Certain Corrosion-Resistant Steel Products from China, India, Italy, Korea, and Taiwan

Investigation Nos. 701-TA-534-537 and 731-TA-1274-1278 (Final)

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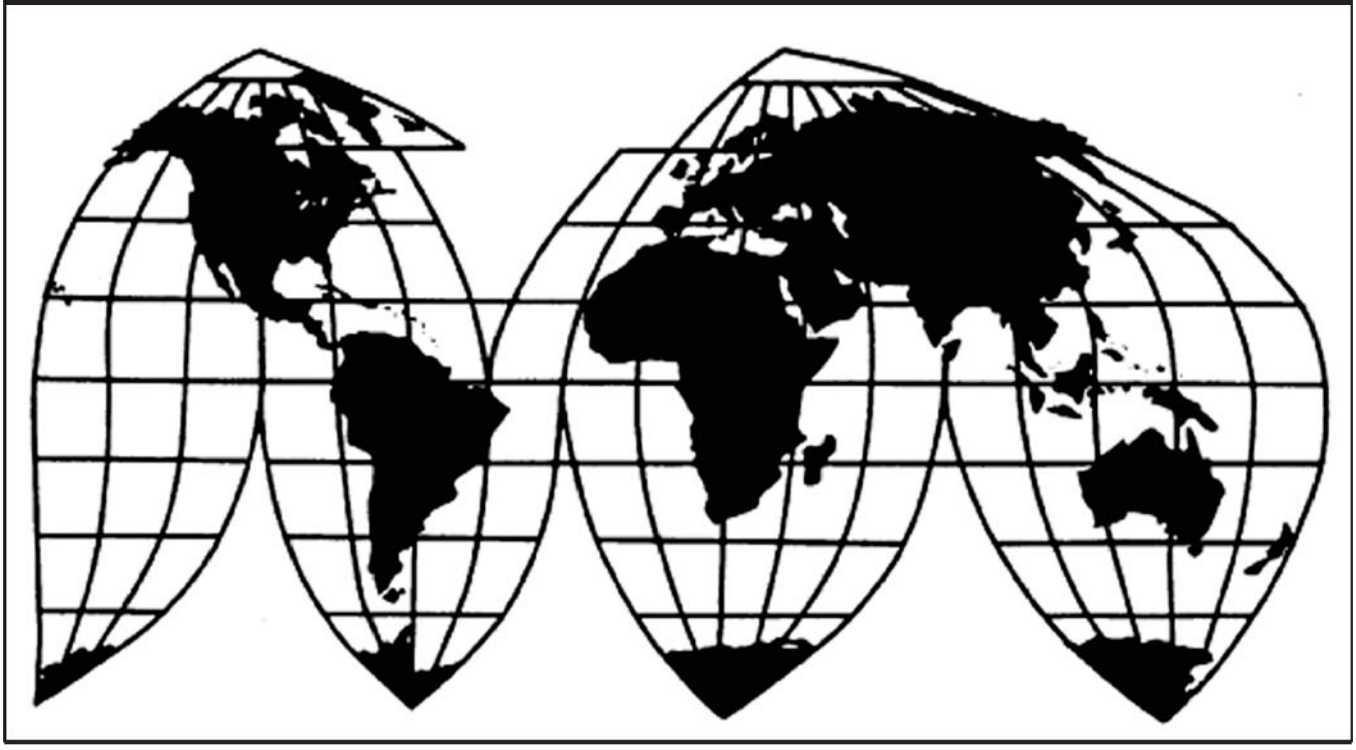
U.S. International Trade Commission



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

U.S. International Trade Commission

Washington, DC 20436
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Note.—Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report. Such deletions are indicated by asterisks.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-534-537 and 731-TA-1274-1278 (Final)

Certain Corrosion-Resistant Steel Products from China, India, Italy, Korea, and Taiwan

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that an industry in the United States is materially injured by reason of imports of certain corrosion-resistant steel products from China, India, Italy, Korea, and Taiwan, provided for in subheadings 7210.30.00, 7210.41.00, 7210.49.00, 7210.61.00, 7210.69.00, 7210.70.60, 7210.90.10, 7210.90.60, 7210.90.90, 7212.20.00, 7212.30.10, 7212.30.30, 7212.30.50, 7212.40.10, 7212.40.50, 7212.50.00, 7212.60.00, 7215.90.10, 7215.90.30, 7215.90.50, 7217.20.15, 7217.30.15, 7217.90.10, 7217.90.50, 7225.91.00, 7225.92.00, 7226.99.01, 7228.60.60, 7228.60.80, and 7229.90.10 of the Harmonized Tariff Schedule of the United States, that have been found by the Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV"), and that have been found by Commerce to be subsidized by the governments of China, India, Italy, and Korea.[2]

BACKGROUND

The Commission, pursuant to sections 705(b) and 735(b) of the Act (19 U.S.C. 1671d(b) and 19 U.S.C. 1673d(b)), instituted these investigations effective June 3, 2015, following receipt of petitions filed with the Commission and Commerce by United States Steel Corp. (Pittsburgh, Pennsylvania), Nucor Corp. (Charlotte, North Carolina), Steel Dynamics Inc. (Fort Wayne, Indiana), California Steel Industries (Fontana, California), ArcelorMittal USA LLC (Chicago, Illinois), and AK Steel Corp. (West Chester, Ohio). The final phase of the investigations was scheduled by the Commission following notification of preliminary determinations by Commerce that imports of certain corrosion-resistant steel products from China, India, Italy, and Korea were subsidized within the meaning of section 703(b) of the Act (19 U.S.C. 1671b(b)) and imports of certain corrosion-resistant steel products from China, India, Italy, Korea, and

[1] The record is defined in sec. 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR 207.2(f)).

[2] All six Commissioners voted in the affirmative. The Commission also finds that imports subject to Commerce's affirmative critical circumstances determinations are not likely to undermine seriously the remedial effect of the countervailing duty orders on certain corrosion-resistant steel products from China, Italy, and Korea and the antidumping duty orders on certain corrosion-resistant steel products from China, Italy, Korea, and Taiwan.

Taiwan were dumped within the meaning of 733(b) of the Act (19 U.S.C. 1673b(b)). Notice of the scheduling of the final phase of the Commission's investigations and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on February 12, 2016 (81 FR 7585), as revised on May 9, 2016 (81 FR 28104). The hearing was held in Washington, DC, on May 26, 2016, and all persons who requested the opportunity were permitted to appear in person or by counsel.

Views of the Commission

Based on the record in the final phase of these investigations, we find that an industry in the United States is materially injured by reason of imports of certain corrosion-resistant steel products ("CORE") from China, India, Italy, Korea, and Taiwan that were found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value and subsidized by the governments of China, India, Italy, and Korea. We also find that critical circumstances do not exist with respect to the entities exporting the subject merchandise from China, Italy, Korea, and Taiwan for which Commerce made affirmative critical circumstances determinations.

I. Background

The petitions in these investigations were filed on June 3, 2015 by United States Steel Corporation ("U.S. Steel"), Nucor Corporation ("Nucor"), Steel Dynamics Inc. ("SDI"), California Steel Industries ("CSI"), ArcelorMittal USA LLC ("AMUSA"), and AK Steel Corporation ("AK Steel") (collectively, "Petitioners"). Each of these firms is a domestic producer of CORE. Representatives of these firms appeared at the hearing accompanied by counsel and submitted prehearing and posthearing briefs.

The following four respondent groups participated actively in the final phase investigations:

- China Iron & Steel Association and the following members: Angang Group International Trading Corp.; Baoshan Iron & Steel Co., Ltd.; Beijing Shougang Cold Rolling Co., Ltd.; Benxi Steel Group International Economic & Trading Co., Ltd.; Handan Iron and Steel Group Import and Export Co., Ltd.; Maanshan Iron & Steel Co., Ltd.; Shanghai Meishan Iron & Steel Co., Ltd.; Shougang Jingtang United Iron & Steel Co., Ltd.; Tangshan Iron and Steel Group Co., Ltd.; and Wisco International Economic & Trading Co., Ltd. ("Chinese Respondents");[1]

- Jindal South West Steel Ltd., Essar Steel India Limited, and Uttam Galva Steels Limited, producers of subject merchandise in India, and Uttam Galva North America, Inc., an importer of subject merchandise from India ("Indian Respondents");

- Marcegaglia, ILVA S.p.A, Acciaieria Arvedi S.p.A., producers of subject merchandise in Italy, and Federacciai Federation of Italian Steel Companies, an association whose members are producers of subject merchandise in Italy ("Italian Respondents"); and

[1] The named members of the China Iron & Steel Association are producers and exporters of the subject merchandise.

- POSCO, POSCO Color & Coated Steel Co., Ltd., Hyundai Steel Co., Ltd., Dongkuk Steel Mill Co., Ltd., and Dongbu Steel Co., Ltd., producers of subject merchandise in Korea, and Korea Iron and Steel Association, an association whose members are producers of subject merchandise in Korea ("Korean Respondents").

Representatives and counsel for these respondent groups appeared at the hearing and submitted prehearing and posthearing briefs, as did representatives and counsel for Prosperity Tieh Enterprise Co., Ltd. ("Prosperity"), a producer of subject merchandise in Taiwan. The following importers of subject merchandise submitted prehearing and posthearing briefs: AmeriLux International LLC ("AmeriLux"); Minmetals, Inc. ("Minmetals"); Stemcor USA Inc. ("Stemcor"), and Transpacific Steel LLC ("Transpacific"). Ford Motor Company ("Ford"), a U.S. purchaser of CORE, also submitted prehearing and posthearing briefs.

In these investigations, U.S. industry data are based on questionnaire responses from 19 domestic producers that accounted for approximately *** percent of domestic production of CORE in 2015.[2] U.S. import data are based on official Commerce import statistics as adjusted to include micro-alloy steel data obtained from questionnaire responses.[3] The Commission received responses to its questionnaires from 30 foreign producers/exporters of subject merchandise: 11 firms believed to account for approximately *** of production of CORE in China in 2015; five firms believed to account for *** percent of production of CORE in India in 2015; four firms believed to account for all production of CORE in Italy in 2015; six firms believed to account for all production of CORE in Korea in 2015; and four firms believed to account for *** percent of production of CORE in Taiwan in 2015.[4]

II. Domestic Like Product

A. In General

In determining whether an industry in the United States is materially injured or threatened with material injury by reason of imports of subject merchandise, the Commission first defines the "domestic like product" and the "industry."[5] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[6] In turn, the Tariff Act defines "domestic like product" as "a product which is like,

[2] Confidential Report ("CR") at III-1-2, Public Report ("PR") at III-1.

[3] CR/PR at IV-1. Usable importer questionnaire responses were received from 60 companies, representing 83.3 percent of U.S. imports from China, 93.7 percent of U.S. imports from India, 91.5 percent of U.S. imports from Italy, all U.S. imports from Korea, 92.0 percent of U.S. imports from Taiwan, 94.5 percent of U.S. imports from nonsubject source Canada, and 78.2 percent of U.S. imports from all other nonsubject countries during 2015. CR at I-8-9, PR at I-6.

[4] CR at I-9, PR at I-6.

[5] 19 U.S.C. § 1677(4)(A).

[6] 19 U.S.C. § 1677(4)(A).

or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[7]

The decision regarding the appropriate domestic like product in an investigation is a factual determination, and the Commission has applied the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.[8] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[9] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[10] Although the Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized or sold at less than fair value,[11] the Commission determines what domestic product is like the imported articles Commerce has identified.[12]

B. Product Description

Commerce defined the scope of the imported merchandise under investigation as follows:

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[7] 19 U.S.C. § 1677(10).

[8] See, e.g., Cleo Inc. v. United States, 501 F.3d 1291, 1299 (Fed. Cir. 2007); NEC Corp. v. Department of Commerce, 36 F. Supp. 2d 380, 383 (Ct. Int'l Trade 1998); Nippon Steel Corp. v. United States, 19 CIT 450, 455 (1995); Torrington Co. v. United States, 747 F. Supp. 744, 749 n.3 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991) ("every like product determination 'must be made on the particular record at issue' and the 'unique facts of each case'"). The Commission generally considers a number of factors, including the following: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities, production processes, and production employees; and, where appropriate, (6) price. See Nippon, 19 CIT at 455 n.4; Timken Co. v. United States, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996).

[9] *See*, *e.g.*, S. Rep. No. 96-249 at 90-91 (1979).

[10] *Nippon*, 19 CIT at 455; *Torrington*, 747 F. Supp. at 748-49; *see also* S. Rep. No. 96-249 at 90-91 (Congress has indicated that the like product standard should not be interpreted in "such a narrow fashion as to permit minor differences in physical characteristics or uses to lead to the conclusion that the product and article are not 'like' each other, nor should the definition of 'like product' be interpreted in such a fashion as to prevent consideration of an industry adversely affected by the imports under consideration.").

[11] *See*, *e.g., USEC, Inc. v. United States*, 34 Fed. Appx. 725, 730 (Fed. Cir. 2002) ("The ITC may not modify the class or kind of imported merchandise examined by Commerce."); *Algoma Steel Corp. v. United States*, 688 F. Supp. 639, 644 (Ct. Int'l Trade 1988), *aff'd*, 865 F.3d 240 (Fed. Cir.), *cert. denied*, 492 U.S. 919 (1989).

[12] *Hosiden Corp. v. Advanced Display Mfrs.*, 85 F.3d 1561, 1568 (Fed. Cir. 1996) (the Commission may find a single like product corresponding to several different classes or kinds defined by Commerce); *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *Torrington*, 747 F. Supp. at 748-52 (affirming the Commission's determination defining six like products in investigations in which Commerce found five classes or kinds).

The products covered by the scope are certain flat-rolled steel products, either clad, plated, or coated with corrosion-resistant metals such as zinc, aluminum, or zinc-, aluminum-, nickel- or iron-based alloys, whether or not corrugated or painted, varnished, laminated, or coated with plastics or other non-metallic substances in addition to the metal coating. The products covered include coils that have a width of 12.7 mm or greater, regardless of form of coil (e.g., in successively superimposed layers, spirally oscillating, etc.). The products covered also include products not in coils (e.g., in straight lengths) of a thickness less than 4.75 mm and a width that is 12.7 mm or greater and that measures at least 10 times the thickness. The products covered also include products not in coils (e.g., in straight lengths) of a thickness of 4.75 mm or more and a width exceeding 150 mm and measuring at least twice the thickness. The products described above may be rectangular, square, circular, or other shape and include products of either rectangular or non-rectangular cross-section where such cross-section is achieved subsequent to the rolling process, i.e., products which have been ''worked after rolling'' (e.g., products which have been beveled or rounded at the edges). For purposes of the width and thickness requirements referenced above:

(1) Where the nominal and actual measurements vary, a product is within the scope if application of either the nominal or actual measurement would place it within the scope based on the definitions set forth above, and

(2) where the width and thickness vary for a specific product (e.g., the thickness of certain products with non-rectangular cross-section, the width of certain products with nonrectangular shape, etc.), the measurement at its greatest width or thickness applies.

Steel products included in the scope in this investigation are products in which: (1) Iron predominates, by weight, over each of the other contained elements; (2) the carbon content is 2 percent or less, by weight; (3) none of the elements listed below exceeds the quantity, by weight, respectively indicated:

• 2.50 percent of manganese, or
• 3.30 percent of silicon, or
• 1.50 percent of copper, or
• 1.50 percent of aluminum, or
• 1.25 percent of chromium, or
• 0.30 percent of cobalt, or
• 0.40 percent of lead, or
• 2.00 percent of nickel, or
• 0.30 percent of tungsten (also called wolfram), or
• 0.80 percent of molybdenum, or
• 0.10 percent of niobium (also called columbium), or
• 0.30 percent of vanadium, or
• 0.30 percent of zirconium

Unless specifically excluded, products are included in this scope regardless of levels of boron and titanium.

For example, specifically included in this scope are vacuum degassed, fully stabilized (commonly referred to interstitial-free (IF)) steels and high strength low alloy (HSLA) steels. IF steels are recognized as low carbon steels with micro-alloying levels of elements such as titanium and/or niobium added to stabilize carbon and nitrogen elements. HSLA steels are recognized as steels with micro-alloying levels of elements such as chromium, copper, niobium, titanium, vanadium, and molybdenum.

Furthermore, this scope also includes Advanced High Strength Steels (AHSS) and Ultra High Strength Steels (UHSS), both of which are considered high tensile strength and high elongation steels.

Subject merchandise also includes corrosion-resistant steel that has been further processed in a third country, including but not limited to annealing, tempering, painting, varnishing, trimming, cutting, punching and/or slitting or any other processing that would not otherwise remove the merchandise from the scope of the investigation if performed in the country of manufacture of the in-scope corrosion resistant steel.

All products that meet the written physical description, and in which the chemistry quantities do not exceed any one of the noted element levels listed above, are within the scope of this investigation unless specifically excluded. The following products are outside of and/or specifically excluded from the scope of this investigation:

• Flat-rolled steel products either plated or coated with tin, lead, chromium, chromium oxides, both tin and lead (terne plate), or both chromium and chromium oxides (tin free steel), whether or not painted, varnished or coated with plastics or other non-metallic substances in addition to the metallic coating;
• Clad products in straight lengths of 4.7625 mm or more in composite thickness and of a width which exceeds 150 mm and measure at least twice the thickness; and
• Certain clad stainless flat-rolled products, which are three-layered corrosion-resistant steel flat-rolled steel products less than 4.75 mm in composite thickness that consist of a flat-rolled steel product clad on both sides with stainless steel in a 20%–60%–20% ratio.[13]

[13] E.g., Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Critical Circumstances Determination, in Part, Appendix II, 81 FR 36316, 35319 (June 2, 2016). Commerce defined the scope identically in its other final CORE determinations.

C. Arguments of the Parties

Petitioners argue that the Commission should define the domestic like product as coextensive with the scope of these investigations, as it did in its preliminary determinations.[14] The Italian Respondents, Korean Respondents, and Prosperity accept the definition of the domestic like product proposed in the petitions.[15] The Indian Respondents take no position.[16]

D. Domestic Like Product Analysis

In our preliminary determinations, we considered arguments by respondent Procon that the Commission should treat two specialty CORE products -- diffusion-annealed nickel-plated steel ("DANP") and copper-plated steel -- as separate domestic like products. We noted at the outset that in cases where domestically manufactured merchandise is made up of a grouping of similar products or involves niche products, we do not consider each item of merchandise to be a separate like product that is only "like" its identical counterpart in the scope, but consider the grouping itself to constitute the domestic like product and "disregard minor variations," absent a "clear dividing line" between particular products in the group. We then found that DANP, copper-plated steel, and other CORE share many of the same physical characteristics and that these products are made using the same technology, processes, and equipment. We further found that these three product groups are sold through the same channels of distribution to the same types of end users; that they share many common characteristics; that they are generally perceived in terms of their corrosion-preventing quality; and that they are sold at comparable prices.[17]

The record in the final phase of these investigations does not contain any new information concerning the domestic like product factors.[18] Therefore, for the reasons set forth in our preliminary determinations, and because no party has argued for a different result in the final phase of these investigations, we define a single domestic like product, consisting of CORE, that is coextensive with Commerce's scope.

III. Domestic Industry and Related Parties

The domestic industry is defined as the domestic "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[19] In defining the domestic

[14] CSI/SDI Prehearing Brief at 3-4, U.S. Steel Prehearing Brief at 11-12.

[15] Italian Respondents Prehearing Brief at 6, Korean Respondents Prehearing Brief at 6, Prosperity Prehearing Brief at 6.

[16] Indian Respondents Prehearing Brief at 2.

[17] *Certain Corrosion-Resistant Steel Products from China, India, Italy, Korea, and Taiwan*, Inv. Nos. 701-TA-534-538 and 731-TA-1274-1278 (Preliminary), USITC Pub. 4547 (July 2015) at 9-11.

[18] Moreover, no party requested in its comments on the draft final phase questionnaires that the Commission collect additional information concerning the definition of the domestic like product.

[19] 19 U.S.C. § 1677(4)(A).

industry, the Commission's general practice has been to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

We must determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.[20] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[21]

In these investigations, AMUSA,[22] CSI,[23] Steelscape,[24] Thomas/Apollo,[25] and USS-POSCO[26] are affiliated with a subject foreign exporter or U.S. importer. None of these firms themselves imported subject merchandise.[27] Consequently, under the statute they would be related parties only if there was a "control" relationship between the U.S. producer, on the one hand, and the importer or exporter of subject merchandise, on the other.[28] This criterion

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[20] *See Torrington Co. v. United States*, 790 F. Supp. 1161, 1168 (Ct. Int'l Trade 1992), *aff'd without opinion*, 991 F.2d 809 (Fed. Cir. 1993); *Sandvik AB v. United States*, 721 F. Supp. 1322, 1331-32 (Ct. Int'l Trade 1989), *aff'd mem*., 904 F.2d 46 (Fed. Cir. 1990); *Empire Plow Co. v. United States*, 675 F. Supp. 1348, 1352 (Ct. Int'l Trade 1987).

[21] The primary factors the Commission has examined in deciding whether appropriate circumstances exist to exclude a related party include the following:

(1) the percentage of domestic production attributable to the importing producer;

(2) the reason the U.S. producer has decided to import the product subject to investigation (whether the firm benefits from the LTFV sales or subsidies or whether the firm must import in order to enable it to continue production and compete in the U.S. market);

(3) whether inclusion or exclusion of the related party will skew the data for the rest of the industry;

(4) the ratio of import shipments to U.S. production for the imported product; and

(5) whether the primary interest of the importing producer lies in domestic production or importation. *Changzhou Trina Solar Energy Co. v. USITC*, 100 F. Supp.3d 1314, 1326-31 (Ct. Int'l. Trade 2015); see *also Torrington Co. v. United States*, 790 F. Supp. at 1168.

[22] ***. CR/PR at III-4 and Table III-2. ***. CR at III-7, PR at III-4 and CR/PR at Table III-9.

[23] ***. CR/PR at Table III-9.

[24] ***. CR/PR at III-4 and Table III-2.

[25] ***. CR/PR at III-4 and Table III-2. ***. CR at III-7, PR at III-4 and CR/PR at Table III-9.

[26] ***. CR/PR at III-4 and Table III-2. ***. CR at III-7, PR at III-4 and CR/PR at Table III-9.

[27] *See generally* CR/PR at Table III-9.

[28] 19 U.S.C. § 1677(7)(4)(B)(i). U.S. producers *** purchased subject imports from ***. CR at III-24, PR at III-13, CR/PR at Table III-9. A purchaser of subject merchandise is a related party only if it controls large volumes of subject imports. The Commission has found such control to exist when the domestic producer was responsible for a predominant proportion of the importer's purchases and these purchases were substantial. *See Electrolytic Manganese Dioxide from Australia and China*, Inv. Nos. 731-TA-1124-1125 (Final), USITC Pub. 4036 (Sep. 2008) at 6 n.26. None of these four firms purchased substantial volumes of subject imports. *See* CR/PR at Tables III-9, IV-1, and IV-3. Because the record (Continued...)

appears to be met for AMUSA ***, Steelscape, and Thomas/Apollo, which each share a common parent company with importers and/or exporters of subject merchandise. For purposes of the discussion below, we assume *arguendo* that a control relationship exists between ***.

We do not find that appropriate circumstances exist to warrant any firm's exclusion from the domestic industry. First, these domestic producers are engaged only in U.S. production of CORE, and do not directly import any subject merchandise. Second, all of these companies have made significant investments in their U.S. CORE operations during 2013-15 [29] (the period of investigation or "POI"), including significant capital expenditures. In light of these expenditures and the often substantial production volumes,[30] the interests of each of these firms appear to be primarily those of a domestic producer. Third, *** these domestic producers, *** imposition of duties.[31] There is no indication that any of these domestic producers derive any benefit or operate in a manner that is different from other domestic producers as a result of their affiliations.[32] Finally, no party has argued that any of these producers be excluded from the domestic industry as related parties.

We find that appropriate circumstances do not exist to exclude any of the producers who may be related parties from the domestic industry. Consequently, we define the domestic industry as all U.S. producers of CORE.

(…Continued)
indicates that none of these firms controlled large volumes of subject imports through their purchases, we do not treat any of them as a related party.

[29] CR/PR at Table VI-4.

[30] CR/PR at Table III-9. These companies' shares of reported domestic production in 2015 were ***. CR/PR at Table III-1.

[31] CR/PR at Table III-1. ***. ***. ***.

[32] *See* CR/PR at Table VI-2.

IV. Cumulation[33]

For purposes of evaluating the volume and effects for a determination of material injury by reason of subject imports, section 771(7)(G)(i) of the Tariff Act requires the Commission to cumulate subject imports from all countries as to which petitions were filed and/or investigations self-initiated by Commerce on the same day, if such imports compete with each other and with the domestic like product in the U.S. market. In assessing whether subject imports compete with each other and with the domestic like product, the Commission generally has considered four factors:

(1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;

(2) the presence of sales or offers to sell in the same geographic markets of subject imports from different countries and the domestic like product;

(3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and

(4) whether the subject imports are simultaneously present in the market.[34]

[33] Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall be deemed negligible. 19 U.S.C. §§ 1671b(a), 1673b(a), 1677(24)(A)(i), 1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)). The statute further provides that subject imports from a single country which comprise less than 3 percent of total such imports of the product may not be considered negligible if there are several countries subject to investigation with negligible imports and the sum of such imports from all those countries collectively accounts for more than 7 percent of the volume of all such merchandise imported into the United States. 19 U.S.C. § 1677(24)(A)(ii). In the case of countervailing duty investigations involving developing countries (as designated by the United States Trade Representative), the statute indicates that the negligibility limits are 4 percent and 9 percent, rather than 3 percent and 7 percent. 19 U.S.C. § 1677(24)(B).

Subject imports as a share of the total CORE imports for each subject country exceed the requisite statutory negligibility threshold. For the 12-month period of June 2014 – May 2015, subject imports from China accounted for *** of total imports of CORE, subject imports from India were ***, subject imports from Italy were ***, subject imports from Korea were *** for purposes of the antidumping duty investigation and *** for purposes of the countervailing duty investigation, and subject imports from Taiwan were ***. CR/PR at Table IV-4.

While no single factor is necessarily determinative, and the list of factors is not exclusive, these factors are intended to provide the Commission with a framework for determining whether the subject imports compete with each other and with the domestic like product.[35] Only a "reasonable overlap" of competition is required.[36]

A. Arguments of the Parties

Petitioners. Petitioners contend that each of the four factors normally considered by the Commission shows that there is a reasonable overlap of competition between imports from each of the subject countries and the domestic like product. With respect to fungibility, they argue that there is a consensus throughout the industry that CORE from the United States and CORE from each of the subject countries are interchangeable. Petitioners argue that the domestic like product and subject imports from all subject countries are sold in all geographic regions of the United States; that they are sold in similar channels of distribution (with significant proportions of the domestic like product and subject imports from each country going to distributors and to end users); and that the domestic like product and subject imports from each country were simultaneously present in the United States during the POI. Accordingly, Petitioners urge the Commission to cumulate all subject imports.[37]

Respondents. Indian Respondents argue that there is not a reasonable overlap of competition between subject imports from India and other subject imports or between subject imports from India and the domestic like product. Indian Respondents maintain that subject imports from India are not fungible with other subject imports or with the domestic product because a majority of imports from India are galvanized steel, and a significant proportion of these imports are light gauge and very light gauge (defined by Indian Respondents as product of less than 0.012" in thickness) CORE products which the domestic industry is not interested in making, and which do not compete with the heavier gauge products imported from other subject countries. They argue that the hot-dipped aluminum-zinc-alloy-coated steel known as Galvalume (produced by the domestic industry and subject producers in Korea and Taiwan) and galvanized light gauge CORE are considered different products depending on end use. The bulk of Indian exports allegedly go to HVAC applications, and Indian Respondents argue that

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(…Continued)

[34] *See Certain Cast-Iron Pipe Fittings from Brazil, the Republic of Korea, and Taiwan*, Inv. Nos. 731-TA-278-280 (Final), USITC Pub. 1845 (May 1986), *aff'd*, *Fundicao Tupy, S.A. v. United States*, 678 F. Supp. 898 (Ct. Int'l Trade), aff'd, 859 F.2d 915 (Fed. Cir. 1988).

[35] *See*, *e.g.*, *Wieland Werke, AG v. United State*s, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

[36] The Statement of Administrative Action (SAA) to the Uruguay Round Agreements Act (URAA), expressly states that "the new section will not affect current Commission practice under which the statutory requirement is satisfied if there is a reasonable overlap of competition." H.R. Rep. No. 103-316, Vol. I at 848 (1994) (*citing Fundicao Tupy, S.A. v. United States*, 678 F. Supp. at 902; *see Goss Graphic Sys., Inc. v. United States*, 33 F. Supp. 2d 1082, 1087 (Ct. Int'l Trade 1998) ("cumulation does not require two products to be highly fungible"); *Wieland Werke, AG*, 718 F. Supp. at 52 ("Completely overlapping markets are not required.").

