Brazilian Mini-mills," *Metal Bulletin Monthly*, March 1992, pp. 17-21.

[10] U.S. Department of State Telegram, July 21, 1992, Caracas, message reference No. 07866.

[11] T.M. Scarnati, "Mexican Steel," p. 30.

[12] U.S. Department of State Telegram, May 26, 1992, Monterrey, message reference No. 01244.

[13] Christopher Llamado, "Latin America," p. 165.

[14] U.S. Department of State Telegram, May 22, 1992, Buenos Aires, message reference No. 05308.

[15] U.S. Department of State Telegram, Jan. 3, 1992, Caracas, message reference No. 00061.

[16] Until the passage of Brazil's privatization law in 1990, Siderbrás acted as the government's holding company for parastatal steel companies, controlling a significant part of the Brazilian steel industry.

[17] "Brazil Sets Privatization for March," *Metal Bulletin*, Jan. 10, 1991, p. 22.

[18] Latin American consulting firm executive, interview by USITC staff, Sept. 2, 1992.

[19] Calculated from International Iron and Steel Institute, *Steel Statistical Yearbook 1991*, (IISI: Brussels, 1991), pp. 2-3 and PaineWebber World Steel Dynamics, *Capacity Monitor #9*, Nov. 7, 1991, pp. 40-41. Capacity figures are for gross (as opposed to effective) capacity.

[20] Long products include steel bars, rods, rails, and light structural shapes.

[21] U.S. Department of State Telegram, June 23, 1992, Brasilia, message reference No. 06519.

[22] Ibid.

[23] "Brazil-Argentina Cartels Feared," *Metal Bulletin*, Sept. 12, 1991, p. 39.

[24] "Zapla's New Owners to Invest $50m," *Metal Bulletin*, Mar. 16, 1992, p. 20.

[25] USITC, *U.S. Market Access in Latin America*, USITC publication 2521, p. 6-18.

[26] U.S. Department of State Telegram, Feb. 12, 1992, Monterrey, message reference No. 00366.

[27] Armco Inc. executive, interview with USITC staff, Sept. 9, 1992.

[28] Frank Haflich, "Mexico Retakes Steel Turf," *American Metal Market*, March 26, 1992, pp. 1,5.

[29] As part of the restructuring process, Venezuela's Sidor has already announced that it is reducing the number of products it produces. The WEFA Group, *Conquering World Steel Markets*, vol. 3, 1990, p. 1.71.

[30] Frank Haflich, "Latin American Steel Output Up 4.9% in 1st Half," *American Metal Market*, Aug. 14, 1992, p. 3.

[31] U.S. Department of State Telegram, June 11, 1992, Monterrey, message reference No. 01408.

Table A
The Latin American steel industry: Production capacity, production, exports, and imports, 1990
(Thousand metric tons)

Country	Production capacity	Crude steel production[1]	Exports of semifinished and finished steel products	Imports of semifinished and finished steel products
Argentina	5,045	2,992	1,966	267
Brazil	28,929	22,617	8,986	193
Chile	1,329	805	139	311
Colombia	970	664	10	350
Mexico	12,430	7,883	1,404	1,049
Peru	780	402	2	71
Venezuela	5,570	3,119	1,243	226
Other Latin America	2,430	660	272	1,555
Total Latin America	57,483	39,142	14,022	4,022

[1] Crude steel production figures are from 1991.

Source: International Iron and Steel Institute, *Steel Statistical Yearbook 1991*, 1991; and World Steel Dynamics, *Capacity Monitor #9*, Nov. 11, 1991.

Table B
Latin American steel industry since 1991: Status and date of privatization of state-owned companies, terms of sale, and future plans

Country	Company	Status	Date	Terms of sale and future plans
Mexico[1]	Altos Hornos de México (Ahmsa)	Sold	November 1991	Sold to consortium of Grupo Acerero del Norte (GAN) and minority partners Grupo Imsa of Monterrey, Hoogovens of the Netherlands, Mission Energy of California, and Southern California Utilities. Sold for $145 million cash, $535 million in facility improvements, and $350 million in long-term debt. Assets include Ahmsa smelters and mines, continuous casting plant, 29 percent of Pena Colorado mine, and La Perla Mine. Deal included sale of Monterrey Aceros Planos (flat-rolled), which was awarded to Grupo Imsa, a galvanized sheet producer. $300 million World Bank loan to upgrade hot-roll line, renovate coking plant, and build additional storage facilities. GAN and Hoogovens plan to invest an additional $500 million by end of the decade.
	Siderurgica Lazaro Cardenas (Sicartsa[2])	Sold	November 1991	Sold to Grupo Villacero for $170 million cash and $42.5 million in investments. Mexican government retains a 20 percent share, valued at $45 million. Assets include the Sicartsa I facility and related mineral and integrated steel services. Grupo Villacero intends to increase production to 1.1 million tons in 1992, compared to only 680,000 tons in 1991; after 1992, production capacity will be upgraded to 1.35 million tons; Grupo Villacero will invest $200 million in the plant over the next 7 years and plans to eliminate another 1,900 jobs.
	Siderúrgica del Balsas, S.A. (Sibalsa)	Sold	November 1991	Sold to India's Ispat and renamed Ispat Méxicana. Sold for $25 million cash, $195 million in assumed debt, and $50 million in investment. Assets include Sicartsa II plant (rolling mill) and 29 percent of the Pena Colorado mine. $60 million modernization program includes increasing slab production to 1 million tons, 40 percent for export, and cutting 300 positions.
Brazil[3]	Usinas Siderúrgicas de Minas Gerais (Usiminas)	Sold	October 1991	Sold to consortium of banks and steel distributors led by Bozano Simonsen (30 percent), CVRD (15 percent), pension funds (23.5 percent), and foreign investors (5.9 percent). Sold for $1.17, 63.5 percent Siderbrás and other debt, 15.8 percent privatization certificates, 0.4 percent foreign debt, 10.4 percent blocked cruzados novas. There were demonstrations at privatization auction by union and leftists. $150 million investment plans, including installation of a $60,000 metric ton galvanizing line.
	Cia Siderúrgica do Nordeste (Cosinor)	Sold	November 1991	Ninety percent of capital acquired for $14.2 million by the Gerdau Group with remaining 10 percent sold to employees on preferential terms. Pre-privatization financial rehabilitation by BNDES (economic and social development bank) eliminated $12.8 million debt. Plans to sell off foundry and equipment parts.
	Aços Finos Piratini	Sold	February 1992	Sold to Gerdau Group and Electrometal (specialty and stainless steelmaker). Sold for $107 million in certificates of privatization and government debt. Plans to invest $30 million in modernization.
	Cia Siderúrgica de Tuberão (CST)	Sold	July 1992	Sixty-five percent of capital sold for $306 million to consortium of banks (Bozano Simonsen, and Unibanco) and the parastatal mining company, Companhia Vale do Rio Doce (CVRD). Two foreign shareholders, Kawasaki and Ilva, hold 13 percent each of CST, but waived their option to additional stock acquisition. Employees hold 9 percent of shares. $400 million debt.
	Aços Minas Gerais (Açosminas)	Scheduled	November 1992	In preparation for privatization has reduced debt from $750 million in April 1991 to $350 million at beginning of 1992.
	Cia Siderurgica Nacional (CSN)	Scheduled	November 1992	Two consultant groups named for privatization. Financial evaluation will involve assessment of debt owed to Siderbrás. Employees seeking to acquire 20 percent of shares instead of only 10 percent. Employees expected to have a strong voice in management as another 12 percent was given to the employee benefit fund in payment for $60 million of the total $84 million CSN owed to the fund. Government of Rio de Janeiro state has announced plans to acquire a stake in CSN via a debt-for-equity swap involving state tax payments owed by CSN. CSN has a $200 million debt with Rio de Janeiro State, out of total debt of $2 billion.
	Cia Siderúrgica Paulista (Cosipa)	Scheduled	1993	Debt of $1.1 billion includes back taxes and debt owed to other state enterprises, especially CVRD, which supplies iron ore. Dismissed 2,800 workers in 1991. Employees have expressed interest in buying more than the 10 percent usually reserved on favorable terms. Cosipa management favors privatization, stating firm will remain at a disadvantage while competing with private firms. Possesses a low-cost port facility, for which it has received separate offers.

See footnotes at end of table.

Table B (Continued)
Latin American steel industry since 1991: Status and date of privatization of state-owned companies, terms of sale, and future plans

Country	Company	Status	Date	Terms of sale and future plans
Brazil	Companhia Aços Especialais Itabira (Acesita)	Scheduled	October 1992	Minimum set price $476.6 million for entire company and $352.7 million for the block of 74 percent of its shares which are to be auctioned and which account for 91.5 percent of its voting capital. A recent court decision was against the sale of the shares held by state-controlled Banco do Brasil, the main share holder. The ruling follows the filing of an antiprivatization case by Banco do Brasil's minority shareholders in 1991. The Brazilian Attorney General has filed a case against the ruling in the Supreme Court.
Argentina[4]	Altos Hornos Zapla	Sold	1992	Sold for $3.3 million cash and $29.7 million debt to consortium of French stainless and alloy steel producer Aubert & Duval, Argentine engineering and construction group Pensa, and Citicorp (the consortium was the only bidder). Announced a $50 million investment plan to bring blast furnaces back on line, improve melting shop, and adapt plant for increased special steels output. Intend to cut workforce from 2,700 to 882.
	Sociedad Mixta Siderurgia Argentia (Somisa)	Scheduled	June 1992	Valued by consultants at between $310 and $570 million. Bids invited and will be accepted until September 29 (a 90-day bidding period). Expected sale will be completed in October. No minimum price set. Twenty percent of shares reserved for employees. Acindar (largest private Argentine steelmaker) reportedly holding talks with international banks to form consortium to buy 40 percent of voting capital. Steel and engineering group Techint also interested, along with Japanese and German industrial interests. Brazilian and Chilean interests also expected to bid.
Venezuela[5]	Grupo Siderpro	Scheduled	Unknown	Forty-six-percent government-owned, 45-percent foreign investors, and 9-percent private investors.
	CVG Siderurgica del Orinoco (Sidor)	Scheduled	Unknown	Nationalized in 1975; largest steel company in Venezuela. Privatization of seamless pipe plant (PAT) approved by government in October 1991. Began construction of PAT project in 1986, spending over $300 million before suspending work in August 1989 because lacked the estimated $500 to $600 million required to complete construction. The Italian contractor, Italimpianti, reportedly considering buying the project, and Sidor hopes to attract other bidders from Germany and Japan. Bar and wire mills, lime plant, and services unit may also be sold. Mill owes $1.6 billion foreign debt, of which $870 million assumed by the Venezuelan government and $580 million refinanced. President has also initiated sale of the steel tubes and pellet operations. The two government corporations with shares are split on privatization. According to the Fondo de Invesiones de Venezuela (which is in charge of the privatization program), privatization is inevitable because the state does not have sufficient resources to finance Sidor at a competitive level. The Corporacion Venezolana de Guayana (the state minerals company), the labor union, and the pro-labor party in Bolivar state actively oppose privatization.
Peru[6]	Empressa Siderúrgica del Peru (Siderperu)	Uncertain	Not applicable	$90 million debt. Reduced workforce from 5,600 to 4,900. Majority stake could be sold to foreign interests since no restrictions have been announced on foreign ownership, although risks of sabotage and economic instability continue. Reportedly, if the loss-making company cannot be sold, the only alternative may be bankruptcy.

[1] Mexican data compiled from U.S. Department of State Telegrams, Feb. 12, 1992, Monterrey, message reference No. 00366, and June 11, 1992, Monterrey, message reference No. 01408.
[2] Sicartsa I is an integrated BOF mill. Sicartsa II is based on EAF steelmaking. This second stage was spun off as a separate company and renamed Siderúrgica del Balsas, S.A. (Sibalsa) to facilitate its sale to private investors.
[3] Brazilian data compiled from U.S. Department of State Telegrams, Dec. 13, 1991, Brasilia, message reference No. 13272, Mar. 16, 1992, Brasilia, message reference No. 02714, Jan. 7, 1992, Brasilia, message reference No. 00148, and June 23, 1992, Brasilia, message reference No. 06519; Michael Kepp, "Brazil Hits Steel Profit Road," American Metal Market, May 23, 1992, pp. 8, 15; Diana Kinch, "Steel Privatization Benefits Brazilian Mini-mills," Metal Bulletin Monthly, Mar. 1992, pp. 17-21; Tsukasa Furukawa, "Kawasaki Sees Stable CST," American Metal Market, Aug. 11, 1992, p. 3; "Brazil's CSN Gears Up for Privatization," Metal Bulletin, Mar. 9, 1992, p. 32; and "Acesita Privatization Runs into Problems," Metal Bulletin, July 30, 1992, p. 18.
[4] Argentine data compiled from "Zapla's New Owners to Invest $50m," Metal Bulletin, Mar. 16, 1992, p. 20; "Argentina Acts to Prevent Monopoly," Metal Bulletin, June 22, 1992, p. 19; "Bids Invited for Somisa," Metal Bulletin, July 16, 1992, p. 17; "Acindar Plans to Buy into Somisa," Metal Bulletin, Nov. 11, 1991, p. 18; and "Somisa Set for June Sell-off," Metal Bulletin, Mar. 9, 1992, p. 32.
[5] Venezuelan data compiled from U.S. Department of State Telegrams, Caracas, message reference No. 07866, Aug. 24, 1992, Caracas, message reference No. 09027, and Mar. 17, 1992, Caracas, message reference No. 02952.
[6] Peruvian data compiled from "Siderperu Looks to Break Even this Year," Metal Bulletin, Aug. 5, 1991, p. 22.

Source: Compiled from various sources as footnoted above.

STEEL TRADE ISSUES: GLOBAL REACTIONS IN A POST-VRA ENVIRONMENT

During the past 6 months major changes have taken place in the steel-trading environment; quantitative restrictions on the flow of steel to the United States have ended, negotiations on a multilateral steel agreement have been suspended, and large numbers of unfair trade cases have been filed by the U.S. industry. International reactions have been numerous and varied, including self-restraint and caution by exporters, the filing of trade cases against U.S. exporters, and renewed pressure by foreign governments for a resumption of multilateral negotiations. It remains to be seen if these actions will lead to a diversion in trade flows, further trade case filings, or to the conclusion of a multilateral agreement on steel.

Steel Trade Agreements and Cases

On March 31, 1992, quantitative restraints affecting steel imports, known as VRAs, terminated. The VRAs, which had been in place on most steel products for 7-½ years, provided ceilings on exports to the United States from major trading partners and prevented trade surges. The agreements stipulated that if trade cases were filed on covered products, the exporting nation could, after consultations with the United States, withdraw the subject products from its VRA. This discouraged the filing of trade cases during the VRA period.

Also on March 31, 1992, negotiations with most major steel exporters on a Multilateral Steel Agreement (MSA) were suspended without agreement. Negotiators have agreed to continue meeting bilaterally and multilaterally but no definite schedule has been set. The MSA called for the elimination of steel tariffs, the elimination of most subsidies and other nontariff measures, and the establishment of an effective dispute-settlement mechanism. Although the MSA does not address dumping issues specifically, its purpose is to reduce the underlying causes of both dumping and subsidies.

Since the end of the VRAs, unfair trade petitions have been filed on numerous items, including wire rope, bar, steel rail, and other steel products once covered by the VRAs. In addition, a large number of petitions were filed by the domestic industry on flat-rolled steel products from 21 countries.[1] On August 10, 1992, the ITC made a preliminary affirmative determination that there is a reasonable indication of material injury to the domestic industry on 72 of the flat-rolled steel investigations, which continue at the U.S. Department of Commerce.[2] Commerce is scheduled to make its preliminary determinations on the countervailing duty and on the antidumping flat-rolled steel cases on November 27, 1992, and January 26, 1993, respectively.

Global Reactions

Unilateral Export Restraints

When the VRAs ended and the MSA talks were suspended there were indications that the steel industries in several countries, including those in Japan, Korea, and Brazil, unilaterally restrained their exports to the United States at or below the VRA ceiling levels in an effort to ward off trade disputes. Brazilian private and public sector steelmakers agreed to limit exports to the United States, seeking to create favorable trade relations with the United States and avoid trade cases. Under the unilateral action, the mills undertook not to raise their sales volumes to the United States above historic averages.

However, now that trade cases have been filed and the ITC has made preliminary affirmative determinations on numerous petitions, some of the industries are reconsidering export restraints. In Korea, steel corporations reportedly no longer feel that unilateral restraint of exports is justifiable. The Ministry of Trade and Industry plans to review the unilateral restraints but to abolish only the restraints on products subject to trade cases that have also had low quota utilization; such items would become "monitored" products. The Ministry's reported concern is that abolishing trade restraints across the board would aggravate the trade complaints.[3]

Trade Petitions Against U.S. Producers

On May 30, 1992, after the preparation of U.S. unfair trade cases had been made public but before they were initiated, the Government of Mexico initiated antidumping investigations of U.S. producers of steel plate and hot- and cold-rolled steel sheet and coil. These investigations were based on complaints by Mexican firms Hylsa and Altos

Hornos de Mexico, which alleged U.S. dumping in Mexico both on the basis of selling price in the United States and on the basis of a "reconstructed price," taking into account production, operation and indirect costs. The Government of Mexico is scheduled to make preliminary determinations in these cases in mid-October 1992.[4] In addition, Mexican galvanized steel producer IMSA reportedly is preparing antidumping cases against U.S. exports of bare and prepainted galvanized sheet in response to the U.S. cases against IMSA and other Mexican companies and is also preparing cases against exports from Korea, Japan, Spain, Brazil, and Guatemala.[5] Cases on other U.S. steel products, such as structurals, are reportedly under consideration.

In a notification to the U.S. State Department dated August 24, 1992, the Canadian Ministry known as Revenue Canada, Customs and Excise (RCCE) announced that it had initiated a dumping investigation on U.S. exports of hot-rolled carbon steel plate and high-strength low-alloy plate based on a complaint from Algoma Steel of Ontario. The complaint alleged dumping margins of 14.4 percent on U.S. exports of plate to Canada during the first half of 1992. RCCE's preliminary determination is expected on or before November 22, 1992. Other exports named in the case include those from Belgium, Brazil, the Czech and Slovak Federal Republic, Denmark, Germany, Romania, Slovenia, the United Kingdom, and the former Yugoslav republic of Macedonia.[6] According to Canadian steel officials, trade cases against hot-rolled products from the United States, the EC, and other sources are scheduled to be initiated by RCCE during September 1992. In addition, similar trade cases have been filed with RCCE on cold-rolled steel products and petitions against corrosion-resistant steel from the United States and other sources are being prepared.[7]

In another product area, on August 25, 1992 the Canadian International Trade Tribunal (CITT) rejected a petition for a safeguard investigation into imports of wide-flange structural steel shapes. The Canadian producer, Algoma Steel Inc., claimed it was being injured by products from U.S. "mini-mills" that recycle scrap steel, thereby avoiding energy-intensive coking and blasting stages. According to the CITT, however, imports fell relative to domestic production during the period under consideration (January 1991 to April 1992 inclusive), so the conditions required for a safeguard inquiry were not met.[8]

Proposal for a North American Steel Pact

Canada's major integrated mills, Stelco Inc., Dofasco Inc., Algoma Steel Inc., Ipsco Inc., and Sidbec-Dosco Inc., have formed the Canadian Flat Rolled Steel Producers Alliance. The Alliance advocates the adoption of a steel accord styled after the Auto Pact, which would recognize a single North American market for steel products. The proposed accord would cover such items as country of origin and the elimination of tariffs between the countries, both of which are covered in the proposed North American Free-Trade Agreement between the United States, Canada, and Mexico and the Canada-U.S. Free-Trade Agreement, which has been in place for several years. In addition, however, the proposal would provide a mechanism to grant favorable treatment to signatories under unfair trade statutes.[9] U.S. steel industry sources indicated that, although informal discussions are continuing, no items should be included in the discussions that would weaken U.S. trade laws or impede the progress of the MSA negotiations.

MSA Negotiations

Several governments, including the Governments of Australia, Brazil, Korea, and Japan have expressed a desire to re-open the suspended MSA negotiations. The Japanese Ministry of Trade and Industry issued a statement of concern that the "massive" filing of trade cases might pose a "serious obstacle" to progress in the MSA, and urged nations concerned to meet to discuss how nondisruptive trade in steel worldwide could be achieved, including through the resumption of the MSA negotiations.[10]

Several of the countries urging a continuation of MSA negotiations indicated, however, that a change in antidumping procedures, either in the Uruguay Round of Trade Negotiations or in the MSA, would be needed to reach agreement on steel. Australian Trade Minister Kerin indicated that, as a result of the U.S. case filings, Australia will be pushing in the MSA for changes in antidumping laws in order to ensure that national trade legislation is not used to disrupt markets or create trade barriers. He stressed, however, that a successful conclusion to the

MSA negotiations would address the major concerns of the steel industry and urged the United States to renew its efforts to reach agreement.[11]

Korean Minister of Trade and Industry, Bong-Soo Hahn, sounded a similar theme, indicating in a letter to United States Trade Representative Carla Hills that the fact that the U.S. industry could file such cases "underscores the need to address systemic problems in the trade laws themselves." Minister Hahn expressed "hope" that the cases would not affect the "already delicate Uruguay Round negotiations" but urged the United States to promptly reconvene the MSA talks in order to address the issues prompted by U.S. steel industry actions.[12]

Outlook

Trade Diversion

Several domestic and foreign industry representatives have expressed concern that the large number of trade cases on flat-rolled steel will cause a diversion of trade flows to other products or sources. Many large foreign integrated producers, who must export to keep production levels efficiently high, are expected to seek new outlets for raw steel production by shifting production and trade to downstream products or new markets. Members of the Steel Manufacturers Association are concerned that any additional duties on flat-rolled products could cause foreign producers to begin shipping long products instead, thus injuring a different segment of the domestic industry.[13] In addition, integrated steel producers, concerned with diversion to products or sources not covered by the current flat-rolled steel cases are reportedly considering petitions on tinplate imports and on flat-rolled steel products from India, Turkey, and republics of the former Soviet Union.[14] Steelmakers in Japan are concerned about shipments planned for the United States being re-directed to Japan, particularly the hot-rolled products from Korea. Producers in Taiwan are concerned that Taiwan would also be a target market for exports because of its growing domestic markets and proximity to major Asian producers.[15]

Trade Agreements

Some domestic steel industry officials believe when the preliminary and final determinations are issued on the large number of flat-rolled steel cases, there will be flurries of activity with respect to new trade agreements in steel. They expect that high additional duties on flat-rolled products and diversion of trade flows to other countries as a result of the trade cases will encourage foreign governments to return to the negotiating table for an international agreement.[16] While clearly not everyone agrees with this prediction of the results of the trade cases, there is considerable interest in an international trade agreement, such as the MSA, as a longer term method of addressing the causes of steel trade friction. It remains to be seen, however, if such an agreement can be reached with the continuing possibility that countervailing or antidumping duties may be imposed as a result of the current cases. Even after the cases have been completed, some governments may continue to seek changes in antidumping procedures on an international basis, either through the MSA on steel or through the Uruguay Round on all products.

Peg MacKnight
202-205-3431

[1] See appendix B for details on the status of steel-related antidumping and countervailing duty cases.

[2] Negative determinations were made in 12 flat-rolled cases, which terminate those investigations.

[3] U.S. Department of State Telegram, Seoul, Aug. 18, 1992, message reference No. 08837.

[4] Rafael Rubio, Vice President of Economics, Hylsa, interview by USITC staff, Sept. 15, 1992 and U.S. Department of State Telegram, Mexico, June 27, 1992, message reference No. 16104.

[5] "Mexico Plans More Dumping Actions," *Metal Bulletin*, July 13, 1992, p. 21.

[6] Canadian Government officials, interviews by USITC staff, Aug. 18, 1992; U.S. Dept. of State Telegram, Aug. 26, 1992, Ottawa, message reference No. 05014; "Canada Probes Plate Dumping," *American Metal Market*, Aug. 26, 1992, p. 1; and "Canada Fires Steel Salvo," *The Globe and Mail*, Toronto, Canada, Aug. 25, 1992, p. 2.

[7] Donald Belch, Director of Government Relations, Stelco Inc., interview by USITC staff, Sept. 10, 1992.

[8] U.S. Department of State Telegram, Sept. 1, 1992, Ottawa, message reference No. 5014.

[9] Marian Stinson, "Steelmakers' Group Seeks Auto-Style Pact with U.S.," *The Globe and Mail*, Toronto, Canada, July 17, 1992, p. B1.

[10] U.S. Department of State Telegram, July 1, 1992, Tokyo, message reference No. 10378.

[11] U.S. Department of State Telegram, July 8, 1992, Canberra, message reference No. 05498.

[12] Letter to United States Trade Representative Carla Hills dated July 30, 1992.

[13] James Collins, President, Steel Manufacturers Association, interview by USITC staff, Sept. 1, 1992.

[14] "More Cases to Come, Warn U.S. Mills," *Metal Bulletin*, Aug. 17, 1992, p. 17.

[15] "ITC Ruling Worries Far East Producers," *Metal Bulletin*, Aug. 17, 1992, p. 17.

[16] "Luerssen Foresight Didn't Quite Match His 20-20 Hindsight," *American Metal Market*, Sept. 2, 1992, p. 2,7.

RECENT STEEL INDUSTRY DEVELOPMENTS

CONTINUED RESTRUCTURING IN THE SPECIALTY STEEL INDUSTRY COULD CREATE NEW HYBRID PRODUCERS

The domestic specialty steel industry continues to undergo structural changes as mergers, acquisitions, and joint ventures reconfigure the ownership of productive capacity. Although the announced intent of mergers is to create more competitive global producers, more recent acquisitions differ from past liaisons in the U.S. specialty steel industry in that they are characterized by the combination of non-like entities (i.e., producers of carbon steel with specialty steel producers) to form a stronger force in all of their markets. This emerging trend is illustrated by Armco Inc.'s acquisition of Cyclops Industries Inc., and Lukens Inc.'s acquisition of Washington Steel Corp. Armco is a major integrated producer of carbon and specialty steel mill products, whereas Cyclops is a producer of stainless flat-rolled products. Lukens is a producer of carbon, alloy, and clad steel plate; Washington is the United States' fourth-largest producer of stainless steel flat-rolled products. A further example of this development includes the reported possibility of a joint venture between Allegheny Ludlum Corp. (the largest U.S. stainless producer) and Lukens to build a carbon and stainless steel rolling mill.

U.S. producers may be experiencing added competitive pressure as a result of recent merger activity overseas, such as Japan's announcement of a merger between Sumitomo Metal Industries' carbon operations and Nippon Stainless Steel Co.'s stainless operations. This union of resources apparently is intended to better enable the participants to address increasingly diversified end-user needs, to consolidate production, and to develop new technology and products. Also, Avesta AB of Sweden and British Steel Plc of the United Kingdom announced plans to merge their stainless-steel-manufacturing and distribution operations in the United States as well as in Europe by the end of 1992. Although this merger is of two like companies, the resulting entity, Avesta Sheffield AB, would be one of the world's largest stainless steel operations with production capacity of 600,000 metric tons per year.

The outlook is for growth in stainless steel demand in the 1990s, as corrosion resistance becomes an increasingly important element in the product design and purchase decisions of steel consumers. The enhancement of operating efficiencies through further investment in new technology and equipment remains an important competitive strategy. The recent and proposed mergers and joint ventures are evidence of the specialty steel industry's efforts to pursue this strategy by promoting operating efficiencies through the melding of complementary production operations.

DISTINCTION BETWEEN MINIMILL AND INTEGRATED PRODUCERS CONTINUES TO BLUR

The distinction between minimills and integrated steel mills, already clouded by the entrance of minimills into product lines traditionally considered the exclusive domain of integrated producers, has been further obscured by the recent consideration of minimill steelmaking technology by integrated mills. Emerging plans to adopt minimill technology for the production of flat-rolled steel adds to growing evidence, and may be a tacit admission, that the large steelmakers may not be able to compete effectively in their current form.

U.S. Steel, the largest steelmaker in the United States, has confirmed that it is considering the construction of a minimill to compete in the flat-rolled steel market. Although the company has no immediate plans to begin construction, a minimill-type operation is one of the alternatives under consideration as part of a U.S.S. review of competitive strategies. Acme Metals, another integrated producer, is also studying the installation of minimill technology in the form of a thin-slab caster and rolling mill.

However, integrated producers may find that borrowing new technology from minimills is insufficient to maintain their market share. These mills must also be able to take advantage of other factors that have allowed minimills to become the lowest cost producers of most steel mill products. Such factors, including nonunion labor, low employment levels, and innovative management styles, may be more difficult to adopt than new technology.

INDUSTRY RECEIVES R&D BOOST FROM DEPARTMENT OF ENERGY

A detailed technical and cost analysis by the U.S. Department of Energy has led to the Agency's partial funding of the Advanced Process Control Program developed by the American Iron and Steel Institute. Negotiation of the cost sharing for the $23 million project is currently underway and is expected to be concluded by January 1993. The Advanced Process Control Program includes six individual projects, involving various stages of process control systems that technology managers at member companies have deemed critical to the future competitiveness of the U.S. steel industry. Four of the projects focus on sheet products whereas the other two involve liquid steelmaking and casting. The program's research participants will include national laboratories, technology suppliers, and steelmakers. This program will allow U.S. steelmakers to magnify their research expenditures, and avoid a duplication of effort, while developing new technologies that could lead to potentially large quality and cost benefits.

Nancy Fulcher
202-205-3434

U.S. STEEL INDUSTRY HIGHLIGHTS

Figure i
U.S. average monthly and monthly steel shipments

1,000 short tons

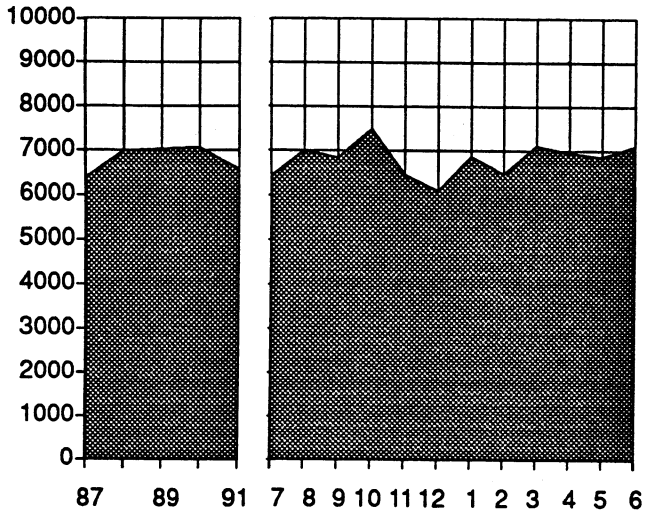


Figure ii
U.S. average monthly and monthly steel imports

1,000 short tons

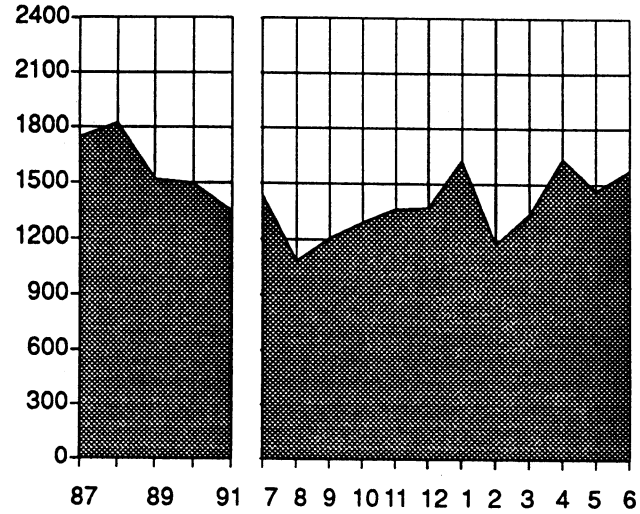


Figure iii
U.S. average monthly and monthly steel exports

1,000 short tons

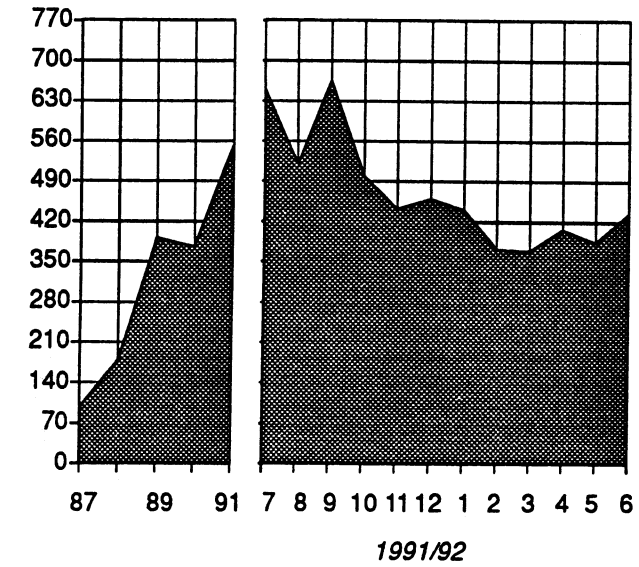
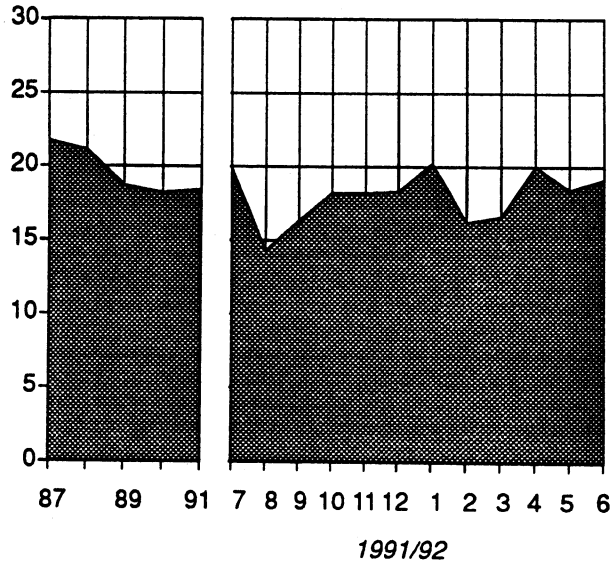


Figure iv
U.S. average monthly and monthly steel import penetration[1]

Percent



[1] Import penetration is defined as the percent of apparent consumption represented by imports.

Source: Compiled from data of the American Iron and Steel Institute and official statistics of the U.S. Department of Commerce.

INTERNATIONAL PRODUCTION AND CONSUMPTION

Figure v
Raw steel: Geographic distribution of world production, 1990

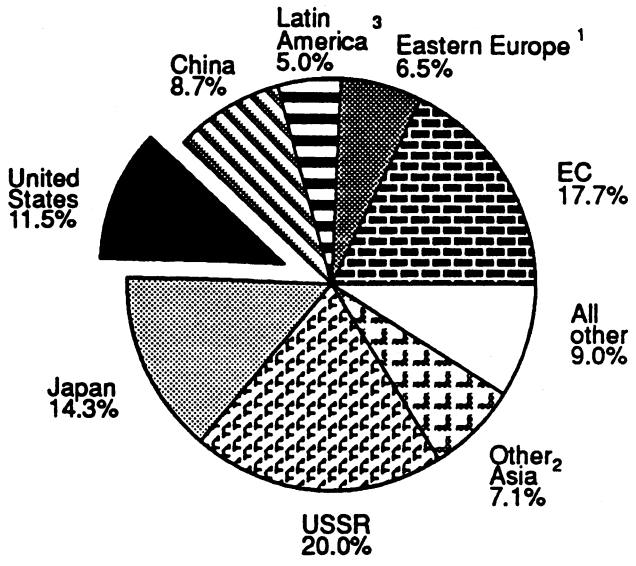
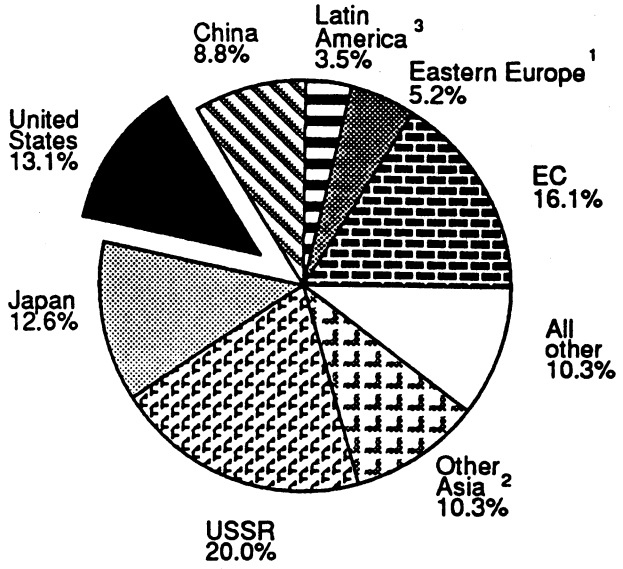


Figure vi
Raw steel: Geographic distribution of world apparent consumption, 1990



[1] Includes Bulgaria, Czechoslavakia, former German Democratic Republic, Hungary, Poland, and Romania.
[2] All Asian countries excluding Japan, China, North Korea, and the Middle East region.
[3] Includes Mexico, Central America, South America and the Caribbean (including Cuba).

Source: International Iron and Steel Institute.

Table i
Raw Steel: Production of top 20 steelmakers, 1981, 1991

Company	*Country*	*1981*	*1991*	*Volume change 1981–91*	*Percent change 1981–91*
			(Million metric tons)		
Nippon Steel	Japan	29.6	28.6	–1.0	–3.4
Usinor Sacilor	France	[1]19.8	22.8	3.0	15.3
Posco	S. Korea	8.7	19.1	10.4	119.7
British Steel	U.K.	13.2	12.9	–0.3	–2.3
NKK	Japan	12.6	12.5	–0.2	–1.4
ILVA	Italy	[2]13.9	11.0	–2.9	–20.9
Kawasaki	Japan	11.4	10.9	–0.5	–4.3
Thyssen	Germany	11.8	10.9	–0.9	–7.7
Sumitomo	Japan	11.2	10.9	–0.3	–2.7
USS	U.S.	21.2	9.6	–11.7	–55.0
SAIL	India	5.5	9.4	3.9	70.5
Bethlehem	U.S.	15.2	9.1	–6.1	–40.1
Arbed	Luxembourg	11.0	7.6	–3.4	–30.8
Iscor	South Africa	6.9	7.6	0.7	10.3
LTV Steel	U.S	[3]9.9	6.9	–2.9	–29.5
Kobe Steel	Japan	6.7	6.5	–0.2	–3.0
China Steel	Taiwan	[4]1.5	5.9	4.4	290.7
BHP	Australia	7.5	5.7	–1.8	–24.1
Hoogovens	Netherlands	5.2	4.9	–0.3	–5.0
National Steel	U.S.	7.4	4.8	–2.7	–36.0

[1] Represents combined production of Usinor and Sacilor, which merged to form Usinor-Sacilor in 1987.
[2] Represents production of FINSIDER, many of whose facilities were taken over by ILVA in early 1989.
[3] Represents combined production at Jones & Laughlin Steel and Republic Steel, which merged to form LTV Steel in 1984.
[4] Estimated.

Source: Metal Bulletin.

INTERNATIONAL PRODUCTION

Table II
Raw steel: Average annual production, by specified country/region, by specified 5–year periods, 1957–91

Period	United States	EC-12	Japan	Principal steel-producing developing countries[1]	World total
			Million metric tons		
1957–61	88.67	89.71	18.35	17.33	313.80
1962–66	108.90	108.55	37.56	22.33	420.98
1967–71	118.28	135.06	78.62	33.55	555.12
1972–76	122.36	152.82	108.61	48.71	669.32
1977–81	114.47	143.99	105.87	75.36	712.24
1982–86	76.49	128.82	101.18	102.24	690.10
1987–91	85.74	135.64	106.41	146.89	760.53
			Percent of world		
1957–61	28.26	28.59	5.85	5.52	100.00
1962–66	25.87	25.78	8.92	5.30	100.00
1967–71	21.31	24.33	14.16	6.04	100.00
1972–76	18.28	22.83	16.23	7.28	100.00
1977–81	16.07	20.22	14.86	10.58	100.00
1982–86	11.08	18.67	14.66	14.82	100.00
1987–91	11.27	17.83	13.99	19.31	100.00

[1] Includes Brazil, People's Republic of China, India, Republic of Korea, Mexico, and Taiwan.

Source: U.K. Iron and Steel Statistics Bureau and International Iron and Steel Institute.

Table III
Raw steel: Production, by specified country/region, 1986–91

Country/region	1986	1987	1988	1989	1990	1991	Percent Change 1986–1991
			Thousand metric tons				
Taiwan	5,545	5,915	8,288	9,047	9,554	10,957	97.6
Korea	14,555	16,782	19,118	21,873	23,125	26,002	78.6
Turkey	5,928	7,044	7,982	7,852	9,350	9,349	57.7
China	52,208	56,020	59,430	61,590	67,241	70,710	35.4
India	12,197	13,121	14,309	14,429	14,866	16,394	34.4
Japan	98,275	98,513	105,681	107,909	110,333	109,636	11.6
Mexico	7,225	7,642	7,779	7,851	8,682	8,013	10.9
EC–12	125,855	126,486	137,816	140,080	136,454	137,357	9.1
United States	74,032	80,876	90,650	88,834	88,900	79,393	7.2
Brazil	21,233	22,228	24,657	25,055	20,569	22,613	6.5
Australia	6,674	6,100	6,387	6,732	6,617	6,182	–7.4
Canada	14,081	14,737	14,866	15,458	12,100	12,994	–7.7
Soviet Union	160,537	161,935	163,037	160,096	154,333	133,643	–16.8
Czechoslovakia	15,112	15,416	15,380	15,465	14,877	12,273	–18.8
Poland	17,144	17,145	16,873	15,094	13,633	10,338	–39.7
Total selected countries/region	630,601	649,960	692,253	697,365	690,634	665,854	5.6
All other	82,782	85,942	87,396	87,575	79,615	68,546	–17.2
World total	713,383	735,902	779,649	784,940	770,249	734,400	2.9

Source: Compiled from statistics of the International Iron and Steel Institute.

Table iv
Steel mill products: Average annual exports, by country/region of origin, by specified periods, 1971–90[1]

Period	United States	EC-12[2]	Japan	Principal steel-producing developing countries[3]	Other	World
			1,000 metric tons			
1971–75	3,456	54,297	26,006	2,012	25,663	111,433
1976–80	2,627	61,511	32,123	4,911	33,810	134,983
1981–85	1,449	64,991	30,286	12,944	40,723	150,393
1986–90	2,365	69,458	22,720	19,074	51,187	164,805
			Percent of world exports			
1971–75	3.1	48.7	23.3	1.8	23.0	100.0
1976–80	1.9	45.6	23.8	3.6	25.0	100.0
1981–85	1.0	43.2	20.1	8.6	27.1	100.0
1986–90	1.4	42.1	13.8	11.6	31.1	100.0
			Percent of shipments[4]			
1971–75	3.8	45.9	30.5	5.9	([5])	22.0
1976–80	3.1	52.6	34.2	9.2	16.0	24.1
1981–85	2.2	59.9	32.6	17.2	18.2	26.6
1986–90	3.4	58.9	23.3	17.3	20.6	25.6

[1] Includes intra-EC trade.
[2] Includes all 12 countries for all years.
[3] Includes Brazil, People's Republic of China, India, Republic of Korea, Mexico, and Taiwan.
[4] Derived by the staff of the International Trade Commission.
[5] Not available.

Source: Calculated from statistics of the International Iron and Steel Institute and the U.K. Iron and Steel Statistics Bureau, except as noted.

Table v
Steel mill products: Average annual exports, by country/region of origin, by specified periods, 1971–90[1]

Period	United States	EC-12[2]	Japan	Principal steel-producing developing countries[3]	Other	World
			1,000 metric tons			
1971–75	3,456	28,257	26,006	2,012	25,663	85,393
1976–80	2,627	33,131	32,123	4,911	33,810	107,056
1981–85	1,449	35,931	30,286	12,944	40,723	121,333
1986–90	2,365	28,857	22,720	19,074	51,187	124,204
			Percent of world exports			
1971–75	4.0	33.1	30.5	2.3	30.1	100.0
1976–80	2.5	31.1	30.0	4.6	31.8	100.0
1981–85	1.2	29.6	25.0	10.7	33.6	100.0
1986–90	1.9	23.2	18.3	15.4	41.2	100.0
			Percent of shipments[4]			
1971–75	3.8	23.9	30.5	5.9	([5])	17.8
1976–80	3.1	28.3	34.2	9.2	16.0	20.1
1981–85	2.2	33.1	32.6	17.2	18.2	22.6
1986–90	3.4	24.5	23.3	17.3	20.6	20.6

[1] Excludes intra-EC trade.
[2] Includes all 12 countries for all years.
[3] Includes Brazil, People's Republic of China, India, Republic of Korea, Mexico, and Taiwan.
[4] Derived by the staff of the International Trade Commission.
[5] Not available.

Source: Calculated from statistics of the International Iron and Steel Institute and the U.K. Iron and Steel Statistics Bureau, except as noted.

Table vi
Steel mill products: Average annual imports, by country/region of origin, by specified periods, 1971–90[1]

Period	United States	EC-12[2]	Japan	Principal steel-producing developing countries[3]	Other	World
			Imports (1,000 metric tons)			
1971–75	14,058	36,057	141	9,691	51,296	111,244
1976–80	15,644	41,910	675	13,891	63,263	135,383
1981–85	18,521	40,555	2,644	17,539	70,294	149,552
1986–90	17,527	53,839	5,930	21,542	67,796	166,634
			Percent of world			
1971–75	12.6	32.4	0.1	8.7	46.1	100.0
1976–80	11.6	31.0	0.5	10.3	46.7	100.0
1981–85	12.4	27.1	1.8	11.7	47.0	100.0
1986–90	10.5	32.3	3.6	12.9	40.7	100.0
			Percent of apparent consumption of finished steel			
1971–75	13.8	36.1	0.2	23.2	[4]	22.0
1976–80	16.2	43.0	1.1	22.2	26.3	24.2
1981–85	22.6	48.2	4.0	21.9	27.8	26.5
1986–90	20.6	52.7	7.4	19.1	25.6	25.8

[1] Includes intra-EC trade.
[2] Includes all 12 countries for all years.
[3] Includes Brazil, People's Republic of China, India, Republic of Korea, Mexico, and Taiwan.
[4] Not available.

Source: Calculated from statisitcs of the international Iron and Steel Institute.

Table vii
Steel mill products: Average annual imports by country/region of origin, by specified periods, 1971–90[1]

Period	United States	EC-12[2]	Japan	Principal steel-producing developing countries[3]	Other	World
			Imports (1,000 metric tons)			
1971–75	14,058	10,017	141	9,691	51,296	85,204
1976–80	15,644	13,374	675	13,891	63,263	107,003
1981–85	18,521	11,495	2,644	17,539	70,294	120,492
1986–90	17,527	13,238	5,930	21,542	67,796	126,033
			Percent of world			
1971–75	16.5	11.8	0.2	11.4	60.2	100.0
1976–80	9.4	12.5	0.6	13.0	59.3	100.0
1981–85	15.4	9.5	2.2	14.6	58.3	100.0
1986–90	13.9	10.5	4.7	17.1	53.8	100.0
			Percent of apparent consumption of finished steel			
1971–75	13.8	10.0	0.2	23.2	[4]	17.7
1976–80	16.2	13.9	1.1	22.2	26.3	20.1
1981–85	22.6	13.7	4.0	21.9	27.8	22.5
1986–90	20.6	12.9	7.4	19.1	25.6	20.8

[1] Excludes intra-EC trade.
[2] Includes all 12 countries for all years.
[3] Includes Brazil, People's Republic of China, India, Republic of Korea, Mexico, and Taiwan.
[4] Not available.

Source: Calculated from statistics of the International Iron and Steel Institute.