[37] AK Steel Prehearing Brief at 7-15, U.S. Steel Prehearing Brief at 12-13.

galvanized steel is preferred over Galvalume for these applications. Indian Respondents further argue that cumulation is inappropriate because only a negligible amount of subject imports from India go to the automotive industry, whereas other subject countries (except China) have a more significant presence in that sector. Finally, Indian Respondents argue that there is a geographic distinction between subject imports from India and those from other subject countries, with India shipping mainly to the East Coast and the Gulf Coast, while subject imports from China, Korea, and Taiwan are shipped primarily to the West Coast.[38]

B. Reasonable Overlap of Competition

The statutory threshold for cumulation is satisfied in these investigations because Petitioners filed the antidumping and countervailing duty petitions with respect to all five subject countries on the same day, June 3, 2015. As discussed below, we find that there is a reasonable overlap of competition among subject imports from these five countries and between subject imports from each source and the domestic like product.[39] [40]

Fungibility. Most responding U.S. producers reported that CORE produced in the United States and CORE imported from each subject source are "always" used interchangeably, and most responding importers and purchasers reported that these products are "frequently" or "sometimes" used interchangeably.[41] Majorities or pluralities of purchasers found imports from each of the subject countries "comparable" to the domestic like product in most of 14 non-price purchasing factors.[42] Substantial proportions of both the domestic like product and imports from each subject country were sold for construction and structural end uses, and the domestic like product and imports from each subject country were also used in the automotive/transportation sector.[43] A majority of U.S. commercial shipments of the domestic

[38] Indian Respondents Prehearing Brief at 10-14 and Posthearing Brief at 3-6.

[39] None of the statutory exceptions to cumulation applies.

[40] We observe that these investigations involve dumping findings covering imports from five subject countries and, with the termination of the countervailing duty investigation of CORE from Taiwan, subsidy findings covering imports from only four of these countries. We have previously explained why we are continuing our longstanding practice of cross-cumulating dumped and subsidized imports. *See Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman,* Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), USITC Pub. 4604 at 9-11 (April 2016).

[41] CR at II-40-41, PR at II-29 and CR/PR at Table II-13.

[42] CR/PR at Table II-12. Majorities or pluralities of purchasers found the domestic like product superior to subject imports from China with respect to delivery terms, delivery time, reliability of supply, and technical support/service; superior to subject imports from India with respect to delivery time and technical support/service; superior to subject imports from Italy with respect to delivery time, technical support/service, and U.S. transportation costs; superior to subject imports from Korea with respect to delivery time; and superior to subject imports from Taiwan with respect to delivery time, technical support/service, and U.S. transportation costs. *Id*.

[43] In 2015, 40.6 percent of U.S. commercial shipments of U.S.-produced CORE were sold for automotive end uses, 29.6 percent were for construction and structural end uses, 5.0 percent were for appliance end uses, and 24.8 percent were for other end uses. For subject imports from China, 1.9 percent of U.S. commercial shipments were sold for automotive end uses, *** were for construction (Continued...)

like product and a substantial proportion of the imports from each subject country were hot-dipped galvanized and galvanneal CORE.[44] Thus, the record indicates that there is sufficient commonality in forms and end uses of the domestic like product and imports from each subject country to support a finding of fungibility.

Indian Respondents' contention regarding fungibility is not supported by evidence in the record. As an initial matter, the Indian Respondents state that "more than *** of India's exports to the U.S. market" consisted of galvanized steel with a thickness equal to or under 0.018 inches," which they claim are products that are unavailable from U.S. sources.[45] This statement inherently concedes that almost *** of India's exports to the United States *did not* consist of CORE products for which there was allegedly a lack of fungibility.

Even with respect to the portion of subject imports from India consisting of light gauge galvanized product, Indian Respondents' argument as to a lack of fungibility is unpersuasive. Petitioner SDI is a major domestic producer of light gauge products.[46] AMUSA and U.S. Steel also produce light gauge products.[47] Moreover, the data for pricing product 3 (a light gauge galvanized steel sold in the spot market) show that the domestic industry sold greater quantities of this product in every quarter than the quantities of subject imports from India.[48] There were also imports of this pricing product from every other subject country.[49]

Indian Respondents' assertion that domestic producers are unable or unwilling to produce light gauge galvanized product also is unpersuasive. The argument rests solely on the observation that the price lists of two producers (AMUSA and U.S. Steel) state "inquire," rather than specifying the amount of the mark-up for *some* light gauge products.[50] This does not demonstrate that AMUSA and U.S. Steel are unable or unwilling to make these products. Indian Respondents' contention that domestic producers do not provide very light gauge products

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and structural end uses, *** were for appliance end uses, and *** were for other end uses. For subject imports from India, *** of U.S. commercial shipments were sold for automotive end uses, *** were for construction and structural end uses, *** were for appliance end uses, and *** were for other end uses. For subject imports from Italy, *** of U.S. commercial shipments were sold for automotive end uses, *** were for construction and structural end uses, *** were for appliance end uses, and *** were for other end uses. For subject imports from Korea, *** of U.S. commercial shipments were sold for automotive end uses, *** were for construction and structural end uses, *** were for appliance end uses, and *** were for other end uses. For subject imports from Taiwan, *** of U.S. commercial shipments were sold for automotive end uses, *** were for construction and structural end uses, *** were for appliance end uses, and *** were for other end uses. CR/PR at Table IV-12.

[44] In 2015, U.S. shipments of hot-dip galvanized and galvanneal CORE as a share of each source's shipments were *** by U.S. producers, *** of imports from China, *** of imports from India, *** of imports from Italy, *** of imports from Korea, and *** of imports from Taiwan. CR/PR at Table IV-13.

[45] Indian Respondents Prehearing Brief at 12.

[46] CSI/SDI Posthearing Brief at 2 and Hearing Tr. at 49 (Teets).

[47] Hearing Tr. at 44 (Baske) and 60 (Matthews).

[48] CR/PR at Table V-5.

[49] CR/PR at Table V-5.

[50] Indian Respondents Posthearing Brief at 4-5 and Exh. 2.

because the AMUSA and U.S. Steel price lists do not include such products[51] suffers from the same flaw. Moreover, Indian Respondents overlook SDI's capability to provide such products.[52] Finally, to the extent that the light gauge product sold by U.S. producers and other subject suppliers consists of Galvalume, Indian Respondents have not provided any evidence to support their assertion that U.S. customers "prefer" galvanized steel over Galvalume.[53]

Channels of Distribution. U.S. shipments of CORE by producers and importers are sold to both distributors and end users. In 2015, the majority of domestic producers' U.S. shipments of CORE (61.2 percent), as well as imports of CORE from China (*** percent), India (*** percent), Italy (*** percent), and Taiwan (*** percent) were sold to end users, whereas the majority of imports of CORE from Korea (*** percent) were sold directly to distributors.[54] A substantial proportion of shipments of the domestic like product and imports from each subject country were consequently directed to end users, and significant quantities from each source were also sold to distributors.

Indian Respondents' contention that subject imports from India are sold in different channels of distribution is not borne out by the record. Substantial proportions of subject imports from India, the domestic like product, and imports from all other subject countries were used in the construction sector. Furthermore, subject imports from China, Italy, and Taiwan also had small representations in the automotive sector.[55]

Geographic Overlap. Domestically produced CORE is shipped nationwide.[56] Subject imports from all subject sources also are sold throughout the continental United States, notwithstanding Indian Respondents' claim to the contrary.[57]

Simultaneous Presence in Market. Imports of CORE from all subject sources were present in the U.S. market in every month during the POI.[58]

Conclusion. The relevant antidumping duty petitions and countervailing duty petitions were filed on the same day, and the record indicates that there is a reasonable overlap of competition between and among subject imports and the domestic like product. Consequently, we analyze subject imports from China, India, Italy, Korea, and Taiwan on a cumulated basis for our analysis of material injury by reason of subject imports.

V. Material Injury by Reason of Subject Imports

Based on the record in the final phase of these investigations, we find that an industry in the United States is materially injured by reason of imports of CORE from China, India, Italy, Korea, and Taiwan that were found by Commerce to be sold in the United States at less than

[51] Indian Respondents Posthearing Brief at 5.
[52] CSI/SDI Posthearing Brief at 2 and Hearing Tr. at 49 (Teets).
[53] Indian Respondents Posthearing Brief at 4.
[54] CR/PR at Table II-2.
[55] CR/PR at Table IV-12.
[56] CR/PR at Table II-3.
[57] CR/PR at Tables II-3 and IV-14.
[58] CR/PR at Table IV-15.

fair value and imports of CORE that were subsidized by the governments of China, India, Italy, and Korea.

A. Legal Standards

In the final phase of antidumping and countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[59] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[60] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[61] In assessing whether the domestic industry is materially injured by reason of subject imports, we consider all relevant economic factors that bear on the state of the industry in the United States.[62] No single factor is dispositive, and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[63]

Although the statute requires the Commission to determine whether the domestic industry is "materially injured or threatened with material injury by reason of" unfairly traded imports,[64] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's reasonable exercise of its discretion.[65] In identifying a causal link, if any, between subject imports and material injury to the domestic industry, the Commission examines the facts of record that relate to the significance of the volume and price effects of the subject imports and any impact of those imports on the condition of the domestic industry. This evaluation under the "by reason of" standard must ensure that subject imports are more than a minimal or tangential cause of injury and that there is a sufficient causal, not merely a temporal, nexus between subject imports and material injury.[66]

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[59] 19 U.S.C. §§ 1671d(b), 1673d(b). The Trade Preferences Extension Act of 2015, Pub. L. 114-27, amended the provisions of the Tariff Act pertaining to Commission determinations of material injury and threat of material injury by reason of subject imports in certain respects. We have applied these amendments here.

[60] 19 U.S.C. § 1677(7)(B). The Commission "may consider such other economic factors as are relevant to the determination" but shall "identify each {such} factor ... and explain in full its relevance to the determination." 19 U.S.C. § 1677(7)(B).

[61] 19 U.S.C. § 1677(7)(A).

[62] 19 U.S.C. § 1677(7)(C)(iii).

[63] 19 U.S.C. § 1677(7)(C)(iii).

[64] 19 U.S.C. §§ 1671d(a), 1673d(a).

[65] *Angus Chemical Co. v. United States*, 140 F.3d 1478, 1484-85 (Fed. Cir. 1998) ("{T}he statute does not 'compel the commissioners' to employ {a particular methodology}."), *aff'g,* 944 F. Supp. 943, 951 (Ct. Int'l Trade 1996).

[66] The Federal Circuit, in addressing the causation standard of the statute, observed that "{a}s long as its effects are not merely incidental, tangential, or trivial, the foreign product sold at less than (Continued...)

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[67] In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.[68] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such

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fair value meets the causation requirement.*"* *Nippon Steel Corp. v. USITC*, 345 F.3d 1379, 1384 (Fed. Cir. 2003). This was further ratified in *Mittal Steel Point Lisas Ltd. v. United States*, 542 F.3d 867, 873 (Fed. Cir. 2008), where the Federal Circuit, quoting *Gerald Metals, Inc. v. United States*, 132 F.3d 716, 722 (Fed. Cir. 1997), stated that "this court requires evidence in the record 'to show that the harm occurred "by reason of" the LTFV imports, not by reason of a minimal or tangential contribution to material harm caused by LTFV goods.'" *See also Nippon Steel Corp. v. United States*, 458 F.3d 1345, 1357 (Fed. Cir. 2006); *Taiwan Semiconductor Industry Ass'n v. USITC*, 266 F.3d 1339, 1345 (Fed. Cir. 2001).

[67] SAA at 851-52 ("{T}he Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports."); S. Rep. 96-249 at 75 (1979) (the Commission "will consider information which indicates that harm is caused by factors other than less-than-fair-value imports."); H.R. Rep. 96-317 at 47 (1979) ("in examining the overall injury being experienced by a domestic industry, the ITC will take into account evidence presented to it which demonstrates that the harm attributed by the petitioner to the subsidized or dumped imports is attributable to such other factors;" those factors include "the volume and prices of nonsubsidized imports or imports sold at fair value, contraction in demand or changes in patterns of consumption, trade restrictive practices of and competition between the foreign and domestic producers, developments in technology and the export performance and productivity of the domestic industry"); *accord Mittal Steel*, 542 F.3d at 877.

[68] SAA at 851-52 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports."); *Taiwan Semiconductor Industry Ass'n,* 266 F.3d at 1345 ("{T}he Commission need not isolate the injury caused by other factors from injury caused by unfair imports ... . Rather, the Commission must examine other factors to ensure that it is not attributing injury from other sources to the subject imports." (emphasis in original)); *Asociacion de Productores de Salmon y Trucha de Chile AG v. United States*, 180 F. Supp. 2d 1360, 1375 (Ct. Int'l Trade 2002) ("{t}he Commission is not required to isolate the effects of subject imports from other factors contributing to injury" or make "bright-line distinctions" between the effects of subject imports and other causes.); *see also Softwood Lumber from Canada*, Inv. Nos. 701-TA-414 and 731-TA-928 (Remand), USITC Pub. 3658 at 100-01 (Dec. 2003) (Commission recognized that "{i}f an alleged other factor is found not to have or threaten to have injurious effects to the domestic industry, *i.e.*, it is not an 'other causal factor,' then there is nothing to further examine regarding attribution to injury"), *citing Gerald Metals,* 132 F.3d at 722 (the statute "does not suggest that an importer of LTFV goods can escape countervailing duties by finding some tangential or minor cause unrelated to the LTFV goods that contributed to the harmful effects on domestic market prices.").

as nonsubject imports, which may be contributing to overall injury to an industry.[69] It is clear that the existence of injury caused by other factors does not compel a negative determination.[70]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports" and the Commission "ensure{s} that it is not attributing injury from other sources to the subject imports."[71] [72] Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[73]

The Federal Circuit's decisions in *Gerald Metals, Bratsk*, and *Mittal Steel* all involved cases where the relevant "other factor" was the presence in the market of significant volumes of price-competitive nonsubject imports. The Commission interpreted the Federal Circuit's guidance in *Bratsk* as requiring it to apply a particular additional methodology following its

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[69] S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

[70] *See Nippon Steel Corp*., 345 F.3d at 1381 ("an affirmative material-injury determination under the statute requires no more than a substantial-factor showing. That is, the 'dumping' need not be the sole or principal cause of injury.").

[71] *Mittal Steel*, 542 F.3d at 877-78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology.") *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 792 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

[72] Commissioners Pinkert and Kieff do not join this paragraph or the following three paragraphs. They point out that the Federal Circuit, in *Bratsk*, 444 F.3d 1369, and *Mittal Steel*, held that the Commission is *required*, in certain circumstances when analyzing present material injury, to consider a particular issue with respect to the role of nonsubject imports, without reliance upon presumptions or rigid formulas. The Court has not prescribed a specific method of exposition for this consideration. *Mittal Steel* explains as follows:

> What *Bratsk* held is that "where commodity products are at issue and fairly traded, price competitive, non-subject imports are in the market," the Commission would not fulfill its obligation to consider an important aspect of the problem if it failed to consider whether non-subject or non-LTFV imports would have replaced LTFV subject imports during the period of investigation without a continuing benefit to the domestic industry. 444 F.3d at 1369. Under those circumstances, *Bratsk* requires the Commission to consider whether replacement of the LTFV subject imports might have occurred during the period of investigation, and it requires the Commission to provide an explanation of its conclusion with respect to that factor.

542 F.3d at 878.

[73] *Nucor Corp. v. United States*, 414 F.3d 1331, 1336, 1341 (Fed. Cir. 2005); *see also Mittal Steel*, 542 F.3d at 879 ("*Bratsk* did not read into the antidumping statute a Procrustean formula for determining whether a domestic injury was 'by reason' of subject imports.").

finding of material injury in cases involving commodity products and a significant market presence of price-competitive nonsubject imports.[74] The additional "replacement/benefit" test looked at whether nonsubject imports might have replaced subject imports without any benefit to the U.S. industry. The Commission applied that specific additional test in subsequent cases, including the *Carbon and Certain Alloy Steel Wire Rod from Trinidad and Tobago* determination that underlies the *Mittal Steel* litigation.

Mittal Steel clarifies that the Commission's interpretation of *Bratsk* was too rigid and makes clear that the Federal Circuit does not require the Commission to apply an additional test nor any one specific methodology; instead, the court requires the Commission to have "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and requires that the Commission not attribute injury from nonsubject imports or other factors to subject imports.[75] Accordingly, we do not consider ourselves required to apply the replacement/benefit test that was included in Commission opinions subsequent to *Bratsk*.

The progression of *Gerald Metals, Bratsk*, and *Mittal Steel* clarifies that, in cases involving commodity products where price-competitive nonsubject imports are a significant factor in the U.S. market, the Court will require the Commission to give full consideration, with adequate explanation, to non-attribution issues when it performs its causation analysis.[76]

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[77] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[78]

B. Conditions of Competition and the Business Cycle

The following conditions of competition inform our analysis of whether there is material injury by reason of subject imports.

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[74] *Mittal Steel*, 542 F.3d at 875-79.

[75] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 875-79 & n.2 (recognizing the Commission's alternative interpretation of *Bratsk* as a reminder to conduct a non-attribution analysis).

[76] To that end, after the Federal Circuit issued its decision in *Bratsk*, the Commission began to present published information or send out information requests in the final phase of investigations to producers in nonsubject countries that accounted for substantial shares of U.S. imports of subject merchandise (if, in fact, there were large nonsubject import suppliers). In order to provide a more complete record for the Commission's causation analysis, these requests typically seek information on capacity, production, and shipments of the product under investigation in the major source countries that export to the United States. The Commission plans to continue utilizing published or requested information in the final phase of investigations in which there are substantial levels of nonsubject imports.

[77] We provide in our respective discussions of volume, price effects, and impact a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

[78] *Mittal Steel*, 542 F.3d at 873; *Nippon Steel Corp*., 458 F.3d at 1350, *citing U.S. Steel Group*, 96 F.3d at 1357; S. Rep. 96-249 at 75 ("The determination of the ITC with respect to causation is ... complex and difficult, and is a matter for the judgment of the ITC.").

1. Demand Considerations

CORE is used primarily in automotive and construction applications; other end uses include appliance manufacturing and HVAC systems, which are linked to residential construction.[79] Thus, demand for CORE is mainly driven by demand in the automotive and construction sectors, as well as overall economic conditions.[80] A plurality of U.S. producers and the majority of importers and purchasers reported that U.S. demand for CORE had increased since January 2013.[81] Total monthly vehicle sales in the United States grew by 12 percent from 15.4 million units in January 2013 to 17.2 million units in December 2015.[82] Total U.S. construction spending increased by 31.3 percent from January 2013 to December 2015.[83] Apparent U.S. consumption of CORE increased by 7.5 percent from 2013 to 2015, rising from 19.8 million short tons in 2013 to 21.8 million short tons in 2014, and then falling slightly to 21.3 million short tons in 2015.[84]

2. Supply Considerations

During the POI, the domestic industry satisfied the bulk of U.S. demand for CORE. The share of apparent U.S. consumption that the domestic industry supplied declined from 85.6 percent in 2013 to 79.8 percent in 2014 and 79.2 percent in 2015.[85] In 2015, the five largest domestic producers, ***, accounted for *** percent of U.S. CORE production.[86] Individual domestic producers of CORE engaged in different types of production activity, with some using blast furnaces and oxygen steelmaking furnaces and some utilizing electric-arc steelmaking furnaces, while others produced CORE starting with slabs, hot-rolled steel or cold-rolled steel produced by a different firm.[87] The domestic industry's production capacity was virtually unchanged in 2015 as compared with 2013.[88]

The domestic industry engaged in some consolidation and restructuring during the POI. AK Steel completed the acquisition of the integrated steel production facilities of Severstal North America in Dearborn, Michigan in September 2014; AMUSA completed its acquisition of ThyssenKrupp Steel USA in February 2014;[89] SDI acquired a Columbus, MS minimill in

[79] CR at II-5 and II-22, PR at II-2 and II-14.
[80] CR/PR at II-1.
[81] CR/PR at Table II-6.
[82] CR at II-25, PR at II-16-17 and CR/PR at Figure II-5.
[83] CR at II-26, PR at II-19 and CR/PR at Figure II-6.
[84] CR/PR at Tables IV-17 and C-1.
[85] CR/PR at Table IV-17.
[86] CR/PR at Table III-1.
[87] CR/PR at III-2.
[88] CR/PR at Table III-5.
[89] This is a 50/50 joint venture between AMUSA and Nippon Steel & Sumitomo Metal Corp. CR/PR at Table III-3.

September 2014; and U.S. Steel ***.[90] A new entrant in the U.S. CORE industry is expected to enter the market later this year; the Big River Steel mill in Osceola, Arkansas is expected to be completed in late 2016 and to have galvanizing lines with the capacity to produce 525,000 short tons of CORE annually.[91]

Eleven of the nineteen responding domestic producers reported prolonged shutdowns or curtailments, mostly during 2014 and 2015.[92] The industry's production capacity, however, was not significantly affected by the production curtailments.[93] Bad weather led to some supply disruptions during the winter of 2014 due to difficulty shipping on the Great Lakes.[94]

Cumulated subject imports as a share of apparent U.S. consumption increased overall from 7.8 percent of the U.S. market in 2013 to 12.4 percent in 2015.[95]

Nonsubject imports increased from 6.7 percent of total apparent U.S. consumption in 2013 to 7.4 percent in 2014 and 8.4 percent in 2015.[96] In 2015, the source of the largest volume of nonsubject imports was Canada.[97]

3. Substitutability and Other Conditions

The record indicates that there is a moderate-to-high degree of substitutability between domestically produced CORE and CORE imported from subject sources and that price is an important purchasing factor.[98] As discussed above, U.S. producers reported that CORE from U.S. and subject sources was frequently or always interchangeable, and importers and purchasers generally reported these products were sometimes or frequently interchangeable.[99]

In addition, the end uses[100] and types of CORE product[101] that exporters from each subject country shipped to the United States during the POI reveal a substantial overlap between the cumulated subject imports and the domestic like product. In 2015, 4.6 million short tons of U.S. commercial shipments of U.S.-produced CORE, and 2.2 million short tons of U.S. commercial shipments of cumulated subject CORE imports, were for construction end

[90] CR/PR at Tables III-3 & III-4.

[91] CR at III-11, PR at III-6.

[92] CR/PR at Tables III-3 & III-4. *** attribute the production shutdowns and production curtailments to a lack of orders due to the subject imports. CR/PR at Tables III-3 & III-4. In particular, ***. CR/PR at Tables III-3 & III-4.

[93] Capacity rose slightly in 2014 and declined slightly in 2015. *See* CR/PR at Table III-5.

[94] CR at II-10-11, PR at II-7-8. *** stated that it experienced some temporary constraints due to severe weather in early 2014. *** reported that production was disrupted at *** but that no orders of CORE were denied. *Id*.

[95] CR/PR at Table IV-17.

[96] CR/PR at Table IV-17.

[97] CR at IV-6, PR at IV-2.

[98] CR at II-30, PR at II-21 and CR/PR at Table II-8.

[99] CR/PR at Table II-13.

[100] CR/PR at Table IV-12.

[101] CR/PR at Table IV-13.

uses.[102] In 2015, U.S. shipments of hot-dip galvanized and galvanneal CORE constituted *** of U.S. producers' shipments and *** of cumulated subject CORE imports.[103]

The record also indicates that price is an important factor in purchasing decisions in the U.S. CORE market. When asked to rate the importance of certain factors in their purchasing decisions, more purchasers reported that price was "very" important than for any other factor.[104] When asked to assess how often differences other than price were significant in sales of CORE from the United States, subject countries, and nonsubject countries, most U.S. producers, importers, and purchasers reported that differences other than price with respect to CORE from all country sources were only "sometimes" or "never" important.[105]

Prices for the primary raw materials used to produce CORE fluctuated between January 2013 and December 2015, though the prices for each input showed an overall decline. Specifically, prices for iron ore, coal, and iron and steel scrap declined by 0.4 percent,[106] 9.9 percent, and 56.6 percent, respectively.[107] Prices for both zinc and aluminum – the main CORE coating materials – declined by *** percent and *** percent, respectively.[108] Prices for hot-rolled coil and cold-rolled coil, intermediate products used in the production of CORE, declined by *** percent and *** percent, respectively.[109] Energy is also a factor in CORE production costs; energy costs fluctuated over the POI.[110]

Most CORE sold by U.S. producers and importers is produced to order. Responding U.S. producers reported that 98.1 percent of their U.S. commercial shipments were produced to order, with lead times averaging 48 days, and responding U.S. importers reported that 88.7 percent of U.S. commercial shipments of subject imports were produced to order, with lead times averaging 67 days.[111]

Finally, U.S. producers reported selling their product mainly through annual or long-term contracts (57.4 percent of 2015 shipments) and spot sales (32.9 percent).[112] Petitioners reported that some contract pricing is closely tied to spot market pricing through indexing to

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[102] CR/PR at Table IV-12.

[103] CR/PR at Table IV-13.

[104] CR/PR at Table II-10.

[105] All U.S. producers reported that there were either "sometimes" or "never" differences other than price between CORE from all country sources. Most importers reported that differences other than price were at least "sometimes" important for all country sources. Among purchasers, the most common response for all comparisons between U.S., subject, and nonsubject CORE (except U.S. compared to Korea or Taiwan) was that differences other than price were "sometimes" important. CR at II-43, PR at II-31-32 and CR/PR at Table II-15.

[106] An alternative data source shows that prices of iron ore declined much more significantly over the POI. Korean Respondents Prehearing Brief at Exh. 17.

[107] CR/PR at V-1 and Figure V-1.

[108] CR/PR at V-2 and Figure V-2.

[109] CR at V-3, PR at V-2 and CR/PR at Figure V-3.

[110] CR at V-5, PR at V-3 and CR/PR at Figure V-4.

[111] CR at II-30, PR at II-21.

[112] CR/PR at Table V-2.

publications such as the CRU.[113] With respect to CORE imported from subject countries, most was sold pursuant to short-term contracts (48.7 percent) or on the spot market (45.5 percent), and less than six percent was sold through annual or long-term contracts.[114]

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[115]

Cumulated subject imports increased from 1.5 million short tons in 2013 to 2.8 million short tons in 2014, and then declined slightly to 2.6 million short tons in 2015.[116] As explained above, apparent U.S. consumption rose during the POI, increasing by 10.1 percent between 2013 and 2014, before falling by 2.4 percent between 2014 and 2015, for an overall increase of 7.5 percent between 2013 and 2015.[117] The volume of cumulated subject imports rose much faster, increasing by 83.0 percent between 2013 and 2014 before decreasing by 5.7 percent between 2014 and 2015, for an overall increase of 72.6 percent between 2013 and 2015.[118]

The market share (by quantity) of cumulated subject imports increased from 7.8 percent in 2013 to 12.9 percent in 2014 and then declined slightly to 12.4 percent in 2015.[119] The gain in market share by subject imports between 2013 and 2014 came entirely at the expense of the domestic industry, whose market share decreased from 85.6 percent in 2013 to 79.8 percent in 2014.[120] Between 2014 and 2015, the domestic industry's market share declined slightly from 79.8 percent to 79.2 percent, and this loss was primarily attributable to the increase in the market share of nonsubject imports.[121] Nonsubject imports' market share increased from 6.7 percent in 2013 to 7.4 percent in 2014 and 8.4 percent in 2015.[122]

We have considered respondents' arguments that subject imports were drawn into the U.S. market in 2014 as a result of increasing demand coupled with supply constraints experienced by the domestic industry. These supply constraints were allegedly due to bad

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[113] Hearing Tr. at 106-107 (Blume) and 153 (Lauschke).

[114] CR/PR at Table V-2. A majority of responding importers reported using transaction-by-transaction negotiations and contracts for their sales to automotive end users and using primarily transaction-by-transaction negotiations for their sales to construction, appliance, other end users, and distributors/service centers. Responding U.S. producers reported using both contracts and transaction-by-transaction negotiations for their sales to automotive end users and using primarily transaction-by-transaction negotiations for their sales to construction, appliance, other end users, and distributors/service centers. CR/PR at Table V-1.

[115] 19 U.S.C. § 1677(7)(C)(i).

[116] CR/PR at Table IV-3.

[117] CR/PR at Table C-1.

[118] CR/PR at Table C-1.

[119] CR/PR at Table IV-17.

[120] CR/PR at Table IV-17.

[121] CR/PR at Table IV-17.

[122] CR/PR at Table IV-17.

weather in early 2014 (which particularly affected integrated producers in the upper Midwest that faced iron ore shortages because of the freezing of the Great Lakes), extended maintenance outages, and the closure of outdated equipment lines.[123] We find that these supply constraints cannot explain the magnitude and duration of the increase in subject imports. Many of these supply disruptions occurred in early 2014 and were of limited duration.[124] Notwithstanding this, subject imports increased for seven consecutive calendar quarters, from the last quarter of 2013 through the second quarter of 2015, after which the petitions in these investigations were filed. The scope of these supply disruptions also does not account for the magnitude of the increase in subject imports, which, as noted above, was 1.3 million short tons between 2013 and 2014. The domestic industry's capacity utilization rates (74.9 percent in 2013, 77.4 percent in 2014, and 75.0 percent in 2015)[125] do not suggest that the industry was incapable of supplying at least a significant share of the market that subject imports captured in 2014 and largely retained in 2015. Also, as discussed in section V.D. below, during the period of claimed shortages, subject imports undersold the domestic like product, which is not the pricing behavior typically associated with a supply shortfall. Moreover, the large increase in importers' end-of-period inventories of subject imports in 2014, and the continued elevated levels of these inventories in 2015, also do not support the respondents' contention that the full increase in subject imports was needed on a short-term basis to address shortages.[126]

Additionally, even if the domestic industry was not able to supply certain types of specialized CORE in the quantities that customers sought and this contributed to the increases in subject imports, we find that any such shortages of particular products cannot explain the magnitude of the increase in subject imports. For example, the record indicates that there was limited domestic production of certain Advanced High Strength Steel ("AHSS") grades during the POI.[127] Yet, U.S. importers' commercial U.S. shipments of AHSS 490 and 1190 grades of hot-dipped galvanized, galvanneal, and electrogalvanized CORE amounted to only *** short tons in 2015,[128] while the total volume of subject imports that year was 2.6 million short tons.

As noted above, the volume and market share of subject imports declined somewhat in 2015.[129] We attribute this decline to the pendency of these investigations. The monthly

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[123] *E.g.*, Korean Respondents Prehearing Brief at 21-31 and Posthearing Brief at 2-6.

[124] CR at II-10, PR at II-7-8, AK Steel Posthearing Brief at Exh. 3 (affidavit stating that ***.)

[125] CR/PR at Table III-5.

[126] U.S. importers' inventories of subject imports increased from 192,575 short tons at the end of 2013 to 393,707 short tons at the end of 2014, and were 327,012 short tons at the end of 2015. CR/PR at Table VII-27.

[127] CR at IV-35-36, PR at IV-16-17.

[128] CR/PR at Tables IV-3 and IV-13.

[129] These data do not, however, fully reflect the presence of subject imports in the U.S. market due to the large volumes of inventories in 2014 and 2015. U.S. importers' inventories of subject imports increased from 192,575 short tons at the end of 2013 to 393,707 short tons at the end of 2014, and were 327,012 short tons at the end of 2015. CR/PR at Table VII-27; AMUSA Posthearing Brief, Exh. 1 at 36 & Exh. 7 (showing that when inventories are taken into account, U.S. consumption of subject imports continued to increase in 2015); *see also* EDIS Doc. 583925, File ID 1104585 at pp. 31 and 37. The data on (Continued...)

volumes of subject imports were lower after July 2015, the month after the filing of the petitions, than they had been in the first half of 2015 or in the same months of 2014.[130]

Based on the foregoing, we find that the cumulated volume of subject imports, and the increase in that volume, are significant in absolute terms and relative to consumption in the United States.

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of the subject imports, the Commission shall consider whether

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[131]

As explained in Section V.B.3. above, the record indicates that there is a moderate-to-high degree of substitutability between subject imports and domestically produced CORE and that price is an important factor in purchasing decisions.

(…Continued)
the record for inventories at service centers is not specific to CORE – it is for carbon flat-rolled products generally – but it also shows rising inventories in 2014. CR at II-20, PR at II-14, CR/PR at Figure II-3.

[130] CR/PR at Table IV-15.

[131] 19 U.S.C. § 1677(7)(C)(ii).

The Commission collected quarterly pricing data on eight pricing products (four CORE products, with separate data for each according to whether it was sold by contract).[132] Thirteen U.S. producers and 39 importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[133]

The quarterly pricing data show that the subject imports undersold the domestic like product in 140 of 239 possible comparisons (involving 1,644,729 short tons) and oversold the domestic like product in the remaining 99 instances (involving 626,749 short tons). Underselling was particularly prevalent in 2014, the year in which subject import volume and market share surged.[134] The margins of underselling ranged from 0.2 percent to 38.2 percent,

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[132] The pricing products were:

Product 1 – Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), *bare*, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, *not* sold by contract;

Product 2 – Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), *pre-painted*, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, *not* sold by contract;

Product 3 – Hot-dipped galvanized steel sheet, *unpainted,* commercial steel type, B, G-30 to G-60 coating weight, 24 inches to 60 inches in width, 0.012 inches to 0.018 inches in thickness, *not* sold by contract;

Product 4 – Hot-dipped galvanized steel sheet, *unpainted*, structural steel quality, G-60 to G-90 coating weight, 24 inches to 60 inches in width, 0.024 inches to 0.06 inches in thickness, *not* sold by contract;

Product 5 – Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), *bare*, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, sold by contract;

Product 6 – Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), *pre-painted*, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, sold by contract;

Product 7 – Hot-dipped galvanized steel sheet, *unpainted,* commercial steel type, B, G-30 to G-60 coating weight, 24 inches to 60 inches in width, 0.012 inches to 0.018 inches in thickness, sold by contract; and

Product 8 – Hot-dipped galvanized steel sheet, *unpainted*, structural steel quality, G-60 to G-90 coating weight, 24 inches to 60 inches in width, 0.024 inches to 0.06 inches in thickness, sold by contract.

CR at V-13, PR at V-8-9.

[133] CR at V-14, PR at V-9. Reported pricing products represented approximately 13.6 percent of U.S. producers' U.S. commercial shipments of CORE in 2015, 26.9 percent of product from China, 46.2 percent of product from India, 39.5 percent of product from Italy, 22.7 percent of product from Korea, and 52.5 percent of product from Taiwan. CR at V-14, PR at V-9.

[134] In that year, subject imports undersold the domestic like product in 64 of 82 possible comparisons (involving 843,972 short tons) and oversold the domestic like product in the remaining 18 instances (involving 37,358 short tons). CR/PR at Table V-12c.

and the average margin of underselling was 9.4 percent.[135] Given the high frequency of underselling and the fact that price is an important consideration in purchasing decisions, we find the underselling to be significant. Purchasers also confirmed shifting from the domestic like product to subject imports due to their lower prices.[136]

We also examined price trends. In general, prices for the domestic like product increased from 2013 to 2014 and then fell in 2015 to levels below those of 2013.[137] Overall, prices generally declined during 2013-15, with price decreases for domestically produced pricing products ranging from *** to *** percent.[138] [139] [140]

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[135] CR at V-33-34, PR at V-21 and CR/PR at Table V-12a.

[136] Thirteen purchasers responding to the Commission's questionnaire reported that they had shifted purchases of CORE to subject imports since 2013, and twelve of those purchasers reported that the imported product was priced lower than the domestic product. Twelve of those purchasers also reported that price was the reason for the shift. CR at V-40, PR at V-25. Purchasers reported shifting a total of 259,000 short tons of CORE purchases from the domestic like product to subject imports. CR/PR at Table V-14. Subject imports from each of the five subject countries were involved in these purchase shifts. *Id.* That appreciable numbers of purchasers indicated that they shifted purchases from domestic to subject sources because of pricing rebuts Korean Respondents' arguments that the reported underselling merely reflects a price premium that the domestic like product receives because of faster delivery and avoiding added logistical costs of importing. *See* Korean Respondents Prehearing Brief at 42. Moreover, the quantity shifted to subject imports for price reasons is significant in the context of the total increase in purchases of subject imports reported by purchasers. *See* CR/PR at Table II-1.

[137] *See* CR/PR at Tables V-3 through V-10.

[138] CR at V-31, PR at V-19.

[139] Chairman Williamson and Commissioners Pinkert and Schmidtlein find that subject imports depressed prices for the domestic like product to a significant degree. The declines in the prices of the domestic like product occurred at a time of robust demand. As noted above, apparent U.S. consumption of CORE increased by 7.5 percent from 2013 to 2015, rising from 19.8 million short tons in 2013 to 21.8 million short tons in 2014, and then falling slightly to 21.3 million short tons in 2015. CR/PR at Tables IV-17 and C-1. Ten purchasers reported in their questionnaire responses that domestic producers were forced to cut prices because of subject import pricing. CR at V-43, PR at V-26 and CR/PR at Table V-16. Domestic producers also provided evidence of purchasers using subject import pricing to leverage price concessions from the U.S. producers in sales negotiations. AMUSA Posthearing Brief, Exh. 1 at 32-33 & Exh. 3; U.S. Steel Posthearing Brief, Exh. 1 at 13 & Exh. 12.

Respondents' argument that declining CORE prices are explained by falling raw material costs (*E.g.*, Korean Respondents Prehearing Brief at 37-41) is not borne out by information in the record regarding the magnitude of declines in prices and raw material costs. By any measure, CORE prices fell by more than the decline in raw material costs, at a time when demand for CORE remained strong. The domestic industry's unit value of raw material costs fell by $74 per short ton from 2014 to 2015. CR/PR at Table VI-1. On an aggregate basis, the unit value of U.S. producers' U.S. shipments declined by $96 per short ton from 2014 to 2015 (*See* CR/PR at Table III-7), the unit value of their total net sales declined by $89 per ton (*see* CR/PR at Table VI-1), and considered on a weighted-average annualized basis, the domestic industry's annual values of the eight pricing products for which the Commission gathered data declined by between $*** to $*** per short ton between 2014 and 2015. Derived from CR/PR at Tables V-3 through V-10.

Accordingly, based on the record in the final phase of these investigations, we find that subject imports significantly undersold the domestic like product. As a result of this underselling, the subject imports gained market share at the expense of the domestic industry, as described in section V.C. above. The low-priced cumulated subject imports consequently had significant effects on the domestic industry, which are described further below.

(…Continued)

[140] Commissioners Johanson, Broadbent, and Kieff do not find that subject imports depressed prices for the domestic like product to a significant degree. Prices for domestically produced CORE decreased in 2015, in line with sharply declining raw material costs. In particular, iron and steel scrap fell by $240 per short ton, or by 50.7 percent, between January and December of that year. U.S. Bureau of Labor Statistics, Producer Price Index, January 2013=100, May 26, 2016; CR/PR at Figure V-1. By comparison, U.S. prices for CORE fell by $*** between Q1 2015 and Q4 2015, or by *** percent. CR/PR at Tables V-3 through V-10. In addition, the industry's unit net sales values declined less rapidly than its unit COGS or raw material costs, and by roughly similar values, over the full POI. The industry's unit value of net sales fell by $64 per short ton, or by 7.3 percent, between 2013 and 2015. By comparison, the industry's unit value of raw material costs fell by $60 per short ton (10.7 percent) while its unit cost of goods sold (COGS) fell by $66 per short ton (8.1 percent). CR/PR at Table VI-1. Moreover, CORE prices fell in strong correlation with, but to a lesser extent than, prices for upstream steel products, such as hot-rolled steel and cold-rolled steel. CR/PR at Figure V-3, CR at V-3, PR at V-2. Therefore, in light of the rapid decline in the price of underlying raw materials and the industry's costs in general, and a strong correlation between the prices of steel products, the decline in U.S. CORE prices cannot be attributed to subject imports.

Commissioners Johanson, Broadbent, and Kieff do not find that subject imports prevented price increases which otherwise would have occurred to a significant degree. Between 2013 and 2014, the domestic industry's costs increased but the unit value of its U.S. shipments increased by a larger amount, and then in 2015, the industry's costs declined significantly. CR/PR at Tables III-7 and VI-1. The domestic industry's ratio of COGS to sales declined during each year of the POI. CR/PR at Table VI-1.

E. Impact of the Subject Imports[141]

Section 771(7)(C)(iii) of the Tariff Act provides that examining the impact of subject imports, the Commission "shall evaluate all relevant economic factors which have a bearing on the state of the industry."[142] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debts, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[143]

We find that cumulated subject imports had a significant impact on the domestic industry during the POI. This was a period of strong demand; as discussed above, apparent U.S. consumption of CORE increased by 7.5 percent from 2013 to 2015, which equated to almost 1.5 million short tons of increased demand. However, the significant and increasing volume of

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[141] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final determinations of sales at less value Commerce found antidumping duty margins of 209.97 percent for imports from all sources in China, 3.05 to 4.44 percent for imports from India, 12.63 to 92.12 percent for imports from Italy, 8.75 to 47.80 percent for imports from Korea, and 3.77 percent for imports from all sources in Taiwan. *Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Critical Circumstances Determination*, *in Part*, 81 FR 36316, 35318 (June 2, 2016); *Certain Corrosion-Resistant Steel Products From India: Final Determination of Sales at Less Than Fair Value and Final Negative Determination of Critical Circumstances*, 81 FR 35329, 35330 (June 2, 2016); *Certain Corrosion-Resistant Steel Products From Italy: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances*, *in Part*, 81 FR 35320, 35321 (June 2, 2016); *Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances*, 81 FR 35303, 35304 (June 2, 2016); and *Certain Corrosion-Resistant Steel Products From Taiwan: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*, 81 FR 35313, 35314 (June 2, 2016).

We note that there is a wide range of dumping margins for the cumulated subject imports. Commerce calculated the highest assigned margins, which are for subject imports from China, on the basis of adverse facts available. Memorandum from Christian Marsh to Paul Piquado: Issues and Decision Memorandum for the Final Determination in the Antidumping Duty Investigation of Certain Corrosion-Resistant Steel Products from the People's Republic of China at 6-8 (May 24, 2016). While we have considered the magnitude of the margins, in light of the wide range, we have given principal weight to the other statutory factors in our impact analysis.

[142] 19 U.S.C. § 1677(7)(C)(iii); *see also* SAA at 851 and 885 ("In material injury determinations, the Commission considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.").

[143] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

subject imports, which undersold the domestic like product,[144] led to a substantial erosion of the domestic industry's market share and a decline in its revenues, despite favorable market conditions. Moreover, as a result of subject imports, in many respects the domestic industry did not perform as well as would have been expected during a time of growing demand.

The domestic industry's capacity was virtually unchanged at about 24.1 million short tons in each year of the POI.[145] Production increased from 18.0 million short tons in 2013 to 18.6 million short tons in 2014 and then declined to 18.0 short tons in 2015.[146] Capacity utilization was 74.9 percent in 2013, 77.4 percent in 2014, and 75.0 percent in 2015.[147]

The domestic industry's U.S. shipments increased from 16.9 million short tons in 2013 to 17.4 million short tons in 2014 and then declined to 16.8 million short tons in 2015.[148] Its market share fell from 85.6 percent in 2013 to 79.8 percent in 2014, and 79.2 percent in 2015.[149] The domestic industry's end-of-period inventories rose from 7.1 percent of total shipments in 2013 to 7.6 percent in 2014 and 8.3 percent in 2015.[150]

The number of production workers, hours worked, and wages paid all increased from 2013 to 2015, by 1.7 percent, 2.9 percent, and 7.0 percent respectively.[151] Productivity, however, was lower in 2015 than in 2013, despite rising from 2013 to 2014.[152]

Revenues were lower in 2015 than in 2013, and revenues and profitability declined from 2014 to 2015. The domestic industry's net sales value increased from $15.7 billion in 2013 to $16.6 billion in 2014 and then declined to $14.4 billion in 2015. Gross profit rose from $1.1 billion in 2013 to $1.2 billion in 2014 but then declined to $1.1 billion in 2015. Operating income rose from $545.6 million in 2013 to $609.5 million in 2014 but then declined to $528.7 million in 2015. Net income rose from $342.8 million in 2013 to $411.4 million in 2014 but then declined to $64.5 million in 2015.[153] The industry's return on assets, expressed as operating income as a share of total assets, increased from 5.2 percent in 2013 to 7.0 percent in 2014, before declining to 6.2 percent in 2015.[154] The industry's capital expenditures were somewhat

[144] Chairman Williamson and Commissioners Pinkert and Schmidtlein find that subject imports also depressed domestic prices to a significant degree.

[145] CR/PR at Table III-5.

[146] CR/PR at Table III-5.

[147] CR/PR at Table III-5.

[148] CR/PR at Table III-7.

[149] CR/PR at Table IV-17.

[150] CR/PR at Table III-8.

[151] CR/PR at Table C-1.

[152] CR/PR at Table III-10.

[153] CR/PR at Table VI-1. The sharp decline in the domestic industry's net income in 2015 was attributable to a large increase in "other expenses," which, in turn, was ***. We recognize that, in some cases, these other expenses were associated with costs that were not necessarily related to CORE production, but these costs were allocated in part to CORE by reasonable methods. CR at VI-18 and nn. 17 & 18, PR at VI-15 and nn. 17 & 18.

[154] CR/PR at Table VI-5.

lower in 2015 than in 2013, and its research and development ("R&D") expenditures were higher in 2015 than in 2013.[155]

Through pervasive underselling, subject imports increased significantly in absolute terms from 2013 to 2014. Subject imports also gained market share at the expense of the domestic industry. Thus, despite robust growth in apparent U.S. consumption in 2014, the domestic industry was largely prevented from increasing its U.S. commercial shipments and sales revenue. In 2015, subject imports largely maintained their increased presence in the U.S. market, while the domestic industry's production, shipments, and sales revenues all declined.[156] Because the domestic industry, despite having the ability to increase its production and shipments,[157] was unable to increase its shipments more significantly as demand grew during the POI, it lost revenues that it otherwise would have obtained. These lost revenues were reflected in the industry's generally stagnant or declining financial performance during the POI.[158] We accordingly find that the significant volume of cumulated subject imports, which gained market share at the expense of the domestic industry through significant underselling, had a significant impact on the domestic industry.

We are not persuaded by respondents' argument that there was a lack of correlation between the increase in subject imports in 2014 and any deterioration in the domestic industry's condition that may have occurred in 2015.[159] Subject imports did not retreat from the U.S. market in 2015; to the contrary, they increased through the time the petitions were filed. Even though the volume and market share of subject imports declined slightly in 2015 from 2014 levels, they remained significantly higher than in 2013.[160]

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[155] The domestic industry's capital expenditures declined from $234.3 million in 2013 to $223.1 million in 2014 and to $221.0 million in 2015. CR/PR at Table VI-4. The industry's R&D expenses increased from $17.0 million in 2013 to $17.6 million in 2014 and to $30.7 million in 2015. *Id.*

[156] Chairman Williamson and Commissioners Pinkert and Schmidtlein find that price depression caused by subject imports also contributed to the industry's declining financial performance.

[157] The industry had appreciable excess capacity during 2013-15, indicating it had the ability to increase production, and its capacity utilization declined overall during the POI. *See* CR/PR at Table III-5.

[158] Respondents have argued that the domestic industry's financial performance during the POI was consistent with its historical performance since at least 2006. *E.g.*, Korean Respondents Prehearing Brief at 51. Whatever the factual basis for this argument which concerns periods well before the POI, it remains true that during the POI the domestic industry lost market share and revenue as a result of the increase in subject imports at prices that reflected pervasive underselling, at a time of strong demand in the U.S. CORE market.

[159] *E.g.*, Korean Respondents Prehearing Brief at 18-21.

[160] A review of the preliminary record shows that the domestic industry did benefit from the filing of the petitions. In the first quarter of 2015, the domestic industry's market share and capacity utilization were 76.1 percent and 72.1 percent, respectively, and subject imports' market share was 15.9 percent. *Certain Corrosion-Resistant Steel Products from China, India, Italy, Korea, and Taiwan*, Inv. Nos. 701-TA-534-538 and 731-TA-1274-1278 (Preliminary), USITC Pub. 4547 (July 2015) at Table C-1. The full year 2015 data show that subject imports' market share declined to 12.4 percent after the petitions were filed, while the domestic industry's market share increased to 79.2 percent and capacity utilization was 75.0 percent. CR/PR at Tables III-5 and IV-17.

We have considered whether there are other factors that may have had an impact on the domestic industry during the POI to ensure that we are not attributing injury from such other factors to subject imports. Nonsubject imports as a share of apparent U.S. consumption increased from 6.7 percent in 2013 to 7.4 percent in 2014 and to 8.4 percent in 2015.[161] Canada accounted for the majority of nonsubject imports during the POI.[162] Nonsubject imports cannot explain the magnitude of the domestic industry's loss of market share and revenues due to underselling by subject imports. The increase in the volume of nonsubject imports occurred at a lower rate than that of subject imports,[163] and the gain in market share by nonsubject imports over the POI (1.7 percentage points) was less than that of subject imports (4.7 percentage points).

The respondents have also emphasized the fact that domestic producers imported nonsubject CORE during the POI, particularly from Canada.[164] We note that the domestic industry was a net exporter of CORE to Canada during the POI,[165] which further undermines the notion that there were significant domestic supply constraints during the POI. Additionally, these nonsubject imports from Canada were part of an established two-way trade in CORE that is used primarily in the automotive industry.[166] Moreover, as explained above, the increase in volume of the nonsubject imports does not negate or otherwise minimize the injury experienced by the domestic industry as a result of its lost market share and revenues by reason of subject imports.[167]

Thus, other factors cannot explain the loss in market share, output, and revenues that we have attributed to the cumulated subject imports. We therefore conclude that the subject imports had a significant impact on the domestic CORE industry.

In sum, we find that the significant and increasing volume of subject imports, at prices which undersold the domestic like product, adversely impacted the domestic industry. We consequently determine that the domestic industry is materially injured by reason of cumulated subject imports from China, India, Italy, Korea, and Taiwan.

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[161] CR/PR at Table IV-17.

[162] CR/PR at Table IV-3. The limited pricing data obtained for nonsubject imports (from three importers, involving imports from Canada) show that nonsubject imports from Canada were generally priced lower than the domestic like product and subject imports during the POI. The prices for nonsubject imports from Canada were lower than the prices for the domestic like product in 21 of 36 comparisons, and were lower than prices for subject imports in 83 of 152 comparisons. CR/PR at D-3. The volume of nonsubject imports from Canada, however, was significantly smaller than the volume of cumulated subject imports. CR/PR at Table C-1.

[163] Subject imports rose by 72.6 percent from 2013-15, while nonsubject imports rose by 35.3 percent. CR/PR at Table C-1.

[164] *E.g.*, Korean Respondents Prehearing Brief at 33.

[165] Nucor Posthearing Brief at Exh. 12.

[166] AMUSA Posthearing Brief, Exh. 1 at 19-22 and Exh. 3 at para. 27; and U.S. Steel Posthearing Brief, Exh. 1 at 1.

[167] For purposes of the *Bratsk*/*Mittal* analysis, Commissioners Pinkert and Kieff note that the majority of nonsubject imports from Canada were controlled by domestic producers. *See* CR/PR at Table IV-3, AMUSA Posthearing Brief, Exh. 1 at 20, U.S. Steel Posthearing Brief, Exh. 1 at 1.

VI. Critical Circumstances

A. Legal Standards and Party Arguments

In its final antidumping duty determinations concerning CORE from China, Italy, Korea, and Taiwan, and its final countervailing duty determinations concerning CORE from China, Italy, and Korea, Commerce found that critical circumstances exist with respect to certain subject producers/exporters. Because we have determined that the domestic industry is materially injured by reason of subject imports from, *inter alia*, China, Italy, Korea, and Taiwan, we must further determine "whether the imports subject to the affirmative {Commerce critical circumstances} determination ... are likely to undermine seriously the remedial effect of the antidumping {and/or countervailing duty} order{s} to be issued."[168] The SAA indicates that the Commission is to determine "whether, by massively increasing imports prior to the effective date of relief, the importers have seriously undermined the remedial effect of the order" and specifically "whether the surge in imports prior to the suspension of liquidation, rather than the failure to provide retroactive relief, is likely to seriously undermine the remedial effect of the order."[169] The legislative history for the critical circumstances provision indicates that the provision was designed "to deter exporters whose merchandise is subject to an investigation from circumventing the intent of the law by increasing their exports to the United States during the period between initiation of an investigation and a preliminary determination by {Commerce}."[170] An affirmative critical circumstances determination by the Commission, in conjunction with an affirmative determination of material injury by reason of subject imports, would normally result in the retroactive imposition of duties for those imports subject to the affirmative Commerce critical circumstances determination for a period 90 days prior to the suspension of liquidation.

The statute provides that, in making this determination, the Commission shall consider, among other factors it considers relevant,

> (I) the timing and the volume of the imports,
>
> (II) a rapid increase in inventories of the imports, and
>
> (III) any other circumstances indicating that the remedial effect of the {order} will be seriously undermined.[171]

In considering the timing and volume of subject imports, the Commission's practice is to consider import quantities prior to the filing of the petition with those subsequent to the filing

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[168] 19 U.S.C. §§ 1671d(b)(4)(A)(ii), 1673d(b)(4)(A)(ii).

[169] SAA at 877.

[170] *ICC Industries, Inc. v United States,* 812 F.2d 694, 700 (Fed. Cir. 1987), *quoting* H.R. Rep. No. 96-317 at 63 (1979), *aff'g* 632 F. Supp. 36 (Ct. Int'l Trade 1986). *See* 19 U.S.C. §§ 1671b(e)(2), 1673b(e)(2).

[171] 19 U.S.C. §§ 1671d(b)(4)(A)(ii), 1673d(b)(4)(A)(ii).

of the petition using data on the record regarding those firms for which Commerce has made an affirmative critical circumstances determination.[172]

Petitioners' Arguments. Petitioners argue that the Commission should make an affirmative critical circumstances finding with respect to subject imports from China, Italy, Korea, and Taiwan. They note that Commerce concluded that respondents had reason to believe, by March 2015, that trade cases on CORE were likely, and that Commerce, for this reason, shifted the "post-petition" period to March 2015 through September 2015 (comparing that period to August 2014 through February 2015). Petitioners argue that the Commission should also consider using a comparison period that encompasses a period of time before the petitions were filed, although they do not specify what that period should be. They also state that "collecting monthly data from the respondents for a period preceding and following the filing date of the petition would allow the Commission to fully analyze the import surge data regarding critical circumstances."[173] In light of the failure of a number of foreign producers to respond to the Commission's questionnaire, they urge the Commission to rely on adverse inferences in making its critical circumstances findings.[174] Petitioners argue that, even where subject imports declined in the post-petition period, it would be appropriate to make affirmative critical circumstances findings, because even a continuation of imports without increase can undermine the effectiveness of orders.[175]

Respondents' Arguments. Italian Respondents argue that the Commission should make a negative critical circumstances finding with respect to imports from Italy. They note that imports from Ilva, the only Italian producer for which Commerce made an affirmative critical circumstances determination,[176] declined steeply after the filing of the petitions.[177] Korean Respondents argue that the Commission should make a negative critical circumstances finding with respect to imports from Korea. They argue that any increases in subject imports from Korea or in inventories of these imports were not significant enough to seriously undermine the remedial effects of the orders.[178] Prosperity argues that the Commission should make a negative critical circumstances finding with respect to imports from Taiwan. It argues that imports from producers for which Commerce made an affirmative critical circumstances determination declined in the six months following the filing of the petitions, and that any

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[172] *See Lined Paper School Supplies from China, India, and Indonesia,* Inv. Nos. 701-TA-442-43, 731-TA-1095-97, USITC Pub. 3884 at 46-48 (Sept. 2006); *Carbazole Violet Pigment from China and India,* Inv. Nos. 701-TA-437 and 731-TA-1060-61 (Final), USITC Pub. 3744 at 26 (Dec. 2004); *Certain Frozen Fish Fillets from Vietnam,* Inv. No. 731-TA-1012 (Final), USITC Pub. 3617 at 20-22 (Aug. 2003).

[173] AMUSA Prehearing Brief at 65.

[174] Commission staff collected the necessary firm-specific information using Customs data. *See* CR/PR at Tables IV-5-IV-10.

[175] AMUSA Prehearing Brief at 60-65; CSI/SDI Prehearing Brief at 18-23.

[176] We note that in its final antidumping duty determination, Commerce also made an affirmative determination with respect to Marcegaglia. *Certain Corrosion-Resistant Steel Products From Italy: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Determination of Critical Circumstances, In Part,* 81 FR 35320, 35321 (June 2, 2016).

[177] Italian Respondents Prehearing Brief at 86-87 and Posthearing Brief at 13-14.

[178] Korean Respondents Prehearing Brief at 86-87 and Posthearing Brief at 14-15.

increase in inventories was not significant enough to seriously undermine the remedial effects of the order.[179] Italian, Korean, and Taiwan Respondents urge the Commission not to deviate from its normal practice of comparing the six months before the filing of the petitions with the six months after the filing.[180]

Four importers argue that the Commission should make a negative critical circumstances finding with respect to subject imports from China. AmeriLux argues that critical circumstances do not exist in the countervailing duty investigation against China. It contends that imports from the five exporters in China for which Commerce made critical circumstances findings in the countervailing duty investigation actually declined sharply in the six months after the filing of the petitions (or for any shorter monthly periods that the Commission may elect to use), and that inventories held by importers that obtained CORE from the five exporters in China were lower in 2015 than in 2014.[181]

Minmetals, Stemcor, and Transpacific argue that critical circumstances do not exist in either the antidumping or the countervailing duty investigations on CORE from China. They contend that in both cases, imports declined sharply in the six months after the filing of the petitions. They urge the Commission not to use comparison periods shorter than five months.[182]

B. Analysis

1. Choice of Time Period

We first consider the appropriate period for comparison of pre-petition and post-petition levels of subject imports. In previous investigations, the Commission has relied on a shorter comparison period when Commerce's preliminary determination fell within the six-month post-petition period the Commission typically considers.[183] That situation arises here with respect to China, Italy, and Korea,[184] and we thus have determined to compare the volume

[179] Prosperity Prehearing Brief at 82-83 and Posthearing Brief at 14-15.

[180] Posthearing Briefs of Italian/Korean/Taiwan Respondents at 15.

[181] AmeriLux Prehearing Brief at 5-16 and Posthearing Brief at 2-8.

[182] Minmetals Prehearing Brief at 2-8 and Posthearing Brief at 2-14; Stemcor Prehearing Brief at 3-9 and Posthearing Brief at 1-5; Transpacific Prehearing Brief at 1-6.