Table viii
Steel mill products: U.S. imports, exports, import penetration, exports as a percentage of shipments, and trade balance, 1989-1991, and by specified period, 1991 and 1992

Year	U.S. imports	U.S. exports	Import penetration[1]	Exports/ shipments	Trade balance Volume	Trade balance Value
	-------Million short tons-------		----------Percent----------		(Million short tons)	(Billion dollars)
1989	18.3	4.8	18.8	5.7	-13.6	-6.8
1990	18.1	4.8	18.5	5.7	-13.3	-6.0
1991	16.4	6.7	18.5	8.5	-9.7	-4.3
Jan.-June 1991	8.5	3.4	19.1	8.6	-5.1	-2.4
Jan.-June 1992	8.8	2.4	18.4	5.8	-6.4	-2.5

[1] Import penetration is defined as imports as a percent of apparent steel consumption.

Source: Compiled from data of the American Iron and Steel Institute, and official statistics of the U.S. Department of Commerce.

U.S. imports and exports of steel mill products have followed two distinctly different trends since 1989, as shown in table viii.[1] Imports declined by 11 percent during 1989-91; concurrently, exports rose by 40 percent. Reflective of these trends, import penetration in the U.S. market fell, whereas U.S. exports' share of shipments in 1991 reached their highest level in 20 years. As a result, from 1989 to 1991, the deficit in steel trade declined by one-quarter in volume terms (3.9 million tons) and by slightly more than one-third in value terms ($2.5 billion). Data for the year-to-date periods show a reversal of these trends, as steel demand in overseas markets has declined.

IMPORTS

Carbon and Certain Alloy Steel

Improvements in U.S. cost competitiveness and relatively strong demand in foreign markets, which reduced interest in exporting to the United States, contributed to a steady decline of 11 percent in U.S. imports of carbon and certain alloy steel mill products during 1989-91 (table 3). During January-June 1992, which includes the expiration of the VRAs on March 31, imports rose by 3 percent over their level during the comparable 1991 period. The relative stability in U.S. import levels, despite the lifting of the foreign export restraints, reflects in part the underlying economic situation. Low domestic steel prices make the U.S. market unattractive for foreign producers and a weak dollar makes imports of steel relatively expensive for U.S. steel consumers. In addition, some foreign governments have urged restraint of steel exports to the United States. Two weeks after the expiration of the VRAs, the Government of Korea announced that it would set up a program to limit steel exports to the United States in an effort to maintain the market stability necessary for the completion of the MSA. The Government of Japan instituted a similar program in which the Ministry of International Trade and Industry urged Japanese producers not to exceed the limits of the expired VRA.

On a regional basis, East Asia, the EC, and Latin America are the largest import suppliers, accounting for 29 percent, 29 percent, and 13 percent, respectively, of imports of carbon and certain alloy steel in 1991 (table 18). These shares remained steady during the first 6 months of 1992, with imports from the EC exhibiting the only increase in absolute import levels.

Similar to the upward trend in overall imports during January-June 1992, on a product basis, there were import increases in most carbon and certain alloy product categories during the period, with the most notable exception being the 49-percent drop in imports of pipe and tube from their January-June 1991 level (table 3). The decline reflects the reduced levels of activity in the construction and oil drilling industries, both major end-use markets for pipe and tube products. The filing in late 1991 of unfair trade cases against pipe and tube from a number of countries (see appendix B) also likely contributed to

declining imports in 1992 as importers postponed purchases from these countries pending the final outcome of the investigations.

Stainless and Alloy Tool Steel

Unlike carbon steel products, total imports of stainless and alloy tool steel products rose steadily between 1989 and June 1992 (table 3). This has occurred despite statements by the domestic specialty steel industry that it is preparing to file unfair trade complaints. The voluntary limits on exports to the United States implemented by Japan and Korea may have held certain of these import levels in check. Imports of stainless wire rod showed the largest relative increase during January-June 1992, rising by 41 percent over their level in the first half of 1991. Several countries supplied the increase in imports. Reportedly, an industry source has attributed the high penetration rate in rod to the limited number of U.S. producers of this product.[2]

EXPORTS

Carbon and Certain Alloy Steel

U.S. exports of carbon and certain alloy steel mill products reached their all-time highest level of 6.5 million short tons, representing 8.5 percent of shipments, in 1991. The same factors that resulted in a decline in steel imports--improved cost competitiveness, favorable exchange rates, and strong steel demand in other countries--also spurred growth in exports. During January-June 1992, exports fell, reflecting increasingly unfavorable global economic conditions.

The primary focus in export markets in 1991 shifted away from neighboring Canada and Mexico towards East Asia. In 1991, shipments to East Asia were almost two-and-one-half times greater than in 1990, representing more than one-third of U.S. exports of carbon and certain alloy steel products during 1991, compared to less than one-fourth in 1990 (table 18). The increase in exports to East Asia reflects, in part, the rapid growth in construction in countries such as Korea and Taiwan, and the associated expansion in steel demand. However, this trend was reversed in January-June 1992 when exports to East Asia fell by 69 percent from their year-ago level, as steel capacity in the region grew and countries were better able to supply their steel needs internally.

Exports to Latin America have risen steadily since 1990, accounting for 38 percent of U.S. exports of carbon and certain alloy steel in January-June 1992. Lower tariffs and the elimination of other trade barriers, such as import licenses, have provided U.S. exports increased market access. For a more detailed discussion of the prospects for U.S. exports to Latin America, see the section of this report entitled "Privatization in the Latin American Steel Industry."

Exports of carbon and certain alloy steel to the EC have declined steadily in both absolute and relative terms since 1990, falling from 6.2 percent of exports in 1990 to 3.6 percent in January-June 1992. Recessionary economic conditions in the region have likely contributed to reduced demand for foreign steel.

Stainless and Alloy Tool Steel

The increasing globalization of the stainless steel industry has helped to boost exports, according to an industry spokesperson. The fact that some domestic producers are foreign-owned, or have established joint ventures with producers in other countries, has contributed to increased intra- and intercompany trade between countries. U.S. producers of stainless steel have indicated that exports are in a cyclical dip in 1992 because of recessionary economies in major export markets.

These developments are reflected in the trade trends. Similar to carbon steel, exports of stainless and alloy tool steel peaked in 1991 then fell off during January-June 1992 (table 27). Latin America is the largest market for U.S. exports of these products, accounting for 34 percent of exports in 1991. Shipments to the EC and East Asia accounted for 18 percent and 15 percent, respectively, of exports that year.

[1] In general, the data discussed in this section are based on data contained at various levels of detail in tables 2 through 38, which appear at the end of this section.

[2] "Imports keep coming despite the threat of lawsuits", Stainless Steel Supplement, *American Metal Market*, Aug. 19, 1992.

Table 1
Steel: U.S. raw steel production, capacity utilization, continuous cast steel, employment, wages, shipments, imports, exports, apparent consumption, net sales, net income, 1989-91, and by specified periods, 1991 and 1992

				January-June	
	1989	1990	1991	1991	1992
Raw steel:					
Production (1,000 short tons)	97,480	98,906	87,310	42,647	46,658
Capacity utilization (percent)	84.1	84.7	74.2	72.1	82.9
Continuously cast (percent)	64.6	67.4	75.7	75.8	77.0
Employment:					
Total (thousands)[1]	279.2	275.4	261.9	266.0	[2]256.2
Production workers (thousands)[1]	215.4	211.3	198.3	[2]202.6	[2]193.0
Hourly employment cost[3] (dollars)	24.63	25.62	27.64	27.64	29.29
Steel:					
Shipments (1,000 short tons)	84,259	84,910	78,846	39,599	41,347
Imports (1,000 short tons)	18,344	18,144	16,381	8,534	8,798
Exports (1,000 short tons)	4,778	4,840	6,711	3,425	2,403
Apparent consumption (1,000 short tons)	97,826	98,214	88,516	44,707	47,742
Ratio of imports to consumption (percent)	18.8	18.5	18.5	19.1	18.4
Export-shipment ratio) (percent)	5.7	5.7	8.5	8.6	5.8
Steel operations:					
Net steel sales (million dollars)	31,525	30,635	27,270	12,772	13,351
Net steel income[4] (million dollars)	1,597	(220)	(54)	(825)	(112)
Ratio of income to net sales (percent)	5.1	(0.7)	(0.2)	(6.5)	(0.8)

[1] These figures represent employment in Standard Industrial Code (SIC) 331. (See Notes for explanation).
[2] Preliminary.
[3] Total employment costs (including benefits) of employees receiving wages.
[4] First half 1991 and 1992 data represent operating, not net, income. Figures are for reporting companies only, which account for about 68 percent of the industry's total raw steel production.

Source: Compiled from data of the American Iron & Steel Institute and official statistics of the U.S. Department of Commerce and the U.S. Department of Labor (Bureau of Labor Statistics).

Table 2.--Steel mill products 1/: U.S. producers' shipments, by product and grade of steel, 1989-1991, and by specified periods, 1991 and 1992

(Short tons)

Item	1989	1990	1991	January-June	
				1991	1992
All grades of steel:					
Semifinished	1,850,245	1,916,575	2,548,961	1,181,554	1,179,549
Plate	7,293,115	7,944,624	6,942,406	3,661,220	3,654,550
Sheet and strip	45,376,975	43,815,735	40,633,136	19,907,615	21,929,081
Bars & certain shapes 2/	14,510,007	14,726,831	12,840,512	6,665,302	6,637,744
Wire rod	4,229,889	4,325,740	4,365,595	2,206,701	2,269,010
Wire	1,005,407	917,950	865,092	446,147	480,429
Wire products	3/	3/	3/	3/	3/
Structural shapes & units	5,438,404	6,092,821	5,675,786	2,818,371	2,779,748
Rails & related products	544,771	518,593	486,185	264,930	321,418
Pipe and tube	4,010,591	4,651,570	4,488,014	2,446,852	2,095,332
Total	84,259,404	84,910,439	78,845,687	39,598,692	41,346,861
Carbon & certain alloy 4/ steel:					
Semifinished	1,753,249	1,873,588	2,469,217	1,130,813	1,144,163
Plate	7,123,691	7,738,559	6,764,518	3,563,925	3,562,427
Sheet and strip	44,419,414	42,856,122	39,668,009	19,414,651	21,411,757
Bars & certain shapes	14,304,189	14,531,409	12,654,917	6,566,942	6,539,823
Wire rod	4,193,118	4,291,153	4,331,673	2,187,832	2,254,197
Wire	980,707	894,750	841,602	434,186	467,194
Wire products	3/	3/	3/	3/	3/
Structural shapes & units	5,438,404	6,092,821	5,675,786	2,818,371	2,779,748
Rails & related products	544,771	518,593	486,185	264,930	321,418
Pipe and tube	3,962,470	4,610,197	4,453,781	2,426,910	2,077,827
Total	82,720,013	83,407,192	77,345,688	38,808,560	40,558,554
Stainless & alloy tool steel:					
Stainless steel:					
Semifinished	96,996	42,987	79,744	50,741	35,386
Plate	169,424	206,065	177,888	97,295	92,123
Sheet and strip	957,561	959,613	965,127	492,964	517,324
Bars & certain shapes	138,618	137,717	134,405	72,054	65,178
Wire rod	36,771	34,587	33,922	18,869	14,813
Wire	24,700	23,200	23,490	11,961	13,235
Pipe and tube	48,121	41,373	34,233	19,942	17,505
Tool steel (all forms)	67,200	57,705	51,190	26,306	32,743
Total	1,539,391	1,503,247	1,499,999	790,132	788,307

1/ Shipment data compiled by AISI exclude certain fabricated products (wire strand, wire ropes, cables, cordage, and fabricated structural units).
2/ Includes tool steel.
3/ Shipment and apparent consumption data for wire and wire products have been combined and are reported in the category designated "wire".
4/ Certain alloy refers to alloy steel other than stainless or tool steel.

Source: Compiled from data of the American Iron & Steel Institute.

Table 3.--Steel mill products and certain fabricated steel products: U.S. imports, by product and grade of steel, 1989-1991, and by specified periods, 1991 and 1992

(Short tons)

Item	1989	1990	1991	January-June	
				1991	1992
All grades of steel:					
Semifinished	2,197,811	2,362,820	2,045,572	1,129,199	1,257,818
Plate	1,437,109	1,572,722	1,291,064	662,363	824,008
Sheet and strip	6,569,023	7,057,626	6,609,290	3,312,511	3,720,430
Bars & certain shapes 1/	1,356,035	1,119,085	1,041,496	487,779	524,284
Wire rod	1,150,116	979,241	846,923	362,943	623,416
Wire	494,303	432,336	391,804	197,363	220,505
Wire products	703,602	660,325	511,839	248,353	300,448
Structural shapes & units	1,640,361	1,020,593	604,361	343,357	306,054
Rails & related products	322,985	349,555	303,596	133,607	164,186
Pipe and tube	2,472,802	2,589,409	2,735,372	1,656,587	856,876
Total	18,344,147	18,143,712	16,381,317	8,534,062	8,798,025
Carbon & certain alloy 2/ steel:					
Semifinished	2,135,690	2,301,998	1,996,610	1,102,434	1,240,846
Plate	1,419,396	1,552,071	1,269,565	650,697	810,449
Sheet and strip	6,424,251	6,894,780	6,440,356	3,231,119	3,620,162
Bars & certain shapes	1,264,305	1,035,255	943,845	437,002	480,410
Wire rod	1,128,417	956,113	821,026	351,021	606,598
Wire	472,984	414,008	374,750	188,704	210,836
Wire products	703,602	660,325	511,839	248,353	300,448
Structural shapes & units	1,640,361	1,020,593	604,361	343,357	306,054
Rails & related products	322,985	349,555	303,596	133,607	164,186
Pipe and tube	2,435,544	2,542,189	2,687,154	1,631,610	835,515
Total	17,947,535	17,726,887	15,953,102	8,317,904	8,575,504
Stainless & alloy tool steel:					
Stainless steel:					
Semifinished	62,121	60,822	48,962	26,765	16,971
Plate	17,713	20,651	21,498	11,666	13,560
Sheet and strip	144,773	162,846	168,934	81,392	100,268
Bars & certain shapes	43,417	44,526	52,493	26,189	26,079
Wire rod	21,698	23,128	25,897	11,922	16,818
Wire	21,319	18,328	17,054	8,659	9,669
Pipe and tube	37,258	47,220	48,218	24,976	21,361
Tool steel (all forms)	48,313	39,304	45,158	24,588	17,795
Total	396,612	416,825	428,214	216,157	222,521

1/ Includes tool steel.
2/ Certain alloy refers to alloy steel other than stainless or tool steel.
Note.--Imports of steel mill products only (excluding fabricated steel products): 17,413,240 short tons (1989); 17,336,410 short tons (1990); 15,748,077 short tons (1991).
Source: Compiled from official statistics of the U.S. Department of Commerce.

Table 4.--Steel mill products and certain fabricated steel products: U.S. exports of domestic merchandise, by product and grade of steel, 1989-1991, and by specified periods, 1991 and 1992

(Short tons)

Item	1989	1990	1991	January-June	
				1991	1992
All grades of steel:					
Semifinished	390,812	522,320	699,080	309,517	203,752
Plate	627,263	453,756	724,722	402,867	214,275
Sheet and strip	2,611,528	1,852,387	2,876,192	1,612,106	973,516
Bars & certain shapes 1/	258,640	448,910	585,849	265,568	284,639
Wire rod	36,093	106,632	166,455	76,678	29,179
Wire	31,344	70,052	89,415	40,716	37,039
Wire products	32,160	41,548	51,552	26,641	28,814
Structural shapes & units	260,750	495,007	657,019	292,740	222,665
Rails & related products	86,464	379,039	108,056	66,675	39,946
Pipe and tube	442,992	470,779	753,109	331,875	369,201
Total	4,778,046	4,840,432	6,711,449	3,425,383	2,403,026
Carbon & certain alloy 2/ steel:					
Semifinished	376,984	515,848	679,017	293,248	201,189
Plate	619,986	442,269	706,612	392,115	210,971
Sheet and strip	2,562,369	1,791,394	2,787,119	1,570,225	935,874
Bars & certain shapes	223,749	428,311	560,268	249,434	273,287
Wire rod	30,588	101,219	162,231	73,631	28,192
Wire	28,730	66,453	86,775	39,113	35,942
Wire products	32,160	41,548	51,552	26,641	28,814
Structural shapes & units	260,750	495,007	657,019	292,740	222,665
Rails & related products	86,464	379,039	108,056	66,675	39,946
Pipe and tube	434,925	457,336	738,176	325,260	361,890
Total	4,656,705	4,718,424	6,536,825	3,329,082	2,338,770
Stainless & alloy tool steel:					
Stainless steel:					
Semifinished	13,829	6,472	20,063	16,269	2,563
Plate	7,277	11,487	18,111	10,752	3,304
Sheet and strip	49,159	60,993	89,073	41,881	37,642
Bars & certain shapes	16,399	16,005	16,989	10,566	7,796
Wire rod	5,505	5,413	4,224	3,046	987
Wire	2,614	3,599	2,640	1,603	1,097
Pipe and tube	8,067	13,443	14,934	6,615	7,312
Tool steel (all forms)	18,492	4,594	8,592	5,569	3,556
Total	121,342	122,006	174,626	96,301	64,257

1/ Includes tool steel.
2/ Certain alloy refers to alloy steel other than stainless or tool steel.
Note.--Exports of steel mill products only (excluding fabricated steel products): 4,631,806 short tons (1989); 4,602,490 short tons (1990); 6,392,652 short tons (1991).
Source: Compiled from official statistics of the U.S Department of Commerce.

Table 5.--Steel mill products and certain fabricated steel products: Apparent U.S. consumption, by product and grade of steel, 1989-1991, and by specified periods, 1991 and 1992

(Short tons)

Item	1989	1990	1991	January-June 1991	January-June 1992
All grades of steel:					
Semifinished	3,657,244	3,757,075	3,895,453	2,001,236	2,233,615
Plate	8,102,961	9,063,590	7,508,748	3,920,716	4,264,283
Sheet and strip	49,334,470	49,020,974	44,366,234	21,608,020	24,675,995
Bars & certain shapes 1/	15,607,402	15,397,006	13,296,159	6,887,513	6,877,389
Wire rod	5,343,912	5,198,349	5,046,063	2,492,966	2,863,247
Wire	2,139,808	1,899,011	1,627,768	824,506	935,529
Wire products	3/	3/	3/	3/	3/
Structural shapes & units	6,818,015	6,618,407	5,623,128	2,868,988	2,863,137
Rails & related products	781,292	489,109	681,725	331,862	445,658
Pipe and tube	6,040,401	6,770,200	6,470,277	3,771,564	2,583,007
Total	97,825,505	98,213,719	88,515,555	44,707,371	47,741,860
Carbon & certain alloy 2/ steel:					
Semifinished	3,511,955	3,659,738	3,786,810	1,939,999	2,183,820
Plate	7,923,101	8,848,361	7,327,471	3,822,507	4,161,905
Sheet and strip	48,281,296	47,959,508	43,321,246	21,075,545	24,096,045
Bars & certain shapes	15,344,745	15,138,353	13,038,494	6,754,510	6,746,946
Wire rod	5,290,947	5,146,047	4,990,468	2,465,222	2,832,603
Wire	2,096,403	1,861,082	1,589,864	805,489	913,722
Wire products	3/	3/	3/	3/	3/
Structural shapes & units	6,818,015	6,618,407	5,623,128	2,868,988	2,863,137
Rails & related products	781,292	489,109	681,725	331,862	445,658
Pipe and tube	5,963,089	6,695,050	6,402,759	3,733,260	2,551,452
Total	96,010,843	96,415,655	86,761,965	43,797,382	46,795,288
Stainless & alloy tool steel:					
Stainless steel:					
Semifinished	145,288	97,337	108,643	61,237	49,794
Plate	179,860	215,229	181,275	98,209	102,379
Sheet and strip	1,053,175	1,061,466	1,044,988	532,475	579,950
Bars & certain shapes	165,636	166,238	169,909	87,677	83,461
Wire rod	52,964	52,302	55,595	27,745	30,644
Wire	43,405	37,929	37,904	19,017	21,807
Pipe and tube	77,312	75,150	67,517	38,303	31,554
Tool steel (all forms)	97,021	92,415	87,756	45,325	46,982
Total	1,814,661	1,798,066	1,753,587	909,988	946,571

1/ Includes tool steel.
2/ Certain alloy refers to alloy steel other than stainless or tool steel.
3/ Shipment and apparent consumption data for wire and wire products have been combined and are reported in the category designated "wire".
Note.--Apparent consumption of steel mill products only (excluding fabricated steel products): 97,040,838 short tons (1989); 97,644,359 short tons (1990); 88,201,112 short tons (1991).
Source: Compiled from data of the American Iron & Steel Institute, and official statistics of the U.S. Department of Commerce.

Table 6.--Steel mill products and certain fabricated steel products: U.S. imports as a percent of apparent consumption, by product and grade of steel, 1989-1991, and by specific periods, 1991 and 1992

(Percent)

Item	1989	1990	1991	January-June	
				1991	1992
All grades of steel:					
Semifinished	60.1	62.9	52.5	56.4	56.3
Plate	17.7	17.4	17.2	16.9	19.3
Sheet and strip	13.3	14.4	14.9	15.3	15.1
Bars & certain shapes 1/	8.7	7.3	7.8	7.1	7.6
Wire rod	21.5	18.8	16.8	14.6	21.8
Wire	56.0	57.5	55.5	54.1	55.7
Wire products	3/	3/	3/	3/	3/
Structural shapes & units	24.1	15.4	10.7	12.0	10.7
Rails & related products	41.3	71.5	44.5	40.3	36.8
Pipe and tube	40.9	38.2	42.3	43.9	33.2
Total	18.8	18.5	18.5	19.1	18.4
Carbon & certain alloy 2/ steel:					
Semifinished	60.8	62.9	52.7	56.8	56.8
Plate	17.9	17.5	17.3	17.0	19.5
Sheet and strip	13.3	14.4	14.9	15.3	15.0
Bars & certain shapes	8.2	6.8	7.2	6.5	7.1
Wire rod	21.3	18.6	16.5	14.2	21.4
Wire	56.1	57.7	55.8	54.3	56.0
Wire products	3/	3/	3/	3/	3/
Structural shapes & units	24.1	15.4	10.7	12.0	10.7
Rails & related products	41.3	71.5	44.5	40.3	36.8
Pipe and tube	40.8	38.0	42.0	43.7	32.7
Total	18.7	18.4	18.4	19.0	18.3
Stainless & alloy tool steel:					
Stainless steel:					
Semifinished	42.8	62.5	45.1	43.7	34.1
Plate	9.8	9.6	11.9	11.9	13.2
Sheet and strip	13.7	15.3	16.2	15.3	17.3
Bars & certain shapes	26.2	26.8	30.9	29.9	31.2
Wire rod	41.0	44.2	46.6	43.0	54.9
Wire	49.1	48.3	45.0	45.5	44.3
Pipe and tube	48.2	62.8	71.4	65.2	67.7
Tool steel (all forms)	49.8	42.5	51.5	54.2	37.9
Total	21.9	23.2	24.4	23.8	23.5

1/ Includes tool steel.
2/ Certain alloy refers to alloy steel other than stainless or tool steel.
3/ Shipment and apparent consumption data for wire and wire products have been combined and are reported in the category designated "wire".
Note.--U.S. imports as a percent of apparent consumption of steel mill products only (excluding fabricated steel products): 17.9 percent (1989); 17.8 percent (1990); 17.9 percent (1991).
Source: Compiled from data of the American Iron & Steel Institute, and official statistics of the U.S. Department of Commerce.