[183] *Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman,* Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), USITC Pub. 4604 at 31 (April 2016); *Carbon and Certain Steel Wire Rod from China*, Inv. Nos. 701-TA-512, 731-TA-1248 (Final), USITC Pub. 4509 at 25-26 (Jan. 2015) (using five-month periods because preliminary Commerce countervailing duty determination was during the sixth month after the petition). We also find it appropriate to include June 2015, the month of the filing of the petition, in the post-petition period because the petitions were filed early in the month (June 3). *Pet Resin*, USITC Pub. 4509 at 31 n.176.

[184] The petitions in these investigations were filed on June 3, 2015, and Commerce made its preliminary determinations in the countervailing duty investigations on November 6, 2015. *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the People's Republic of China: Preliminary Affirmative Determination*, 80 Fed. Reg. 68843 (Nov. 6, 2015); *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Italy: Preliminary*
(Continued...)

of subject imports five months prior to the filing of the petition with the volume of subject imports five months after the filing of the petitions for these subject countries.[185] For the antidumping duty investigation concerning Taiwan we have used six-month pre- and post-petition periods.[186]

2. China

Antidumping Duty. In its final antidumping duty critical circumstances determination concerning China, Commerce determined that critical circumstances exist with regard to imports from China of CORE from Hebei Iron & Steel Co., Ltd. (Tangshan Branch) ("Hebei Tangshan"); Baoshan Iron & Steel Co., Ltd. ("Baoshan"); and all other producers in China, other than Yieh Phui (China) Technomaterial Co., Ltd. ("Yieh Phui").[187]

The monthly data for subject import volume from China for the entities for which Commerce found that critical circumstances exist for the five-month periods before and after the filing of the petition in June 2015 show a decline, from *** short tons to *** short tons.[188] End-of-period ("EOP") inventories of imports from China were *** short tons in 2014 and *** short tons in 2015.[189] In light of these declines in imports and inventories, and in the absence of any other circumstances indicating that the remedial effect of the antidumping duty order

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(…Continued)
Affirmative Determination, 80 Fed. Reg. 68839 (Nov. 6, 2015); *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the Republic of Korea: Preliminary Affirmative Determination*, 80 Fed. Reg. 68842 (Nov. 6, 2015).

[185] The periods considered – for the analysis of the volume of imports for our critical circumstances findings with respect to China, Italy, and Korea – are January 2015 through May 2015 and June 2015 through October 2015.

Because Commerce made affirmative critical circumstances determinations with respect to different sets of exporters in the antidumping and countervailing duty investigations concerning CORE from China, Italy, and Korea**,** we have conducted a separate critical circumstances analysis for each investigation. *See Certain Passenger Vehicle and Light Truck Tires from China,* Inv. Nos. 701-TA-522 and 731-TA-1258 (Final), USITC Pub. 4545 (Aug. 2015); *Certain Uncoated Paper from Australia, Brazil, China, Indonesia, and Portugal,* Inv. Nos. 701-TA-528-529 and 731-TA-1264-1268 (Final) USITC Pub. 4592 (Feb. 2016).

[186] The periods considered – for the analysis of the volume of imports for our critical circumstances findings with respect to the antidumping duty investigation concerning Taiwan – are December 2014 through May 2015 and June 2015 through November 2015.

[187] Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Critical Circumstances Determination, in Part, 81 FR 36316, 35317 (June 2, 2016).

[188] CR/PR at Table IV-5. An analysis using six-month periods also shows a decline, from *** short tons to *** short tons. *Id.*

[189] CR at IV-13, PR at IV-8. These data are overstated because they include inventories of subject imports from Yieh Phui, an entity for which Commerce made a negative critical circumstances finding. CR at IV-13-14, PR at IV-8.

will be seriously undermined, we make a negative critical circumstances determination with regard to subject imports in the antidumping duty investigation of CORE from China.

Countervailing Duty. In its final countervailing duty critical circumstances determination for China, Commerce determined that critical circumstances exist with regard to imports from China of corrosion-resistant steel from Angang Group Hong Kong Co. Ltd. ("Angang"); Duferco S.A. ("Duferco"); Handan Iron & Steel Group ("Handan"); Changshu Everbright Material Technology ("Everbright"); and Baoshan.[190]

The monthly data for subject import volume from China for the entities for which Commerce found that critical circumstances exist for the five-month periods before and after the filing of the petition in June 2015 show a decline, from *** short tons to *** short tons.[191] EOP inventories of imports from China subject to Commerce's affirmative critical circumstances determination were *** short tons in 2014 and *** short tons in 2015.[192] In light of these declines in imports and inventories, and in the absence of any other circumstances indicating that the remedial effect of the countervailing duty order will be seriously undermined, we make a negative critical circumstances determination with regard to subject imports in the countervailing duty investigation of CORE from China.

3. Italy

Antidumping Duty. In its final antidumping duty critical circumstances determination for CORE from Italy, Commerce determined that critical circumstances exist with regard to imports from Italy of CORE from Marcegaglia S.p.A. ("Marcegaglia").

The monthly data for subject import volume from Marcegaglia show an increase from *** short tons to *** short tons.[193] EOP inventories of imports from Marcegaglia were *** short tons in 2014 and *** short tons in 2015.[194] Although the volume of subject imports from Marcegaglia rose somewhat in the post-petition period, we find that the volume of these imports is too small to have a significant effect on the domestic industry and undermine seriously the effectiveness of the countervailing duty order. The level of inventories at the end of 2015 was trivial. In light of this, and in the absence of any other circumstances indicating that the remedial effect of the antidumping duty order will be seriously undermined, we make a negative critical circumstances determination with regard to subject imports in the antidumping duty investigation of CORE from Italy.

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[190] Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Affirmative Determination, and Final Affirmative Critical Circumstances Determination, in Part, 81 Fed. Reg. 35308, 35309 (June 2, 2016).

[191] CR/PR at Table IV-6. An analysis using six-month periods also shows a decline, from *** short tons to *** short tons. *Id.*

[192] CR at IV-15, PR at IV-9. These data are overstated because they include inventories of subject imports from firms in China for which Commerce made a negative critical circumstances finding. CR at IV-15-16, PR at IV-9.

[193] CR/PR at Table IV-7. The same data would apply to an analysis using six-month periods. *Id.*

[194] CR at IV-18, PR at IV-10.

Countervailing Duty. In its final countervailing duty critical circumstances determination for Italy, Commerce determined that critical circumstances exist with regard to imports from Italy of CORE from ILVA S.p.A. ("ILVA").[195]

The monthly data for subject import volume from ILVA show these imports were *** short tons in the five months before the filing of the petition, and that there *** in the five months after the filing of the petition.[196] There were *** EOP inventories of subject imports from ILVA in 2014 or 2015.[197] In light of the cessation of imports and the absence of inventories, and in the absence of any other circumstances indicating that the remedial effect of the antidumping duty order will be seriously undermined, we make a negative critical circumstances determination with regard to subject imports in the countervailing duty investigation of CORE from Italy.

4. Korea

Antidumping Duty. In its final antidumping duty critical circumstances determination for CORE from Korea, Commerce determined that critical circumstances exist with regard to imports from Korea of CORE from all producers/exporters in Korea other than Dongkuk Steel Mill Co., Ltd. ("Dongkuk/Union") and Hyundai.[198]

The monthly data for subject imports from Korea for the entities for which Commerce found that critical circumstances exist for the five-month periods before and after the filing of the petition in June 2015 show a decline, from *** short tons to *** short tons.[199] EOP inventories of imports from Korea subject to Commerce's affirmative critical circumstances determination were *** short tons in 2014 and *** short tons in 2015.[200] In light of these declines in imports and inventories, and in the absence of any other circumstances indicating that the remedial effect of the antidumping duty order will be seriously undermined, we make a negative critical circumstances determination with regard to subject imports in the antidumping duty investigation of CORE from Korea.

Countervailing Duty. In its final countervailing duty critical circumstances determination for CORE from Korea, Commerce determined that critical circumstances exist with regard to

[195] Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Italy: Final Affirmative Determination and Final Affirmative Critical Circumstances, in Part, 81 Fed. Reg. 35326, 35327 (June 2, 2016).

[196] CR/PR at Table IV-8. The same data would apply to an analysis using six-month periods. *Id.*

[197] CR at IV-18, PR at IV-10.

[198] Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, 81 Fed. Reg. 35303, 35304 (June 2, 2016).

[199] CR/PR at Table IV-9. An analysis using six-month periods also shows a decline, from *** short tons to *** short tons. *Id.*

[200] CR at IV-20, PR at IV-11.

imports from Korea of CORE from all producers/exporters in Korea other than Dongbu Steel Co., Ltd. ("Dongbu") and Dongkuk/Union.[201]

The monthly data for subject import volume from Korea for the entities for which Commerce found that critical circumstances exist for the five-month periods before and after the filing of the petition in June 2015 show a decline, from *** short tons to *** short tons.[202] EOP inventories of imports from Korea subject to Commerce's affirmative critical circumstances determination were *** short tons in 2014 and *** short tons in 2015.[203] Although the EOP inventories were somewhat higher in 2015 than in 2014, we find that the volume of these inventories is too small to have a significant effect on the domestic industry and undermine seriously the effectiveness of the countervailing duty order. In light of this, and the decline in the volume of subject imports, and in the absence of any other circumstances indicating that the remedial effect of the countervailing duty order will be seriously undermined, we make a negative critical circumstances determination with regard to subject imports in the countervailing duty investigation of CORE from Korea.

5. Taiwan

In its final antidumping duty critical circumstances determinations for CORE from Taiwan, Commerce determined that critical circumstances exist with regard to imports from Taiwan of CORE from all producers/exporters in Taiwan other than Yieh Phui Enterprises Co., Ltd. ("Yieh Phui") and Prosperity Tieh Enterprises Co., Ltd ("Prosperity").[204]

The monthly data for subject import volume from Taiwan for the entities for which Commerce found that critical circumstances exist for the six-month periods before and after the filing of the petition in June 2015 show a decline, from *** short tons to *** short tons.[205] EOP inventories of imports from Taiwan subject to Commerce's affirmative critical circumstances determination were *** short tons in 2014 and *** short tons in 2015.[206] Although the EOP inventories were somewhat higher in 2015 than in 2014, we find that the volume of these inventories is too small to have a significant effect on the domestic industry and undermine seriously the effectiveness of the antidumping duty order. In light of this, and

[201] Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Affirmative Determination, and Final Affirmative Critical Circumstances Determination, in Part, 81 Fed. Reg. 35310, 35311 (June 2, 2016).

[202] CR/PR at Table IV-10. An analysis using six-month periods show a slight increase, from *** short tons to *** short tons. Given the very small magnitude of this increase, use of these data would not change our conclusion that critical circumstances do not exist.

[203] CR at IV-21, PR at IV-11.

[204] Certain Corrosion-Resistant Steel Products From Taiwan: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part, 81 Fed. Reg. 35313, 35314 (June 2, 2016).

[205] CR/PR at Table IV-11.

[206] CR at IV-23, PR at IV-12. These data are overstated because they include inventories of subject imports from firms in Taiwan for which Commerce made a negative critical circumstances finding. CR at IV-23-24, PR at IV-12.

the decline in the volume of subject imports, and in the absence of any other circumstances indicating that the remedial effect of the antidumping duty order will be seriously undermined, we make a negative critical circumstances determination with regard to subject imports in the antidumping duty investigation of CORE from Taiwan.

VII. Conclusion

For the reasons stated above, we determine that an industry in the United States is materially injured by reason of subject imports of CORE from China, India, Italy, Korea, and Taiwan that are sold in the United States at less than fair value and imports of CORE subsidized by the governments of China, India, Italy, and Korea. We also make negative critical circumstances findings in the investigations of CORE from China, Italy, Korea, and Taiwan.

PART I: INTRODUCTION

BACKGROUND

These investigations result from petitions filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by United States Steel Corp. (Pittsburgh, Pennsylvania), Nucor Corp. (Charlotte, North Carolina), Steel Dynamics Inc. (Fort Wayne, Indiana), California Steel Industries (Fontana, California), ArcelorMittal USA LLC (Chicago, Illinois), and AK Steel Corp. (West Chester, Ohio), on June 3, 2015, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized and less-than-fair-value ("LTFV") imports of certain corrosion-resistant steel products ("corrosion-resistant steel")[1] from China, India, Italy, Korea, and Taiwan. The following tabulation provides information relating to the background of these investigations.[2] [3]

Effective date	Action
June 3, 2015	Petitions filed with Commerce and the Commission; institution of Commission investigations (80 FR 32606, June 9, 2015)
June 30, 2015	Commerce's notice of initiation of antidumping duty investigations (80 FR 37228, June 30, 2015) and countervailing duty investigations (80 FR 37223, June 30, 2015
July 20, 2015	Commission's preliminary determinations (80 FR 44151, July 24, 2015)
November 6, 2015	Commerce's preliminary countervailing duty determinations (80 FR 68839-68845 and 68852-68856)
November 13, 2015	Commerce's alignment of final countervailing duty determinations with final antidumping duty determinations (80 FR 72685, November 20, 2015)
January 4, 2016	Commerce's preliminary antidumping duty determinations (81 FR 63-67 and 69-81); scheduling of final phase of Commission investigations (81 FR 7585, February 12, 2016)
May 26, 2016	Commission's hearing
June 2, 2016	Commerce's final affirmative determinations with respect to the antidumping duty investigation concerning imports from Taiwan and the antidumping and countervailing duty investigations concerning imports from China, India, Italy, and Korea; Commerce's final negative determination with respect to the countervailing duty investigation concerning imports from Taiwan (81 FR 35299-35319)
June 2, 2016	Termination of Commission's countervailing duty investigation concerning imports from Taiwan (81 FR 38735, June 14, 2016)

[1] See the section entitled "The Subject Merchandise" in *Part I* of this report for a complete description of the merchandise subject to these investigations.

[2] Pertinent *Federal Register* notices are referenced in app. A, and may be found at the Commission's website (www.usitc.gov).

[3] App. B presents a list of witnesses appearing at the public hearing.

Effective date	Action
June 8, 2016	Commerce's final critical circumstances determination with respect to the countervailing duty investigation on imports from India (81 FR 38671, June 14, 2016)
June 24, 2016	Commission's vote
July 15, 2016	Commission's views

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

Section 771(7)(B) of the Tariff Act of 1930 (the "Act") (19 U.S.C. § 1677(7)(B)) provides that in making its determinations of injury to an industry in the United States, the Commission--

> *shall consider (I) the volume of imports of the subject merchandise, (II) the effect of imports of that merchandise on prices in the United States for domestic like products, and (III) the impact of imports of such merchandise on domestic producers of domestic like products, but only in the context of production operations within the United States; and. . . may consider such other economic factors as are relevant to the determination regarding whether there is material injury by reason of imports.*

Section 771(7)(C) of the Act (19 U.S.C. § 1677(7)(C)) further provides that--[4]

> *In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which*

[4] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.

In addition, Section 771(7)(J) of the Act (19 U.S.C. § 1677(7)(J)) provides that—[5]

(J) EFFECT OF PROFITABILITY.—The Commission may not determine that there is no material injury or threat of material injury to an industry in the United States merely because that industry is profitable or because the performance of that industry has recently improved.

Organization of report

Part I of this report presents information on the subject merchandise, subsidy programs and dumping margins, and domestic like product. *Part II* of this report presents information on conditions of competition and other relevant economic factors. *Part III* presents information on the condition of the U.S. industry, including data on capacity, production, shipments, inventories, and employment. *Parts IV* and *V* present the volume of subject imports and pricing of domestic and imported products, respectively. *Part VI* presents information on the financial experience of U.S. producers. *Part VII* presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury, as well as information regarding nonsubject countries.

MARKET SUMMARY

Corrosion-resistant steel is steel sheet that has been coated or plated with a corrosion- or heat-resistant metal to prevent corrosion and thereby extend the service life of products produced from the steel. Corrosion-resistant steel is used primarily in automotive and construction applications. The leading U.S. producers of corrosion-resistant steel are AK Steel Corp. ("AK Steel"), ArcelorMittal USA ("ArcelorMittal"), Nucor Corp. ("Nucor"), Steel Dynamics,

[5] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.

Inc. ("Steel Dynamics"), and United States Steel Corp. ("U.S. Steel"). These firms responded to the Commission's producer questionnaire in this proceeding.[6] [7]

The following 11 producers in China responded to the Commission's questionnaire in this proceeding: Angang Group International Trading Corp. ("Angang"); Baoshan Iron & Steel Co., Ltd. ("Baoshan"); Benxi Steel Group International Economic & Trading Co., Ltd. ("Benxi"); POSCO China Guangdong Steel Co., Ltd. ("POSCO China"); Handan Iron and Steel Group and Import Co., Ltd. ("Handan"); Maanshan Iron & Steel Co., Ltd.; ("Maanshan"); Shanghai Meishan Iron & Steel Co., Ltd. ("Shanghai Meishan"); Beijing Shougang Cold Rolling Co., Ltd. ("Beijing Shougang"); Shougang Jingtang United Iron & Steel Co., Ltd. ("Shougang Jingtang"); Tangshan Iron and Steel Group Co., Ltd. ("Tangshan"); and Wisco International Economic & Trading Co., Ltd. ("Wisco").[8] While there are multiple producers of corrosion-resistant steel in China, the companies with the largest amounts of capacity include ***.[9]

The following five producers in India responded to the Commission's questionnaire in this proceeding: JSW Steel Ltd./JSW Steel Coated Products Ltd. ("JSW"); National Steel & Agro Industries Ltd. ("National"); POSCO Maharashtra Steel Pvt. Ltd. ("POSCO Maharashtra"); Steel Authority of India Ltd. ("SAIL"); and Uttam Galva Steels Ltd. and Uttam Value Steels Ltd. ("Uttam").[10] There are believed to be approximately 16 producers of corrosion-resistant steel in India, the largest of which include ***.[11]

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[6] ArcelorMittal's and U.S. Steel's questionnaire responses include data for U.S. joint-venture producer Double G Coatings. U.S. producer Double Eagle Steel Coating Co. ("Desco") was jointly owned by AK Steel and U.S. Steel until June 2015, when AK Steel sold its joint venture interest to U.S. Steel. U.S. Steel's questionnaire response includes data for Desco. Steel Dynamic's questionnaire response includes data for "The Techs" (MetalTech, NexTech, and Galvtech). U.S. producer Spartan Steel Coating ("Spartan") is jointly owned by Worthington and AK Steel. Both Worthington and AK Steel included in their questionnaire responses their portions of Spartan's data.

[7] Other U.S. producers that responded to the Commission's questionnaire include Arrow Shed LLC ("Arrow Shed"), California Steel Industries ("CSI"), Gregory Industries, Inc. ("Gregory"), Material Sciences Corp./Canfield Coating Co. ("Canfield"), CSN, LLC ("CSN"), National Galvanizing LP ("National"), Precoat Metals ("Precoat"), Steelscape, LLC ("Steelscape"), Ternium USA, Inc. ("Ternium"), Thomas Steel Strip Corp. and Apollo Metals, Ltd. ("Thomas/Apollo"), Top Gun Investment Corp. II ("Top Gun") (also known as "NLMK Pennsylania"), USS-POSCO Industries ("USS-POSCO"), Wheeling-Nisshin, Inc. ("Wheeling-Nisshin"), and Worthington Steel ("Worthington"). Additional firms that are believed to have the capacity to produce corrosion-resistant steel in the United States include ***. ***.

[8] Two producers in China (Jiangyin Zongcheng Steel Co., Ltd. ("Jiangyin") and Tianjin Rolling-One Steel Co., Ltd. ("Tianjin")) responded to the Commission's questionnaire in the preliminary phase of the investigations but did not respond in the final phase. In the preliminary phase of these investigations, Jiangyin accounted for *** percent of reported 2014 production in China and *** percent of reported exports from China to the United States; whereas Tianjin accounted for *** percent and *** percent, respectively.

[9] ***.

[10] One producer in India (Essar Steel India Ltd. ("Essar")) responded to the Commission's questionnaire in the preliminary phase of the investigations but did not respond in the final phase. In

(*continued*...)

The following four producers in Italy responded to the Commission's questionnaire in this proceeding: Acciaieria Arvedi S.p.A. ("Arvedi"); ArcelorMittal Piombina S.p.A., including ArcelorMittal Avellino ("ArcelorMittal Piombina"); Ilva S.p.A. in Amministrazione Straordinariia ("Ilva"); and Marcegaglia Carbon Steel S.p.A. ("Marcegaglia"). The only known producers of corrosion-resistant steel in Italy include ***.[12]

The following six producers in Korea responded to the Commission's questionnaire in this proceeding: Dongbu Steel Co., Ltd. ("Dongbu"); Dongkuk Steel Mill Co., Ltd. ("Dongkuk"); Hyundai Steel Co. ("Hyundai"); POSCO; POSCO Coated & Color Steel Co., Ltd. ("POSCO C&C"); and TCC Steel Corp. ("TCC"). There are believed to be eight producers of corrosion-resistant steel in Korea, the largest of which include ***.[13]

The following four producers in Taiwan responded to the Commission's questionnaire in this proceeding: Great Grandeul Steel Corp. ("Great Grandeul"); Prosperity Tieh Enterprise Co., Ltd. ("Prosperity"); China Steel Corp. ("China Steel"); and Sheng Yu Steel Co., Ltd. ("Sheng Yu").[14] There are believed to be ten producers of corrosion-resistant steel in Taiwan, the largest of which include ***.[15]

The leading U.S. importers of subject corrosion-resistant steel in 2015 include companies that import from China (***), India (***), Italy (***), Korea (***); and Taiwan (***). Other leading U.S. importers of corrosion-resistant steel in 2015 include companies that import from Canada (***), and other nonsubject countries (***).

The leading U.S. purchasers of corrosion-resistant steel are primarily automotive end users and steel distributors. These firms include ***, in order of size.

Apparent U.S. consumption of corrosion-resistant steel totaled approximately 21.3 million short tons ($17.1 billion) in 2015. U.S. producers' U.S. shipments of corrosion-resistant steel totaled 16.8 million short tons ($13.5 billion) in 2015, and accounted for 79.2 percent of apparent U.S. consumption by quantity and 78.9 percent by value. U.S. imports from subject sources totaled 2.6 million short tons ($2.1 billion) in 2015 and accounted for 12.4 percent of apparent U.S. consumption by quantity and 12.1 percent by value. U.S. imports from nonsubject sources totaled 1.8 million short tons ($1.5 billion) in 2015 and accounted for 8.4 percent of apparent U.S. consumption by quantity and 9.0 percent by value.

(…*continued*)
the preliminary phase of these investigations, Essar accounted for *** percent of reported 2014 production in India and *** percent of reported exports from India to the United States.

[11] ***.

[12] ***.

[13] ***.

[14] One producer in Taiwan (Kai Ching Industry Co., Ltd. ("Kai Ching")) responded to the Commission's questionnaire in the preliminary phase of the investigations but did not respond in the final phase. In the preliminary phase of these investigations, Kai Ching accounted for *** percent of reported 2014 production in Taiwan and *** percent of reported exports from Taiwan to the United States in 2014.

[15] ***.

SUMMARY DATA AND DATA SOURCES

A summary of data collected in these investigations is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on questionnaire responses of 19 firms that accounted for *** percent of U.S. production of corrosion-resistant steel during 2015.[16]

Usable importer questionnaire responses were received from 60 companies, representing 83.3 percent of U.S. imports from China, 93.7 percent of U.S. imports from India, 91.5 percent of U.S. imports from Italy, all U.S. imports from Korea, 92.0 percent of U.S. imports from Taiwan, 94.5 percent of nonsubject U.S. imports from Canada, and 78.2 percent of U.S. imports from all other nonsubject countries during 2015.[17] In light of the less-than-complete coverage of data from several subject and nonsubject countries provided in Commission questionnaires, import data in this report are based on official Commerce statistics for corrosion-resistant steel (HTS statistical reporting numbers 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000), as adjusted to include micro-alloy steel data collected separately in questionnaire responses.

Foreign producer questionnaire responses were received from 30 companies: 11 firms representing almost *** of production in China, 5 firms representing *** percent of production in India, 4 firms representing all production in Italy, 6 firms representing all production in Korea, and 4 firms representing *** percent of production in Taiwan.

PREVIOUS AND RELATED INVESTIGATIONS

Title VII investigations

The Commission has conducted a number of previous import relief investigations on corrosion-resistant steel. Information concerning the disposition of Commission investigations and reviews concerning corrosion-resistant steel are presented in table I-1.

[16] The coverage estimate is based on total production of coated sheet in the United States of *** short tons as reported by ***.

[17] The coverage estimates presented are based on official import statistics, as supplemented from Commission questionnaire responses for micro-alloy corrosion-resistant steel.

Table I-1
Corrosion-resistant steel: Previous and related Commission investigations

Original investigation				First review (1999)[1]	Second review (2006)[1]	Third review (2012)[1]	Notes
Date[1]	Number	Country	Outcome				
1980	731-TA-18	Belgium	Affirmative[2]	--	--	--	Terminated 10/01/80
	731-TA-19	W. Germany	Affirmative[2]	--	--	--	Terminated 10/01/80
	731-TA-20	France	Affirmative[2]	--	--	--	Terminated 10/01/80
	731-TA-21	Italy	Affirmative[2]	--	--	--	Terminated 10/01/80
	731-TA-23	Netherlands	Affirmative[2]	--	--	--	Terminated 10/01/80
	731-TA-24	U.K.	Affirmative[2]	--	--	--	Terminated 10/01/80
1982	701-TA-110	Belgium	Negative[2]	--	--	--	--
	701-TA-111	France	Negative[2]	--	--	--	--
	701-TA-112	Italy	Negative[2]	--	--	--	--
	701-TA-113	Luxembourg	Negative[2]	--	--	--	--
	701-TA-114	Netherlands	Negative[2]	--	--	--	--
	701-TA-115	U.K.	Negative[2]	--	--	--	--
	701-TA-116	W. Germany	Negative[2]	--	--	--	--
	701-TA-158	Spain	Affirmative	--	--	--	ITA revoked 08/21/85
	701-TA-173	Korea	Affirmative	--	--	--	ITA revoked 10/10/85
	731-TA-75	Belgium	Negative[2]	--	--	--	--
	731-TA-76	France	Negative[2]	--	--	--	--
	731-TA-77	Italy	Negative[2]	--	--	--	--
	731-TA-78	Luxembourg	Negative[2]	--	--	--	--
	731-TA-79	Netherlands	Negative[2]	--	--	--	--
	731-TA-80	U.K.	Negative[2]	--	--	--	--
	731-TA-81	W. Germany	Negative[2]	--	--	--	--

Table continued on following page.

Table I-1 -- Continued
Corrosion-resistant steel: Previous and related Commission investigations

Original investigation				First review (1999)[1]	Second review (2006)[1]	Third review (2012)[1]	Notes
Date[1]	Number	Country	Outcome				
1984	701-TA-212	Australia	Affirmative[2]	--	--	--	ITA negative 05/10/84
	701-TA-233	Austria	Negative[2]	--	--	--	--
	701-TA-234	Venezuela	Negative[2]	--	--	--	--
	731-TA-178	Australia	Affirmative[2]	--	--	--	Petition withdrawn 01/18/85
	731-TA-179	South Africa	Affirmative[2]	--	--	--	Petition withdrawn 06/07/84
	731-TA-180	Spain	Affirmative[2]	--	--	--	Petition withdrawn 01/18/85
	731-TA-230	Austria	Negative[2]	--	--	--	--
	731-TA-231	E. Germany	Negative[2]	--	--	--	--
	731-TA-232	Romania	Negative[2]	--	--	--	--
	731-TA-233	Venezuela	Negative[2]	--	--	--	--
1992	701-TA-347	Brazil	Affirmative	Affirmative	Negative	--	--
	701-TA-348	France	Affirmative	Affirmative	Negative	--	--
	701-TA-349	Germany	Affirmative	Affirmative	--	--	Order revoked by Commerce 04/01/04
	701-TA-350	Korea	Affirmative	Affirmative	Affirmative	Negative	--
	701-TA-351	Mexico	Negative	--	--	--	--
	701-TA-352	N. Zealand	Negative	--	--	--	--
	701-TA-353	Sweden	Negative	--	--	--	--
	731-TA-612	Australia	Affirmative	Affirmative	Negative	--	--
	731-TA-613	Brazil	Negative	--	--	--	--
	731-TA-614	Canada	Affirmative	Affirmative	Negative	--	--
	731-TA-615	France	Affirmative	Affirmative	Negative	--	--
	731-TA-616	Germany	Affirmative	Affirmative	Affirmative	Negative	--
	731-TA-617	Japan	Affirmative	Affirmative	Negative	--	--
	731-TA-618	Korea	Affirmative	Affirmative	Affirmative	Negative	--
	731-TA-619	Mexico	Negative	--	--	--	--
	731-TA-620	Taiwan	Negative[2]	--	--	--	--
2013	731-TA-1206	Japan	Affirmative	([3])	([3])	([3])	([3])

[1] The dates presented in this table refer to the year in which the investigation or review was instituted by the Commission.
[2] Preliminary determination.
[3] The first five-year review of the antidumping duty order on imports of diffusion-annealed, nickel-plated flat-rolled steel products from Japan is currently scheduled for initiation in April 2019.

Note.—Investigation No. 731-TA-1206 (2013) concerned diffusion-annealed, nickel-plated flat-rolled steel products from Japan.

Source: Compiled from Commission publications and determinations published in the *Federal Register*.

Safeguard investigations

In 1984, the Commission determined that carbon and alloy steel sheet (including galvanized sheet and strip) were being imported into the United States in such increased quantities as to be a substantial cause of serious injury to the domestic industry producing such articles, and recommended quantitative restrictions of imports for a period of five years. President Ronald Reagan determined that import relief under section 201 of the Trade Act of 1974 was not in the national interest. At the President's direction, quantitative limitations under voluntary restraint agreements ("VRAs") for a five-year period ending September 30, 1989, were negotiated. In July 1989, the VRAs were extended for two and one half years until March 31, 1992.

In 2001, the Commission determined that certain carbon and alloy steel, including corrosion-resistant steel, was being imported into the United States in such increased quantities as to be a substantial cause of serious injury to the domestic industry producing such articles, and recommended additional duties on imports for a period of four years.[18] On March 5, 2002, President George W. Bush announced the implementation of steel safeguard measures. Import relief relating to corrosion-resistant steel consisted of an additional tariff for a period of three years and one day (30 percent ad valorem on imports in the first year, 24 percent in the second year, and 18 percent in the third year).[19] Following receipt of the Commission's mid-term monitoring report in September 2003, and after seeking information from the U.S. Secretary of Commerce and U.S. Secretary of Labor, President Bush determined that the effectiveness of the action taken had been impaired by changed circumstances. Therefore, he terminated the U.S. measure with respect to increased tariffs on December 4, 2003.[20]

Section 337

On May 26, 2016, U.S. Steel filed a request that the Commission institute an investigation based on a complaint by U.S. Steel alleging violations of section 337 of the Tariff Act of 1930, as amended, regarding certain carbon and alloy steel products by several proposed Chinese respondents. This complaint alleged that the proposed respondents violated one or more of the following unfair acts: (1) a conspiracy to fix prices and control output and export volumes; (2) the misappropriation and use of U.S. Steel's trade secrets; and (3) the false

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[18] *Steel; Import Investigations*, 66 FR 67304, December 28, 2001.

[19] *Presidential Proclamation 7529 of March 5, 2002, To Facilitate Positive Adjustment to Competition From Imports of Certain Steel Products*, 67 FR 10553, March 7, 2002. The President also instructed the Secretaries of Commerce and the Treasury to establish a system of import licensing to facilitate steel import monitoring.

[20] *Presidential Proclamation 7741 of December 4, 2003, To Provide for the Termination of Action Taken With Regard to Imports of Certain Steel Products*, 68 FR 68483, December 8, 2003. Import licensing, however, remained in place through March 21, 2005, and continues in modified form at this time.

designation of origin or manufacturer for purposes of evading duties. Under this complaint, U.S. Steel seeks a general exclusion order, a limited exclusion order, and a permanent cease and desist order.[21]

COMMERCE'S CRITICAL CIRCUMSTANCES DETERMINATIONS

On June 2, 2016, Commerce's final determinations concerning critical circumstances were published in the *Federal Register*.[22] Commerce's final affirmative and negative critical circumstances findings are summarized in table I-2.

[21] https://www.usitc.gov/press_room/news_release/2016/er0526ll602.htm, retrieved on June 1, 2016.

[22] *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Taiwan: Final Negative Countervailing Duty Determination*, 81 FR 35299, June 2, 2016; *Issues and Decision Memorandum for the Final Negative Determination: Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products from Taiwan*, May 24, 2016; *Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances*, 81 FR 35303, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Affirmative Determination, and Final Affirmative Critical Circumstances Determination, in Part*, 81 FR 35308, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Affirmative Determination, and Final Affirmative Critical Circumstances Determination, in Part*, 81 FR 35310, June 2, 2016; *Certain Corrosion-Resistant Steel Products From Italy: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*, 81 FR 35320, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From India: Final Affirmative Determination*, 81 FR 35323, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products from India: Notice of Correction to Final Affirmative Determination; Negative Determination of Critical Circumstances,* 81 FR 38671, June 14, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Italy: Final Affirmative Determination and Final Affirmative Critical Circumstances, in Part*, 81 FR 35326, June 2, 2016; *Certain Corrosion-Resistant Steel Products From India: Final Determination of Sales at Less Than Fair Value and Final Negative Determination of Critical Circumstances*, 81 FR 35329, June 2, 2016; *Certain Corrosion-Resistant Steel Products From Taiwan: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*, 81 FR 35313, June 2, 2016; and *Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Critical Circumstances Determination*, in Part, 81 FR 36316, June 2, 2016.

Table I-2
Corrosion-resistant steel: Commerce's final critical circumstances determinations

Country	Commerce case number (*Federal Register* cite)	Companies receiving affirmative final critical circumstances determinations	Companies receiving negative final critical circumstances determinations
China	A–570–026 (81 FR 36316, June 2, 2016)	Hebei Iron & Steel Co., Ltd. (Tangshan Branch) ("Tangshan"); Baoshan Iron & Steel Co., Ltd. ("Baoshan"); and PRC-wide entity	Yieh Phui (China) Technomaterial Co., Ltd. ("YPC"); and all other producers/exporters entitled to a separate rate
	C–570–027 (81 FR 35308, June 2, 2016)	Angang Group Hong Kong Co. Ltd. ("Angang"); Duferco S.A. ("Duferco"); Handan Iron & Steel Group ("Handan"); Changshu Everbright Material Technology ("Everbright"); and Baoshan	YPC and all other producers/exporters
India	A–533–863 (81 FR 35329, June 2, 2016)	No companies	Uttam Galva Steels, Ltd. ("Uttam"); JSW Steel Ltd. ("JSW") and all other producers/exporters
	C–533–864 (81 FR 38671, June 14, 2016)	No companies	Uttam; JSW; and all other producers/exporters
Italy	A–475–832 (81 FR 35320, June 2, 2016)	Marcegaglia S.p.A. ("Marcegaglia")	Acciaieria Arvedi S.p.A. ("Arvedi") and all other producers/exporters
	C–475–833 (FR 35326, June 2, 2016)	ILVA S.p.A. ("ILVA")	Arvedi; Marcegaglia; and all other producers/exporters
Korea	A–580–878 (81 FR 35303, June 2, 2016)	All other producers/exporters	Dongkuk Steel Mill Co., Ltd. ("Dongkuk/Union") and Hyundai
	C–580–879 (81 FR 35310, June 2, 2016)	All other producers/exporters	Dongbu Steel Co., Ltd. ("Dongbu"); and Dongkuk/Union
Taiwan	A–583–856 (81 FR 35313, June 2, 2016)	All other producers/exporters	Yieh Phui Enterprises Co., Ltd. ("Yieh Phui"); Prosperity Tieh Enterprises Co., Ltd. ("Prosperity")
	C–583–857 (81 FR 35299, June 2, 2016)	No companies	All producers/exporters

Source: Cited *Federal Register* notices.

NATURE AND EXTENT OF SUBSIDIES AND SALES AT LTFV

Subsidies

On June 2, 2016, Commerce published notice in the *Federal Register* of its final determinations concerning countervailable subsidies for producers and exporters of product from China, India, Italy, Korea, and Taiwan.[23] Table I-3 presents Commerce's final subsidy determinations.

Sales at LTFV

On June 2, 2016, Commerce published a notice in the *Federal Register* of its final determinations of sales at LTFV with respect to imports from China, India, Italy, Korea, and Taiwan.[24] Table I-4 presents Commerce's final sales at LTFV determinations.

[23] *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Taiwan: Final Negative Countervailing Duty Determination*, 81 FR 35299, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Affirmative Determination, and Final Affirmative Critical Circumstances Determination, in Part*, 81 FR 35308, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Affirmative Determination, and Final Affirmative Critical Circumstances Determination, in Part*, 81 FR 35310, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From India: Final Affirmative Determination*, 81 FR 35323, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Italy: Final Affirmative Determination and Final Affirmative Critical Circumstances, in Part*, 81 FR 35326, June 2, 2016.

[24] *Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances*, 81 FR 35303, June 2, 2016; *Certain Corrosion-Resistant Steel Products From Italy: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*, 81 FR 35320, June 2, 2016; *Certain Corrosion-Resistant Steel Products From India: Final Determination of Sales at Less Than Fair Value and Final Negative Determination of Critical Circumstances*, 81 FR 35329, June 2, 2016; *Certain Corrosion-Resistant Steel Products From Taiwan: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*, 81 FR 35313, June 2, 2016; and *Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Critical Circumstances Determination*, in Part, 81 FR 36316, June 2, 2016.

Table I-3
Corrosion-resistant steel: Commerce's final subsidy determinations

Producer/exporter	Final subsidy rate (*percent*)
China	
Yieh Phui (China) Technomaterial Co., Ltd.	39.05
Angang Group Hong Kong Company Ltd.	241.07
Baoshan Iron & Steel Co., Ltd.	241.07
Duferco S.A., Hebei Iron & Steel Group, and Tangshan Iron and Steel Group Co., Ltd.	241.07
Changshu Everbright Material Technology	241.07
Handan Iron & Steel Group	241.07
All others	39.05
India	
JSW Steel Limited and JSW Coated Products Limited	4.44
Uttam Galva Steels Ltd.; Uttam Value Steels Ltd.; Atlantis International Services Co. Ltd.; Uttam Galva Steels, Netherlands, B.V.; and Uttam Galva Steels (BVI) Ltd.	3.05
All others	3.86
Italy	
Acciaieria Arvedi S.p.A.	12.63
Marcegaglia S.p.A.	92.12
All others	12.63
Korea	
Union Steel Manufacturing Co. Ltd./ Dongkuk Steel Mill Co., Ltd.	0.72 (de minimis)
Dongbu Steel Co., Ltd./Dongbu Incheon Steel Co., Ltd.	1.19
All others	1.19
Taiwan	
Prosperity Tieh Enterprise Co., Ltd. (PT); Hong-Ye Steel Co., Ltd. (HY); Prosperity Did Enterprise Co., Ltd. (PD); and Chan Lin Enterprise Co., Ltd. (CL) (collectively "Prosperity Companies")	0.00
Yieh Phui Enterprise Co., Ltd. (Yieh Phui); Yieh Corporation Limited (YCL); Shin Yang Steel Co., Ltd. (Shin Yang); and Synn Industrial Co., Ltd (Synn) (collectively "Yieh Phui Companies").	0.00
All others	([1])

[1] Commerce did not calculate an "All others" rate because it made a negative final determination with respect to the countervailing duty investigation on imports from Taiwan.

Source: *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Taiwan: Final Negative Countervailing Duty Determination*, 81 FR 35299, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Affirmative Determination, and Final Affirmative Critical Circumstances Determination, in Part*, 81 FR 35308, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Affirmative Determination, and Final Affirmative Critical Circumstances Determination, in Part*, 81 FR 35310, June 2, 2016; *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From India: Final Affirmative Determination*, 81 FR 35323, June 2, 2016; and *Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Italy: Final Affirmative Determination and Final Affirmative Critical Circumstances, in Part*, 81 FR 35326, June 2, 2016.

Table I-4
Corrosion-resistant steel: Commerce's final weighted-average LTFV margins

Exporter/manufacturer	Final dumping margin (*percent*)
China	
Yieh Phui (China) Technomaterial Co., Ltd	209.97
Jiangyin Zongcheng Steel Co., Ltd.	209.97
Union Steel China	209.97
China-wide entity	209.97
India	
JSW Steel Ltd. and JSW Coated Products Ltd.	4.44
Uttam Galva Steels Ltd.; Uttam Value Steels Ltd.; Atlantis International Services Co., Ltd.; Uttam Galva Steels, Netherlands, B.V.; and Uttam Galva Steels (BVI) Ltd.	3.05
All others	3.86
Italy	
Acciaieria Arvedi S.p.A.	12.63
Marcegaglia S.p.A	92.12
All others	12.63
Korea	
Dongkuk Steel Mill Co., Ltd./Union Steel Manufacturing Co., Ltd.	8.75
Hyundai Steel Co.	47.80
All others	28.28
Taiwan	
Prosperity Tieh Enterprise Co., Ltd.; Yieh Phui Enterprise Co., Ltd.; and Synn Industrial Co., Ltd.	3.77
All others	3.77

Source: *Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances*, 81 FR 35303, June 2, 2016; *Certain Corrosion-Resistant Steel Products From Italy: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*, 81 FR 35320, June 2, 2016; *Certain Corrosion-Resistant Steel Products From India: Final Determination of Sales at Less Than Fair Value and Final Negative Determination of Critical Circumstances*, 81 FR 35329, June 2, 2016; *Certain Corrosion-Resistant Steel Products From Taiwan: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*, 81 FR 35313, June 2, 2016; and *Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Critical Circumstances Determination*, in Part, 81 FR 36316, June 2, 2016.

THE SUBJECT MERCHANDISE

Commerce's scope

In its final determinations, Commerce defined the scope of these investigations as follows:

> The products covered by the scope are certain flat-rolled steel products, either clad, plated, or coated with corrosion-resistant metals such as zinc, aluminum, or zinc-, aluminum-, nickel- or iron-based alloys, whether or not corrugated or painted, varnished, laminated, or coated with plastics or other non-metallic substances in addition to the metal coating. The products covered include coils that have a width of 12.7 mm or greater, regardless of form of coil (e.g., in successively superimposed layers, spirally oscillating, etc.). The products covered also include products not in coils (e.g., in straight lengths) of a thickness less than 4.75 mm and a width that is 12.7 mm or greater and that measures at least 10 times the thickness. The products covered also include products not in coils (e.g., in straight lengths) of a thickness of 4.75 mm or more and a width exceeding 150 mm and measuring at least twice the thickness. The products described above may be rectangular, square, circular, or other shape and include products of either rectangular or non-rectangular cross-section where such cross-section is achieved subsequent to the rolling process, i.e., products which have been ''worked after rolling'' (e.g., products which have been beveled or rounded at the edges). For purposes of the width and thickness requirements referenced above:
>
> (1) Where the nominal and actual measurements vary, a product is within the scope if application of either the nominal or actual measurement would place it within the scope based on the definitions set forth above, and
>
> (2) where the width and thickness vary for a specific product (e.g., the thickness of certain products with non-rectangular cross-section, the width of certain products with nonrectangular shape, etc.), the measurement at its greatest width or thickness applies.
>
> Steel products included in the scope in this investigation are products in which: (1) Iron predominates, by weight, over each of the other contained elements; (2) the carbon content is 2 percent or less, by weight; (3) none of the elements listed below exceeds the quantity, by weight, respectively indicated:
>
> • 2.50 percent of manganese, or
> • 3.30 percent of silicon, or
> • 1.50 percent of copper, or
> • 1.50 percent of aluminum, or
> • 1.25 percent of chromium, or
> • 0.30 percent of cobalt, or

• 0.40 percent of lead, or
• 2.00 percent of nickel, or
• 0.30 percent of tungsten (also called wolfram), or
• 0.80 percent of molybdenum, or
• 0.10 percent of niobium (also called columbium), or
• 0.30 percent of vanadium, or
• 0.30 percent of zirconium

Unless specifically excluded, products are included in this scope regardless of levels of boron and titanium.

For example, specifically included in this scope are vacuum degassed, fully stabilized (commonly referred to interstitial-free (IF)) steels and high strength low alloy (HSLA) steels. IF steels are recognized as low carbon steels with micro-alloying levels of elements such as titanium and/or niobium added to stabilize carbon and nitrogen elements. HSLA steels are recognized as steels with micro-alloying levels of elements such as chromium, copper, niobium, titanium, vanadium, and molybdenum.

Furthermore, this scope also includes Advanced High Strength Steels (AHSS) and Ultra High Strength Steels (UHSS), both of which are considered high tensile strength and high elongation steels.

Subject merchandise also includes corrosion-resistant steel that has been further processed in a third country, including but not limited to annealing, tempering painting, varnishing, trimming, cutting, punching and/or slitting or any other processing that would not otherwise remove the merchandise from the scope of the investigation if performed in the country of manufacture of the in-scope corrosion resistant steel.

All products that meet the written physical description, and in which the chemistry quantities do not exceed any one of the noted element levels listed above, are within the scope of this investigation unless specifically excluded. The following products are outside of and/or specifically excluded from the scope of this investigation:

• Flat-rolled steel products either plated or coated with tin, lead, chromium, chromium oxides, both tin and lead (terne plate), or both chromium and chromium oxides (tin free steel), whether or not painted, varnished or coated with plastics or other non-metallic substances in addition to the metallic coating;
• Clad products in straight lengths of 4.7625 mm or more in composite thickness and of a width which exceeds 150 mm and measure at least twice the thickness; and
• Certain clad stainless flat-rolled products, which are three-layered corrosion-resistant steel flat-rolled steel products less than 4.75 mm in composite thickness that consist of a flat-rolled steel product clad on both sides with stainless steel in a 20%–60%–20% ratio.

Tariff treatment

The subject merchandise is imported under the following HTS statistical reporting numbers: 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000.

The products subject to the investigations may also be imported under the following HTS statistical reporting numbers: 7210.90.1000, 7215.90.1000, 7215.90.3000, 7215.90.5000, 7217.20.1500, 7217.30.1530, 7217.30.1560, 7217.90.1000, 7217.90.5030, 7217.90.5060, 7217.90.5090, 7225.91.0000, 7225.92.0000, 7225.99.0090, 7226.99.0110, 7226.99.0130, 7226.99.0180, 7228.60.6000, 7228.60.8000, and 7229.90.1000.

The general U.S. tariff rate on corrosion-resistant steel, applicable to U.S. imports that are products of China, India, Italy, Korea, and Taiwan and imported under these provisions, is free.

THE PRODUCT

Description and applications

Steel is generally defined as a combination of carbon and iron that is usefully malleable as first cast, and in which iron predominates, by weight, over each of the other contained elements, and the carbon content is 2 percent or less, by weight. Corrosion-resistant steel is steel sheet that has been coated or plated with a corrosion- or heat-resistant metal to prevent corrosion and thereby extend the service life of products produced from the steel. Corrosion-resistant steel includes primarily steel coated with zinc (galvanized), zinc-iron alloy (galvannealed), aluminum, or any of several zinc-aluminum alloys.[25] Steel coated with other corrosion-resistant metals, however, including nickel and copper, as well as steel clad with aluminum or stainless steel sheet, is also included within Commerce's scope. Corrosion-resistant steel is used in the manufacture of automobile bodies, in appliances, and in commercial and residential buildings and other construction applications.

Corrosion-resistant steel coated with metals other than zinc or aluminum, including copper, nickel, and cobalt, is produced in much smaller quantities than galvanized and aluminized steel, and usually by smaller firms specializing in such coatings. Such products are used for specialized applications. Nickel-plated steel is used in the production of batteries and automotive fuel lines, and copper-plated steel is used in the production of tubing for automotive brake fluid and for other applications.

[25] Other than galvanized and galvannealed, for which the zinc-coating alloy contains only a small (less than 1 percent) amount of aluminum, zinc alloy coatings include 55 percent aluminum-zinc alloy (Galvalume®) and zinc-5 percent aluminum-mischmetal (Galfan®). Aluminum coating alloys are either commercially pure aluminum or alloys containing 5 to 11 percent silicon.

The substrate, or steel base, for corrosion-resistant steel is produced with properties needed for particular applications. The properties are achieved through control of the chemical composition and thermal processing of the steel. Different levels of carbon and manganese content are chosen, depending upon the product being made. To achieve higher strength levels, micro-alloying additions of such elements as columbium and titanium are used. The scope of these investigations includes both steels that are classified as non-alloy under the HTSUS as well as steel classified as "other alloy,"[26] yet not containing more than the amounts of certain alloying elements as listed.

In order to reduce the weight of automobiles and achieve higher gasoline mileage, a class of steel products called Advanced High Strength Steels ("AHSS") has been developed, and further advances in AHSS technology are actively being pursued. These steels combine light weight, great strength, and a high degree of formability, among other characteristics. The increase in steel strength is achieved through alloy additions and controlled rates of cooling from annealing temperatures. Specific grades of AHSS are often designated by the acronym "AHSS" followed by a number roughly equal to the steel's tensile strength measured in megapascals.[27] AHSS 490 and AHSS 1180 are two grades of advanced high strength steel for which data were collected for these investigations.

Manufacturing processes

Steel for the substrate of corrosion resistant steel may be produced by several methods. The two common methods are the electric-arc furnace method, which generally uses cold metallic raw materials, including scrap, cold pig iron, and direct-reduced iron as input, and the blast furnace/oxygen furnace method, which uses iron ore, coke, and smaller amounts of scrap or other cold metallic materials. After melting, steel is cast as a semifinished steel product called "slab." Slabs are heated to hot-rolling temperature and rolled on a hot-strip mill. The hot-rolled product is reeled into a coil for further handling and processing.

Hot-rolled steel is uncoiled and processed through a "pickle line" in which it passes through vats of acid to remove oxide scale from the hot-rolling process. Next, the steel is processed through a cold-rolling mill to reduce its thickness to the ordered final thickness. The cold-rolling process hardens the steel so that it must be softened by thermal processing (annealing) in subsequent operations.

The coating or plating of the metallic coatings on corrosion-resistant steel takes place on continuous processing lines (continuous galvanizing lines for zinc coatings). The processing lines are generally divided into three sections: an entry section in which the head end of each coil is joined to the tail end of its preceding coil in order to achieve fully continuous operation; a processing section for thermal processing and coating; and a delivery section where the coated

[26] "Other alloy" refers to steel containing more of any of certain elements than the amount listed in a table in the HTSUS, but other than stainless steel.

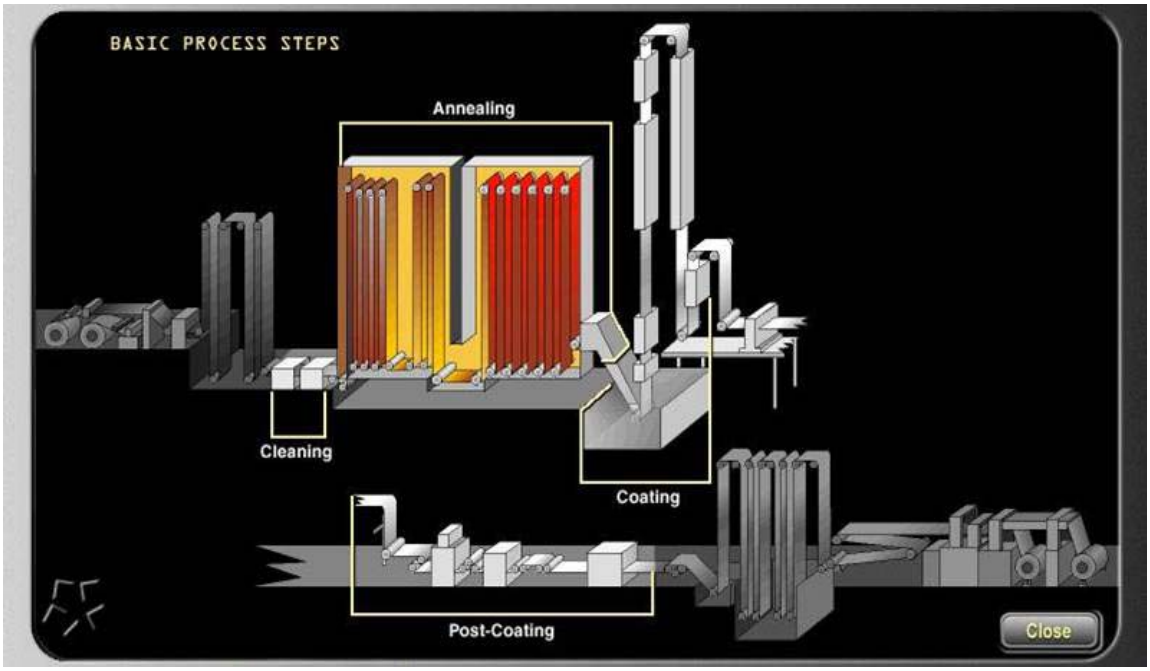
[27] "Megapascal" is the usual International System of Units (SI) unit for steel strength. One thousand megapascals is equivalent to about 145 thousand pounds per square inch.

steel is recoiled, separated from the following coil and discharged from the line. The three sections are separated by accumulators that allow the entry and the delivery sections to be stopped to start a new coil or discharge a finished coil while the middle, processing section operates continuously using or storing steel temporarily in the accumulators.

There are two widely used processes for producing corrosion-resistant steel: the hot-dip process, in which steel sheet passes through a bath of molten zinc or aluminum, and the electrolytic process, in which steel sheet passes through a series of electrolytic cells that electrolytically plate zinc or other metals onto the surface of the steel. Most galvanized steel in the United States is produced using the continuous hot-dip process. In either case, the starting material is usually cold-rolled steel sheet.[28]

In general, the continuous hot-dip process consists of cleaning, annealing, and hot dipping (figure I-1). Liquid alkali cleaning is an important part of making high quality galvanized

Figure I-1
Corrosion resistant steel: Basic hot-dip galvanizing process



Source: International Zinc Association, *GALVANIZING—2014 Continuous hot-‐-dip galvanizing process and Products,* found at http://www.galvinfo.com/Documents/Galvanizing%202014.pdf, p. 10, retrieved July 7, 2015.

[28] The substrate for corrosion-resistant steel is usually cold-rolled steel, but hot-rolled substrate is used for some applications, depending upon the desired thickness and metallurgical properties required.

and galvannealed steel. Cleaning the coils in hot alkali using scrub brushes, followed by rinsing and hot air drying, removes residual rolling oils and iron fines from the surface. This cleaning of the surface prior to annealing improves coating adhesion, appearance, and paintability. It also removes loose iron bearing debris from the surface that could get carried through to the molten zinc and form pot dross or surface dross on the steel. Alone, or in combination with liquid cleaning, some hot-dip lines use direct flame cleaning in which the strip is heated to volatilize organic surface contaminants.

Modern hot-dip galvanizing lines incorporate vertical, radiant tube annealing furnaces with multiple independently monitored combustion zones for precise and uniform temperature control. Annealing temperatures vary from 1330°F to 1550°F. After annealing, the strip is cooled to a temperature about equal to that of the upcoming molten zinc. The moving strip passes directly from the controlled atmosphere of the annealing furnace into the molten zinc so that no oxidation of the surface occurs due to exposure to air.

Molten zinc on most galvanizing lines is maintained at a temperature between 865°F and 870°F in a ceramic-lined vessel that typically holds about 200 - 350 tons of liquid zinc, although some may contain up to 500 tons. In the molten zinc, the moving strip passes around a rotating, submerged roll and is redirected to exit the molten zinc vertically. Low-pressure, high-volume blowers are used to blow excess zinc from the sheet as it leaves the molten zinc. Pressure is the principal parameter for control of coating mass (weight), although the distance of the blowers above the molten zinc, their distance from the strip, and angle of the blowers are also adjustable. Automatic coating weight control using artificial intelligence technology is installed on some lines to produce consistent coating weight with a low standard deviation. If the zinc coating is allowed to solidify after the weight control operation, it forms a regular galvanized coating. To produce galvannealed steel, the strip is reheated to a temperature of 1100°F immediately after passing the blowers and while the zinc is still molten. At that temperature, iron from the steel substrate diffuses through the zinc coating, forming a zinc-iron alloy that extends to the outer surfaces of the coating. Only galvanizing lines that are equipped with a special galvanneal reheating furnace are capable of producing galvanneal.

Galvalume, Galfan, and aluminized coatings are produced by hot dipping in a similar manner as galvanized and galvanneal. To produce these coatings, the molten metal in the line is of the particular alloy to be coated. Some galvanizing lines are equipped with two or more pots of molten metal that may be exchanged in order to switch production from one type of corrosion-resistant steel to another.

There are several optional processes that may be performed in a continuous galvanizing line after coating. In-line temper rolling is sometimes performed to produce extra-smooth sheet for exposed applications. It imparts a carefully controlled surface finish, mechanical property control, and good flatness. Tension leveling may be performed to improve flatness.

Coated sheet may be treated with a chemical solution to inhibit the formation of wet-storage stain, which is the formation of a heavy accumulation of zinc oxide. Some hot-dip lines are now applying organic coatings by in-line roll coating to prevent hand print marks during handling of the sheet by users. These treatments were developed for the aluminum-zinc hot dip coatings, which are particularly susceptible to this problem. Finally, a light film of rust preventative oil is applied. Immediately after oiling, strip is recoiled on a mandrel to produce coils to the customers' ordered weight.

The second method of producing zinc-coated steel is the electrolytic plating process, also called "electrogalvanizing." In the processing section of an electrolytic coating line, the steel passes through a series of plating cells rather than a vat of molten metal. Each plating cell contains a chemical solution (electrolyte) and a source of the plating metal (anode) submerged in the electrolyte. An electric power source is connected to the anode. As the steel strip is passed through each plating cell, it functions as a cathode and zinc is deposited on the strip. The electrolytic plating process is an incremental process wherein passage through each plating cell deposits a small amount of coating. Thin formable electrogalvanized coatings are usually not as thick as hot-dip galvanized coatings and are ideally suited for deep drawing or painting.[29] A further advantage of electrogalvanizing is that it is a "cold" process that does not alter the mechanical properties of the steel. Therefore, certain AHSS steel grades that cannot be produced by hot-dip galvanizing because the heating and cooling inherent in the hot-dip galvanizing process would alter their properties can be electrogalvanized.