Table 7.--Steel mill products and certain fabricated steel products: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Canada	3,203,970	3,189,823	1,485,273	2,181,947
Japan	3,205,475	2,880,969	1,557,489	1,288,053
Korea	1,520,641	1,583,466	873,309	801,897
Germany	1,591,850	1,448,397	675,192	716,379
Brazil	1,486,654	1,321,907	656,169	837,388
France	1,161,981	929,415	485,514	498,501
United Kingdom	823,983	626,679	276,348	331,821
Mexico	689,260	534,216	331,583	244,663
Netherlands	459,375	494,184	200,040	273,018
Belgium	485,121	452,790	254,782	185,313
Australia	310,515	368,973	202,962	193,102
Italy	382,145	330,724	199,683	167,915
Sweden	295,108	302,844	192,930	187,825
Spain	346,450	222,981	127,746	87,082
Argentina	196,273	198,550	149,354	38,551
All others	1,984,911	1,495,398	865,687	764,569
Total	18,143,711	16,381,316	8,534,062	8,798,023
East Asia	5,098,669	4,689,214	2,559,391	2,181,626
EC-12	5,550,937	4,749,489	2,337,678	2,376,762
Eastern Europe	169,471	201,883	137,329	45,832
LAIA	2,607,940	2,184,428	1,214,459	1,177,258
U.S. exports:				
Canada	2,041,948	1,729,394	914,754	797,646
Mexico	730,368	1,370,880	621,443	774,536
Korea	309,219	874,556	506,556	107,216
Japan	479,781	704,128	433,889	89,714
Taiwan	20,268	441,809	151,743	32,866
Venezuela	34,240	117,485	54,809	38,878
China	9,093	100,367	24,725	52,474
Algeria	323	79,907	4,190	12,042
Italy	125,904	78,215	57,423	21,214
Indonesia	49,737	76,615	46,810	9,635
All others	1,039,552	1,138,094	609,042	466,803
Total	4,840,433	6,711,450	3,425,383	2,403,025
East Asia	1,001,759	2,435,240	1,275,859	392,773
EC-12	331,469	273,576	202,522	91,915
Eastern Europe	1,627	2,244	561	2,589
LAIA	895,848	1,596,980	719,739	920,075

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

Table 8.--Carbon and certain alloy 1/ semifinished steel: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Brazil	813,302	704,348	334,648	484,096
Germany	238,170	244,191	104,146	136,935
United Kingdom	289,099	212,479	109,885	139,425
Mexico	235,733	201,417	146,763	73,540
Australia	129,746	160,936	80,522	97,889
France	122,970	125,539	90,205	34,253
Sweden	64,589	90,597	86,086	52,237
Canada	188,925	82,534	54,048	72,746
Netherlands	60,499	63,861	34,159	34,112
Belgium	88,307	60,690	42,017	43,065
Finland	6,383	46,472	18,808	25,916
Japan	9,574	3,450	1,098	7
Spain	0	38	19	19
Italy	49,399	29	28	6
Austria	2	22	0	106
All others	5,299	6	2	46,495
Total	2,301,998	1,996,610	1,102,434	1,240,846
East Asia	9,679	3,451	1,099	21,673
EC-12	852,870	706,828	380,459	387,815
Eastern Europe	45	0	0	0
LAIA	1,049,244	905,765	481,411	579,778
U.S. exports:				
Taiwan	663	184,829	55,278	23,137
Canada	89,628	64,671	17,817	14,297
Korea	17,328	61,898	6,555	944
Mexico	15,231	58,606	8,575	82,020
Japan	66,077	54,715	24,717	312
Indonesia	33,973	47,515	22,283	5,649
Australia	106	41,852	40,783	1,125
Egypt	33,045	27,458	27,458	0
France	37,241	18,274	16,999	1,167
Malaysia	3	18,201	18,182	0
All others	222,554	100,998	54,600	72,538
Total	515,848	679,017	293,248	201,189
East Asia	145,864	374,529	131,935	30,364
EC-12	52,558	40,556	33,461	6,935
Eastern Europe	0	2	0	14
LAIA	61,725	76,435	10,938	131,569

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 9.--Carbon and certain alloy 1/ steel plate: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Canada	271,734	253,456	99,486	250,818
Belgium	137,014	128,925	75,503	30,964
France	190,068	123,918	59,308	128,712
Germany	145,329	110,292	63,935	48,470
Sweden	118,078	92,202	50,090	67,922
Brazil	86,554	87,312	51,668	45,751
Finland	111,410	69,827	29,862	42,815
Spain	68,136	69,560	37,059	17,905
United Kingdom	52,589	43,631	18,919	16,127
Poland	26,695	38,357	23,690	8,198
Japan	32,833	37,202	18,686	9,513
Romania	31,650	36,428	25,070	7,934
Netherlands	29,663	35,046	12,278	25,758
Italy	24,785	30,364	15,968	6,740
Korea	36,677	28,038	17,430	9,251
All others	188,858	85,007	51,744	93,571
Total	1,552,071	1,269,565	650,697	810,449
East Asia	69,510	65,240	36,115	18,764
EC-12	654,277	546,178	284,927	276,923
Eastern Europe	90,723	111,567	71,249	22,684
LAIA	145,386	116,284	64,392	79,776
U.S. exports:				
Japan	79,393	218,102	129,189	24,613
Canada	227,677	165,570	106,196	51,461
Mexico	44,828	142,589	61,520	97,438
Korea	33,566	71,475	42,823	19,495
Greece	16,160	37,118	37,118	0
Taiwan	406	18,350	3,210	1,920
Singapore	2,622	14,541	2	0
Malaysia	1,851	10,977	2,279	0
Argentina	1,273	9,095	108	39
Thailand	11,599	4,862	1,875	1,004
All others	22,894	13,932	7,794	15,000
Total	442,269	706,612	392,115	210,971
East Asia	131,020	341,298	182,176	47,115
EC-12	30,215	38,670	38,585	232
Eastern Europe	0	33	0	0
LAIA	48,604	155,076	63,500	109,107

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 10.--Carbon and certain alloy 1/ steel sheet and strip: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Japan	1,935,695	1,645,466	883,387	804,061
Canada	870,806	998,359	406,620	755,974
Korea	850,043	940,867	492,759	514,794
Germany	769,818	621,544	271,167	377,099
France	506,426	398,099	176,148	203,000
Netherlands	353,834	381,158	148,458	202,899
Brazil	281,888	241,021	127,076	177,553
Australia	150,452	182,057	107,870	85,200
Belgium	140,754	177,477	92,597	55,838
Italy	162,889	161,602	88,678	132,235
Argentina	48,399	96,861	67,438	12,511
Mexico	129,935	88,650	47,519	51,845
Austria	96,106	70,538	51,028	2,233
Finland	79,465	67,129	33,438	30,664
New Zealand	92,303	63,551	60,558	36,857
All others	425,967	305,977	176,377	177,398
Total	6,894,780	6,440,356	3,231,119	3,620,162
East Asia	2,887,533	2,639,916	1,419,821	1,330,809
EC-12	2,091,485	1,889,808	852,362	1,043,771
Eastern Europe	16,104	10,187	7,582	5,232
LAIA	546,963	444,740	256,872	242,522
U.S. exports:				
Canada	616,264	646,281	328,774	323,532
Mexico	332,192	638,605	305,403	354,682
Korea	215,564	620,782	424,399	52,916
Japan	256,885	357,450	252,217	62,109
Taiwan	7,288	216,054	81,882	2,643
Italy	70,018	43,004	35,739	13,283
Hong Kong	20,996	28,617	10,431	15,858
Venezuela	1,567	26,715	1,776	5,304
Malaysia	762	25,037	15,196	213
Indonesia	6,213	22,516	20,727	435
All others	263,645	162,058	93,680	104,897
Total	1,791,394	2,787,119	1,570,225	935,874
East Asia	524,285	1,308,014	824,775	170,247
EC-12	122,692	61,954	46,883	25,039
Eastern Europe	520	152	56	344
LAIA	371,964	688,548	316,767	384,376

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 11.--Carbon and certain alloy 1/ steel bars and light shapes: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Canada	339,393	341,964	158,272	240,124
United Kingdom	162,112	159,667	47,073	51,055
Brazil	84,587	85,635	52,634	28,794
Japan	92,407	84,049	43,937	43,400
France	65,807	68,718	34,529	31,345
Germany	53,152	48,104	17,896	16,450
Turkey	31,970	27,370	7,285	22,400
Venezuela	32,482	21,847	7,849	8,793
Colombia	6,748	21,216	12,055	0
Korea	39,102	20,105	17,513	4,462
Mexico	13,193	11,194	6,116	5,786
Spain	16,397	10,259	5,024	5,357
Trinidad and Tobago	31,873	8,520	6,035	4,477
Argentina	22,515	6,389	5,966	375
Sweden	4,759	5,775	2,343	3,645
All others	38,757	23,033	12,473	13,947
Total	1,035,255	943,845	437,002	480,410
East Asia	146,212	110,440	63,798	50,568
EC-12	304,883	292,972	108,565	107,438
Eastern Europe	2,212	730	383	215
LAIA	159,525	146,281	84,621	43,747
U.S. exports:				
Canada	257,120	226,334	121,460	101,307
Mexico	49,232	171,716	67,929	90,241
Algeria	0	36,678	0	0
Turkey	11,080	23,915	15,561	104
Japan	11,637	22,294	11,693	265
Egypt	6	19,451	1	25
Guatemala	8,587	8,468	4,315	8,641
Bahamas	3,829	4,626	2,320	1,988
Dominican Republic	1,203	4,326	3,951	528
United Kingdom	2,999	3,747	2,922	273
All others	82,619	38,712	19,282	69,915
Total	428,311	560,268	249,434	273,287
East Asia	42,175	28,050	13,994	47,324
EC-12	12,255	7,242	4,660	3,817
Eastern Europe	102	110	33	52
LAIA	71,141	180,199	72,514	99,907

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 12.--Carbon and certain alloy 1/ steel wire rod: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Canada	344,955	378,768	165,863	266,207
Japan	182,818	193,795	95,867	112,766
Turkey	89,832	64,336	16,097	52,638
France	77,171	50,167	28,929	25,877
Trinidad and Tobago	36,782	45,466	13,121	42,528
Brazil	70,254	19,547	6,560	55,687
Germany	7,467	17,051	2,001	10,320
Australia	9,962	16,836	9,584	4,852
Luxembourg	14,145	12,401	1,922	8,447
Sweden	8,556	8,672	5,290	3,148
Venezuela	16,071	5,467	3,249	14,925
Mexico	30,162	3,981	0	0
Italy	1,824	2,070	1,055	396
United Kingdom	7,410	705	660	6,282
Taiwan	1,471	649	286	355
All others	57,234	1,114	538	2,171
Total	956,113	821,026	351,021	606,598
East Asia	189,584	194,490	96,198	113,120
EC-12	147,053	83,344	34,944	53,197
Eastern Europe	0	0	0	0
LAIA	117,364	29,080	9,893	70,617
U.S. exports:				
Canada	45,217	54,997	27,994	13,539
Mexico	33,667	51,094	24,128	12,057
Korea	363	24,557	11,339	29
Malaysia	4	8,549	5	16
Ecuador	12	7,508	7,479	0
Thailand	7	5,301	44	0
Singapore	52	3,792	0	108
Guatemala	94	1,998	11	678
Venezuela	422	1,094	756	945
Peru	107	908	7	0
All others	21,276	2,433	1,869	820
Total	101,219	162,231	73,631	28,192
East Asia	20,496	42,925	12,001	215
EC-12	566	541	376	125
Eastern Europe	0	0	0	0
LAIA	34,502	60,630	32,374	13,482

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 13.--Carbon and certain alloy 1/ steel wire: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Canada	160,741	153,425	76,151	90,761
Japan	63,483	59,440	30,841	31,769
Belgium	45,978	33,139	16,808	20,806
France	29,468	24,759	13,331	15,728
United Kingdom	19,881	15,959	6,687	8,341
Brazil	8,504	13,397	7,028	4,972
Germany	13,996	11,351	5,179	6,611
Taiwan	8,060	10,308	5,091	6,471
Venezuela	6,092	8,124	3,415	3,577
Sweden	7,240	7,738	4,070	4,173
China	8,228	7,418	3,501	4,015
India	6,759	6,653	4,427	3,338
Korea	4,003	4,944	2,762	1,461
Australia	4,849	4,880	2,393	1,889
Mexico	3,259	3,977	1,850	1,414
All others	23,467	9,239	5,168	5,510
Total	414,008	374,750	188,704	210,836
East Asia	84,131	82,454	42,397	44,021
EC-12	115,313	88,833	43,621	53,878
Eastern Europe	122	215	81	167
LAIA	30,091	28,282	14,693	10,534
U.S. exports:				
Canada	34,294	33,308	16,246	20,093
Korea	82	22,124	7,802	57
Mexico	13,064	18,163	7,425	10,115
Brazil	625	3,987	2,189	468
United Kingdom	540	1,345	1,129	274
Germany	1,004	1,091	712	487
Romania	632	985	369	677
Costa Rica	677	792	575	203
Jamaica	282	524	338	676
Bahamas	24	414	359	0
All others	15,227	4,042	1,969	2,891
Total	66,453	86,775	39,113	35,942
East Asia	11,675	22,932	8,180	569
EC-12	1,986	2,820	2,074	1,047
Eastern Europe	635	985	369	681
LAIA	14,792	22,628	9,936	10,733

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 14.--Carbon and certain alloy 1/ steel wire products: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Korea	185,686	155,381	80,371	83,112
Canada	98,435	97,098	47,584	53,585
Japan	59,622	41,508	23,339	23,847
Mexico	34,023	26,959	14,644	16,965
China	42,136	23,727	7,754	25,116
Spain	23,142	16,375	10,115	11,998
Indonesia	22,699	14,540	3,616	12,986
Italy	8,244	12,639	4,015	8,183
Brazil	12,446	11,622	5,903	6,624
Taiwan	14,687	11,071	4,521	7,144
Poland	9,780	10,354	3,993	4,178
Belgium	16,284	10,201	6,067	6,709
France	10,257	8,655	4,342	5,935
Oman	5,706	7,469	3,260	943
United Arab Emirates	10,333	7,294	2,857	3,035
All others	106,845	56,947	25,972	30,088
Total	660,325	511,839	248,353	300,448
East Asia	333,007	249,162	120,464	154,270
EC-12	78,806	63,172	31,344	41,799
Eastern Europe	14,985	12,840	5,252	5,206
LAIA	83,842	54,541	28,601	29,189
U.S. exports:				
Canada	18,671	21,473	9,916	13,910
Mexico	5,625	9,620	4,580	3,728
Turkey	1,159	2,383	2,381	221
Costa Rica	492	1,094	792	596
Nigeria	449	943	507	28
Germany	836	919	666	373
Saudi Arabia	485	896	466	373
Japan	1,206	890	610	168
Bahamas	1,165	778	360	579
Panama	412	760	286	792
All others	11,048	11,796	6,075	8,046
Total	41,548	51,552	26,641	28,814
East Asia	2,635	2,437	1,165	2,868
EC-12	3,937	3,185	1,884	1,020
Eastern Europe	13	33	13	14
LAIA	6,797	12,654	5,897	5,226

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 15.--Carbon and certain alloy 1/ steel structural shapes and units: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Canada	278,669	217,538	122,933	118,559
Luxembourg	160,457	88,005	48,284	57,840
United Kingdom	163,073	82,168	46,088	28,951
Japan	114,932	48,069	21,780	28,004
Spain	93,138	41,845	22,037	10,414
Poland	15,062	24,309	24,309	3,166
Belgium	42,548	22,295	11,402	21,569
Germany	35,696	19,376	11,052	13,114
Mexico	36,696	13,031	8,045	4,106
Korea	8,147	12,012	8,928	1,614
Brazil	6,509	10,883	4,301	4,713
France	39,444	8,512	6,048	5,206
Argentina	5,353	6,416	4,439	2
China	1,477	1,705	478	404
Taiwan	5,365	1,377	523	660
All others	14,028	6,820	2,709	7,731
Total	1,020,593	604,361	343,357	306,054
East Asia	133,779	63,441	31,960	30,692
EC-12	537,513	263,352	145,450	137,619
Eastern Europe	15,193	24,371	24,371	3,166
LAIA	48,745	31,620	17,423	8,894
U.S. exports:				
Canada	220,316	202,996	110,253	75,019
Mexico	80,558	120,608	54,180	62,403
Korea	18,619	55,892	6,718	5,080
Japan	28,913	46,451	12,983	912
Nigeria	8,101	33,443	10,678	6,501
Singapore	12,774	25,848	19,314	7,576
Saudi Arabia	3,591	18,735	3,507	4,986
Taiwan	5,637	15,195	7,668	758
Hong Kong	625	13,747	1,484	737
United Kingdom	6,997	13,166	6,161	12,160
All others	108,876	110,938	59,795	46,533
Total	495,007	657,019	292,740	222,665
East Asia	81,859	173,428	57,415	28,161
EC-12	33,485	36,435	24,734	14,979
Eastern Europe	89	655	43	54
LAIA	88,965	133,113	60,340	71,065

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 16.--Carbon and certain alloy 1/ steel rails and related products: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Canada	200,252	144,179	49,060	57,753
Japan	87,191	97,927	56,137	52,276
Luxembourg	20,156	18,162	8,487	8,181
United Kingdom	9,977	17,636	4,557	23,559
Germany	12,930	7,791	6,117	5,635
Austria	6,319	3,642	1,695	5,050
Korea	4,025	3,609	2,144	2,088
Argentina	2	2,999	2,999	0
France	552	2,872	188	5,261
Australia	3,657	1,324	559	1,175
Brazil	1,336	1,272	703	1,253
Italy	587	461	171	186
Switzerland	11	311	311	0
Taiwan	246	284	136	99
Belgium	195	191	85	242
All others	2,117	936	257	1,427
Total	349,555	303,596	133,607	164,186
East Asia	91,557	101,908	58,472	54,471
EC-12	44,423	47,188	19,609	43,068
Eastern Europe	30	46	32	208
LAIA	1,523	4,510	3,821	1,369
U.S. exports:				
Mexico	88,527	63,187	42,524	15,329
Canada	274,018	25,407	17,689	18,608
Egypt	2,471	4,345	706	2,235
Guinea	539	1,821	689	136
Venezuela	1,022	1,701	708	635
Honduras	139	1,286	351	84
Peru	797	1,017	484	21
Panama	175	972	609	58
Australia	402	896	338	322
Brazil	575	732	261	57
All others	10,375	6,691	2,316	2,461
Total	379,039	108,056	66,675	39,946
East Asia	1,138	1,621	546	554
EC-12	305	684	343	529
Eastern Europe	70	55	5	0
LAIA	93,212	67,276	44,217	16,307

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 17.--Carbon and certain alloy 1/ steel pipe and tube: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Japan	540,343	579,441	335,901	138,379
Canada	400,098	473,741	274,880	252,306
Korea	374,528	397,957	239,600	151,959
Germany	276,053	334,299	178,745	81,553
Brazil	111,315	138,046	61,146	20,616
Mexico	140,133	133,064	90,752	34,010
Italy	116,589	101,440	78,116	10,524
France	83,086	82,614	55,540	22,921
Austria	32,169	74,215	70,097	71
Argentina	90,315	71,650	55,964	24,312
Taiwan	77,484	52,185	35,712	3,511
Greece	23,398	39,397	25,846	9,050
Venezuela	48,020	38,391	27,839	1,414
Spain	33,736	25,830	16,336	7,297
India	18,466	16,177	11,633	1,633
All others	176,455	128,708	73,504	75,961
Total	2,542,139	2,687,154	1,631,610	835,515
East Asia	1,037,566	1,053,805	623,632	301,259
EC-12	573,065	616,761	364,475	156,521
Eastern Europe	29,638	39,145	27,857	8,868
LAIA	391,387	381,849	235,921	80,592
U.S. exports:				
Canada	216,756	247,967	136,557	147,762
China	4,224	93,475	19,308	48,107
Venezuela	18,685	71,970	41,659	11,368
Algeria	316	43,178	4,181	12,039
Mexico	29,676	41,690	17,115	21,793
Nigeria	10,476	24,493	8,656	11,115
Italy	39,183	21,674	9,447	5,439
Saudi Arabia	2,411	19,591	4,258	11,968
Netherlands	6,726	17,260	12,378	5,632
Egypt	4,394	12,409	1,862	944
All others	124,488	144,468	69,840	85,721
Total	457,336	738,176	325,260	361,890
East Asia	29,009	113,178	32,704	60,360
EC-12	60,468	50,794	26,339	29,555
Eastern Europe	90	174	28	1,417
LAIA	62,876	140,473	72,473	51,266

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 18.--Total, carbon and certain alloy 1/ steel products: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Canada	3,154,008	3,141,061	1,454,897	2,158,833
Japan	3,118,898	2,790,348	1,510,973	1,244,021
Korea	1,502,300	1,562,912	861,507	790,406
Germany	1,559,775	1,420,222	662,795	700,221
Brazil	1,476,696	1,313,084	651,667	830,058
France	1,125,248	893,852	468,569	478,238
United Kingdom	792,907	600,606	266,446	320,828
Mexico	665,777	501,740	319,376	221,756
Netherlands	458,713	493,465	199,734	272,706
Belgium	481,998	443,048	248,386	180,839
Australia	309,960	368,963	202,955	193,098
Italy	368,274	312,350	189,439	159,812
Sweden	256,296	263,341	172,778	168,929
Argentina	196,215	198,547	149,352	38,549
Spain	312,752	190,585	112,016	72,664
All others	1,947,068	1,458,980	847,013	744,544
Total	17,726,887	15,953,102	8,317,904	8,575,502
East Asia	4,982,558	4,564,307	2,493,957	2,119,647
EC-12	5,399,689	4,598,435	2,265,756	2,302,028
Eastern Europe	169,052	199,101	136,806	45,746
LAIA	2,574,068	2,142,954	1,197,648	1,147,019
U.S. exports:				
Canada	1,999,961	1,689,005	892,903	779,529
Mexico	692,601	1,315,877	593,379	749,807
Korea	306,378	861,243	503,017	106,430
Japan	478,055	701,950	432,774	88,834
Taiwan	17,553	437,815	149,343	31,722
Venezuela	33,135	115,551	53,432	37,951
China	8,646	100,217	24,610	52,446
Algeria	323	79,907	4,190	12,042
Italy	125,208	77,458	56,896	21,045
Indonesia	49,495	75,999	46,593	9,503
All others	1,007,070	1,081,802	571,947	449,460
Total	4,718,424	6,536,824	3,329,083	2,338,769
East Asia	990,157	2,408,414	1,264,893	387,776
EC-12	293,344	242,881	179,339	83,278
Eastern Europe	1,518	2,198	547	2,576
LAIA	854,578	1,537,031	688,957	893,038

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 19.--Stainless semifinished steel: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Canada	26,379	21,273	15,092	9,821
Sweden	12,320	14,318	7,556	4,551
United Kingdom	11,705	7,316	497	14
Italy	728	2,354	1,726	622
Japan	1,679	2,101	1,447	421
Germany	104	1,012	361	1,228
Soviet Union	0	455	0	0
Spain	7,502	66	34	27
Mexico	275	65	51	43
France	0	1	1	0
Korea	85	1	1	0
Switzerland	0	0	0	0
Israel	0	0	0	0
Norway	0	0	0	0
Taiwan	1	0	0	0
All others	44	0	0	244
Total	60,822	48,962	26,765	16,971
East Asia	1,764	2,101	1,448	421
EC-12	20,041	10,749	2,618	1,892
Eastern Europe	42	0	0	0
LAIA	275	65	51	43
U.S. exports:				
Germany	488	5,132	5,084	44
Spain	0	4,626	4,622	0
France	103	2,612	2,507	5
Belgium	100	2,287	922	47
Canada	780	754	477	328
Mexico	895	713	387	902
Saudi Arabia	1,113	628	120	169
Korea	427	541	360	27
United Kingdom	313	458	316	144
Venezuela	78	398	370	155
All others	2,177	1,914	1,105	742
Total	6,472	20,063	16,269	2,563
East Asia	1,056	1,298	723	429
EC-12	1,339	15,155	13,475	260
Eastern Europe	0	9	9	0
LAIA	1,440	1,510	1,007	1,148

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

Table 20.--Stainless steel plate: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Finland	6,444	4,884	3,244	2,077
Belgium	1,744	4,719	2,505	2,534
Germany	3,019	3,328	957	2,103
United Kingdom	3,497	2,877	1,911	1,890
Japan	2,576	2,557	1,027	1,325
Korea	545	1,158	985	741
Sweden	1,510	972	375	654
Austria	126	464	284	120
Canada	178	247	239	64
France	191	69	63	300
Italy	48	66	66	23
Kenya	0	66	0	0
Spain	744	49	9	47
Netherlands	28	22	0	0
India	0	18	0	0
All others	0	2	0	1,682
Total	20,651	21,498	11,666	13,560
East Asia	3,121	3,715	2,012	2,067
EC-12	9,271	11,130	5,510	6,897
Eastern Europe	0	0	0	0
LAIA	0	0	0	89
U.S. exports:				
Korea	203	5,879	2,100	28
Canada	7,322	5,190	2,963	2,044
Mexico	1,973	3,942	3,623	531
United Kingdom	74	1,002	906	73
Italy	16	350	286	1
Sierra Leone	321	327	102	77
Colombia	39	248	116	11
Hong Kong	38	231	169	11
India	0	209	0	3
Honduras	19	90	27	32
All others	1,483	642	460	491
Total	11,487	18,111	10,752	3,304
East Asia	870	6,287	2,412	69
EC-12	428	1,470	1,274	126
Eastern Europe	0	17	0	0
LAIA	2,147	4,293	3,795	686

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

Table 21.--Stainless steel sheet and strip: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Japan	43,156	43,101	23,057	21,109
Mexico	22,362	31,782	12,002	22,440
France	24,674	23,313	12,197	13,010
Spain	15,238	17,318	8,549	6,814
Germany	10,963	11,577	4,924	6,044
United Kingdom	10,013	10,190	4,483	5,721
Korea	9,457	7,546	3,233	7,334
Sweden	5,529	6,689	3,418	3,552
Belgium	858	4,556	3,644	1,650
Italy	3,215	4,483	1,902	2,507
Finland	9,365	3,951	2,216	2,464
Canada	2,605	3,097	1,278	4,986
Brazil	2,239	730	79	1,066
India	2,773	343	343	21
Austria	13	67	33	28
All others	387	190	34	1,523
Total	162,846	168,934	81,392	100,268
East Asia	52,717	50,717	26,307	28,456
EC-12	65,131	71,485	35,698	35,746
Eastern Europe	34	19	0	0
LAIA	24,641	32,511	12,081	23,506
U.S. exports:				
Mexico	26,852	39,871	17,245	19,023
Canada	18,680	21,582	11,480	8,950
Korea	1,440	4,612	450	172
Hong Kong	608	3,150	1,880	404
United Kingdom	3,859	2,850	1,761	606
Turkey	708	2,419	2,079	0
Germany	671	1,918	1,301	2,491
France	506	1,518	509	1,551
Taiwan	965	1,514	809	875
Netherlands	47	1,438	639	102
All others	6,657	8,202	3,727	3,468
Total	60,993	89,073	41,881	37,642
East Asia	3,875	11,934	4,106	2,005
EC-12	5,866	8,782	5,094	5,408
Eastern Europe	105	19	5	7
LAIA	27,711	41,546	17,766	19,847

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

Table 22.--Stainless steel bars and shapes: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Japan	17,777	19,988	9,804	8,934
Spain	4,127	5,626	2,867	3,159
Canada	5,374	5,089	2,992	3,058
Korea	2,610	3,822	1,957	1,431
Sweden	3,308	3,595	1,747	2,079
Italy	1,743	3,347	2,152	1,318
Brazil	3,318	3,334	1,500	2,528
France	2,444	3,047	1,155	1,275
United Kingdom	1,770	1,757	881	454
India	1,084	1,404	659	848
Germany	717	566	230	542
Switzerland	15	321	45	153
Yugoslavia	53	259	88	72
Austria	130	136	55	70
Taiwan	3	125	42	66
All others	52	77	15	92
Total	44,526	52,493	26,189	26,079
East Asia	20,389	23,946	11,803	10,432
EC-12	10,817	14,349	7,284	6,765
Eastern Europe	53	259	88	72
LAIA	3,351	3,349	1,515	2,529
U.S. exports:				
Canada	4,479	3,590	1,977	1,809
Israel	1,352	2,669	1,697	461
Taiwan	1,541	1,433	875	108
United Kingdom	1,552	1,285	654	1,582
Mexico	639	1,202	740	389
Japan	697	963	545	434
Belgium	8	834	833	6
Netherlands	404	667	363	152
Venezuela	577	596	562	341
Switzerland	187	272	117	92
All others	4,568	3,478	2,201	2,420
Total	16,005	16,989	10,566	7,796
East Asia	3,055	3,096	1,852	1,179
EC-12	3,525	3,294	2,119	2,142
Eastern Europe	0	0	0	1
LAIA	1,428	2,073	1,436	805

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

Table 23.--Stainless steel wire rod: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
France	4,525	5,547	2,048	3,838
Japan	5,195	4,574	2,051	3,378
Sweden	4,621	4,244	2,491	2,357
Spain	3,354	3,309	1,726	1,605
Italy	2,484	2,922	1,412	1,047
India	97	1,729	745	2,144
Brazil	1,413	1,671	558	1,722
Korea	861	1,604	699	496
Taiwan	0	126	126	0
United Kingdom	184	120	60	200
Canada	168	48	4	10
Austria	0	3	3	0
Germany	218	0	0	0
Argentina	0	0	0	0
Netherlands	8	0	0	21
All others	0	0	0	0
Total	23,128	25,897	11,922	16,818
East Asia	6,057	6,305	2,876	3,874
EC-12	10,772	11,898	5,246	6,711
Eastern Europe	0	0	0	0
LAIA	1,413	1,671	558	1,722
U.S. exports:				
Mexico	1,439	875	694	89
Brazil	524	736	386	290
Canada	1,666	674	466	88
Taiwan	25	640	485	64
Hong Kong	59	299	285	6
Saudi Arabia	4	183	164	14
Israel	75	144	61	35
Philippines	9	128	127	0
Panama	98	107	106	1
United Kingdom	73	105	86	25
All others	1,440	334	186	375
Total	5,413	4,224	3,046	987
East Asia	225	1,186	941	252
EC-12	215	161	121	55
Eastern Europe	0	0	0	0
LAIA	2,038	1,702	1,128	447

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

Table 24.--Stainless steel wire: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Japan	3,393	2,677	1,434	1,316
Sweden	2,051	2,531	1,204	1,615
Canada	2,404	2,156	1,151	1,179
France	2,354	1,862	827	989
Italy	1,081	1,447	721	667
Taiwan	867	1,441	759	971
United Kingdom	1,441	1,082	463	891
Spain	635	932	346	489
Korea	619	778	457	476
Switzerland	284	591	182	248
Belgium	448	386	190	267
Germany	484	361	257	310
India	1,613	337	283	120
Brazil	446	321	264	3
Thailand	175	105	93	74
All others	32	47	30	56
Total	18,328	17,054	8,659	9,669
East Asia	5,055	5,002	2,744	2,836
EC-12	6,443	6,070	2,803	3,634
Eastern Europe	0	4	4	0
LAIA	466	341	271	31
U.S. exports:				
Canada	1,311	1,119	618	580
Mexico	507	507	258	170
United Kingdom	177	171	112	16
Panama	0	116	115	0
Germany	288	105	33	34
Jamaica	81	69	69	2
Costa Rica	24	64	58	13
Sweden	39	57	42	14
France	58	51	36	13
Hong Kong	147	37	36	0
All others	966	344	226	255
Total	3,599	2,640	1,603	1,097
East Asia	388	122	95	62
EC-12	652	397	237	125
Eastern Europe	2	1	0	0
LAIA	551	530	273	218

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

Table 25.--Stainless steel pipe and tube: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Japan	8,787	11,333	6,041	5,650
Taiwan	8,216	9,333	5,032	2,816
Korea	3,470	5,391	4,323	1,013
Spain	2,084	4,969	2,164	2,255
Canada	5,711	4,479	2,188	1,628
Italy	2,845	2,729	1,511	1,667
Romania	0	1,993	0	0
Singapore	1,038	1,529	663	938
France	1,561	1,446	507	551
United Kingdom	724	1,238	770	1,187
Sweden	3,225	908	496	375
Netherlands	412	650	305	269
Germany	6,885	517	290	759
Mexico	597	511	132	239
Austria	929	441	274	510
All others	736	752	280	1,503
Total	47,220	48,218	24,976	21,361
East Asia	22,159	28,278	16,300	11,877
EC-12	14,525	11,554	5,552	6,701
Eastern Europe	0	1,993	0	1
LAIA	598	526	134	242
U.S. exports:				
Canada	6,423	5,623	3,121	3,043
Mexico	3,458	2,652	1,190	1,929
Korea	579	2,050	474	471
Saudi Arabia	7	1,480	4	6
Singapore	672	342	164	298
United Kingdom	297	299	203	50
Netherland Antilles	0	296	294	4
India	5	234	73	237
Germany	87	193	105	30
Venezuela	158	155	113	96
All others	1,755	1,610	874	1,148
Total	13,443	14,934	6,615	7,312
East Asia	1,834	2,673	704	869
EC-12	571	816	525	184
Eastern Europe	1	0	0	0
LAIA	3,830	2,971	1,390	2,160

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

Table 26.--Alloy tool steel (all forms): U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Canada	7,142	12,371	7,432	2,367
Germany	9,686	10,814	5,379	5,171
Sweden	6,247	6,246	2,866	3,715
Japan	4,015	4,291	1,655	1,899
Austria	2,810	4,139	2,325	1,216
Brazil	2,542	2,766	2,102	1,921
United Kingdom	1,741	1,493	837	635
Italy	1,726	1,027	754	252
China	74	299	143	23
France	984	277	148	301
Poland	289	276	201	14
Korea	694	254	147	0
Czech and Slovak Republic	0	230	230	0
Finland	0	172	172	1
Spain	14	127	35	21
All others	1,341	377	163	258
Total	39,304	45,158	24,588	17,795
East Asia	4,848	4,844	1,945	2,016
EC-12	14,247	13,818	7,211	6,388
Eastern Europe	289	506	431	14
LAIA	3,127	3,011	2,200	2,078
U.S. exports:				
Mexico	2,005	5,241	3,927	1,697
Canada	1,326	1,859	748	1,276
Angola	0	273	134	26
Germany	231	270	156	105
United Kingdom	33	177	128	66
Netherlands	29	94	21	97
Korea	12	84	78	6
Taiwan	44	59	30	15
Israel	38	58	43	6
Netherland Antilles	93	52	46	7
All others	783	425	258	255
Total	4,594	8,592	5,569	3,556
East Asia	300	230	134	132
EC-12	408	621	339	337
Eastern Europe	0	0	0	5
LAIA	2,124	5,322	3,987	1,725

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

Table 27.--Total, stainless and alloy tool steel products: U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

Short tons

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Japan	86,577	90,622	46,516	44,032
Canada	49,962	48,761	30,376	23,114
Sweden	38,812	39,503	20,152	18,897
France	36,733	35,562	16,945	20,263
Mexico	23,483	32,476	12,207	22,907
Spain	33,698	32,396	15,730	14,418
Germany	32,075	28,175	12,398	16,158
United Kingdom	31,076	26,073	9,901	10,992
Korea	18,341	20,554	11,802	11,491
Italy	13,870	18,374	10,243	8,103
Taiwan	9,087	11,043	5,959	3,960
Belgium	3,123	9,742	6,396	4,474
Finland	15,809	9,018	5,639	4,573
Brazil	9,958	8,823	4,503	7,330
Austria	4,009	5,258	2,983	1,981
All others	10,212	11,834	4,407	9,828
Total	416,824	428,214	216,157	222,521
East Asia	116,110	124,908	65,434	61,979
EC-12	151,247	151,054	71,922	74,734
Eastern Europe	419	2,782	523	86
LAIA	33,871	41,474	16,810	30,239
U.S. exports:				
Mexico	37,767	55,003	28,064	24,729
Canada	41,987	40,390	21,851	18,117
Korea	2,842	13,313	3,539	786
Germany	2,269	7,791	6,746	2,945
United Kingdom	6,379	6,347	4,166	2,562
Spain	1,207	4,844	4,795	511
France	855	4,425	3,141	1,634
Hong Kong	1,197	4,013	2,572	859
Taiwan	2,715	3,995	2,400	1,144
Belgium	552	3,928	2,542	115
All others	24,237	30,579	16,486	10,854
Total	122,007	174,626	96,300	64,256
East Asia	11,602	26,826	10,966	4,997
EC-12	13,003	30,695	23,184	8,637
Eastern Europe	109	46	14	13
LAIA	41,270	59,949	30,782	27,037

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

Table 28.--Steel mill products and certain fabricated steel products: Value of U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992

$1,000

Item	1990	1991	January-June	
			1991	1992
U.S. imports for consumption:				
Carbon & certain alloy 1/ steel:				
Semifinished	538,223	505,791	280,622	281,046
Plate	568,637	454,927	233,076	263,608
Sheet and strip	3,265,704	2,939,948	1,502,479	1,677,325
Bars & certain shapes	476,540	440,348	210,609	213,520
Wire rod	340,591	294,588	130,396	201,292
Wire	309,503	278,526	140,571	162,676
Wire products	658,004	527,030	259,164	308,021
Structural shapes & units-	476,520	325,913	178,390	147,806
Rails & related products--	136,287	134,028	66,166	81,498
Pipe and tube	1,473,676	1,661,570	999,518	494,850
Subtotal	8,243,685	7,562,669	4,000,991	3,831,642
Stainless & alloy tool steel:				
Stainless steel:				
Semifinished	79,442	73,116	40,314	25,235
Plate	47,239	51,274	26,804	27,539
Sheet and strip	323,263	332,432	162,558	190,928
Bars & certain shapes---	118,157	133,704	66,856	63,144
Wire rod	56,004	60,057	28,735	34,035
Wire	71,776	69,145	35,065	37,014
Pipe and tube	186,548	194,508	103,644	87,044
Tool steel (all forms)----	87,814	78,904	41,243	36,169
Subtotal	970,242	993,141	505,220	501,109
Total	9,213,927	8,555,810	4,506,211	4,332,751
U.S. exports:				
Carbon & certain alloy 1/ steel:				
Semifinished	201,044	244,988	129,372	84,993
Plate	199,988	268,958	155,245	89,432
Sheet and strip	982,372	1,302,505	709,654	542,997
Bars & certain shapes	235,173	284,511	132,783	139,933
Wire rod	46,256	64,478	32,688	14,795
Wire	76,122	91,063	44,272	44,206
Wire products	90,155	90,003	46,737	62,505
Structural shapes & units-	427,462	595,121	229,221	196,353
Rails & related products--	83,716	82,168	44,318	35,120
Pipe and tube	515,023	752,052	345,243	399,129
Subtotal	2,857,311	3,775,847	1,869,533	1,609,463

Table 28.--Steel mill products and certain fabricated steel products: Value of U.S. imports for consumption, U.S. exports, by selected countries and country groups, 1990, 1991, and by specified periods, 1991 and 1992 --Continued.

$1,000

Item	1990	1991	January-June	
			1991	1992
U.S. exports:				
Stainless & alloy tool steel:				
Stainless steel:				
Semifinished	21,655	49,913	37,632	14,285
Plate	24,883	33,831	18,315	10,492
Sheet and strip	136,772	202,178	98,394	92,460
Bars & certain shapes	46,062	55,686	30,812	22,119
Wire rod	13,055	12,170	8,182	3,041
Wire	17,245	14,235	8,201	6,229
Pipe and tube	59,660	66,996	32,493	34,619
Tool steel (all forms)	13,610	21,482	11,169	14,973
Subtotal	332,942	456,490	245,196	198,217
Total	3,190,253	4,232,337	2,114,730	1,807,680

1/ Certain alloy refers to alloy steel other than stainless or tool steel.

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

Table 29.--Steel mill products and certain fabricated steel products: Unit value of U.S. imports for consumption, 1990, 1991, and by specified periods, 1991 and 1992

(Dollars per short ton)

Item	1990	1991	January-June	
			1991	1992
Carbon and certain alloy 1/ steel:				
Semifinished 2/	234	253	255	226
Plate	366	358	358	325
Sheet and strip:				
Hot rolled	334	320	329	314
Cold rolled	502	492	493	492
Galvanized	581	542	544	581
Tin plate	616	624	623	628
Tin free	581	606	606	635
Other coated	643	619	608	593
Average, sheet and strip	474	456	465	463
Bar:				
Hot finished	463	462	477	443
Cold finished	684	701	707	728
Reinforcing	316	319	322	262
Light shapes	336	328	328	328
Average, bar	460	467	482	444
Wire rod	356	359	371	332
Wire	748	743	745	772
Wire products	996	1,030	1,044	1,025
Structural shapes and units:				
Heavy structurals	359	403	392	365
Fabricated structurals	1,371	1,373	1,408	1,232
Average, structurals	457	539	520	483
Rails and related products	390	441	495	496
Pipe and tube:				
Oil country tubular goods	728	757	732	891
Line pipe	510	597	600	566
Mechanical pipe	891	920	949	896
Structural pipe	538	519	528	482
Pressure tubing	1,093	1,082	963	1,124
Other (incl. standard)	503	522	504	518
Average, pipe and tube	580	618	613	592
Average, carbon and certain alloy 1/ steel	465	474	481	447

See footnotes at end of table.

Table 29.--Steel mill products and certain fabricated steel products: Unit value of U.S. imports for consumption, 1990, 1991, and by specified periods, 1991 and 1992

(Dollars per short ton)

Item	1990	1991	January-June	
			1991	1992
Stainless and alloy tool steel:				
Stainless steel:				
Semifinished 2/	1,306	1,493	1,506	1,487
Plate	2,288	2,385	2,298	2,031
Sheet and strip:				
Sheet	1,823	1,785	1,793	1,726
Strip	3,084	3,211	3,296	3,315
Average, sheet and strip	1,985	1,968	1,997	1,904
Bars and shapes	2,654	2,547	2,553	2,421
Wire rod	2,421	2,319	2,410	2,024
Wire	3,916	4,054	4,050	3,828
Pipe and tube	3,951	4,034	4,150	4,075
Alloy tool steel (all forms) 1/	2,234	1,747	1,677	2,033
Average, stainless and alloy tool steel	2,328	2,319	2,337	2,252

1/ Including alloy steel other than stainless or tool steel.
2/ Semifinished steel includes ingots, blooms, billets, slabs, and sheet bars.

Source: Compiled from data of the American Iron & Steel Institute, and official statistics of the U.S. Department of Commerce.

Table 30.--Steel mill products and certain fabricated steel products: Unit value of U.S. exports, 1990, 1991, and by specified periods, 1991 and 1992

(Dollars per short ton)

Item	1990	1991	January-June	
			1991	1992
Carbon and certain alloy 1/ steel:				
Semifinished 2/	390	361	441	422
Plate	452	381	396	424
Sheet and strip:				
Hot rolled	347	320	320	391
Cold rolled	675	652	656	677
Galvanized	689	694	704	649
Tin plate	465	518	543	500
Tin free	621	624	575	631
Other coated	1,227	1,150	1,163	1,063
Average, sheet and strip	548	467	452	580
Bar:				
Hot finished	606	634	609	588
Cold finished	1,005	1,018	1,059	872
Reinforcing	321	288	300	292
Light shapes	444	465	436	501
Average, bar	549	506	529	512
Wire rod	457	397	444	525
Wire	1,146	1,049	1,132	1,230
Wire products	2,170	1,746	1,754	2,169
Structural shapes and units:				
Heavy structurals	436	423	432	433
Fabricated structurals	1,555	1,682	1,358	1,743
Average, structurals	864	906	783	882
Rails and related products	221	760	665	879
Pipe and tube:				
Oil country tubular goods	932	919	952	1,052
Line pipe	997	891	940	929
Other(mech,std,strc,pres.)	1,376	1,286	1,319	1,331
Average, pipe and tube	1,126	1,019	1,061	1,103
Average, carbon and certain alloy 1/ steel	606	578	561	688

See footnotes at end of table.

Table 30.--Steel mill products and certain fabricated steel products: Unit value of U.S. exports, 1990, 1991, and by specified periods, 1991 and 1992

(Dollars per short ton)

Item	1990	1991	January-June	
			1991	1992
Stainless and alloy tool steel:				
Stainless steel:				
Semifinished 2/	3,346	2,488	2,313	5,574
Plate	2,166	1,868	1,703	3,175
Sheet and strip:				
Sheet	2,359	2,434	2,535	2,697
Strip	2,185	2,156	2,201	2,335
Average, sheet and strip	2,242	2,270	2,349	2,456
Bars and shapes	2,878	3,278	2,916	2,837
Wire rod	2,412	2,881	2,686	3,081
Wire	4,792	5,392	5,116	5,678
Pipe and tube	4,438	4,486	4,912	4,735
Alloy tool steel (all forms) 1/	2,497	2,337	1,861	4,211
Average, stainless and alloy tool steel	2,314	2,604	2,529	3,085

1/ Including alloy steel other than stainless or tool steel.
2/ Semifinished steel includes ingots, blooms, billets, slabs, and sheet bars.

Source: Compiled from data of the American Iron & Steel Institute, and official statistics of the U.S. Department of Commerce.

Table 31.-- Steel mill products and certain fabricated steel products: U.S. imports for consumption of specified products and imports as a percent of major product groupings, 1990, 1991, and by specified periods, 1991 and 1992

Item	1990	1991	January-June	
			1991	1992
	Quantity (short tons)			
Carbon and certain alloy 1/ steel:				
Semifinished:				
Ingots	65,400	2,706	2,444	472
Blooms and billets	488,780	586,127	364,335	385,936
Slabs and sheet bars	1,747,818	1,407,776	735,655	854,438
Total	2,301,998	1,996,610	1,102,434	1,240,846
Plate:				
Carbon	1,420,427	1,144,460	596,961	730,925
Alloy	131,644	125,105	53,736	79,524
Total	1,552,071	1,269,565	650,697	810,449
Sheet and strip:				
Hot rolled:				
Sheet	2,274,942	2,116,126	994,037	1,190,624
Strip	96,349	105,520	45,296	74,707
Cold rolled:				
Black plate	146,079	129,488	56,958	60,766
Electrical	76,163	81,976	38,089	44,284
Other sheet	1,913,520	1,744,854	919,635	956,711
Other strip	118,377	119,987	57,310	72,012
Galvanized	1,649,264	1,527,317	807,791	856,141
Tin plate	313,549	310,962	147,493	164,687
Tin free	114,045	114,267	58,598	70,194
Other coated	192,491	189,857	105,912	130,037
Total	6,894,780	6,440,356	3,231,119	3,620,162
Bar:				
Hot rolled:				
Carbon	464,375	421,611	170,153	192,925
Alloy	202,466	231,736	112,144	137,696
Cold rolled:				
Carbon	91,358	79,946	42,775	38,943
Alloy	44,295	38,520	24,394	15,565
Reinforcing	147,882	107,344	49,924	59,531
Light structural shapes	84,880	64,689	37,613	35,749
Total	1,035,255	943,845	437,002	480,410

See footnotes at end of table.

Table 31.-- Steel mill products and certain fabricated steel products: U.S. imports for consumption of specified products and imports as a percent of major product groupings, 1990, 1991, and by specified periods, 1991 and 1992--Continued

Item	1990	1991	January-June	
			1991	1992
	Quantity (short tons)			
Wire rod and related products:				
Wire rod:				
Carbon	936,837	800,363	340,209	594,747
Alloy	19,276	20,663	10,812	11,851
Wire:				
Carbon	375,454	337,141	171,068	190,431
Alloy	38,555	37,609	17,636	20,405
Wire products:				
Nails	373,685	286,915	132,152	168,460
Barbed wire	15,350	11,167	6,572	6,886
Wire fencing	46,164	36,793	19,820	21,896
Bale ties	696	497	240	283
Wire strand	152,051	102,065	51,542	63,501
Wire rope	72,380	74,402	38,027	39,422
Total	2,030,446	1,707,616	788,078	1,117,882
Structurals:				
Heavy	911,556	519,377	300,322	264,545
Fabricated	109,037	84,984	43,035	41,509
Total	1,020,593	604,361	343,357	306,054
Rails and related products:				
Rails	301,410	254,189	112,788	138,443
Joint bars and tie plates	10,205	12,991	8,286	5,914
Track spikes	2,602	3,352	1,474	1,571
Wheels and axles	35,337	33,064	11,059	18,257
Total	349,555	303,596	133,607	164,186
Pipes and tubes:				
Oil country tubular goods	381,022	412,616	262,899	49,318
Line pipe	695,930	1,003,500	650,412	254,704
Mechanical pipe	186,242	169,832	96,043	72,394
Structural pipe	275,432	209,824	111,820	115,530
Pressure tubing	38,044	35,881	19,604	13,561
Other (including standard)	965,519	855,502	490,832	330,009
Total	2,542,189	2,687,154	1,631,610	835,515

See footnotes at end of table.