Certain applications for electrogalvanized steel, largely non-automotive, do not require high corrosion resistance. The corrosion resistance of a very light coating of zinc is satisfactory for such applications, which are in the manufacture of precision instruments such as slot machines, computer cases, and other electronic products. One manufacturer in Taiwan has noted that it operates an electrogalvanizing line having fewer plating cells than the typical line operated in the United States, and lacking the ability to produce the common coating weights required for automotive applications. For these investigations, data have been collected concerning electrogalvanized steel having a coating weight per side of less than 20 grams per square meter.

The petitioners argue that U.S. producers of corrosion-resistant steel "are fully capable and have more than enough capacity to serve all aspects of this market. This includes light gauge, narrow Galvalume, advanced high strength steel and many other advanced corrosion-resistant steel products that our customers and the market demand."[30] However, according to the Korean respondents, U.S. production of galvalume steel (55 percent aluminum-zinc coating) is limited and cannot supply the full U.S. demand. As an example, they cite the U.S. supply of such steel with a thickness of 0.018 inch or less and a width of less than 45 inches, commonly used to produce steel building components, such as roofing, siding, and panels.[31] Data on such production and imports were collected for these investigations.

Corrosion-resistant steel with coatings of metals other than zinc is also produced by electrolytic plating. Other metals include nickel and copper as well as alloys including zinc-iron, zinc-nickel, cobalt-nickel, and zinc-copper.[32]

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[29] Automotive makers use electrogalvanized steel sheet for exposed car-body panels due to these qualities.

[30] Hearing transcript, pp. 60-61 (Matthews).

[31] Korean producers' prehearing brief, p. 15.

[32] Thomas/Apollo's postconference brief, p. 11; *U.S. Steel webpage*, https://www.ussteel.com/uss/portal/home/products/sheet/coated%20sheet/electrolytic%20zinc%20and%20%20zinc-iron%20alloy%20coated/electrolytic-zinc-zinc-iron-alloy-coated/, retrieved June 8, 2016;

(*continued*...)

Applications in major markets[33]

Due to the different properties of hot-dip galvanized and electrogalvanized steel, the applications in end-use markets (automotive, construction, and appliance) differ.[34] In the automotive market, most unexposed parts are fabricated from either hot-dip galvanized or hot-dip galvannealed while most exposed panels are made from galvannealed or electrogalvanized steel as these forms of corrosion-resistant steel have superior "paintability." Since hot-dip galvanized is less expensive than electrogalvanized steel, efforts have been made to substitute hot-dip galvanized for electrogalvanized steel in exposed panels. These efforts at substitution have had limited success.[35] The construction market uses galvanized steel - especially prepainted (i.e., steel produced by direct application of paint in a coil-coating line). In general, galvannealed steel is not used to produce prepainted sheet steel, as the coating is brittle compared to galvanized or Galvalume steel.[36] The appliance market is increasing its use of galvanized steel, including prepainted galvanized steel, as galvanized steel has greater corrosion resistance than cold-rolled steel sheet.

DOMESTIC LIKE PRODUCT ISSUES

The Commission determined in the preliminary phase of these investigations that there is one domestic like product that is coextensive with the scope of the investigations encompassing all corrosion-resistant steel products.[37] In its preliminary phase determinations,

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(…*continued*)
Thomas Steel webpage, http://www.tatasteeleurope.com/en/about-us/operations/plating/production-sites/thomas-steel-strip, retrieved June 8, 2016; and *Apollo Metals webpage*, http://www.tatasteeleurope.com/en/about-us/operations/plating/production-sites/apollo-metals, retrieved June 8, 2016.

[33] Unless otherwise noted, information in this section was obtained from *Galvanizing - 2014: Continuous Hot-Dip Galvanizing –Process and Products, November 2014*, published by the International Zinc Association.

[34] The two largest known end-use markets for hot-dip galvanized steel are automotive (about 43 percent of U.S. shipments) and construction (about 18 percent of U.S. shipments). About 30 percent of U.S. shipments go to service centers and distributors where the final end-user is unknown. The great majority of U.S. shipments of electrogalvanized steel, about 97 percent, go to the automotive market. *AIS 16 12 Months 2015*, American Iron and Steel Institute.

[35] *Corrosion-Resistant Carbon Steel Flat Products from Germany and Korea, Inv. Nos. 701-TA-350 and 731-TA-616 and 618 (Third Review)*, USITC Publication 4388, March 2013, pp. I-32 and I-33.

[36] A strong bond is formed between the galvanneal coating and the paint and the latter will delaminate during subsequent forming, usually taking the galvanneal coating with it.

[37] In its preliminary phase determinations, the Commission found that DANP, copper-plated steel, and other corrosion-resistant steel share many of the same physical characteristics, are made using the same technology, processes, and equipment as other corrosion-resistant steel, and are sold through the same channels of distribution to the same types of end users. The Commission also found that different types of corrosion-resistant steel products serve a range of applications where the specific items may
(*continued*...)

the Commission also instructed parties to indicate in their comments on the draft questionnaires in any final phase of these investigations if they wish to raise particular domestic like product arguments, and request that the Commission seek additional data on any proposed separate domestic like products.[38] None of the parties raised domestic like product arguments in their comments on the draft questionnaires in this final phase.[39]

The petitioners propose a domestic like product that is coextensive with the scope of these investigations.[40] Domestic producers Thomas/Apollo and Steel Dynamics, Inc. ("SDI") agree with the petitioners' single domestic like product definition.[41]

The Italian producers (Marcegaglia, Arvedi, and Federacciai Federation of Italian Steel Companies), Korean producers (Korea Iron and Steel Association, POSCO, POSCO C&C, Hyundai, Dongkuk, and Dongbu), and the Taiwan producer (Prosperity) note that they accept the definitions of the domestic like product and domestic industry that have been proposed in the petitions.[42] The Indian respondents (JSW, Essar, Uttam Galva, and Uttam Galva North America) indicate that they take no position with respect to the domestic like product. They add, however, that the scope of the merchandise defined by the petitioners is "extremely broad" and that the different types of merchandise included in the scope are not interchangeable,

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(…*continued*)
not be directly interchangeable, but that DANP and copper-plated steel, as well as other specialty products, generally share many common characteristics with corrosion-resistant steel products, including a (cold-rolled) steel substrate, hot dip or electrolytic plating process, metal or alloy plating material, and corrosion-resistance. In addition, the Commission noted that producers and customers perceive that the intended purpose for DANP, copper-plated steel, and other corrosion-resistant steel products is to prevent corrosion in numerous automotive and consumer applications. The Commission also noted that the price of DANP or copper-plate steel is comparable to other thin gauge, high quality corrosion-resistant steel products, including products with zinc or other coating metals. Therefore, in its preliminary phase determinations, the Commission found that the evidence on the record indicates that there is not a clear dividing line between DANP, copper-plated steel, and other specialty corrosion-resistant steel products, and that DANP and copper-plated steel are niche products that share the general characteristics of the group of corrosion-resistant steel products subject to investigation. *Certain Corrosion-Resistant Steel Products from China, India, Italy, Korea, and Taiwan Investigation Nos. 701-TA-534-538 and 731-TA-1274-1278 (Preliminary)*, USITC Publication 4547, July 2015, pp. 10-11.

[38] *Certain Corrosion-Resistant Steel Products from China, India, Italy, Korea, and Taiwan Investigation Nos. 701-TA-534-538 and 731-TA-1274-1278 (Preliminary)*, USITC Publication 4547, July 2015, p. 11.

[39] On January 29, 2016, the Commission received the following three sets of comments on the draft questionnaires: (1) U.S. producers AK Steel, ArcelorMittal; CSI; SDI; Nucor; and U.S. Steel; (2) Korean respondents (Korea Iron and Steel Association; POSCO; POSCO Coated & Color Steel Co., Ltd.; Hyundai Steel Co.; Dongkuk Steel Mill Co., Ltd.; and Dongbu Steel Co., Ltd.), Italian respondents (Marcegaglia; ILVA S.p.A.; Acciaieria Arvedi S.p.A.; and Federacciai Federation of Italian Steel Companies), and Taiwan producer Prosperity Tieh Enterprise Co., Ltd.; and (3) Taiwan producer Great Grandeul Steel Co., Ltd.

[40] Petitions, pp. 3-8.

[41] Thomas/Apollo's postconference brief, pp. 1-2; and CSI/SDI's prehearing brief, p. 4.

[42] Italian producers' postconference brief, p. 4; Italian producers' prehearing brief, p. 6; Korean producers' postconference brief, p. 4; Korean producers' prehearing brief, p. 6; Prosperity's postconference brief, p. 4; and Prosperity's prehearing brief, p. 4..

have vastly different physical characteristics and technical specifications, and serve different purposes and end markets with distinct conditions of competition.[43]

The Chinese respondents (China Iron & Steel Association: Angang Group International Trade Corp.; Baoshan Iron & Steel Co., Ltd.; Beijing Shougang Cold Rolling Co., Ltd.; Benxi Steel Group International Economic & Trading Co., Ltd.; Handan Iron and Steel Group Import and Export Co., Ltd.; Maanshan Iron & Steel Co., Ltd.; Shanghai Meishan Iron & Stell Co., Ltd.; Shougang Jingtang United Iron & Steel Co., Ltd.; Tangshan Iron and Steel Group Ltd.; and Wisco International Economic & Trading Co., Ltd.) note that while the Commission has found that corrosion-resistant steel, cold-rolled sheet, and hot-rolled sheet constituted separate domestic like products and industries in past proceedings, they "do not challenge that categorization here." They add, however, that "the nature of those products makes it particularly critical that the Commission separate the performances of each product in its analyses. . . . it is important that the same effect of imports not be counted in totality two or three times. . ."[44]

In the preliminary phase of these investigations, the representative of Procon Metals Incorporated ("Procon"), an importer of subject merchandise from Korea, argued in his testimony at the Commission's conference and postconference brief that the Commission should treat certain corrosion-resistant steel plated with nickel (specifically, diffusion-annealed nickel plated steel ("DANP")) and copper-plated steel as separate domestic like products from other corrosion-resistant steel in these investigations.[45] Although Procon provided an importer questionnaire response in the final phase of these investigations,[46] it did not provide comments on the final phase draft questionnaires, nor did it participate in the hearing or submit briefs in the final phase of these investigations.

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[43] Indian companies' postconference brief, pp. 1-2; and Indian companies' prehearing brief, p. 2.

[44] Chinese producers/exporters' prehearing brief, p. 2.

[45] Conference transcript, pp. 175-180 (Hartman) and 213 (Peterson); and TCC Steel Co., Ltd., TCC America Corp., and Procon Metals, Inc.'s ("TCC/Procon") postconference brief , pp. 5-8.

[46] In response to a question concerning third-country import relief proceedings in its final phase questionnaire, Procon asked the Commission to review and compare the domestic like product and domestic industry determination in the Commission's investigation concerning Diffusion Annealed Nickel Plated Steel from Japan (Investigation No. 731-TA-1206) with respect to nickel plated steel. Procon noted, "In that case the only domestic producer (Thomas Steel) argued that the Commission should define a single domestic like product to be Coextensive with the definition of the subject merchandise, i.e., nickel plate. It specifically argued that the domestic like product should not be defined to include other types of corrosion-resistant carbon steel flat rolled products. This remained unchanged in all aspects of that filing."

PART II: CONDITIONS OF COMPETITION IN THE U.S. MARKET

U.S. MARKET CHARACTERISTICS

Corrosion-resistant steel is used primarily in automotive and construction applications.[1] Demand for corrosion-resistant steel is driven generally by demand in these industries, as well as overall economic conditions. Apparent U.S. consumption of corrosion-resistant steel increased during 2013-15 from 19.8 million to 21.3 million short tons. Overall, apparent U.S. consumption in 2015 was 7.5 percent higher than in 2013.

U.S. PURCHASERS

The Commission received 42 usable questionnaire responses from firms that bought corrosion-resistant steel during 2013-15.[2] Twenty-six responding purchasers are end users (12 in construction, 8 in automotive, 1 in consumer appliances/HVAC, and 6 are other end users including metal stampings producers, alkaline battery shell producers, and roll formers). Seventeen responding purchasers are service centers/distributors/trading companies.[3]

In general, responding U.S. purchasers were located in all regions of the contiguous United States, with the majority of responding purchasers in the Midwest and the Southeast, where there is a high concentration of automotive producers.

The largest purchasers of corrosion-resistant steel are primarily automotive end users and steel distributors (table II-1). Total purchases reported by the 42 responding firms were 10.5 million short tons in 2015, equivalent to approximately half of apparent U.S. consumption.

Table II-1
Corrosion-resistant steel: Top ten purchasers, 2013-15, by source

* * * * * * *

[1] U.S. producers and importers reported that corrosion-resistant steel is used in various other applications as well, such as appliances, furniture, pipe and tube, steel barrels and drums, batteries, sporting ammunition, containers, electrical manufacturing equipment, air filters, hose clamps, license plates, walk-in cooler panels, grill parts, HVAC equipment, and hardware. These end uses account for a smaller percentage of the market than automotive and construction end uses.

[2] Of the 42 responding purchasers, 42 purchased domestic corrosion-resistant steel, 20 purchased product from China, 10 purchased product from India, 11 purchased product from Italy, 19 purchased product from Korea, 13 purchased product from Taiwan, and 35 purchased products from other sources.

[3] U.S. purchaser *** identified itself as both ***.

CHANNELS OF DISTRIBUTION

U.S. producers and importers of corrosion-resistant steel from India and Taiwan sold mainly to end users from 2013 to 2015 (table II-2). Importers of corrosion-resistant steel from China sold relatively equal shares to end users and distributors, importers of subject corrosion-resistant steel from Italy sold an increasing share of shipments to end users, and importers from Korea sold a decreasing share of shipments to end users between 2013 and 2015. Imports from nonsubject sources combined were shipped primarily to end users, although the shares varied by source, with imports from Canada heavily concentrated in end-user sales.

By end use, U.S. producers' largest market was the automotive industry in 2015, while importers' largest market was the construction industry (figure II-1). U.S. producers sold 40.6 percent of their product to the automotive industry, followed by the construction industry (29.6 percent), other or unknown applications (24.8 percent),[4] and appliance manufacturers (5.0 percent). Importers of subject product sold 78.8 percent of their product to the construction industry, followed by the automotive industry (11.4 percent), the appliance industry (2.4 percent), and other or unknown uses (7.4 percent).[5]

[4] Other reported end uses include containers, electrical applications, battery and ammunition shells, pipe and tube, and agricultural applications.

[5] For more detail on the distribution of imports by subject country, see Part IV (table IV-12).

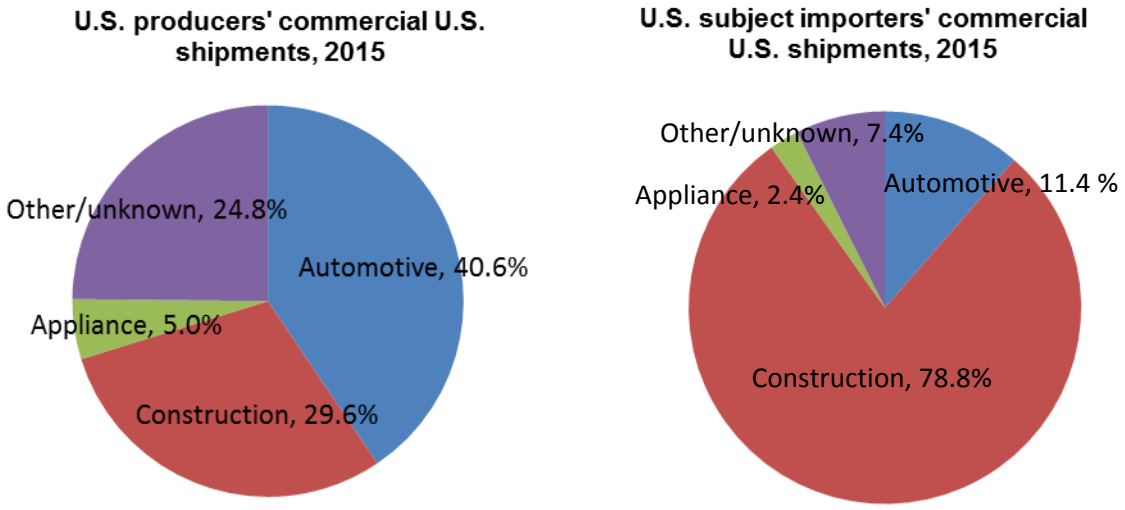
Table II-2
Corrosion-resistant steel: U.S. producers' and importers' U.S. commercial shipments, by source and channels of distribution, 2013-15

Item	Calendar year		
	2013	2014	2015
	Share of quantity (percent)		
U.S. producers' commercial U.S. shipments to:			
Distributors	37.9	38.4	38.8
End users	62.1	61.6	61.2
U.S. importers' commercial U.S. shipments of imports from China to:			
Distributors	***	***	***
End users	***	***	***
U.S. importers' commercial U.S. shipments of imports from India to:			
Distributors	***	***	***
End users	***	***	***
U.S. importers' commercial U.S. shipments of imports from Italy to:			
Distributors	***	***	***
End users	***	***	***
U.S. importers' commercial U.S. shipments of imports from Korea to:			
Distributors	***	***	***
End users	***	***	***
U.S. importers' commercial U.S. shipments of imports from Taiwan to:			
Distributors	***	***	***
End users	***	***	***
Subtotal, U.S. importers' commercial U.S. shipments of imports from subject sources:			
Distributors	34.5	42.4	42.3
End users	65.5	57.6	57.7
U.S. importers' commercial U.S. shipments of imports from Canada to:			
Distributors	***	***	***
End users	***	***	***
U.S. importers' commercial U.S. shipments of imports from other sources to:			
Distributors	***	***	***
End users	***	***	***
Subtotal, U.S. importers' commercial U.S. shipments of imports from all other sources to:			
Distributors	18.6	13.5	24.6
End users	81.4	86.5	75.4
Total, U.S. importers' commercial U.S. shipments of imports from all sources to:			
Distributors	27.3	31.1	34.0
End users	72.7	68.9	66.0

Source: Compiled from data submitted in response to Commission questionnaires.

Figure II-1

Corrosion-resistant steel: Share of U.S. producers' and importers' commercial U.S. shipments by end use, 2015



Source: Compiled from data submitted in response to Commission questionnaires.

As shown in figure II-2, reported end uses of imports varied by country. While the majority of shipments from all subject sources went to the construction industry, a large share of shipments from Korea went to the automotive industry (*** percent).

Figure II-2

Corrosion-resistant steel: Share of U.S. importers' U.S. commercial shipments by source and end use, 2015

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GEOGRAPHIC DISTRIBUTION

U.S. producers and importers reported selling corrosion-resistant steel to all regions in the United States (table II-3).

Table II-3
Corrosion-resistant steel: Geographic market areas in the United States served by U.S. producers and importers

Region	U.S. producers	U.S. importers of product from from					
		China	India	Italy	Korea	Taiwan	Subject
Northeast	17	17	12	6	7	8	31
Midwest	18	18	14	5	12	11	37
Southeast	17	19	12	5	11	14	39
Central Southwest	14	23	17	5	9	12	34
Mountains	13	11	6	1	5	9	20
Pacific Coast	13	26	7	1	10	16	36
Other[1]	3	1	3	0	0	1	5
All regions (except Other)	12	8	5	0	4	7	15
Reporting firms	18	33	20	10	17	20	50

[1] All other U.S. markets, including AK, HI, PR, and VI.

Source: Compiled from data submitted in response to Commission questionnaires.

Most U.S. producers' shipments were between 101 and 1,000 miles of their production facility (table II-4). For U.S. producers, 26.9 percent of sales were within 100 miles of their production facility, 67.2 percent were between 101 and 1,000 miles, and 5.9 percent were over 1,000 miles. Importers sold 64.8 percent within 100 miles of their U.S. point of shipment, 32.2 percent between 101 and 1,000 miles, and 3.0 percent over 1,000 miles.

Table II-4
Corrosion-resistant steel: Distance shipped within the United States for U.S. producers and importers

Distance shipped within the United States	U.S. producers	Subject U.S. importers
Zero to 100 miles	26.9	64.8
101 miles to 1,000 miles	67.2	32.2
Over 1,000 miles	5.9	3.0

Source: Compiled from data submitted in response to Commission questionnaires.

Purchasers Ford (***) and Hyundai (***) stated that a producer's proximity is important for automotive end users because of the logistical advantages of reduced lead times, local

technical support, just-in-time delivery requirements, and reliability of supply.[6] Additionally, length of shipment has a variety of negative effects on steel, such as hardening, which decreases the formability of corrosion-resistant steel. Ford stated that distance alone can often disqualify imported steel from subject countries.[7]

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Domestic production

Based on available information, U.S. producers of corrosion-resistant steel have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of U.S.-produced corrosion-resistant steel to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity, and moderate levels of inventories.

Industry capacity

Domestic capacity utilization fluctuated, increasing from 74.9 percent in 2013 to 77.4 percent in 2014, and decreasing to 75.0 percent in 2015. Total capacity remained constant over the period at approximately 24 million short tons. This relatively moderate level of capacity utilization suggests that U.S. producers may have a moderate ability to increase production of corrosion-resistant steel in response to an increase in prices.

Alternative markets

U.S. producers' exports remained constant at 6.2 percent of total shipments during 2013-15. This relatively low share indicates that U.S. producers may have a limited ability to shift shipments between the U.S. market and other markets in response to price changes. U.S. producers' major export markets are Canada and Mexico.[8]

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[6] Ford's prehearing brief, pp. 2, 7, 8; Prosperity Tieh's prehearing brief, p. 10; hearing transcript, p. 202 (Shin). Korean respondents stated that this hardening does not occur until approximately six months after production, and most automakers keep their inventory turnover under three months. Korean producers' posthearing brief, Responses to Commission Questions, p. 92.

[7] Ford's prehearing brief, p. 7.

[8] One U.S. producer (***) reported that China was a principal export market as well.

Inventory levels

U.S. producers' inventories, as a ratio to total shipments, increased from 7.1 percent in 2013 to 8.3 percent in 2015, rising from 1.3 million to 1.5 million short tons. These inventory levels suggest that U.S. producers may have some ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

Virtually all responding U.S. producers stated that they could not switch production from corrosion-resistant steel to other products. Only one of 19 responding U.S. producers, ***, reported that it could switch production from corrosion-resistant steel to other products.[9] Although U.S. producers *** reported that they are not able to shift production to other products, the two firms provided production data for other products produced on the same equipment as corrosion-resistant steel, which accounted for *** and *** percent, respectively, of their total production during 2015.[10]

Supply constraints

Three of 17 producers reported supply constraints since January 2013. *** reported that any constraints were temporary and a result of severe weather in early 2014. *** reported a production disruption ***, and that it worked closely with customers to avoid delays so that no orders were denied.[11] *** stated that it had no supply constraints but that it "occasionally declines to accept orders from certain customers for a variety of reasons, including creditworthiness."

Sixteen of 42 responding purchasers reported supply constraints since January 2013 due to high demand, winter delays, allocations for aluzinc/Galvalume, equipment and maintenance issues, and capacity limits. Purchaser *** reported that some domestic producers established more stringent credit limits. Purchaser *** reported that AK Steel had supply issues with longer lead times than imported corrosion-resistant steel. Purchaser *** reported that U.S. Steel's Great Lakes facility roof collapsed, halting production and limiting its ability to supply required volumes, and *** reported that U.S. Steel placed *** due to contract negotiations with the United Steel Workers Union. Purchaser *** reported that both U.S. Steel and Nucor implemented controlled order entry.

Respondents noted that the U.S. industry experienced supply disruptions during 2013-15 due to bad weather, extended maintenance outages, and idle machinery.[12] Additionally,

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[9] ***.

[10] Producer *** reported production of *** and producer *** did not provide further details on the out-of-scope production.

[11] ***'s U.S. producer questionnaire response, question IV-16, attachment 37A.

[12] Prosperity Tieh's prehearing brief, p. 21; Chinese producers' prehearing brief, p. 15; Korean producers' prehearing brief, p. 22. The Soo Locks navigation season ends January 15 and resumes March

(*continued*...)

respondents noted that certain U.S. producers restructured their corrosion-resistant steel production operations in a way that reduced their ability to supply certain products.[13]

Subject imports[14]

Table II-5 provides a summary of supply-related data for subject countries.

Table II-5
Corrosion-resistant steel: Foreign industry factors that affect ability to increase shipments to the U.S. market

Country	Capacity (millions of short tons)		Capacity utilization (percent)		Inventory levels (percent)		Ability to alternate products (number reporting "yes")	Shipments exported to non-US markets 2015 (percent)
	2013	2015	2013	2015	2013	2015		
China	***	***	***	***	***	***	*** of 11	***
India	***	***	***	***	***	***	*** of 5	***
Italy	***	***	***	***	***	***	*** of 4	***
Korea	***	***	***	***	***	***	*** of 6	***
Taiwan	***	***	***	***	***	***	*** of 4	***

Source: Compiled from data submitted in response to Commission questionnaires.

Subject imports from China

Based on available information, producers of corrosion-resistant steel from China have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of corrosion-resistant steel to the U.S. market. The main contributing factors to this degree of responsiveness of supply are a large total capacity, shipments to alternative markets, some availability of unused capacity, and some inventories.

(…*continued*)
25. U.S. Army Corps of Engineers website, http://www.lre.usace.army.mil/Missions/Recreation/SooLocksVisitorCenter/FrequentlyAskedSooLocksQuestions.aspx, retrieved June 6, 2016. The U.S. Geological Survey reported that record levels of ice cover on the Great Lakes reduced iron ore shipments from January-April 2014. U.S. Steel reported that the Soo locks were closed for "double the normal winter length of time" in the winter of 2014, resulting in a curtailment of operations due a shortage of raw materials. U.S. Steel, "Fourth Quarter 2014, Questions and Answers," p. 4, https://www.ussteel.com/uss/.../4Q2014+Q%26A+-+FINAL.pdf, retrieved June 6, 2016.

[13] Specifically, in early 2014, ***. Korean producers' posthearing brief, p. 4 and Response to Commissioner Questions, p. 90.

[14] For data on the number of responding foreign firms and their share of U.S. imports from subject sources, please refer to Part I, "Summary Data and Data Sources."

Industry capacity

Responding Chinese producers reported slightly increasing capacity utilization rates from *** percent to *** percent of industry capacity (*** short tons) during 2013-15.

Alternative markets

Responding Chinese producers reported that in 2015, *** percent of their total shipments were to other export markets including Korea, Vietnam, Belgium, India, Thailand, the Philippines, Chile, and Spain (by volume). Export to the United States were *** percent of Chinese shipments in 2015.

Chinese producer *** reported a ***. Petitioners stated that China has faced a contraction in its home market demand for corrosion-resistant steel.[15]

Inventory levels

Responding Chinese producers reported increasing inventories relative to total shipments from *** percent in 2013 to *** percent in 2015.

Production alternatives

Most Chinese producers reported an inability to shift production, with the exception of producer *** which reported an ability to shift production from corrosion-resistant steel to ***.

Supply constraints

One importer (***) of Chinese corrosion-resistant steel reported that the difficulties of ultra-high strength steel production sometimes limit mills' ability to fulfill the customer's demand.

Subject imports from India

Based on available information, Indian producers of corrosion-resistant steel have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of corrosion-resistant steel to the U.S. market. The main contributing factors to this degree of responsiveness of supply are an increasing total capacity, the availability of some unused capacity, the existence of inventories, and shipments to alternate markets.

[15] AMUSA's prehearing brief, pp. 28, 42.

Industry capacity

Responding Indian producers reported slightly increasing capacity utilization rates of between *** percent in 2013 and *** percent in 2015. Total production capacity increased from *** to *** short tons during 2013-15.

Alternative markets

Responding Indian producers reported that *** percent of their total shipments in 2015 were to export markets other than the United States, including the UAE, Ethiopia, Spain, Belgium, Italy, Iran, Peru, and Portugal (by volume). Export shipments to the United States were *** percent of Indian shipments in 2015. Indian respondents stated that the Indian market for corrosion-resistant steel is strong, and that Indian producers are focusing more on the home market.[16]

Petitioner U.S. Steel argued that demand for corrosion-resistant steel in India has been declining.[17]

Inventory levels

Responding Indian producers reported that inventories, relative to total shipments, increased slightly from *** percent in 2013 to *** percent in 2015.

Production alternatives

No Indian producers reported production alternatives.

Supply constraints

No firm reported supply constraints for corrosion-resistant steel from India.

Subject imports from Italy

Based on available information, Italian producers of corrosion-resistant steel have the ability to respond to changes in demand with moderate changes in the quantity of shipments of corrosion-resistant steel to the U.S. market. The main contributing factors to this degree of responsiveness of supply are increasing capacity, some availability of unused capacity, the existence of inventories, and a relatively large share of shipments to alternative markets.

[16] Indian respondents' prehearing brief, p. 6.

[17] U.S. Steel's prehearing brief, p. 67.

Industry capacity

Responding Italian producers reported an *** in capacity utilization from *** percent in 2013 to *** percent in 2015. Total production capacity increased from *** to *** short tons during 2013-15.

Alternative markets

Responding Italian producers reported that *** percent of their total shipments in 2015 were to export markets other than the United States, including Germany, Spain, France, Turkey, Poland, the UK, Romania, and Austria (by volume). Export shipments to the United States were *** percent of Italian shipments in 2015.

Inventory levels

Responding Italian producers reported that inventories, relative to total shipments, decreased from *** percent in 2013 to *** percent in 2015.

Production alternatives

No Italian producers reported the ability to produce alternative products.

Supply constraints

No firm reported supply constraints for corrosion-resistant steel from Italy.

Subject imports from Korea

Based on available information, producers of corrosion-resistant steel from Korea have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of corrosion-resistant steel to the U.S. market. The main contributing factors to this degree of responsiveness of supply are large production capacity, some availability of unused capacity, a relatively large share of shipments to alternative markets, some inventories, and some ability to produce alternate products.

Industry capacity

Responding Korean producers reported an increase in capacity utilization from 80.0 percent in 2013 to 90.3 percent in 2015. Total production capacity decreased slightly from 15.0 million to 14.8 million short tons during 2013-15.

Alternative markets

Responding Korean producers reported that 42.1 percent of their total shipments in 2015 were to export markets other than the United States, including China, Japan, Mexico,

Thailand, India, Slovenia, Belgium, and Turkey (by volume). Export shipments to the United States were 5.0 percent of Korean shipments in 2015.

Petitioner Arcelor Mittal USA argued that Korea's largest export market, China, is facing a stalling economy and thus stalling demand for corrosion-resistant steel, and argue that exports to other third markets are likely to decline based on economic downturns and import relief proceedings in other parts of the world.[18] Petitioner U.S. Steel stated that steel steel demand is projected to remain low in Korea due to stagnant growth in the automotive and construction industries.[19]

Inventory levels

Responding Korean producers reported that inventories, relative to total shipments, decreased from 4.2 percent in 2013 to 3.5 percent in 2015.

Production alternatives

Most Korean producers reported an inability to shift production. However, Korean producer *** reported an ability to shift production between corrosion-resistant steel and *** and *** reported an ability to shift production to ***.

Supply constraints

No firm reported supply constraints for corrosion-resistant steel from Korea.

Subject imports from Taiwan

Based on available information, producers of corrosion-resistant steel from Taiwan have the ability to respond to changes in demand with moderate changes in the quantity of shipments of corrosion-resistant steel to the U.S. market. The main contributing factors to this degree of responsiveness of supply are some availability of unused capacity, the existence of inventories, and the existence of some alternate markets.

Industry capacity

Responding producers from Taiwan reported an overall increase in capacity utilization from *** percent in 2013 to *** percent in 2015. Total production capacity decreased slightly from *** to *** short tons during 2013-15.

[18] AMUSA's prehearing brief, p. 42.
[19] U.S. Steel's prehearing brief, p. 74.

Alternative markets

Responding producers from Taiwan reported that *** percent of their total shipments in 2015 were to markets other than the United States, including China, Thailand, Mexico, Malaysia, Australia, Japan, Saudi Arabia, and Belgium (by volume). Export shipments to the United States were *** percent of shipments from Taiwan producers in 2015.

Inventory levels

Responding producers from Taiwan reported that inventories, relative to total shipments, increased from *** percent in 2013 to *** percent in 2015.

Production alternatives

No producers from Taiwan reported an ability to produce alternative products.

Supply constraints

One importer (***) of corrosion-resistant steel from Taiwan reported that ***, but also reported that ***.

Nonsubject imports

Canada was the largest overall source of U.S. imports of corrosion-resistant steel during 2013-15, accounting for *** percent of the total quantity of U.S. imports of corrosion-resistant steel in 2015.[20] ***. U.S. imports of corrosion-resistant steel from Canada increased by *** percent between 2013 and 2015, and U.S. imports from all other nonsubject countries increased by *** percent during this period.[21]

New suppliers

Seventeen of 42 purchasers indicated that new suppliers entered the U.S. market since January 1, 2013. Purchasers cited new suppliers from Vietnam (reported by five purchasers), Belgium, Europe, Brazil, South Africa, and Turkey (reported by one purchaser each). U.S. purchaser *** reported that there has been a consolidation of U.S. steel industry, and that there are fewer suppliers than in 2013.

[20] Compiled from official Commerce statistics as shown in table IV-3.

[21] Based on official statistics, other nonsubject sources of corrosion-resistant steel include Brazil and Mexico, which accounted for 6.3 percent and 5.0 percent, respectively, of total U.S. imports during 2015.

Purchasers' inventories

According to Metals Service Center Institute ("MSCI") data,[22] service centers' inventories of carbon flat-rolled products declined during most of 2013, steadily increased during 2014, peaking in December of that year, and then declined in 2015 (figure II-3). The number of months of inventory on hand also peaked in December 2014, before decreasing through June 2015, then trended upwards through the second half of 2015, reaching near December 2014 levels by the end of the year, as a result of lower service center shipments. Service centers' inventories and number of months of inventory on hand have declined in 2016. Petitioners stated that it is normal for inventories to increase at year-end.[23]

Figure II-3
Carbon flat-rolled products: Service centers' U.S. shipments to end users, end-of-month inventories, and the number of months of inventory on hand, monthly, January 2013-April 2016

* * * * * * *

U.S. demand

Based on available information, the overall demand for corrosion-resistant steel is likely to experience small-to-moderate changes in response to changes in price. The main contributing factors are the somewhat limited range of substitute products and small cost share in most of its end-use products, weighed against the moderate-to-large cost share of corrosion-resistant steel in components.

End uses

U.S. demand for corrosion-resistant steel depends on the demand for U.S.-produced downstream products. The largest end-use markets for corrosion-resistant steel are the automotive and construction industries. Reported automotive end uses include body panels and reinforcements, door panels, hoods, chassis, and brake and fuel line systems. Reported construction end uses include framing, roofing, building panels/siding, trim, gutters/downspouts, culverts, decking, garage/entry doors, suspension ceiling grids, and engineered truss connector plates. The appliance industry is another, though smaller, end-use market. Additional end uses include agriculture applications, pipe and tube, fluid handling/tubing, ammunition, containers, electrical manufacturing equipment, hose clamps, license plates, HVAC equipment, hardware, fencing, and battery components.[24]

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[22] MSCI collects data on shipments from service centers' owned inventory (stock shipments) to customer end markets and month-end service center inventories. These shipments include cold-rolled, hot-rolled, and coated flat-rolled steel. MSCI does not break out the data by country of origin.

[23] CSI and SDI's posthearing brief, Answers to Commission Questions, p. A-1.

[24] *Certain Corrosion-Resistant Steel Products from China, India, Italy, Korea, and Taiwan, Inv. Nos. 701-TA-534-538 and 731-TA-1274-1278 (Preliminary)*, USITC Publication 4547, July 2015, p. II-10.

Respondents argued that there are several distinct market segments, each of which are subject to different conditions of competition. Respondents also argue that domestic production of certain types of steel such as Galvalume is limited and cannot supply the full U.S. demand.[25] Petitioners responded that the domestic industry produces light-gauge corrosion-resistant steel and the full range of automotive high strength steels.[26]

Cost share

Given the wide variety of end uses and market segments for corrosion-resistant steel, U.S. producers, importers, and purchasers reported a wide variety of cost shares depending on the end-use products:

- Automotive: auto parts (5 to 30 percent); fuel and break lines (35 percent); new vehicles (3 to 81 percent)
- Construction: doors (15 to 56 percent); roofing (45 to 80 percent); garage doors (50 to 80 percent); siding and panels (56 to 80 percent); and truss connector plates and structural connectors (80 percent)
- Appliances: HVAC (5 to 70 percent); ducts (30 percent); and furnace pipe and fittings (92 percent)
- Batteries: 9 to 40 percent
- Guardrails and fences: 70 to 80 percent
- Other applications: ammunition (10 percent); containers (75 percent); pipe and tube (90 percent)

Business cycles

The market for corrosion-resistant steel follows trends in the automotive and construction markets, and also follows general economic trends, particularly in the construction market.[27] Most U.S. producers (11 of 18) and some importers (24 of 55) and purchasers (15 of 41) reported that the market for corrosion-resistant steel was subject to business cycles. Nine importers and eight purchasers reported specifically that demand in the construction sectors slows during the winter.[28] [29]

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[25] Prosperity Tieh's prehearing brief, pp. 7, 9, 14; Korean producers' prehearing brief, p. 8. Respondents testified at the staff conference that U.S. capacity for galvalume production is about 1.25 million tons, while U.S. demand is estimated to exceed 2 million tons. Conference transcript, p. 160 (Quartararo).

[26] Nucor's posthearing brief, p. 39.

[27] U.S. Steel's prehearing brief, p. 17.

[28] Respondents also stated that there is a pattern of weak demand during the first quarter. Prosperity Tieh's prehearing brief, p. 2; Korean producers' prehearing brief, p. 46.

[29] Three purchasers reported that demand in the battery sectors increases during the back-to-school, hurricane, and holiday seasons.

Most U.S. producers (11 of 18), importers (51 of 55), and purchasers (35 of 41) reported that the market for corrosion-resistant steel was not subject to distinct conditions of competition. Of the firms reporting distinct conditions of competition, five U.S. producers, one importer, and one purchaser indicated that imports from subject countries had affected sales volumes and prices. Two purchasers indicated that the antidumping dumping duties on diffusion annealed nickel plated steel eliminated a Japanese supplier for corrosion-resistant steel, one purchaser indicated that Ford switched from galvanized steel to aluminum, and one purchaser indicated that the availability of light gauge galvanized was a condition of competition.

Most U.S. producers and purchasers and some importers indicated that there have been changes to business cycles or the conditions of competition since 2013, citing increased imports, and improved economic conditions leading to increased demand from automotive and construction industries.

Demand trends

A majority or plurality of firms reported an increase in U.S. demand for corrosion-resistant steel since January 1, 2013 (table II-6). A plurality of U.S. producers reported that demand outside of the United States decreased while most importers and purchasers reported increasing or fluctuating demand outside of the United States. A majority of purchasers reported that demand for their final products had increased since 2013.

Table II-6
Corrosion-resistant steel: Firms' responses regarding U.S. demand and demand outside the United States

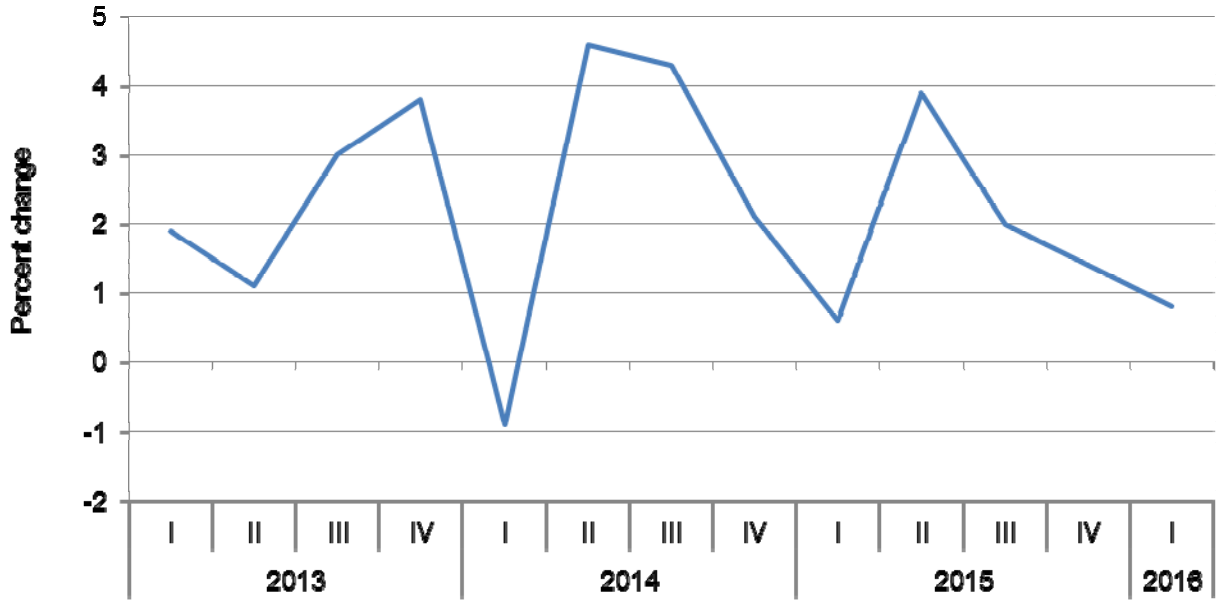
Item	Number of firms reporting			
	Increase	No change	Decrease	Fluctuate
Demand inside the United States:				
U.S. producers	8	1	4	5
Importers	27	5	5	16
Purchasers	22	6	9	5
Demand outside the United States:				
U.S. producers	2	1	5	2
Importers	13	7	6	14
Purchasers	8	4	6	3
Demand for purchasers' final products:				
Purchasers	19	1	5	2

Source: Compiled from data submitted in response to Commission questionnaires.

Demand for corrosion-resistant steel is mainly driven by automotive and construction demand, and is also affected by the overall economy. Real GDP growth in the United States fluctuated during January 2013 to December 2015, with economic growth of at least 2 percent in six of the 13 quarters (figure II-4). Total U.S. light truck and automobile sales grew by 12.0 percent from 15.4 million units in January 2013 to 17.2 million units in December 2015 (figure II-5). After peaking in September-November 2015, automotive sales have been lower in

December 2015 and the first few months of 2016. The National Automobile Dealers Association projects that U.S. light vehicle sales will increase to 17.7 million units in 2016 and then fall to 17.2 million units in 2017.[30]

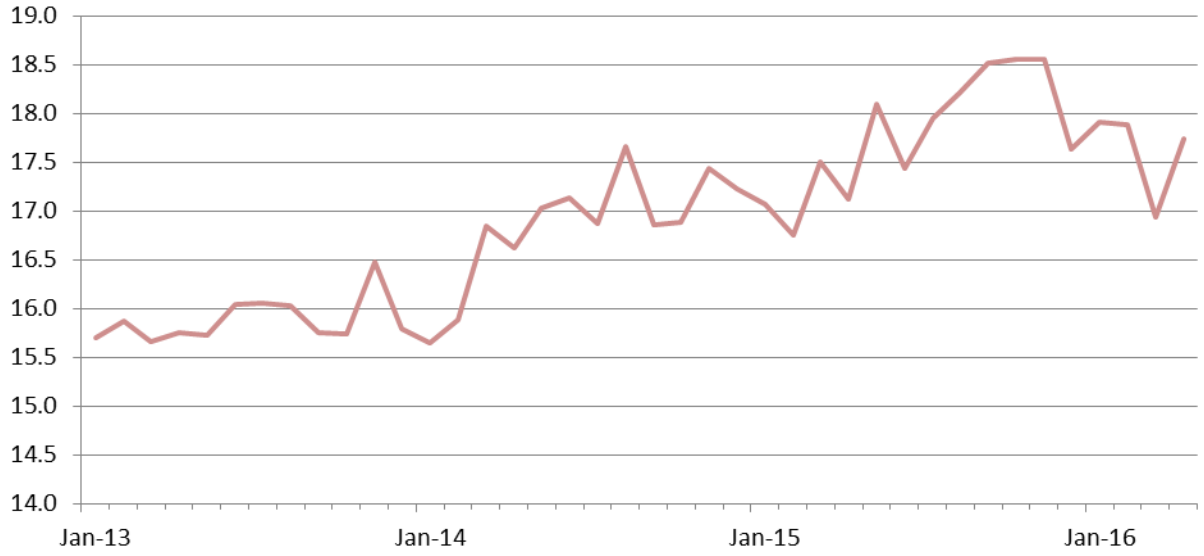
Figure II-4
Real U.S. GDP growth: Percentage change from the previous quarter, quarterly, January 2013-March 2016



Source: National Income and Product Accounts-Table 1.1.1, *Percent Change from Preceding Period in Real Gross Domestic Product*, Bureau of Economic Analysis, http://www.bea.gov/iTable/index_nipa.cfm, retrieved May 27, 2016.

[30] National Automobile Dealers Association press release, "NADA Forecasts 17.7 Million New Vehicles Sales in 2016," November 27, 2015, reproduced in Korean respondents' prehearing brief, exh. 21.

Figure II-5
U.S. automotive sales: Automobile and light truck retail unit sales, monthly, seasonally adjusted at annual rates, January 2013-April 2016

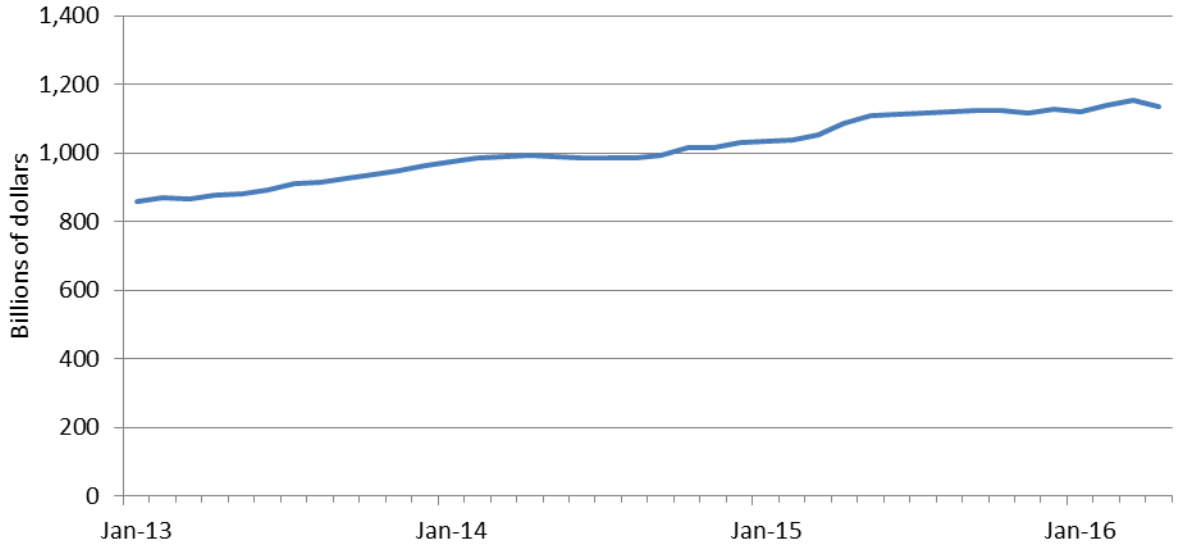


Source: BEA, Motor Vehicle Unit Retail Sales, table 6, Light Vehicle and Total Vehicle Sales, www.bea.gov/national/xls/gap_hist.xls, retrieved June 2, 2016.

Total U.S. construction spending increased by 31.3 percent from January 2013 to December 2015, and continued to rise into 2016, with preliminary data showing a slight downturn in April 2016.[31] U.S. construction spending is projected to continue to increase in 2016 and 2017 (figure II-6).[32]

Figure II-6

U.S. construction activity: Total construction spending (private and public construction), monthly, seasonally adjusted at annual rates, January 2013-April 2016[1]



[1] Spending data for April 2016 are preliminary.

Source: Construction Spending, U.S. Census Bureau, http://www.census.gov/, retrieved June 2, 2016.

[31] Total U.S. construction spending increased by 12.2 percent from January 2013 to December 2013, 6.0 percent from January 2014 to December 2014, and 9.0 percent from January 2015 to December 2015.

[32] Non-residential building spending is projected to grow by 8.3 percent in 2016 and 6.7 percent in 2017. American Institute of Architects press release, "Nonresidential Construction Market Momentum to Continue," February 11, 2016.

Housing starts are projected to increase by 11.9 percent in 2016 and 9.9 percent in 2017. Construction Market Data, "U.S. Housing Starts Forecasts and Long-term Graphs," March 30, 2016.

Petitioner U.S. Steel stated that other corrosion-resistant steel consuming sectors, such as household appliances, also experienced increased demand.[33]

Effect of gas and oil prices on demand

Between January 2013 and December 2015, gas prices decreased by 42 percent and oil prices decreased by 61 percent. During the first four months of 2016, gas prices decreased by 16 percent and oil prices decreased by 51 percent.[34] U.S. producers reported mixed responses regarding the effect of gas and oil prices on demand for corrosion-resistant steel. Most U.S. producers reported that declining gas and oil prices have had little direct impact on prices for corrosion-resistant steel, because corrosion-resistant steel is not used in OCTG or line pipe production. U.S. producer *** reported that lower gas prices stimulate spending in construction, appliances, and automotive sales. U.S. producers *** reported that a decline in energy-related construction spending has curtailed the demand for corrosion-resistant steel.

In contrast, many importers reported that gas and oil prices have a substantial indirect effect on demand for corrosion-resistant steel. Two importers and five purchasers reported that lower gas and oil prices have led to a higher demand for automobiles. Nine importers and six purchasers reported that lower gas and oil prices have led to a decline in demand for hot-rolled steel to produce OCTG and that this decline in demand puts downward pressure on demand for corrosion-resistant steel. Importer ***, however, indicated that oil and gas prices do not have a substantial effect on the corrosion-resistant market.

Substitute products

About half of responding U.S. producers (7 of 15) and a minority of responding importers (8 of 43) and purchasers (6 of 41) reported that there were substitutes for corrosion-resistant steel. About half of the firms that reported that there were substitutes (3 producers, 4 importers, and 4 purchasers) reported that changes in the prices of these substitutes affect the price of corrosion-resistant steel. All but one responding automotive and construction end user and most distributors (12 of 15) reported that there were no substitutes.[35]

Substitutes reported in automotive applications included aluminum and aluminum composites. U.S. producer *** reported that aluminum can be substituted for corrosion-resistant steel in automotive applications, but that aluminum prices would not affect corrosion-resistant steel prices because the use of substitutes depends on long-term design decisions. U.S. purchaser Ford reported that its decision to substitute aluminum for corrosion-resistant

[33] U.S. Steel's prehearing brief, pp. 19-20.

[34] Henry hub spot and WTI, Short Term Energy Outlook, Energy Information Administration, www.eia.gov, June 14, 2016.

[35] Of the purchasers that did not identify their firm type, most (7 of 9) indicated that there were no substitutes.

steel in the F-150 was primarily in response to higher fuel economy standards, and that while "***."[36]

Reported substitutes for corrosion-resistant steel for construction uses include aluminum and zinc-aluminum products, plastic, concrete, asphalt, and wood. Substitutes in other end uses included brass (sporting applications), plastic (culverts and hardware), and copper (fluid handling).

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported corrosion-resistant steel depends upon such factors as relative prices, quality (e.g., strength, reliability of supply, gauge control, coating consistency, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, payment terms, product services, etc.). Based on available data, staff believes that there is a moderate-to-high degree of substitutability between domestically produced corrosion-resistant steel and corrosion-resistant steel imported from subject sources.

Lead times

Corrosion-resistant steel is primarily produced-to-order. U.S. producers and importers reported primarily produced-to-order shipments (98.1 percent and 88.7 percent, respectively), with lead times averaging 48 days for U.S. producers and 67 days for imports from subject sources.

Petitioners stated that producing mills generally only hold inventory for just-in-time delivery purposes, or if it is product still in process.[37] Service centers generally hold inventories of product that can be further processed to meet additional specifications of their customers.[38]

Knowledge of country sources

Thirty-nine purchasers indicated they had marketing/pricing knowledge of domestic product, 17 of Chinese product, 12 of Indian product, 9 of Italian product, 16 of Korean product, and 12 purchasers indicated knowledge of Taiwan product. Eighteen purchasers reported knowledge of nonsubject countries, including Canada (six purchasers).

As shown in table II-7, most purchasers always or usually make purchases based on the producer, while their customers sometimes or never make purchasing decisions based on the producer. Of the 13 purchasers reporting that they make purchasing decisions based on the producer, firms cited price, quality, producers' reputation, reliability, cost-consistency, eco-friendliness, and service. Of the 10 purchasers that reported that they always or usually make decisions based on the country-of-origin, firms cited lead time, logistics, and quality. Purchaser

[36] Ford's prehearing brief, p. 11 ***.
[37] Hearing transcript, p. 93 (Schagrin).
[38] Hearing transcript, pp. 93-94 (Blume).

*** reported that suppliers from Korea and Australia have proven reliable and that corrosion-resistant steel from these countries has better performance than domestic product.

Table II-7
Corrosion-resistant steel: Purchasing decisions based on producer and country of origin

Decision	Always	Usually	Sometimes	Never
Purchases based on producer:				
Purchaser's decision	13	10	12	7
Purchaser's customer's decision	2	0	19	16
Purchases based on country of origin:				
Purchaser's decision	6	4	13	17
Purchaser's customer's decision	0	0	16	17

Source: Compiled from data submitted in response to Commission questionnaires.

Factors affecting purchasing decisions

The most often cited top three factors firms consider in their purchasing decisions for corrosion-resistant steel were price/cost (39 firms), quality (38 firms), and availability (18 firms) as shown in table II-8. Quality was the most frequently cited first-most important factor (cited by 22 firms), followed by price/cost (14 firms); quality was the most frequently reported second-most important factor (12 firms); and price/cost was the most frequently reported third-most important factor (18 firms).

Quality characteristics include: surface quality, appearance, spangle, or flatness (reported by 19 purchasers); drawability/formability and thickness (8 purchasers each); inclusion free/lack of impurities, and yield and tensile strength/steel chemistry and mechanical properties (6 purchasers each); gauge tolerance/control and coating tolerance or type, nickel plating specifications (5 purchasers each), and paint line quality/adhesive bonding capability/paintability and hardness/nonfluting/grade/shape (3 purchasers each).

Table II-8
Corrosion-resistant steel: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Item	First	Second	Third	Total
	Number of firms (number)			
Price/cost	14	7	18	39
Quality	22	12	4	38
Availability/supply	2	11	5	18
Other[1]	4	11	12	27

[1] Other factors cited as the top three purchasing factors include product line (5 purchasers), meets specifications and complies with safety standards (4), meets specifications and complies with safety standards (4), contracts (3), service and claim support (2), traditional suppliers, lead time, on-time delivery, extension of credit, and incumbent share (1 each).

Note.--*** reported price, availability, quality, and product line range all as the first purchasing factor. *** reported both price and availability as the first most important factor.

Source: Compiled from data submitted in response to Commission questionnaires.

Slightly less than half of purchasers (20 of 42) reported that they "usually" purchase the lowest-priced product. Of the remaining purchasers, 17 "sometimes" purchase the lowest-priced product and three "always" purchase the lowest-priced product. Two purchasers, ***, reported that they "never" purchase the lowest-priced product. Most automotive and construction end users and a plurality of distributors reported "usually" purchasing the lowest-priced product (table II-9).

Table II-9
Corrosion-resistant steel: Frequency of purchasing decisions based on price, by purchaser type

Purchaser type	Always	Usually	Sometimes	Never
Automotive end user	0	4	3	0
Construction end user	0	8	3	0
Distributor	2	7	4	2
Unidentified	1	1	7	0
Total	**3**	**20**	**17**	**2**

Source: Compiled from data submitted in response to Commission questionnaires.

Respondent POSCO stated that strength is the most important attribute of corrosion-resistant steel for most types of structural and commercial corrosion-resistant steel, but that automotive producers also require surface roughness for external applications and ductability for steel used for stamping of internal parts.[39] Respondents stated that the most important factors for automotive end users are flatness, no wave, and low reject rates, and that while price is a consideration, quality and uniformity trump any other factors.[40]

When asked if they purchased corrosion-resistant steel from one source although a comparable product was available at a lower price from another source, 18 of 42 responding purchasers reported reasons including quality (India, Japan, Korea, and Taiwan), availability of prepainted corrosion-resistant steel from Taiwan and light narrow gauge from Vietnam, and superior drawability of Chinese product. Nineteen of 41 purchasers reported that certain types of product were only available from certain sources. These types include:

- high quality and prepainted galvalume from Korea and Taiwan,
- light gauge aluminized steel from Korea and the EU,
- diffusion annealed nickel plated steel[41] from Germany, Japan, and the United States,
- heavy gauge steel from the United States,
- 0.012" x 60" hot dipped galvanized steel from India and Italy, and
- electro-galvanized steel from Taiwan.

[39] Hearing transcript, p. 203 (Ryoo).
[40] Hearing transcript, p. 201 (Shin).
[41] Purchaser *** reported that it is currently testing diffusion annealed nickel plated steel from Korea.

Purchaser *** reported that it has specific grades that are occasionally only available from certain mills.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 15 factors in their purchasing decisions (table II-10). The factors rated as "very important" by more than half of responding purchasers were price (40 purchasers), product consistency (38), reliability of supply (35), availability (34), quality meets industry standards (31), U.S. transportation costs (30), and delivery time (29).

According to respondents, automotive manufacturers emphasize characteristics such as quality and sustained availability are the most important factors affecting purchasing decisions.[42] Purchaser Ford stated that only if critical factors such as availability of supply, qualification, technical ability, and proximity of supply are exactly equal, would it make a purchasing decision on the basis of price.[43]

Table II-10
Corrosion-resistant steel: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Number of firms reporting		
	Very	Somewhat	Not
Availability	34	6	1
Delivery terms	18	22	2
Delivery time	29	12	1
Discounts offered	14	15	13
Extension of credit	10	15	16
Minimum quantity requirements	4	23	15
Packaging	16	19	7
Price	40	1	1
Product consistency	38	3	1
Product range	20	20	3
Quality exceeds industry standards	20	18	5
Quality meets industry standards	31	8	3
Reliability of supply	35	5	2
Technical support/service	19	18	5
U.S. transportation costs	30	7	4

Source: Compiled from data submitted in response to Commission questionnaires.