Table 31.-- Steel mill products and certain fabricated steel products: U.S. imports for consumption of specified products and imports as a percent of major product groupings, 1990, 1991, and by specified periods, 1991 and 1992--Continued

Item	1990	1991	January-June	
			1991	1992
	Quantity (short tons)			
Stainless and alloy tool steel:				
Stainless:				
Semifinished:				
Ingots	273	2,702	1,927	156
Blooms and billets	41,560	32,516	18,536	12,472
Slabs and sheet bars	18,989	13,744	6,302	4,344
Total	60,822	48,962	26,765	16,971
Plate	20,651	21,498	11,666	13,560
Sheet and strip:				
Sheet:				
Hot rolled	6,822	4,699	1,973	5,130
Cold rolled	135,126	142,537	68,382	83,900
Strip	20,898	21,698	11,037	11,238
Total	162,846	168,934	81,392	100,268
Bars and shapes	44,526	52,493	26,189	26,079
Wire rod	23,128	25,897	11,922	16,818
Wire	18,328	17,054	8,659	9,669
Pipe and tube	47,220	48,218	24,976	21,361
Alloy tool steel (all forms):				
Semifinished 2/	6,771	10,608	6,902	1,813
Bars	26,843	25,407	12,825	11,720
Other	5,690	9,143	4,860	4,262
Total	39,304	45,158	24,588	17,795

See footnotes at end of table.

Table 31.-- Steel mill products and certain fabricated steel products: U.S. imports for consumption of specified products and imports as a percent of major product groupings, 1990, 1991, and by specified periods, 1991 and 1992

Item	1990	1991	January-June	
			1991	1992
	Import share of product group totals (percent)			
Carbon and certain alloy 1/ steel:				
Semifinished:				
Ingots	2.85	0.14	0.22	0.04
Blooms and billets	21.30	29.36	33.05	31.10
Slabs and sheet bars	75.85	70.51	66.73	68.86
Total	100.00	100.00	100.00	100.00
Plate:				
Carbon	91.52	90.15	91.74	90.19
Alloy	8.48	9.85	8.26	9.81
Total	100.00	100.00	100.00	100.00
Sheet and strip:				
Hot rolled:				
Sheet	33.00	32.86	30.76	32.89
Strip	1.40	1.64	1.40	2.06
Cold rolled:				
Black plate	2.12	2.01	1.76	1.68
Electrical	1.10	1.27	1.18	1.22
Other sheet	27.75	27.09	28.46	26.43
Other strip	1.72	1.86	1.77	1.99
Galvanized	23.92	23.71	25.00	23.65
Tin plate	4.55	4.83	4.56	4.55
Tin free	1.65	1.77	1.81	1.94
Other coated	2.79	2.95	3.28	3.59
Total	100.00	100.00	100.00	100.00
Bar:				
Hot rolled:				
Carbon	44.86	44.67	38.94	40.16
Alloy	19.56	24.55	25.66	28.66
Cold rolled:				
Carbon	8.82	8.47	9.79	8.11
Alloy	4.28	4.08	5.58	3.24
Reinforcing	14.28	11.37	11.42	12.39
Light structural shapes	8.20	6.85	8.61	7.44
Total	100.00	100.00	100.00	100.00

See footnotes at end of table.

Table 31.-- Steel mill products and certain fabricated steel products: U.S. imports for consumption of specified products and imports as a percent of major product groupings, 1990, 1991, and by specified periods, 1991 and 1992--Continued

Item	1990	1991	January-June	
			1991	1992
	Import share of product group totals (percent)			
Wire rod and related products:				
Wire rod:				
Carbon	46.14	46.87	43.17	53.20
Alloy	0.95	1.21	1.37	1.06
Wire:				
Carbon	18.49	19.74	21.71	17.03
Alloy	1.90	2.20	2.24	1.83
Wire products:				
Nails	18.40	16.80	16.77	15.07
Barbed wire	0.76	0.65	0.83	0.62
Wire fencing	2.27	2.15	2.52	1.96
Bale ties	0.03	0.03	0.03	0.03
Wire strand	7.49	5.98	6.54	5.68
Wire rope	3.56	4.36	4.83	3.53
Total	100.00	100.00	100.00	100.00
Structurals:				
Heavy	89.32	85.94	87.47	86.44
Fabricated	10.68	14.06	12.53	13.56
Total	100.00	100.00	100.00	100.00
Rails and related products:				
Rails	86.23	83.73	84.42	84.32
Joint bars and tie plates	2.92	4.28	6.20	3.60
Track spikes	0.74	1.10	1.10	0.96
Wheels and axles	10.11	10.89	8.28	11.12
Total	100.00	100.00	100.00	100.00
Pipes and tubes:				
Oil country tubular goods	14.99	15.36	16.11	5.90
Line pipe	27.38	37.34	39.86	30.48
Mechanical pipe	7.33	6.32	5.89	8.66
Structural pipe	10.83	7.81	6.85	13.83
Pressure tubing	1.50	1.34	1.20	1.62
Other (including standard)	37.98	31.84	30.08	39.50
Total	100.00	100.00	100.00	100.00

See footnotes at end of table.

Table 31.-- Steel mill products and certain fabricated steel products: U.S. imports for consumption of specified products and imports as a percent of major product groupings, 1990, 1991, and by specified periods, 1991 and 1992--Continued

Item	1990	1991	January-June	
			1991	1992
	Import share of product group totals (percent)			
Stainless and alloy tool steel:				
Stainless:				
Semifinished:				
Ingots	0.45	5.52	7.20	0.92
Blooms and billets	68.33	66.41	69.25	73.49
Slabs and sheet bars	31.22	28.07	23.55	25.59
Total	100.00	100.00	100.00	100.00
Plate	100.00	100.00	100.00	100.00
Sheet and strip:				
Sheet:				
Hot rolled	4.19	2.78	2.42	5.12
Cold rolled	82.98	84.37	84.02	83.68
Strip	12.83	12.84	13.56	11.21
Total	100.00	100.00	100.00	100.00
Bars and shapes	100.00	100.00	100.00	100.00
Wire rod	100.00	100.00	100.00	100.00
Wire	100.00	100.00	100.01	100.00
Pipe and tube	100.00	100.00	100.00	100.00
Alloy tool steel (all forms):				
Semifinished 2/	17.20	23.49	28.07	10.19
Bars	68.32	56.26	52.16	65.86
Other	14.50	20.25	19.77	23.95
Total	100.00	100.00	100.00	100.00

1/ Certain alloy refers to alloy steel other than stainless or tool steel.
2/ Semifinished steel includes ingots, blooms, billets, slabs, and sheet bars.

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

Table 32.-- Steel mill products and certain fabricated steel products: U.S. exports of specified products and exports as a percent of major product groupings, 1990, 1991, and by specified periods, 1991 and 1992

Item	1990	1991	January-June	
			1991	1992
	Quantity (short tons)			
Carbon and certain alloy 1/ steel:				
Semifinished 2/	515,848	679,017	293,248	201,189
Plate:				
Carbon	431,140	690,484	383,366	204,386
Alloy	11,129	16,128	8,749	6,584
Total	442,269	706,612	392,115	210,971
Sheet and strip:				
Hot rolled:				
Sheet	682,438	1,592,246	980,498	262,418
Strip	47,658	36,709	18,681	19,798
Cold rolled:				
Black plate	2,382	4,883	2,246	3,034
Electrical	47,574	84,184	44,906	27,655
Other sheet	346,747	380,228	188,777	195,808
Other strip	133,623	126,341	64,007	63,806
Galvanized	286,377	303,358	151,560	168,143
Tin plate	147,705	150,737	75,121	121,822
Tin free	25,605	37,987	11,137	27,955
Other coated	71,284	70,446	33,292	45,435
Total	1,791,394	2,787,119	1,570,225	935,874
Bar:				
Hot rolled:				
Carbon	137,475	136,338	71,456	75,266
Alloy	73,738	91,126	49,000	55,884
Cold rolled:				
Carbon	40,412	38,469	17,246	22,445
Alloy	4,846	10,179	6,022	6,339
Reinforcing	118,919	234,616	84,309	90,988
Light structural shapes	52,921	49,540	21,400	22,365
Total	428,311	560,268	249,434	273,287

See footnotes at end of table.

Table 32.-- Steel mill products and certain fabricated steel products: U.S. exports of specified products and exports as a percent of major product groupings, 1990, 1991, and by specified periods, 1991 and 1992--Continued

Item	1990	1991	January-June	
			1991	1992
	Quantity (short tons)			
Wire rod and related products:				
Wire rod:				
Carbon	94,960	155,710	70,320	24,138
Alloy	6,260	6,522	3,312	4,054
Wire:				
Carbon	54,841	75,236	32,977	30,296
Alloy	11,611	11,539	6,136	5,646
Wire products:				
Nails	11,853	14,135	6,532	7,836
Barbed wire	2,715	3,997	1,892	1,127
Wire fencing	7,694	10,794	5,071	6,980
Wire strand	14,704	18,245	10,739	10,063
Wire rope	4,582	4,380	2,407	2,807
Total	209,220	300,559	139,385	92,948
Structurals:				
Heavy	305,804	405,222	181,751	146,386
Fabricated	189,204	251,796	110,988	76,279
Total	495,007	657,019	292,740	222,665
Rails and related products:				
Rails	110,214	77,005	51,859	16,860
Joint bars and tie plates	261,635	15,601	10,370	11,938
Wheels and axles	7,191	15,450	4,447	11,148
Total	379,039	108,056	66,675	39,946
Pipes and tubes:				
Oil country tubular goods	194,770	362,765	162,157	123,951
Line pipe	73,420	162,052	63,887	119,198
Other (mech,std,struc,pres.)	189,147	213,358	99,216	118,740
Total	457,336	738,176	325,260	361,890

See footnotes at end of table.

Table 32.-- Steel mill products and certain fabricated steel products: U.S. exports of specified products and exports as a percent of major product groupings, 1990, 1991, and by specified periods, 1991 and 1992--Continued

Item	1990	1991	January-June	
			1991	1992
	Quantity (short tons)			
Stainless and alloy tool steel:				
Stainless:				
Semifinished 2/	6,472	20,063	16,269	2,563
Plate	11,487	18,111	10,752	3,304
Sheet and strip:				
Sheet:				
Hot rolled	2,922	5,582	3,024	1,465
Cold rolled	17,266	30,906	15,599	11,124
Strip	40,806	52,586	23,258	25,052
Total	60,993	89,073	41,881	37,642
Bars and shapes	16,005	16,989	10,566	7,796
Wire rod	5,413	4,224	3,046	987
Wire	3,599	2,640	1,603	1,097
Pipe and tube	13,443	14,934	6,615	7,312
Alloy tool steel (all forms)--	4,594	8,592	5,569	3,556
Total	122,006	174,626	96,301	64,257

See footnotes at end of table.

Table 32.-- Steel mill products and certain fabricated steel products: U.S. exports of specified products and exports as a percent of major product groupings, groupings, 1990, 1991, and by specified periods, 1991 and 1992

Item	1990	1991	January-June	
			1991	1992
	Export share of product group totals (percent)			
Carbon and certain alloy 1/ steel:				
Semifinished 2/	100.00	100.00	100.00	100.00
Plate:				
Carbon	97.48	97.72	97.77	96.88
Alloy	2.52	2.28	2.23	3.12
Total	100.00	100.00	100.00	100.00
Sheet and strip:				
Hot rolled:				
Sheet	38.15	57.13	62.44	28.04
Strip	2.66	1.32	1.19	2.12
Cold rolled:				
Black plate	0.13	0.18	0.14	0.32
Electrical	2.53	3.02	2.86	2.96
Other sheet	19.38	13.64	12.02	20.92
Other strip	7.47	4.53	4.08	6.82
Galvanized	16.01	10.88	9.65	17.97
Tin plate	8.26	5.41	4.78	13.02
Tin free	1.43	1.36	0.71	2.99
Other coated	3.98	2.53	2.12	4.85
Total	100.00	100.00	100.00	100.00
Bar:				
Hot rolled:				
Carbon	32.10	24.39	28.79	27.54
Alloy	17.22	16.30	19.74	20.45
Cold rolled:				
Carbon	9.44	6.88	6.95	8.21
Alloy	1.13	1.60	1.92	2.32
Reinforcing	27.76	41.97	33.97	33.29
Light structural shapes	12.36	8.86	8.62	8.18
Total	100.00	100.00	100.00	100.00

See footnotes at end of table.

Table 32.-- Steel mill products and certain fabricated steel products: U.S. exports of specified products and exports as a percent of major product groupings, groupings, 1990, 1991, and by specified periods, 1991 and 1992--Continued

Item	1990	1991	January-June	
			1991	1992
	Export share of product group totals (percent)			
Wire rod and related products:				
Wire rod:				
Carbon	45.39	51.81	50.45	25.97
Alloy	2.99	2.17	2.38	4.36
Wire:				
Carbon	26.21	25.03	23.66	32.59
Alloy	5.55	3.84	4.40	6.07
Wire products:				
Nails	5.67	4.70	4.69	8.43
Barbed wire	1.30	1.33	1.36	1.21
Wire fencing	3.68	3.59	3.64	7.51
Wire strand	7.03	6.07	7.70	10.83
Wire rope	2.19	1.46	1.73	3.02
Total	100.00	100.00	100.00	100.00
Structurals:				
Heavy	61.78	61.68	62.09	65.74
Fabricated	38.22	38.32	37.91	34.26
Total	100.00	100.00	100.00	100.00
Rails and related products:				
Rails	29.08	71.26	77.78	42.21
Joint bars and tie plates	69.03	14.44	15.55	29.88
Wheels and axles	1.90	14.30	6.67	27.91
Total	100.00	100.00	100.00	100.00
Pipes and tubes:				
Oil country tubular goods	42.59	49.14	49.85	34.25
Line pipe	16.05	21.95	19.64	32.94
Other (mech,std,struc,pres.)	41.36	28.90	30.50	32.81
Total	100.00	100.00	100.00	100.00

See footnotes at end of table.

Table 32.-- Steel mill products and certain fabricated steel products: U.S. exports of specified products and exports as a percent of major product groupings, groupings, 1990, 1991, and by specified periods, 1991 and 1992--Continued

Item	1990	1991	January-June	
			1991	1992
	Export share of product group totals (percent)			
Stainless and alloy tool steel:				
Stainless:				
Semifinished 2/	100.00	100.00	100.00	100.00
Plate	100.00	100.00	100.00	100.00
Sheet and strip:				
Sheet:				
Hot rolled	4.79	6.27	7.22	3.89
Cold rolled	28.31	34.70	37.25	29.55
Strip	66.90	59.04	55.53	66.55
Total	100.00	100.00	100.00	100.00
Bars and shapes	100.00	100.00	100.00	100.00
Wire rod	100.00	100.00	100.00	100.00
Wire	100.00	100.00	100.00	100.00
Pipe and tube	100.00	100.00	100.00	100.00
Alloy tool steel (all forms)--	100.00	100.00	100.00	100.00
Total	100.00	100.00	100.00	100.00

1/ Certain alloy refers to alloy steel other than stainless or tool steel.
2/ Semifinished steel includes ingots, blooms, billets, slabs, and sheet bars.

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

Table 33.--Steel mill products and certain fabricated steel products: U.S. imports for consumption, by customs areas, 1990, 1991, and by specified periods, 1991 and 1992

(Short tons)

Item	1990	1991	January-June	
			1991	1992
Atlantic Coast	2,928,879	2,796,230	1,687,495	1,627,181
Great Lakes-Canadian border	5,846,525	5,092,319	2,076,553	2,929,069
Gulf Coast-Mexican border	4,633,694	4,388,184	2,628,198	2,174,676
Off-shore	309,270	267,302	139,251	137,608
Pacific Coast	4,425,344	3,837,281	2,002,565	1,929,489
Total	18,143,711	16,381,316	8,534,062	8,798,023

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

Table 34.--Steel mill products and certain fabricated steel products: U.S. imports, for consumption through the Atlantic Coast customs area, 1990, 1991, and by specified periods, 1991 and 1992

(Short tons)

Item	1990	1991	January-June	
			1991	1992
Carbon and certain alloy 1/ steel:				
Semifinished 2/	172,652	215,983	126,354	147,348
Plate	215,847	197,091	122,817	114,490
Sheet and strip	1,213,186	1,301,402	838,788	771,367
Bars and certain shapes	102,207	75,641	45,401	48,683
Wire rod	185,722	150,070	70,228	123,201
Wire	76,338	56,557	29,254	31,827
Wire products	211,516	142,681	67,456	92,278
Structural shapes and units	192,938	91,410	55,334	47,233
Rails and related products	26,018	27,479	16,505	17,808
Pipe and tube	360,166	366,760	226,581	140,125
Total	2,756,591	2,625,076	1,598,717	1,534,360
Stainless and alloy tool steel:				
Stainless steel:				
Semifinished 2/	21,028	14,741	8,274	4,921
Plate	9,071	7,984	4,341	7,570
Sheet and strip	57,221	62,101	33,177	34,978
Bars and certain shapes	19,501	23,850	11,942	12,280
Wire rod	17,513	18,497	8,179	13,001
Wire	10,169	9,195	4,917	4,866
Pipe and tube	18,163	15,230	7,821	6,113
Tool steel (all forms)	19,621	19,555	10,126	9,092
Total	172,288	171,154	88,778	92,821
Grand Total	2,928,879	2,796,230	1,687,495	1,627,181

1/ Certain alloy refers to alloy steel other than stainless or tool steel.
2/ Semifinished steel includes ingots, blooms, billets, slabs, and sheet bars.

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

Table 35.--Steel mill products and certain fabricated steel products: U.S. imports, for consumption through the Great Lakes-Canadian border customs area, 1990, 1991, and by specified periods, 1991 and 1992

(Short tons)

Item	1990	1991	January-June	
			1991	1992
Carbon and certain alloy 1/ steel:				
Semifinished 2/	376,130	147,430	69,473	138,157
Plate	578,160	481,880	173,313	320,298
Sheet and strip	2,466,866	2,216,955	768,718	1,212,419
Bars and certain shapes	590,935	557,758	221,829	312,632
Wire rod	387,724	394,153	169,308	278,621
Wire	202,258	197,111	95,465	117,840
Wire products	96,089	87,258	44,212	50,853
Structural shapes and units	399,695	267,925	145,272	138,671
Rails and related products	196,840	125,448	49,248	53,775
Pipe and tube	446,874	517,440	285,778	259,616
Total	5,741,573	4,993,357	2,022,617	2,882,882
Stainless and alloy tool steel:				
Stainless steel:				
Semifinished 2/	26,516	21,834	15,194	9,821
Plate	5,084	3,143	2,019	1,447
Sheet and strip	35,140	27,942	12,491	16,947
Bars and certain shapes	8,597	9,236	4,433	5,350
Wire rod	1,064	1,866	745	961
Wire	4,816	5,214	2,486	3,245
Pipe and tube	7,942	7,264	3,481	2,886
Tool steel (all forms)	15,794	22,463	13,087	5,530
Total	104,951	98,962	53,936	46,187
Grand Total	5,846,525	5,092,319	2,076,553	2,929,069

1/ Certain alloy refers to alloy steel other than stainless or tool steel.
2/ Semifinished steel includes ingots, blooms, billets, slabs, and sheet bars.

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

Table 36.--Steel mill products and certain fabricated steel products: U.S. imports, for consumption through the Gulf Coast-Mexican border customs area, 1990, 1991, and by specified periods, 1991 and 1992

(Short tons)

Item	1990	1991	January-June	
			1991	1992
Carbon and certain alloy 1/ steel:				
Semifinished 2/	608,575	603,254	371,081	322,298
Plate	626,168	490,505	297,042	329,364
Sheet and strip	1,253,794	1,240,151	768,435	725,804
Bars and certain shapes	124,950	150,691	89,537	50,031
Wire rod	217,475	197,187	81,009	173,499
Wire	53,333	44,736	25,990	22,921
Wire products	175,874	133,800	69,808	80,445
Structural shapes and units	197,391	128,798	79,454	69,146
Rails and related products	55,424	61,407	34,233	49,472
Pipe and tube	1,229,715	1,233,838	765,195	296,294
Total	4,542,699	4,284,367	2,581,784	2,119,274
Stainless and alloy tool steel:				
Stainless steel:				
Semifinished 2/	13,275	11,879	3,156	2,203
Plate	3,456	6,799	3,394	2,982
Sheet and strip	39,420	53,917	24,325	32,755
Bars and certain shapes	8,266	10,425	5,509	4,351
Wire rod	1,824	2,142	1,107	914
Wire	2,162	1,848	856	1,069
Pipe and tube	12,488	15,145	7,378	8,793
Tool steel (all forms)	10,104	1,663	689	2,335
Total	90,995	103,818	46,414	55,403
Grand Total	4,633,694	4,388,184	2,628,198	2,174,676

1/ Certain alloy refers to alloy steel other than stainless or tool steel.
2/ Semifinished steel includes ingots, blooms, billets, slabs, and sheet bars.

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

Table 37.--Steel mill products and certain fabricated steel products: U.S. imports, for consumption through the Off-shore customs area, 1990, 1991, and by specified periods, 1991 and 1992

(Short tons)

Item	1990	1991	January-June	
			1991	1992
Carbon and certain alloy 1/ steel:				
Semifinished 2/	3/	0	0	0
Plate	6,085	5,349	3,772	1,300
Sheet and strip	100,234	66,315	34,942	46,013
Bars and certain shapes	115,415	99,676	42,263	45,192
Wire rod	15,574	12,199	7,590	4,362
Wire	12,654	13,339	6,472	5,769
Wire products	8,213	5,953	3,272	2,783
Structural shapes and units	12,233	11,587	6,579	6,301
Rails and related products	624	439	73	751
Pipe and tube	37,894	49,995	32,640	24,934
Total	308,925	264,852	137,603	137,405
Stainless and alloy tool steel:				
Stainless steel:				
Semifinished 2/	0	0	0	0
Plate	0	0	0	0
Sheet and strip	244	0	0	3/
Bars and certain shapes	10	0	0	3/
Wire rod	0	0	0	0
Wire	64	64	42	3/
Pipe and tube	8	2,386	1,607	202
Tool steel (all forms)	19	0	0	0
Total	345	2,450	1,649	202
Grand Total	309,270	267,302	139,251	137,608

1/ Certain alloy refers to alloy steel other than stainless or tool steel.
2/ Semifinished steel includes ingots, blooms, billets, slabs, and sheet bars.
3/ Less than 0.5 short tons.

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

Table 38.--Steel mill products and certain fabricated steel products: U.S. imports, for consumption through the Pacific Coast customs area, 1990, 1991, and by specified periods, 1991 and 1992

(Short tons)

Item	1990	1991	January-June	
			1991	1992
Carbon and certain alloy 1/ steel:				
Semifinished 2/	1,137,032	1,029,943	535,525	633,043
Plate	125,811	94,740	53,753	44,997
Sheet and strip	1,860,701	1,615,533	820,236	864,559
Bars and certain shapes	101,747	60,079	37,973	23,871
Wire rod	149,617	67,417	22,886	26,915
Wire	69,425	63,008	31,523	32,480
Wire products	168,632	142,147	63,606	74,088
Structural shapes and units	218,336	104,641	56,718	44,703
Rails and related products	70,650	88,822	33,548	42,379
Pipe and tube	467,540	519,121	321,416	114,546
Total	4,369,490	3,785,451	1,977,184	1,901,582
Stainless and alloy tool steel:				
Stainless steel:				
Semifinished 2/	3	507	141	26
Plate	3,039	3,574	1,911	1,561
Sheet and strip	30,821	24,974	11,400	15,587
Bars and certain shapes	8,152	8,981	4,305	4,097
Wire rod	2,728	3,392	1,891	1,942
Wire	1,117	733	359	489
Pipe and tube	8,619	8,193	4,690	3,366
Tool steel (all forms)	1,376	1,478	686	838
Total	55,854	51,831	25,381	27,907
Grand Total	4,425,344	3,837,281	2,002,565	1,929,489

1/ Certain alloy refers to alloy steel other than stainless or tool steel.
2/ Semifinished steel includes ingots, blooms, billets, slabs, and sheet bars.

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

Appendix A

Structure of the Report and Notes on Product Coverage and Methodology

Structure of the Report

- The special focus section provides perspectives on developments and conditions in the U.S. and global steel industry by examining various competitiveness issues, such as privatization, environmental regulation, technological developments, and globalization. The inclusion of such insights, which may not be readily apparent from the report's tabulated data, are intended to focus attention on important events in the steel industry.

- The section on recent steel industry developments highlights major events, primarily in the U.S. steel industry, that are generally company specific, including capacity expansions/closures, joint ventures, investment, etc.

- The figures on U.S. steel industry highlights present trends in U.S. average monthly steel shipments, imports, exports, and import penetration.

- The figures and tables on international production and consumption highlight the geographic distribution of world production and apparent consumption.

- The tables on international trade highlights present average annual import and export data for various countries/country groups over a 20-year time period.

- The section on recent trends in U.S. trade provides a narrative summary of changes in U.S. trade flows presented in tables 7-38, described below.

- Table 1 provides data on key items, including raw steel production, capacity utilization, employment, wages, shipments, trade, and financial performance.

- Tables 2-6 provide data on shipments, imports, exports, apparent consumption, and imports as a percent of apparent consumption by major product for all grades of steel, plus carbon and specialty products separately.

- Tables 7-27 provide data on the quantity of major carbon and specialty steel imports and exports on a product-by-product basis. The top 15 country suppliers, the top 10 country markets, and major regional groupings are specified.

- Table 28 provides data on the total value of carbon and specialty steel imports and exports on a product basis.

- Tables 29 and 30 provide data on the unit values of selected imports and exports of carbon and specialty steel products.

- Tables 31 and 32 provide data on imports and exports of selected carbon and specialty steel products. The tables also provide information which permits an examination of the extent to which shifts in product mix within major product categories is occurring.

- Tables 33-38 provide data on imports of steel mill products and certain fabricated products, by U.S. customs area.

Notes on Product Coverage and Methodology

Data on foreign trade and domestic shipments are compiled from official statistics of the U.S. Department of Commerce and from statistics of the American Iron and Steel Institute (AISI), respectively.

The products for which foreign trade data are collected generally correspond to those covered by the VRAs. Since the VRAs included certain fabricated products (defined as wire strand, wire ropes, cables, cordage, and fabricated structural units), the data may exceed that compiled by other organizations such as the AISI. The additional tonnage, however, is relatively small. In 1991, AISI reported imports of 15.8 million tons, which compares to the 16.2 million tons indicated in this report. The product categories most affected are structural shapes and units (which includes fabricated structurals in this report) and wire and wire products (which includes wire rope and wire strand).

The source for the data on employment levels in Table 1 is the U.S. Department of Labor, Bureau of Labor Statistics (BLS), rather than the American Iron and Steel Institute (AISI). AISI employment figures cover reporting companies only; these companies represent a declining share of total raw steel production. The BLS data cover the entire steel industry, as defined by Standard Industrial Code 331, which includes the electrometallurgical products (or ferroalloy) industry. In the past, this industry, which is not generally defined as part of the steel industry, has represented less than three percent of total employment levels reporting under this SIC.

The regional groupings specified in tables 7-27 are defined as follows:

East Asia includes Brunei, Burma, Cambodia, China, Hong Kong, Indonesia, Japan, South Korea, Laos, Macao, Malaysia, Philippines, Ryukyu Islands, Singapore, Taiwan, Thailand, and South Vietnam;

EC12 includes Belgium, Luxembourg, Denmark, France, Germany (beginning in 1992, includes what was formerly East Germany), Greece, Ireland, Italy, Netherlands, Portugal, Spain, and the United Kingdom;

Eastern Europe includes Bulgaria, the Czech and Slovak Federal Republic (formerly Czechoslovakia), East Germany (included only through 1991), Hungary, Poland, and Romania;

The Latin American Integration Association (LAIA) is the former LAFTA and includes Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico, Paraguay, Peru, Uruguay, and Venezuela.

Trade data include imports under sections 9802.0060 and 9802.0080 of the Harmonized Tariff Schedule. These provisions apply to U.S. merchandise that is exported, processed, and reimported into the United States.

Data on tool steel imports exclude bearing steel products. This is consistent with industry practice and reports, which treat bearing steel as an alloy steel and categorize it according to its end form--either plate, sheet and strip, or rod. Unlike data on imports and shipments, available data on tool steel exports include some bearing steel products. As a result, apparent consumption calculations (see table 5) are slightly understated in the case of tool steel, and slightly overstated in the case of plate, sheet and strip, and rod. The ITC staff estimates, however, that the degree of understatement/overstatement is minor, as exports of bearing steel products are believed to be relatively low.

Following consultation with the U.S. Department of Commerce, the ITC staff made the following revision to the June, July, and September 1990 export data: 686 tons of June 1990 tool steel exports to Iraq, valued at $1,411,000, have been reclassified as electrical sheet and strip; 1,681 tons of July 1990 tool steel exports to Iraq, valued at $2,360,000, have been similarly reclassified; and 25,122 tons of September 1990 stainless plate exports to France, valued at $9,162,041, have been reclassified as carbon slab exports.

Other data revisions announced by AISI include: 7,609 tons ($1,927,000) of February 1990 tool steel imports from Mexico, which were reclassified as carbon semifinished imports; and 1,258 tons ($1,537,000) of February 1991 tool steel exports to Mexico, which were reclassified as alloy bar exports.

The rails and related products category includes both new and used rails (see appendix E for complete definition). Of the 303,596 tons of rails and related products imported into the United States during 1991, 29 percent (or 102,551 tons) were used rails.

In tables 29 and 30, unit values are calculated using unrounded data. Import values are customs value, i.e., the data do not include insurance and freight charges from the country of origin to the United States.

Appendix B

Status of Unfair Trade Cases on Steel Products and Raw Materials

Status of unfair trade cases on steel products and raw materials—Continued

Product description	Country	AD (731-TA)	CVD (701-TA)	USITC preliminary determination Date	Outcome	USITC final determination Date	Outcome
Cold-rolled carbon steel flat products.....	Argentina	597		8-14-92	A		
	Australia	598		8-14-92	N		
	Austria	599	336	8-14-92	A		
	Belgium	600	337	8-14-92	A		
	Brazil	601	338	8-14-92	A		
	Canada	602		8-14-92	A		
	France	603	339	8-14-92	A		
	Germany	604	340	8-14-92	A		
	Italy	605	341	8-14-92	A		
	Japan	606		8-14-92	A		
	Korea	607	342	8-14-92	A		
	Netherlands	608		8-14-92	A		
	New Zealand		343	8-14-92	N		
	Spain	609	344	8-14-92	A		
	Taiwan	610	345	8-14-92	N		
	United Kingdom	611	346	8-14-92	N		
Certain corrosion-resistant carbon steel flat products.....	Australia	612		8-14-92	A		
	Brazil	613	347	8-14-92	A		
	Canada	614		8-14-92	A		
	France	615	348	8-14-92	A		
	Germany	616	349	8-14-92	A		
	Japan	617		8-14-92	A		
	Korea	618	350	8-14-92	A		
	Mexico	619	351	8-14-92	A		
	New Zealand		352	8-14-92	A		
	Sweden		353	8-14-92	A		
	Taiwan	620	354	8-14-92	N		
Cut-to-length carbon steel plate.....	Belgium	573	319	8-14-92	A		
	Brazil	574	320	8-14-92	A		
	Canada	575		8-14-92	A		
	Finland	576		8-14-92	A		
	France	577	321	8-14-92	A		
	Germany	578	322	8-14-92	A		
	Italy	579	323	8-14-92	A		
	Japan	580		8-14-92	N		
	Korea	581	324	8-14-92	A		
	Mexico	582	325	8-14-92	A		
	Poland	583		8-14-92	A		
	Romania	584		8-14-92	A		
	Spain	585	326	8-14-92	A		
	Sweden	586	327	8-14-92	A		
	United Kingdom	587	328	8-14-92	A		
Compact ductile iron waterworks fittings.....	China	621		8-24-92	A		

Appendix C

Request Letter from the Honorable Dan Rostenkowski,
Chairman of the Committee on Ways and Means,
U.S. House of Representatives

COMMITTEE ON WAYS AND MEANS

U.S. HOUSE OF REPRESENTATIVES
WASHINGTON, DC 20515-6348

June 11, 1992

The Honorable Donald Newquist
Chairman
U.S. International Trade Commission
500 E Street, S.W.
Washington, D.C. 20436

Dear Mr. Chairman:

The recent expiration of the Voluntary Restraint Agreements (VRAs), the apparent collapse of the negotiations for a Multilateral Steel Agreement (MSA) and the filing of trade cases by the U.S. industry have combined to create an uncertain future for U.S. steel trade that is a source of continued concern to the Committee on Ways and Means. In light of this, the Committee hereby requests the U.S. International Trade Commission to provide it with semi-annual monitoring reports, under Section 332 of the Tariff Act of 1930, on the the status of, and prospects for, the U.S. steel industry for the period from January 1992 through December 1994.

This series of reports should combine concise analysis of global industry trends and competitiveness issues with key product trade information. They should generally follow the format of, and contain trade data and information similar to that provided in, the reports on all carbon and alloy (including stainless steel) mill products which the Commission has been providing under investigation No. 332-226. In addition, each year one of the reports should contain an annual review focusing primarily on developments and conditions in the U.S. industry and should highlight significant developments in the industry's competitiveness since 1990 (e.g. operating performance, capital expenditures and R&D, technology, and environmental expenditures). Finally, the Committee recognizes that limited primary data gathering, particularly the use of questionnaires, is necessary to examine these developments.

As you know, the Commission's current series of quarterly reports on the steel industry will be completed in June 1992, and will contain data through March 1992, when the recent VRAs expired. The first report under the new series should be published in September 1992 (covering data from January through

June 1992). Subsequent reports should then appear in April and September, with the April report containing an annual review of the domestic industry. I request that the Commission provide the Committee with these semiannual reports through April 1995, at which time the Committee will reevaluate the Commission's monitoring efforts in terms of their relevance to the global steel trade environment.

Thank you for your cooperation in this matter.

Sincerely yours,

Dan Rostenkowski
Chairman

Appendix D

Notice of the Commission's Investigation

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC

(332-327)

Steel: Semiannual Monitoring Report

AGENCY: United States International Trade Commission

ACTION: Institution of investigation.

EFFECTIVE DATE: July 9, 1992

FOR FURTHER INFORMATION CONTACT: Ms. Nancy Fulcher, Office of Industries/Minerals and Metals Division (202-205-3434), or Mr. Mark Paulson, Office of Industries/Minerals and Metals Division (202-205-3429), U.S. International Trade Commission, Washington, D.C. 20436. Hearing-impaired persons are advised that information on this investigation can be obtained by contacting the Commission's TDD terminal on 202-205-2648.

BACKGROUND AND SCOPE OF INVESTIGATION: Following receipt on June 11, 1992, of a request from the Committee on Ways and Means of the U.S. House of Representatives, the Commission on July 9, 1992, instituted investigation No. 332-327, under section 332(g) of the Tariff Act of 1930 (19 U.S.C. 1332(g)) concerning the status of, and prospects for, the U.S. steel industry for the period from January 1991 through December 1994.

As requested by the Committee, the Commission will provide semiannual reports in which it will seek to combine concise analysis of global industry trends and competitiveness issues with key product trade information. The reports will generally follow the format of, and contain trade data and information similar to that provided in, the reports on all carbon and alloy (including stainless steel) mill products which the Commission provided under investigation No. 332-226: Quarterly Report on the Status of the Steel Industry. In addition, each year one of the reports will contain an annual review focusing primarily on developments and conditions in the U.S. industry and will highlight significant developments in the industry's competitiveness since 1990 (e.g., operating performance, capital expenditures and R&D, technology, and environmental expenditures).

As requested by the Committee, the Commission intends to submit its first report under the new series no later than September 1992 (covering data from January through June 1992). Subsequent reports will be submitted in April and September, with the April report containing the annual review of the domestic industry. Reports will be provided through April 1995.

WRITTEN SUBMISSIONS: Interested persons are invited to submit written statements concerning the matters to be addressed in the report containing the Commission's annual review of the domestic industry. Commercial or financial information that a party desires the Commission to treat as confidential must be submitted on separate sheets of paper, each clearly marked "Confidential Business Information" at the top. (Generally, submission of separate confidential and public versions of the submission would be appropriate.) All

submissions requesting confidential treatment must conform with the requirements of § 201.6 of the Commission's Rules of Practice and Procedure (19 CFR 201.6). All written submissions, except for confidential business information, will be made available in the Office of the Secretary of the Commission for inspection by interested persons. To be assured of consideration by the Commission, written statements should be submitted to the Commission at the earliest practical date and should be received no later than February 26, 1993; February 25, 1994; and February 24, 1995. All submissions should be addressed to the Secretary to the Commission at the Commission's Office in Washington, DC.

By order of the Commission.

Paul R. Bardos
Acting Secretary

Issued: July 10, 1992

Appendix E

Definitions of Certain Terms, and Descriptions of the Products Subject to the Investigation

DEFINITIONS

1. Steel.--An alloy of iron and carbon which is malleable as first cast and which contains by weight 2 percent or less of carbon. Steel may contain other elements, but iron must predominate, by weight, over each of the other elements.

2. Carbon steel.--Steel, other than chromium, which contains by weight 2 percent or less of carbon, and in which none of the elements listed below meets or exceeds the quantity, by weight, respectively indicated:

1.65 percent of manganese; or
0.25 percent of phosphorus; or
0.35 percent of sulphur; 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
0.10 percent of any other metallic element.

3. Alloy steel.--Steel which contains any of the elements listed in definition 2 (above) in excess of its specified quantity.

(i) Stainless steel.--Any alloy steel which contains by weight 1.2 percent or less of carbon and 10.5 percent or more of chromium, with or without other elements.

(ii) Tool steel.--Alloy steels which contain the following combinations of elements in the quantity, by weight, respectively indicated:

more than 1.2 percent carbon and more than 10.5 percent chromium; or
not less than 0.3 percent carbon and 1.25 percent or more but less than 10.5 percent chromium; or
not less than 0.85 percent carbon and 1 percent to 1.8 percent, inclusive, manganese; or
0.9 percent to 1.2 percent, inclusive, chromium and 0.9 percent to 1.4 percent, inclusive, molybdenum; or
not less than 0.5 percent carbon and not less than 3.5 percent molybdenum; or
not less than 0.5 percent carbon and not less than 5.5 percent tungsten.

(iii) Certain alloy steel.--Alloy steel not covered under 3.(i) "Stainless steel" or 3.(ii) "Tool steel."

4. Galvanized.--Steel which has been coated or plated with zinc.

5. Hot-rolled.--Steel which has been reduced to its final thickness by heating and rolling the product at elevated temperature (usually above 2,200° F).

6. Cold-rolled.--Steel which has been reduced to its final thickness by rolling the product without heating it immediately prior to the rolling operation.

7. Continuous casting.--The method of producing semifinished products in which molten steel flows evenly into a caster where it is rapidly cooled, causing it to solidify directly into semifinished products such as slabs and billets.

8. Short ton.--Two thousand (2,000) pounds.

Unlike the TSUSA system of classification, the HTS does not differentiate by dimension those steel products formerly referred to as blooms and billets, slabs and sheet bars, plate, sheet, and strip. Instead, these products are included in two larger categories: flat-rolled and semifinished (described below). However, for purposes of data comparability with previous Commission reports provided under investigation No. 332-226 (Monthly and Quarterly Reports on the Status of the Steel Industry), and in the interest of providing useful information and coverage of the steel industry, this report will continue to designate such product categories (e.g., blooms and billets, slabs and sheet bars, plate, hot-rolled and cold-rolled sheet, and strip). A partial basis for classification are those definitions found in Federal Register Notice 52897, December 29, 1988.

For certain products, export categories under the Schedule B classification system are broader than import product categories under the HTS; therefore, there is no overall one-to-one correspondence between the two classification systems. For this reason, export classifications are listed separately from import classifications in the following definitions.

9. Semifinished products include:

Continuous cast products of solid section, not presented in coils, whether or not subjected to primary hot-rolling.

Other products of solid section which have not been further worked than subjected to primary hot-rolling or roughly shaped by forging, including blanks, angles, shapes, or sections.

For the purposes of this investigation, semi-finished products are classified as follows:

(i) Ingots.--Castings resulting from the solidification of molten steel and having a columnar form suitable for working by rolling or forging. Ingots are included in AISI (American Iron and Steel Institute) product group No. 1A.

(A) Carbon and certain alloy ingots; provided for in subheadings 7206.10.0000, 7206.90.0000, 7224.10.0005, 7224.10.0075 of the Harmonized Tariff Schedules of the United States (HTS).

(B) Stainless steel ingots; provided for in subheading 7218.10.0000 of the HTS.

(ii) Blooms, billets, slabs, and sheet bars.--Other continuous cast products of solid cross section, which have not been further worked than subjected to primary hot-rolling or roughly shaped by forging including blanks for angles, shapes or sections. These products are not presented in coils and are included in AISI product group No. 1B.

(A) Carbon and certain alloy blooms and billets; provided for in subheadings 7207.11.0000, 7207.12.0010, 7207.19.0030, 7207.19.0090, 7207.20.0025, 7207.20.0075, 7207.20.0090, 7224.90.0005, 7224.90.0045, 7224.90.0065, 7224.90.0075 of the HTS.

(B) Carbon and certain alloy slabs and sheet bars; provided for in subheadings 7207.12.0050, 7207.20.0045, 7224.90.0055 of the HTS.

(C) Stainless steel blooms and billets; provided for in subheadings 7218.90.0005, 7218.90.0015, 7218.90.0025, 7218.90.0032, 7218.90.0040, 7218.90.0050, 7218.90.0060, 7218.90.0075, 7218.90.0085, 7218.90.0095 of the HTS.

(D) Stainless steel slabs and sheet bars; provided for in subheading 7218.90.0038 of the HTS.

Exports of carbon and certain alloy semifinished products are provided for in Schedule B subheadings 7206.10.0000, 7206.90.0000, 7207.11.0000, 7207.12.0000, 7207.19.0000, 7207.20.0000, 7224.10.0000, 7224.90.0000.

Exports of stainless steel semifinished products are provided for in Schedule B subheadings 7218.10.0000, 7218.90.0000.

10. Flat-rolled products.--Rolled products of solid rectangular (other than square) cross section, whether perforated, corrugated, polished, or with a pattern derived from rolling, which do not conform to the definition of semifinished products above in the form of:

- coils of successively superimposed layers; or
- straight lengths, which if of a thickness less than 4.75 mm are of a width measuring at least 10 times the thickness or if of a thickness of 4.75 mm or more are of a width which exceeds 150 mm and measures at least twice the thickness. Also those products of a shape other than rectangular or square of a width of 600 mm or more, not elsewhere specified.

(i) Plates.--Flat-rolled products with a thickness equal to or exceeding 4.75 mm. Plates are included in AISI product group No. 6.

(A) Carbon plate; provided for in subheadings 7208.11.0000, 7208.12.0000, 7208.21.1000, 7208.21.5000, 7208.22.1000, 7208.22.5000, 7208.31.0000, 7208.32.0000, 7208.33.1000, 7208.33.5000, 7208.41.0000, 7208.42.0000, 7208.43.0000, 7210.90.1000, 7211.11.0000, 7211.12.0000, 7211.21.0000, 7211.22.0045, 7211.22.0090 of the HTS.

Exports of carbon plates are provided for in Schedule B subheadings 7208.11.0000, 7208.12.0000, 7208.21.0000, 7208.22.0000, 7208.31.0000, 7208.32.0000, 7208.33.0000, 7208.41.0000, 7208.42.0000, 7208.43.0000, 7210.90.1000, 7211.11.0000, 7211.12.0000, 7211.21.0000, 7211.22.0000.

(B) Certain alloy plate; provided for in subheadings 7225.30.3005, 7225.30.3050, 7225.40.1015, 7225.40.3005, 7225.40.3050, 7225.50.6000, 7226.91.5000 of the HTS.

Exports of certain alloy plates are provided for in Schedule B subheadings 7225.30.0000, 7225.40.0000.

(C) Stainless steel plate; provided for in subheadings 7219.11.0000, 7219.12.0005, 7219.12.0015, 7219.12.0045, 7219.12.0075, 7219.21.0005, 7219.21.0050, 7219.22.0005, 7219.22.0050, 7219.31.0010, 7219.31.0050, 7220.11.0000 of the HTS.

Exports of stainless steel plates are provided for in Schedule B subheadings 7219.11.0000, 7219.12.0000, 7219.21.0000, 7219.22.0000, 7219.31.0000, 7220.11.0000.

(ii) Sheets and strip.--Flat-rolled products less than 4.75 mm in thickness. Sheet has a width equal to or exceeding 600 mm; strip width is less than 600 mm (but at least 10 times the thickness). Sheets and strip are included in AISI product group Nos. 28, 29, 29A, 30, 31, 32, 33A, 33B, 34, 35, 36, and 37. For the purposes of this investigation, sheets and strip are classified as follows:

(A) Hot-rolled carbon and certain alloy sheet; provided for in subheadings 7208.13.1000, 7208.13.5000, 7208.14.1000, 7208.14.5000, 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, 7225.30.5030, 7225.30.7000, 7225.40.5030, 7225.40.7000, 7226.91.1530 of the HTS.

Exports of hot-rolled carbon and certain alloy sheet are provided for in Schedule B subheadings 7208.13.0000, 7208.14.0000, 7208.23.0000, 7208.24.0000, 7208.34.0000, 7208.35.0000, 7208.44.0000, 7208.45.0000, 7208.90.0000.

(B) Hot-rolled carbon and certain alloy strip; provided for in subheadings 7211.19.1000, 7211.19.5000, 7211.29.1000, 7211.29.3000, 7211.29.5000, 7211.29.7030, 7211.29.7060, 7211.29.7090, 7226.91.2530, 7226.91.7000, 7226.91.8000 of the HTS.

Exports of hot-rolled carbon and certain alloy strip are provided for in Schedule B subheadings 7211.19.0000, 7211.29.0000, 7226.91.0000.

(C) Cold-rolled carbon and certain alloy sheet and strip:

(a) Black plate; provided for in subheading 7209.24.1000 of the HTS.

Exports of black plate are provided for in Schedule B subheading 7209.24.1000.

(b) Electrical sheet and strip; provided for in subheadings 7225.10.0000, 7226.10.1000, 7226.10.5030, 7226.10.5060 of the HTS.

Exports of electrical sheet and strip are provided for in Schedule B subheadings 7225.10.0000, 7226.10.0000.

(c) Other sheet; provided for in subheadings 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, 7209.24.5000, 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, 7225.50.1030, 7225.50.7000, 7225.50.8000, 7225.90.0000 of the HTS.

Exports of other cold-rolled sheet are provided for in Schedule B subheadings 7209.11.0000, 7209.12.0000, 7209.13.0000, 7209.14.0000, 7209.21.0000, 7209.22.0000, 7209.23.0000, 7209.24.0000, 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, 7225.50.0000, 7225.90.0000.

(d) Other strip; provided for in subheadings 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, 7226.92.1030, 7226.92.3030, 7226.92.5000, 7226.92.7005, 7226.92.7050, 7226.92.8005, 7226.92.8050, 7226.99.0000 of the HTS.

Exports of other cold-rolled strip are provided for in Schedule B subheadings 7210.70.0000, 7211.30.0000, 7211.41.0000, 7211.49.0000, 7211.90.0000, 7212.40.0000, 7226.92.4000, 7226.99.0000.

(D) Galvanized sheet and strip; provided for in subheadings 7210.31.0000, 7210.39.0000, 7210.41.0000, 7210.49.0030, 7210.49.0090, 7210.70.6030, 7210.70.6060, 7212.21.0000, 7212.29.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000 of the HTS.

Exports of galvanized sheet and strip are provided for in Schedule B subheadings 7210.31.0000, 7210.39.0000, 7210.41.0000, 7210.49.0000, 7212.21.0000, 7212.29.0000, 7212.30.0000.

(E) Tin plate; provided for in subheadings 7210.11.0000, 7210.12.0000, 7212.10.0000 of the HTS.

Exports of tin plate are provided for in Schedule B subheadings 7210.11.0000, 7210.12.0000, 7212.10.0000.

(F) Tin free; provided for in subheading 7210.50.0000 of the HTS.

Exports of tin free sheets are provided for in Schedule B subheading 7210.50.0000.

(G) Other metallic coated sheet and strip; provided for in subheadings 7210.20.0000, 7210.60.0000, 7210.70.6090, 7210.90.6000, 7210.90.90000, 7212.50.0000, 7212.60.0000 of the HTS.

Exports of other metallic coated sheet and strip are provided for in Schedule B subheadings 7210.20.0000, 7210.60.0000, 7210.90.5000, 7212.50.0000, 7212.60.0000.

(H) Stainless steel hot-rolled sheet; provided for in subheadings 7219.13.0030, 7219.13.0060, 7219.14.0030, 7219.14.0060, 7219.23.0030, 7219.23.0060, 7219.24.0030, 7219.24.0060 of the HTS.

Exports of stainless steel hot-rolled sheet are provided for in Schedule B subheadings 7219.13.0000, 7219.14.0000, 7219.23.0000, 7219.24.0000.

(I) Stainless steel cold-rolled sheet; provided for in subheadings 7219.32.0015, 7219.32.0030, 7219.32.0045, 7219.32.0060, 7219.33.0015, 7219.33.0030, 7219.33.0045, 7219.33.0060, 7219.34.0010, 7219.34.0050, 7219.35.0010, 7219.35.0050, 7219.90.0000 of the HTS.

Exports of stainless steel cold-rolled sheet are provided for in Schedule B subheadings 7219.32.0000, 7219.33.0000, 7219.34.0000, 7219.35.0000, 7219.90.0000.

(J) Stainless steel strip; provided for in subheadings 7220.12.1000, 7220.12.5000, 7220.20.1000, 7220.20.6005, 7220.20.6050, 7220.20.7005, 7220.20.7050, 7220.20.8000, 7220.20.9000, 7220.90.0000 of the HTS.

Exports of stainless steel strip are provided for in Schedule B subheadings 7220.12.0000, 7220.20.0000, 7220.90.0000.

11. Bars.-- Hot-rolled products whether or not in irregularly wound coils, which have a solid cross section along their length in the shape of circles, segments of circles, ovals, rectangles (including squares), triangles, or other convex polygons. Such products may:

- have indentations, ribs, grooves or other deformations produced during the rolling process (reinforcing bars and rods);
- be twisted after rolling.

For purposes of this investigation the term "bars" also includes hollow drill steel, which is a hollow product suitable for making mining drills or mining drill rods, of which the greatest external dimension of the cross-section exceeds 15 mm but does not exceed 52 mm, and of which the greatest internal dimension does not exceed one-half of the greatest external dimension. Bars and hollow drill steel are found in AISI product groups Nos. 14, 14A, 15, and 16.

For the purposes of this investigation, bars and light structural shapes are classified as follows:

(i) Hot-rolled carbon bars.--Provided for in subheadings 7213.39.0060, 7213.49.0060, 7213.50.0060, 7214.10.0000, 7214.30.0000, 7214.40.0010, 7214.40.0030, 7214.40.0050, 7214.50.0010, 7214.50.0030, 7214.50.0050, 7214.60.0010, 7214.60.0030, 7214.60.0050, 7215.90.1000 of the HTS, and included in AISI product group No. 14.

Exports of hot-rolled carbon bars are provided for in Schedule B subheadings 7213.20.0000, 7214.10.0000, 7214.30.0000, 7214.40.0000, 7214.50.0000, 7214.60.0000.

(ii) Hot-rolled certain alloy bars.--Provided for in subheadings 7227.20.0000, 7227.90.6005, 7227.90.6050, 7228.20.1000, 7228.30.8005, 7228.30.8050, 7228.40.0000, 7228.60.6000, 7228.80.0000 of the HTS, and included in AISI product group No. 14.

Exports of hot-rolled alloy bars are provided for in Schedule B subheadings 7227.20.0000, 7228.20.0000, 7228.30.8000, 7228.40.0000, 7228.60.5000, 7228.80.0000.

(iii) Cold-formed carbon bars.--Provided for in subheadings 7215.10.0000, 7215.20.0000, 7215.30.0000, 7215.40.0000, 7215.90.3000, 7215.90.5000 of the HTS, and included in AISI product group No. 16.

Exports of cold-formed carbon bars are provided for in Schedule B subheadings 7215.10.0000, 7215.20.0000, 7215.30.0000, 7215.40.0000, 7215.90.0000.

(iv) Cold-formed certain alloy bars.--Provided for in subheadings 7228.20.5000, 7228.50.5005, 7228.50.5050, 7228.60.8000 of the HTS, and included in AISI product group No. 16.

Exports of cold-formed certain alloy bars are provided for in Schedule B subheading 7228.50.5000.

(v) Reinforcing carbon and certain alloy steel bars.--Hot-rolled steel bars, of solid cross section, having deformations of various patterns on their surfaces; provided for in subheadings 7213.10.0000, 7214.20.0000 of the HTS, and included in AISI product group No. 15.

Exports of reinforcing carbon and certain alloy steel bars are provided for in Schedule B subheadings 7213.10.0000, 7214.20.0000.

(vi) Light structural shapes.--Bar-size light shapes having a cross-sectional dimension of less than 7.62 cm provided for in subheadings 7216.10.0010, 7216.10.0050, 7216.21.0000, 7216.22.0000, 7228.70.3060, 7228.70.3080 of the HTS, and included in AISI product group No. 14A.

Exports of light structural shapes are provided for in Schedule B subheadings 7216.10.0000, 7216.21.0000, 7216.22.0000.

(vii) Stainless steel bars and shapes.--Provided for in subheadings 7221.00.0005, 7221.00.0045, 7221.00.0075, 7222.10.0005, 7222.10.0050, 7222.20.0005, 7222.20.0045, 7222.20.0075, 7222.30.0000, 7222.40.3060, 7222.40.3080 of the HTS and included in AISI product group Nos. 14, 15, and 16.

Exports of stainless steel bars and shapes are provided for in Schedule B subheadings 7222.10.0000, 7222.20.0000, 7222.30.0000, 7222.40.0000.

12. Wire rods and related products:

(i) Wire rods.--Coiled, semifinished, hot-rolled products of solid cross section, approximately round in cross section, not under 14mm nor over 19mm in diameter. Wire rods are included in AISI product group No. 3.

For the purposes of this investigation, wire rods are classified as follows:

(A) Carbon steel wire rods; provided for in subheadings 7213.31.3000, 7213.31.6000, 7213.39.0030, 7213.39.0090, 7213.41.3000, 7213.41.6000, 7213.49.0030, 7213.49.0090, 7213.50.0020, 7213.50.0040, 7213.50.0080 of the HTS.

Exports of carbon steel wire rods are provided for in Schedule B subheadings 7213.31.0000, 7213.39.0000, 7213.41.0000, 7213.49.0000, 7213.50.0000.

(B) Certain alloy steel wire rods; provided for in subheadings 7227.90.1030, 7227.90.2030, 7228.30.2000, 7228.50.1010, 7228.60.1030 of the HTS.

Exports of certain alloy steel wire rods are provided for in Schedule B subheading 7227.90.0000.

(C) Stainless steel wire rods; provided for in subheadings 7221.00.0015, 7221.00.0030 of the HTS.

Exports of stainless steel wire rods are provided for in Schedule B subheading 7221.00.0000.

(ii) Steel wire.--Cold-formed products in coils, of any uniform solid cross section along their whole length, which do not conform to the definition of flat-rolled products. Steel wire is included in AISI product group No. 23.

For the purpose of this investigation, steel wire is classified as follows:

(A) Carbon steel wire; provided for in subheadings 7217.11.1000, 7217.11.2000, 7217.11.3000, 7217.11.5020, 7217.11.5040, 7217.11.5060, 7217.11.5080, 7217.11.7030, 7217.11.7090, 7217.11.9000, 7217.12.1000, 7217.12.3030, 7217.12.3060, 7217.12.5000, 7217.12.7000, 7217.13.1000, 7217.13.3030, 7217.13.3060, 7217.13.5000, 7217.13.7000, 7217.19.5000, 7217.21.1000, 7217.21.3015, 7217.21.3030, 7217.21.3045, 7217.21.3060, 7217.21.3075, 7217.21.3090, 7217.21.5000, 7217.22.1015, 7217.22.1030, 7217.22.1050, 7217.22.5000, 7217.23.1015, 7217.23.1030, 7217.23.1050, 7217.23.5000, 7217.29.5000, 7217.31.1000, 7217.31.3015, 7217.31.3030, 7217.31.3045, 7217.31.3060, 7217.31.3075, 7217.31.3090, 7217.31.5000, 7217.32.1015, 7217.32.1030, 7217.32.1050, 7217.32.5000, 7217.33.1015, 7217.33.1030, 7217.33.1050, 7217.33.5000, 7217.39.5000 of the HTS.

Exports of carbon steel wire are provided for in Schedule B subheadings 7217.11.0000, 7217.12.0000, 7217.13.0000, 7217.19.0000, 7217.21.0000, 7217.22.0000, 7217.23.0000, 7217.29.0000, 7217.31.0000, 7217.32.0000, 7217.33.0000, 7217.39.0000.

(B) Certain alloy steel wire; provided for in subheadings 7229.20.0000, 7229.90.1000, 7229.90.5015, 7229.90.5030, 7229.90.5050, 7229.90.9000 of the HTS.

Exports of certain alloy steel wire are provided for in Schedule B subheadings 7229.20.0000, 7229.90.0000.

(C) Stainless steel wire; provided for in subheadings 7223.00.1015, 7223.00.1030, 7223.00.1045, 7223.00.1060, 7223.00.1075, 7223.00.5000, 7223.00.9000 of the HTS.

Exports of stainless steel wire are provided for in Schedule B subheading 7223.00.0000.

(iii) Carbon and certain alloy steel wire products.--As defined by the following:

(A) Nails and brads, spikes, staples, and tacks; fasteners, of one piece construction, made of round wire, and not including thumb tacks, staples in strip form, corrugated fasteners, glaziers' points, hook nails, ring nails, or fasteners suitable for use in power-actuated hand tools; as provided for in subheadings 7317.00.1000, 7317.00.5505, 7317.00.5510, 7317.00.5520, 7317.00.5530, 7317.00.5540, 7317.00.5550, 7317.00.5560, 7317.00.5570, 7317.00.5580, 7317.00.5590, 7317.00.7500, 8305.20.0000 of the HTS. Nails and staples are included in AISI product group No. 51 (pt.).

Exports of nails and brads, spikes, staples, and tacks are provided for in Schedule B subheadings 7317.00.1000, 7317.00.9000, 8305.20.0000.

(B) Barbed wire; a wire, or strand of twisted wires, armed with barbs or sharp points; as provided for in subheading 7313.00.0000 of the HTS. Barbed wire is included in AISI product group No. 52.

Exports of barbed wire are provided for in Schedule B subheading 7313.00.0000.

(C) Wire expanded metal, grill and fencing; products, whether or not galvanized, wholly of round wire with a maximum cross-sectional diameter of 3 mm or more, having a mesh size of 100 cm^2 or more, whether or not such wire is covered with plastics; as provided for in subheadings 7314.20.0000, 7314.30.1000, 7314.30.5000, 7314.41.0030, 7314.41.0060, 7314.42.0030, 7314.42.0060, 7314.49.3000, 7314.49.6000 of the HTS. The products are included in AISI product group No. 50.

Exports of wire expanded metal, grill and fencing are provided for in Schedule B subheadings 7314.20.0000, 7314.30.0000, 7314.41.0000, 7314.42.0000, 7314.49.0000.

(D) Baling wire and ties; with or without buckles or fastenings and whether or not coated with paint or other substance; as provided for in subheading 7326.20.0010 of the HTS and included in AISI product group No. 53.

(E) Wire strand; two or more wires which together constitute one of the parts which are twisted together to form rope, cord, or cordage, suitable for fencing purposes, not fitted with fittings, not made up into articles, not of brass plated wire, as provided for in subheadings 7312.10.1030, 7312.10.1050, 7312.10.1070, 7312.10.3005, 7312.10.3010, 7312.10.3012, 7312.10.3020, 7312.10.3065, 7312.10.3070, 7312.10.3074, 7312.10.3080 of the HTS. Wire strand is included in AISI product group No. 47.

Exports of wire strand are provided for in Schedule B subheadings 7312.10.3015, 7312.10.3500.

(F) Wire ropes, cables, and cordage; products made by the twisting of a number of wire strands and are not covered with nonmetallic material, not fitted with fittings, not made up into articles, and, if valued 13 cents or more per pound, not of brass plated wire; as provided for in subheadings 7312.10.6000, 7312.10.9030, 7312.10.9060, 7312.10.9090 of the HTS. Wire ropes, cables, and cordage are included in AISI product group No. 46.

Exports of wire ropes, cables, and cordage are provided for in Schedule B subheading 7312.10.8500.

13. Structurals.--Nontubular products not conforming completely to the respective specifications set forth in the HTS for semi-finished, flat-rolled, bars and rod or wire.

(i) Heavy structural shapes.--Products having a maximum cross-sectional dimension of 7.62 cm or more, and sheet piling; as provided for in subheadings 7216.31.0000, 7216.32.0000, 7216.33.0030, 7216.33.0060, 7216.33.0090, 7216.40.0010, 7216.40.0050, 7216.50.0000, 7222.40.3020, 7222.40.3040, 7228.70.3020, 7228.70.3040, 7301.10.0000 of the HTS. These products are included in AISI product group Nos. 4 and 5.

Exports of heavy structural shapes and sheet piling are provided for in Schedule B subheadings 7216.31.0000, 7216.32.0000, 7216.33.0000, 7216.40.0000, 7216.50.0000, 7216.60.0000, 7216.90.0000, 7301.10.0000.

(ii) Fabricated structural units.--Columns, pillars, posts, beams, girders, and similar structural units; as provided for in subheadings 7216.60.0000, 7216.90.0000, 7222.40.6000, 7228.70.6000, 7301.20.1000, 7301.20.5000, 7308.10.0000, 7308.20.0000, 7308.40.0000, 7308.90.3000, 7308.90.6000, 7308.90.9030, 7308.90.9090, 8430.49.4000 of the HTS. These products are included in AISI product group Nos. 38 and 39.

Exports of fabricated structural units are provided for in Schedule B subheadings 7228.70.0000, 7301.20.1000, 7301.20.5000, 7308.10.0000, 7308.20.0000, 7308.40.0000, 7308.90.1000, 7308.90.9030, 7308.90.9090, 8430.49.4000.

14. Rails and related railway products as defined by the following:

(i) Rails.-- Hot-rolled steel products, whether punched or not punched, weighing not less than 8 pounds per yard, with cross-sectional shapes intended for carrying wheel loads in railroad, railway, and crane runway applications; as provided for in subheadings 7302.10.1010, 7302.10.1015, 7302.10.1025, 7302.10.1035, 7302.10.1045, 7302.10.1055, 7302.10.1065, 7302.10.1075, 7302.10.5020, 7302.10.5040, 7302.10.5060 of the HTS. Rails are included in AISI product group Nos. 7, 8, and 41.

Exports of rails are provided for in Schedule B subheadings 7302.10.1020, 7302.10.1030, 7302.10.1080, 7302.10.5000.

(ii) Joint bars.--Hot-rolled steel products, usually punched or slotted, designed to connect the ends of adjacent rails in track; tie plates are hot-rolled steel products which are punched to provide holes for spikes and have one or two shoulder sections as rail guides and are used to support rails in track, to maintain track gauge, and to protect the ties; all the foregoing, as provided for in subheadings 7302.20.0000, 7302.30.0000, 7302.40.0000, 7302.90.0000 of the HTS. Joint bars and tie plates are included in AISI product group Nos. 9 and 42.

Exports of joint bars, tie plates, and other railway track material are provided for in Schedule B subheadings 7302.20.0000, 7302.30.0000, 7302.40.0000, 7302.90.0000.

(iii) Railway track spikes.--Products of one-piece construction, used to secure tie plates or ties; as provided for in subheadings 7317.00.6530, 7317.00.6560 of the HTS. Railway track spikes are included in AISI product group No. 42 (pt.).

(iv) Railroad and railway (RR) axles and wheels, parts thereof, and axle bars.--Provided for in subheadings 8607.19.1000, 8607.19.2000 of the HTS. These articles are included in AISI product group No. 43.

Exports of railroad and railway (RR) axles and wheels, parts thereof, and axle bars are provided for in Schedule B subheadings 8607.19.1000 and 8607.19.2000.

15. Pipes and tubes and blanks therefor.--Tubular products, including hollow bars and hollow billets but not including hollow drill steel, of any cross-sectional configuration, by whatever process made, whether seamless, brazed, or welded and whether with an open or lock seam or joint. For the purposes of this investigation, pipes and tubes and blanks therefor are classified as follows:

(i) Oil country tubular goods.--Provided for in subheadings 7304.20.1000, 7304.20.1010, 7304.20.1020, 7304.20.1030, 7304.20.1040, 7304.20.1050, 7304.20.1060, 7304.20.1080, 7304.20.2000, 7304.20.2010, 7304.20.2020, 7304.20.2030, 7304.20.2040, 7304.20.2050, 7304.20.2060, 7304.20.2080, 7304.20.3000, 7304.20.3010, 7304.20.3020, 7304.20.3030, 7304.20.3040, 7304.20.3050, 7304.20.3060, 7304.20.3080, 7304.20.4010, 7304.20.4020, 7304.20.4030, 7304.20.4040, 7304.20.4050, 7304.20.4060, 7304.20.4080, 7304.20.5015, 7304.20.5030, 7304.20.5045, 7304.20.5060, 7304.20.5075, 7304.20.6015, 7304.20.6030, 7304.20.6045, 7304.20.6060, 7304.20.6075, 7304.20.7000, 7304.20.8030, 7304.20.8045, 7304.20.8060,

7305.20.2000, 7305.20.4000, 7305.20.6000, 7305.20.8000, 7306.20.1030, 7306.20.1090, 7306.20.2000, 7306.20.3000, 7306.20.4000, 7306.20.6010, 7306.20.6050, 7306.20.8010, 7306.20.8050 of the HTS. Oil country tubular goods are included in AISI product group No. 19.

Exports of oil country tubular goods are provided for in Schedule B subheadings 7304.20.1500, 7304.20.3500, 7304.20.5000, 7304.20.6000, 7304.20.7000, 7304.20.8000, 7305.20.3000, 7305.20.7000, 7306.20.1500, 7306.20.2500, 7306.20.6000, 7306.20.8000.

(ii) Line pipe.--Provided for in subheadings 7304.10.1020, 7304.10.1030, 7304.10.1045, 7304.10.1060, 7304.10.1080, 7304.10.5020, 7304.10.5050, 7304.10.5080, 7305.11.1030, 7305.11.1060, 7305.11.5000, 7305.12.1030, 7305.12.1060, 7305.12.5000, 7305.19.1030, 7305.19.1060, 7305.19.5000, 7306.10.1010, 7306.10.1050, 7306.10.5010, 7306.10.5050 of the HTS. Line pipe is included in AISI product group No. 20.

Exports of line pipe are provided for in Schedule B subheadings 7304.10.1020, 7304.10.1050, 7304.10.1080, 7304.10.5020, 7304.10.5050, 7304.10.5080, 7305.11.1000, 7305.11.5000, 7305.12.1000, 7305.12.5000, 7305.19.1000, 7305.19.5000, 7306.10.1000, 7306.10.5000.

(iii) Mechanical pipe.--Provided for in subheadings 7304.31.3000, 7304.31.6050, 7304.39.0028, 7304.39.0032, 7304.39.0040, 7304.39.0044, 7304.39.0052, 7304.39.0056, 7304.39.0068, 7304.39.0072, 7304.51.1000, 7304.51.5060, 7304.59.1000, 7304.59.6000, 7304.59.8020, 7304.59.8025, 7304.59.8035, 7304.59.8040, 7304.59.8050, 7304.59.8055, 7304.59.8065, 7304.59.8070, 7304.90.5000, 7304.90.7000, 7306.30.1000, 7306.30.5015, 7306.30.5020, 7306.30.5035, 7306.50.1000, 7306.50.5030, 7306.50.5050, 7306.50.5070, 7306.60.5000, 7306.60.7000 of the HTS. Mechanical pipe is included in AISI product group No. 21A.

(iv) Structural pipe.--Provided for in subheadings 7304.90.1000, 7304.90.3000, 7305.31.2000, 7305.31.4000, 7305.31.6000, 7306.30.3000, 7306.50.3000, 7306.60.1000, 7306.60.3000 of the HTS. Structural pipe is included in AISI product group No. 22A.

(v) Pressure tubing.--Provided for in subheadings 7304.31.6010, 7304.39.0002, 7304.39.0004, 7304.39.0006, 7304.39.0008, 7304.51.5015, 7304.51.5045, 7304.59.2030, 7304.59.2040, 7304.59.2045, 7304.59.2055, 7304.59.2060, 7304.59.2070, 7304.59.2080, 7306.30.5010, 7306.50.5010 of the HTS. Pressure tubing is included in AISI product group No. 21B.

(vi) Stainless steel pipes and tubes.--Provided for in subheadings 7304.41.0005, 7304.41.0015, 7304.41.0045, 7304.49.0005, 7304.49.0015, 7304.49.0045, 7304.49.0060, 7306.40.1000, 7306.40.5005, 7306.40.5015, 7306.40.5045, 7306.40.5060, 7306.40.5075 of the HTS. Stainless steel pipes and tubes are included in AISI product group Nos. 21C and 21D.

Exports of stainless steel pipes and tubes are provided for in Schedule B subheadings 7304.41.0000, 7304.49.0010, 7304.49.0040, 7306.40.1000, 7306.40.5000.

(vii) Other, including standard.--Provided for in subheadings 7304.39.0016, 7304.39.0020, 7304.39.0024, 7304.39.0036, 7304.39.0048,

7304.39.0062, 7304.39.0076, 7304.39.0080, 7304.39.0090, 7304.51.5005, 7304.59.8010, 7304.59.8015, 7304.59.8030, 7304.59.8045, 7304.59.8060, 7304.59.8080, 7305.39.1000, 7305.39.5000, 7305.90.1000, 7305.90.5000, 7306.30.5025, 7306.30.5028, 7306.30.5032, 7306.30.5040, 7306.30.5055, 7306.30.5085, 7306.30.5090, 7306.90.1000, 7306.90.5000 of the HTS. Other, including standard pipe is included in AISI product group Nos. 18, 21E, and 22B.

Exports of other pipes and tubes, including mechanical, structural, pressure, and standard are provided for in Schedule B subheadings 7304.31.0000, 7304.39.0000, 7304.51.0000, 7304.59.0000, 7304.90.4000, 7304.90.6000, 7305.31.2000, 7305.31.4000, 7305.31.6000, 7305.39.1000, 7305.39.5000, 7305.90.1000, 7305.90.5000, 7306.30.1000, 7306.30.1500, 7306.50.1000, 7306.50.4500, 7306.60.2500, 7306.60.6500, 7306.90.1000, 7306.90.5000.

16. Alloy tool steel (all forms).--Provided for in subheadings 7224.10.0045, 7224.90.0015, 7224.90.0025, 7224.90.0035, 7225.20.0000, 7225.30.1000, 7225.30.5060, 7225.40.1090, 7225.40.5060, 7225.50.1060, 7226.20.0000, 7226.91.0500, 7226.91.1560, 7226.91.2560, 7226.92.1060, 7226.92.3060, 7227.10.0000, 7227.90.1060, 7227.90.2060, 7228.10.0010, 7228.10.0030, 7228.10.0060, 7228.30.4000, 7228.30.6000, 7228.50.1020, 7228.50.1040, 7228.50.1060, 7228.50.1080, 7228.60.1060, 7229.10.0000 of the HTS. Alloy tool steel is included in AISI product group No. 17.

Exports of alloy tool steel (all forms) are provided for in Schedule B subheadings 7225.20.0000, 7226.20.0000, 7226.92.2000, 7227.10.0000, 7228.10.0000, 7228.30.5000, 7228.50.1000, 7228.60.1000, 7229.10.0000.

Please refer to appendix A, Notes on Product Coverage and Methodology, for further explanation.