[42] Korean producers' prehearing brief, p. 75.
[43] Ford's prehearing brief, p. 9.

Supplier certification

Thirty-one of 42 responding purchasers require their suppliers to become certified or qualified to sell corrosion-resistant steel to their firm. Purchasers reported that the time to qualify a new supplier ranged widely from 1 to 545 days.[44] Common certification processes include trial orders to test cleanliness, drawability, technical specifications, color, corrosion-testing, chemistry, packaging, thickness, and surface finish. Nine purchasers reported that a domestic or foreign supplier had failed in its attempt to qualify product, or had lost its approved status since 2013. Purchaser *** reported that U.S. Steel failed to qualify for *** and purchasers *** reported that ArcelorMittal USA failed to certify due to cracks and inflexibility of its steel. Other purchasers reported that Baosteel (China) failed to match certain colors, and that Procon (Korea) failed for formability. Purchaser *** reported that many firms have not been able to qualify due to quality issues or delayed delivery issues, and *** reported that while no supplier has failed to qualify since 2013, not all steel suppliers can produce the corrosion-resistant steel products that it needs.

Purchaser Hyundai stated that auto producers have a long approval process because they require product specifically suited to their production and that the longer the relationship with the supplier, the more confidence the automotive end user has in the product.[45] Purchaser Ford stated that in addition to its specific technical requirements, it considers the supplier's long-term financial health and stability, its reputation, and the degree to which the supplier will be able to sustain production and delivery of certain products over the life of multiple vehicle programs.[46]

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since January 1, 2013 (table II-11). Reasons reported for changes in decreased purchases of domestic product included noncompetitive pricing, customer demand, and diversification. Purchasers reported increasing purchases of domestic product because of price, needing shorter lead times, increased spot and contractual purchasing, and business growth.

[44] Fourteen purchasers reported ranges between 30-180 days and eight purchasers reported ranges greater than 180 days.

[45] Hearing transcript, p. 201 (Shin).

[46] Ford's prehearing brief, p. 3.

Table II-11

Corrosion-resistant steel: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	0	13	8	10	11
China	18	4	9	1	5
India	22	6	3	1	2
Italy	25	3	5	0	1
Korea	19	3	8	3	4
Taiwan	22	1	5	4	3
All other sources	5	2	11	8	11
Sources unknown	15	0	1	4	5

Source: Compiled from data submitted in response to Commission questionnaires.

Nineteen of 42 responding purchasers reported that they had changed suppliers since January 1, 2013. Specifically, firms added or increased purchases from U.S. producers NexTech/Steel Dynamics, Wheeling-Nisshin, and Steelscape, and importer ArcelorMittal Dofasco (Canada), because of pricing. Several firms reported increasing import purchases because of attractive pricing. Purchaser *** reported that it has increased imports due to availability of cost-effective light gauge galvanized steel. Purchaser *** dropped U.S. producers NexTech/Steel Dynamics, CSN, California Steel, Nucor, and USS POSCO because of pricing. Purchaser *** dropped or reduced purchases from Tata Steel, Algoma, Severstal, Eagle Steel, MST, and Shaw because of its overall reduction in suppliers. Purchaser *** reported changes in suppliers due to changes in ownership of ***. Seventeen of 42 purchasers reported new suppliers, including Wupperman (Belgium), Theis Precision Steel USA, Tata Steel, DSP (South Africa), and new suppliers from Brazil and Vietnam.

Importance of purchasing domestic product

Purchasers reported that purchasing U.S.-produced product was not an important factor in 82 percent of their purchases. Fourteen purchasers reported that domestic product was required by law (for 1 to 15 percent),[47] 12 purchasers reported it was required by their customers (for 2 to 25 percent of their purchases).[48] Two reported other preferences for domestic product: Purchaser *** reported its preference for domestic product because of its purchasing strategy, and *** reported its preference was due to environmental impact credits.

[47] Two purchasers, ***, reported that *** percent and *** percent, respectively, of their domestic purchases were required by law.

[48] Three purchasers, ***, reported that *** percent of their domestic purchasers were required by their customers.

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing corrosion-resistant steel produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 15 factors (table II-12) for which they were asked to rate the importance.

Table II-12

Corrosion-resistant steel: Purchasers' comparisons between U.S.-produced and imported product

Factor	Number of firms reporting								
	United States vs. China			United States vs. India			United States vs Italy		
	S	C	I	S	C	I	S	C	I
Availability	7	13	0	4	10	0	2	8	1
Delivery terms	11	8	1	6	7	1	4	6	1
Delivery time	18	2	0	14	0	0	8	3	0
Discounts offered	3	8	5	3	6	3	2	7	0
Extension of credit	3	11	2	1	9	2	1	7	1
Minimum quantity requirements	6	12	1	4	9	0	1	9	0
Packaging	1	17	1	1	12	0	0	10	0
Price[1]	0	2	18	0	1	13	0	3	8
Product consistency	6	13	1	1	13	0	1	9	1
Product range	8	11	1	4	8	2	2	9	0
Quality exceeds industry standards	5	13	0	3	10	0	1	9	1
Quality meets industry standards	2	18	0	2	11	1	0	11	0
Reliability of supply	11	7	1	6	8	0	4	7	0
Technical support/service	14	5	1	9	4	1	7	4	0
U.S. transportation costs[1]	6	11	3	5	7	2	5	3	3

Table continued.

Table II-12 -- Continued

Corrosion-resistant steel: Purchasers' comparisons between U.S.-produced and imported product

Factor	Number of firms reporting								
	United States vs. Korea			United States vs. Taiwan			United States vs Nonsubject		
	S	C	I	S	C	I	S	C	I
Availability	3	15	1	1	13	0	6	16	1
Delivery terms	6	13	0	5	9	0	7	15	1
Delivery time	13	6	0	10	4	0	13	10	0
Discounts offered	1	13	3	2	7	3	3	14	1
Extension of credit	1	15	1	0	10	1	1	16	1
Minimum quantity requirements	2	16	0	2	10	1	3	18	1
Packaging	1	15	3	0	12	2	0	22	1
Price[1]	0	5	14	0	4	10	1	11	11
Product consistency	3	12	4	1	13	0	2	18	3
Product range	3	9	7	3	10	1	5	16	2
Quality exceeds industry standards	3	11	5	2	11	1	2	15	6
Quality meets industry standards	1	16	1	1	13	0	1	20	1
Reliability of supply	5	11	3	6	8	0	9	14	0
Technical support/service	6	8	5	7	5	2	10	10	3
U.S. transportation costs[1]	4	11	4	6	5	2	6	12	5

[1] A rating of superior means that price/U.S. transportation costs is generally lower. If a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.

Note.--S=first listed country's product is superior; C=both countries' products are comparable; I=first list country's product is inferior.

Source: Compiled from data submitted in response to Commission questionnaires.

Purchasers reported that U.S., subject, and nonsubject product were comparable on most factors. In all comparisons, domestically produced corrosion-resistant steel was reported superior to products from subject and nonsubject sources in delivery time, and superior to all sources except Korea in technical support/service. When compared to product from China, U.S. product was also reported superior in delivery terms and reliability of supply; when compared to product from Italy and Taiwan, U.S. product was also reported superior in transportation costs. In all comparisons, domestically produced product was reported inferior in price. When comparing subject countries to other subject and nonsubject sources, purchasers reported that corrosion-resistant steel from these sources was comparable on most factors.[49]

Comparison of U.S.-produced and imported corrosion-resistant steel

In order to determine whether U.S.-produced corrosion-resistant steel can generally be used in the same applications as imports from subject countries, U.S. producers, importers, and purchasers were asked whether the products can "always," "frequently," "sometimes," or "never" be used interchangeably. As shown in table II-13, most U.S. producers reported that corrosion-resistant steel from all country pairs was "always" interchangeable. Most importers reported that corrosion-resistant steel from all country pairs was "frequently" or "sometimes" interchangeable. Most purchasers also reported that corrosion-resistant steel from all country pairs was "frequently" or "sometimes" interchangeable, with the exception of U.S. product and product from Taiwan, and U.S. product and product from Canada, which was more frequently reported as "always" or "frequently" interchangeable.

[49] Three of five purchasers reported Chinese product inferior to Italian product and two purchasers each reported Chinese product superior, comparable, and inferior to product from Taiwan in discounts offered; 4 of 7 purchasers reported Chinese product inferior to Korean product in product consistency. Two of three purchasers reported that Italian product is inferior to Korean product in availability, product consistency, product range, and reliability of supply.

Table II-13

Corrosion-resistant steel: Interchangeability between corrosion-resistant steel produced in the United States and in other countries, by country pairs

Country pair	U.S. producers				U.S. importers				U.S. purchasers			
	A	F	S	N	A	F	S	N	A	F	S	N
United States vs. China	11	2	2	0	11	19	12	1	7	11	7	1
United States vs. India	9	2	1	0	6	15	10	1	4	8	8	2
United States vs. Italy	10	2	1	0	6	13	6	0	5	8	3	1
United States vs. Korea	10	3	0	0	6	14	16	0	8	6	12	2
United States vs. Taiwan	10	3	0	0	6	19	13	1	9	6	6	1
China vs. India	9	3	0	0	5	15	4	1	3	6	3	2
China vs. Italy	9	3	0	0	4	9	3	1	2	5	2	1
China vs. Korea	10	2	1	0	5	12	10	2	3	5	2	2
China vs. Taiwan	10	2	1	0	4	15	8	2	3	6	1	1
India vs. Italy	9	2	1	0	4	8	6	1	2	5	2	1
India vs. Korea	9	3	0	0	4	12	8	1	1	4	3	3
India vs. Taiwan	9	3	0	0	4	13	9	1	1	5	3	2
Italy vs. Korea	9	3	0	0	4	9	7	1	1	4	2	1
Italy vs. Taiwan	9	3	0	0	4	9	8	2	1	3	2	1
Korea vs. Taiwan	9	3	0	0	4	14	6	1	2	5	3	1
United States vs. Canada	10	3	0	0	9	12	2	0	6	7	3	2
United States vs. Other	9	2	1	0	4	17	11	1	4	9	8	1
China vs. Canada	10	2	1	0	4	9	4	1	1	4	0	2
China vs. Other	9	2	1	0	3	12	7	1	3	5	1	1
India vs. Canada	9	2	1	0	5	7	4	1	1	4	2	2
India vs. Other	8	2	1	0	3	10	6	1	2	5	2	1
Italy vs. Canada	9	3	0	0	4	8	2	1	1	3	0	1
Italy vs. Other	8	2	1	0	3	8	4	1	2	4	2	1
Korea vs. Canada	9	2	1	0	4	9	4	1	1	3	0	2
Korea vs. Other	9	2	1	0	4	9	8	1	2	4	0	1
Taiwan vs. Canada	10	2	1	0	4	8	4	1	2	3	0	1
Taiwan vs. Other	8	2	1	0	3	9	7	1	2	4	1	1
Canada vs. Other	8	2	1	0	3	6	6	1	1	6	0	1

Note.—A=Always, F=Frequently, S=Sometimes, N=Never.

Source: Compiled from data submitted in response to Commission questionnaires.

Producer *** reported that factors limiting interchangeability include the type or amount of coating, surface quality for painting, surface appearance, and surface treatment.[50]

Purchasers *** reported that corrosion-resistant steel from Korea has high tensile strength that domestic mills cannot produce, and purchaser *** reported that the best quality corrosion-resistant steel comes from Korea. Purchaser *** reported that Korean *** and purchaser *** reported that Korean product's surface quality doesn't meet its standards as frequently as the U.S. or Canadian product.

Purchasers *** reported that quality (and paint quality) of product from China and India is inferior, and *** reported that it does not buy product from China or India because of perceived long lead times, difficult logistics, and unreliable product quality. Other purchasers stated that due to their qualification processes, they cannot use product interchangeably from different sources.

As can be seen from table II-14, most responding purchasers reported that domestically produced corrosion-resistant steel and Korean corrosion-resistant steel "always" met minimum quality specifications. The majority of responding purchasers reported that product from Italy, Taiwan, and nonsubject Canada, "usually" met minimum quality specifications and a plurality of responding purchasers reported that product from China and India "usually" met minimum quality specifications.

Table II-14
Corrosion-resistant steel: Ability to meet minimum quality specifications, by source[1]

Source	Always	Usually	Sometimes	Rarely or never
United States	22	19	1	0
China	6	9	5	0
India	6	7	2	1
Italy	4	7	0	0
Korea	12	7	3	0
Taiwan	7	9	1	0
Canada	6	9	0	0
Other	15	9	1	0

[1] Purchasers were asked how often domestically produced or imported corrosion-resistant steel meets minimum quality specifications for their own or their customers' uses.

Source: Compiled from data submitted in response to Commission questionnaires.

In addition, producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of corrosion-resistant steel from the United States, subject, or nonsubject countries. As seen in table II-15, all U.S. producers reported that there were either "sometimes" or "never" differences other than price between all country pairs. Importer responses were more varied; the most common responses for all but

[50] Staff email correspondence with ***, April 29, 2016.

Table II-15

Corrosion-resistant steel: Significance of differences other than price between corrosion-resistant steel produced in the United States and in other countries, by country pairs

Country pair	U.S. producers				U.S. importers				U.S. purchasers			
	A	F	S	N	A	F	S	N	A	F	S	N
United States vs. China	0	0	6	9	8	6	20	6	6	4	8	5
United States vs. India	0	0	5	7	6	6	15	3	6	2	8	3
United States vs. Italy	0	0	4	8	6	3	11	2	5	0	7	3
United States vs. Korea	0	0	4	9	6	9	13	4	8	5	7	4
United States vs. Taiwan	0	0	5	8	5	10	17	2	6	2	4	4
China vs. India	0	0	4	6	4	3	13	3	1	0	6	3
China vs. Italy	0	0	4	6	4	2	6	2	1	1	5	1
China vs. Korea	0	0	4	7	5	5	11	4	1	0	5	1
China vs. Taiwan	0	0	5	6	7	4	12	2	1	0	4	1
India vs. Italy	0	0	4	6	4	2	6	2	1	1	5	1
India vs. Korea	0	0	4	6	5	3	11	3	1	0	5	1
India vs. Taiwan	0	0	4	6	6	4	12	2	1	0	5	1
Italy vs. Korea	0	0	4	6	4	3	4	2	1	0	4	0
Italy vs. Taiwan	0	0	4	6	4	2	6	2	0	1	3	0
Korea vs. Taiwan	0	0	4	6	4	3	12	2	0	2	4	1
United States vs. Canada	0	0	5	8	5	3	9	4	5	2	4	7
United States vs. Other	0	0	5	8	5	6	19	1	9	0	9	3
China vs. Canada	0	0	5	6	3	2	7	2	0	1	2	2
China vs. Other	0	0	4	7	3	3	12	1	1	0	5	2
India vs. Canada	0	0	4	6	3	2	7	2	0	1	2	2
India vs. Other	0	0	4	6	3	3	11	1	1	0	5	2
Italy vs. Canada	0	0	4	6	3	2	5	2	0	1	2	1
Italy vs. Other	0	0	4	6	3	3	7	1	1	0	4	1
Korea vs. Canada	0	0	4	6	3	2	7	2	2	0	2	1
Korea vs. Other	0	0	4	7	3	5	10	2	2	0	4	1
Taiwan vs. Canada	0	0	5	6	3	2	7	2	1	1	2	1
Taiwan vs. Other	0	0	4	6	3	4	10	1	1	1	4	1
Canada vs. Other	0	0	4	6	3	2	11	1	2	0	2	2

Note.--A = Always, F = Frequently, S = Sometimes, N = Never.

Source: Compiled from data submitted in response to Commission questionnaires.

one country pair were that there were “sometimes” differences other than price. In all cases, most importers reported that differences other than price were at least “sometimes” important for all country pairs. Differences cited by importers included product offerings, quality, reliability of supply, availability, lead times, risks of buying offshore, product range, and technical support. Purchaser responses were also varied; the most common responses for most country pairs were that there were “sometimes” differences other than price.

ELASTICITY ESTIMATES

This section discusses elasticity estimates; parties were encouraged to comment on these estimates in their prehearing or posthearing brief, but did not do so.

U.S. supply elasticity

The domestic supply elasticity[51] for corrosion-resistant steel measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of corrosion-resistant steel. The elasticity of domestic supply depends on several factors including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced corrosion-resistant steel. Analysis of these factors earlier indicates that the U.S. industry has the ability to greatly increase or decrease shipments to the U.S. market; an estimate in the range of 4 to 8 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for corrosion-resistant steel measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of corrosion-resistant steel. This estimate depends on factors discussed earlier such as the existence, availability, and commercial viability of substitute products, as well as the component share of the corrosion-resistant steel in the production of any downstream products. Based on the available information, the aggregate demand for corrosion-resistant steel is likely to be relatively inelastic; a range of -0.5 to -1 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[52] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (e.g., availability, sales terms/ discounts/ promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced corrosion-resistant steel and imported corrosion-resistant steel is likely to be in the range of 3 to 5.

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[51] A supply function is not defined in the case of a non-competitive market.

[52] The substitution elasticity measures the responsiveness of the relative U.S. consumption levels of the subject imports and the domestic like products to changes in their relative prices. This reflects how easily purchasers switch from the U.S. product to the subject products (or vice versa) when prices change.

PART III: U.S. PRODUCERS' PRODUCTION, SHIPMENTS, AND EMPLOYMENT

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the subsidies and dumping margins was presented in Part I of this report and information on the volume and pricing of imports of the subject merchandise is presented in Part IV and Part V. Information on the other factors specified is presented in this section and/or Part VI and (except as noted) is based on the questionnaire responses of 19 firms that accounted for the vast majority of U.S. production of corrosion-resistant steel during 2015.

U.S. PRODUCERS

The Commission issued U.S. producer questionnaires to 21 firms based on information contained in the petitions, the preliminary phase of these investigations, and other available industry sources. Nineteen firms provided usable data on their production operations.[1] Staff believes that these responses represented approximately *** percent of U.S. production of corrosion-resistant steel in 2015.[2]

[1] Two firms provided no response to the Commission's questionnaire: Big River Steel ("Big River") and Pro-Tec Coating Co. ("Pro-Tec"). Pro-Tec, a joint venture of Kobe Steel and petitioner U.S. Steel, did not respond to the Commission's questionnaire despite numerous attempts by staff to elicit a response. Based on *** capacity data, Pro-Tec is believed to have accounted for *** percent of U.S. corrosion-resistant steel capacity in 2015. Big River simply responded to the Commission's request for certain information in the questionnaire by indicating that it was a start-up mill and had not yet begun production. In addition, several U.S. producers provided consolidated producer questionnaire responses. For example, a consolidated response was filed on behalf of Apollo Metals and Thomas Steel and the information for Double G was included in the responses of U.S. Steel and ArcelorMittal. In addition, the information for Desco was included in the response of U.S. Steel; the information for "The Techs" (MetalTech, NexTech, and Galvtech) was included in the response of Steel Dynamics; and the information for Spartan was included in the response of Worthington.

[2] The coverage estimate is based on total 2015 production of coated sheet in the United States of *** short tons as reported by ***. ***.

Table III-1 lists known U.S. producers of corrosion-resistant steel, their production locations, positions on the petitions, and shares of total reported production in 2015. *** are the largest domestic producers of corrosion-resistant steel, together accounting for *** percent of domestic production during 2015. The tabulation below lists known U.S. producers of corrosion-resistant steel and the types of production activities in which their facilities are involved.

Principal type of production activity	Firm
Blast furnace/oxygen furnace steelmaking	AK Steel ArcelorMittal USA U.S. Steel
Electric arc furnace steelmaking	Nucor Steel Dynamics
Hot rolling of purchased/imported slabs	CSI ArcelorMittal USA Calvert facility Top Gun
Cold rolling of purchased/imported hot-rolled steel	CSN Steelscape Thomas/Apollo USS-POSCO
Coating (including toll-coating) of purchased cold-rolled or hot-rolled sheet	Arrow Shed Canfield Gregory National Precoat Pro-Tec Ternium Wheeling-Nisshin Worthington

Note.-- All of the purchasers of both slab and/or hot-rolled steel are related in some way to offshore blast furnace/oxygen furnace suppliers.

Table III-1
Corrosion-resistant steel: U.S. producers, their position on the petition, location of U.S. production facilities, and share of reported production, 2015

Firm	Position on petition	Production location(s)	Share of production (percent)
AK Steel	Petitioner	Ashland, Kentucky Butler, Pennsylvania Dearborn, Michigan Middletown, Ohio Rockport, Indiana	***
ArcelorMittal	Petitioner	Burns Harbor, Indiana Cleveland and Columbus, Ohio East Chicago and New Carlisle, Indiana Calvert, Alabama Jackson, Mississippi	***
Arrow Shed	***	Haskell, New Jersey	***
Canfield	***	Canfield, Ohio	***
CSI	Petitioner	Fontana, California	***
CSN	***	Terre Haute, Indiana	***
Gregory	***	Canton, Ohio	***
National	***	Monroe, Michigan	***
Nucor	Petitioner	Blytheville, Arkansas Berkeley, South Carolina Trinity, Alabama Crawfordsville, Indiana	***
Precoat	***	Elkridge, Maryland	***
Pro-Tec	***	Leipsic, Ohio	***
Steel Dynamics	Petitioner	Butler, Indiana Columbus, Mississippi Jeffersonville, Indiana Pittsburgh and Turtle Creek, Pennsylvania	***
Steelscape	***	Kalama, Washington Rancho Cucamonga, California Fairfield, Alabama (sold Dec. 2013)	***
Ternium	***	Shreveport, Louisiana	***
Thomas/Apollo	***	Bethlehem, Pennsylvania Warren, Ohio	***
Top Gun	***	Sharon and Farrell, Pennsylvania	***
USS-POSCO	***	Pittsburg, California	***
U.S. Steel	Petitioner	Fairfield, Alabama Gary and Portage, Indiana Granite City, Illinois Ecorse and Dearborn, Michigan Fairless Hills and West Mifflin, Pennsylvania Jackson, Mississippi	***
Wheeling-Nisshin	***	Follansbee, West Virginia	***
Worthington	***	Columbus and Delta, Ohio Monroe, Michigan	***
Total			***

[1] ***.
[2] ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Related firms

Table III-2 lists the responding U.S. producers, their parent company or owner(s), and any related and/or affiliated firms. The following U.S. producers are related to foreign producers of corrosion-resistant steel in the subject countries: ArcelorMittal USA, Steelscape, Thomas/Apollo, and USS-POSCO. ArcelorMittal USA is related to Italian producers/exporters ArcelorMittal Piombino and ArcelorMittal Avellino through a common corporate parent and to Chinese producer Valin ArcelorMittal Automotive Steel Co., Ltd. and Indian producer Uttam Galva Steels Ltd. through joint venture agreements. Steelscape is related through a common parent to Tata BlueScope Steel Ltd., a producer of corrosion-resistant steel in India, and BlueScope Steel (Suzhou) Co. Ltd., a producer of corrosion-resistant steel in China. Thomas Steel Strip Corp. and Apollo Metals, Ltd. are related through a common parent to producers of corrosion-resistant steel in India (Tata Steel Ltd.). Domestic producer USS-POSCO is a 50/50 joint venture owned by domestic producer U.S. Steel and Korean producer POSCO.

Table III-2
Corrosion-resistant steel: U.S. producers' ownership and related and/or affiliated firms

* * * * * * *

U.S. producer ArcelorMittal reported that it is related to U.S. importer ArcelorMittal International, a U.S. importer of corrosion-resistant steel from ***[3] and ***,[4] and ArcelorMittal Dofasco, a U.S. importer of corrosion-resistant steel from ***. U.S. producer USS-POSCO is related to U.S. importer POSCO AAPC, a U.S. importer of subject corrosion-resistant steel from ***,[5] and POSCO America, a U.S. importer of corrosion-resistant steel from ***.[6] U.S. producer California Steel Industries is related to JFE, a U.S. importer from ***. U.S. producer Thomas/Apollo is related to Hille & Mueller, a U.S. importer from ***, and Tata, a U.S. importer from ***. U.S. producer Nucor Corp. reported that it is related to U.S. importer Nucor Trading USA Inc.; however, Nucor Corp. indicated ***.[7] In addition, U.S. producer Nucor Corp. and JFE Steel Corp., a U.S. importer of corrosion-resistant steel from ***, have formed a 50-50 joint venture to build a $270 million continuous galvanizing line in central Mexico.[8] U.S. producer Steelscape is related through a common parent to BlueScope Steel Americas LLC, ***.[9]

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[3] ArcelorMittal International reported that it ***.

[4] ***.

[5] POSCO AAPC reported that it ***.

[6] POSCO America reported that it ***.

[7] A review of ***.

[8] The joint venture (Nucor-JFE Steel Mexico) will have the capacity to produce 400,000 tons of galvanized steel sheet annually and is expected to begin production in the second half of 2019. The production facility will source an equal amount of raw material substrate from Nucor and JFE and its galvanized product (i.e., car doors and frames) is expected to serve the automotive industry in Mexico. Nucor reportedly decided to expand into Mexico because the automotive production there is expected

(*continued*...)

Tolling operations

Nine of the responding U.S. producers reported that they have been involved in toll agreements regarding the production of corrosion-resistant steel. However, only two of the nine producers are exclusively toll processors: *** and ***, which represented *** and *** percent of 2015 domestic production, respectively. The trade data for these two firms are included in the aggregate data presented. Therefore, the aggregate values and unit values presented in this section of the report are slightly understated because of the inclusion of processing fees as shipment values as reported by ***.

The remaining seven domestic producers reported that only a portion of their total production involves toll processing. Information reported by these firms is listed below:

- ***.
- ***.
- ***.
- ***.
- ***.
- ***.[10] ***.
- ***.

Changes in operations

Domestic producers of corrosion-resistant steel have experienced both outages and closures since January 1, 2013. These include unplanned outages by AK Steel at its Middletown, Ohio Works during 2013 and its Ashland, Kentucky facility in 2014-15. AK Steel's unplanned outage during 2013 at its Middletown facility, which produces hot-rolled, cold-rolled, and corrosion-resistant steels, reduced the company's steelmaking production and shipments during the third quarter of 2013 and resulted in a delay of shipments to some of its carbon steel spot market customers. AK Steel's blast furnace and steelmaking outage during late 2015 at its Ashland facility, which produces carbon and ultra-low carbon steel slabs along with hot dip galvanized and galvannealed coated steels, resulted in layoffs of more than 600 employees.[11] However, the galvanizing line at AK Steel's Ashland facility remained in operation.

In addition, U.S. Steel experienced outages at its Granite City and Gary Works facilities and the permanent closure of facilities at U.S. Steel's Fairfield Works in 2015. Operations affected by the closure at U.S. Steel's Fairfield, Alabama facility include the blast furnace, the hot strip mill, the pickle line, the cold mill, the annealing facility, and the stretch and temper line, as well as the coating operations. Further, the firm announced in December 2015 that it

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(…*continued*)
to increase by 55.9 percent from 2016 to 2020. "Nucor, JFE form Mexican galvanizing venture," *American Metal Market*, June 9, 2016.

[9] BlueScope Steel Americas LLC ***.

[10] *** is not subject to these investigations.

[11] Hearing transcript, p. 53 (Lauschke).

was delaying its electric arc furnace construction project at Fairfield and, in April 2016, its Fairfield tubular operations were temporarily idled. In 2015, U.S. Steel also shut down its coke-making operations at its Gary, Indiana facility, which produces sheet products, hot strip mill plate products, and tin products, and the steelmaking and finishing operations, including the galvanizing lines, at its Granite City facility during 2015.[12]

Table III-3 summarizes recent important events that have taken place in the United States since January 1, 2013. In addition to the events listed in table III-3, there is reportedly a new entrant in the industry—the Big River Steel mill located in Osceola, Arkansas. Once the mill is completed in late 2016, it is expected to employ 525 workers and produce about 1.6 million tons of specialty steels annually, including advanced high strength cold-rolled steel and advanced high strength corrosion-resistant steel.[13] Its galvanizing lines are expected to have an annual capacity to produce approximately 525,000 short tons when fully operational.[14] Big River Steel responded to the Commission's questionnaire in these final phase investigations indicating only that it is a start-up mill and that it has not yet produced any quantities of corrosion-resistant steel.

[12] Hearing transcript, pp. 86 and 173 (Matthews), and p. 41 (Longhi); U.S. Steel's prehearing brief, exh. 68; "US Steel postpones construction of Alabama furnace," *The Wall Street Journal*, December 21, 2015, http://www.wsj.com/articles/u-s-steel-to-delay-construction-of-electric-arc-furnace-1450737510; "U.S. Steel lays off 200 more workers in Fairfield," *Birmingham Sun Times*, March 18, 2016, http://birmingham.suntimes.com/bir-business/7/122/320705/u-s-steel-lays-off-200-more-workers-in-fairfield; and U.S. Steel website, https://www.ussteel.com.

[13] "Big River Steel project already boosting economic activity with more jobs, spending," *Talk Business & Politics*, April 18, 2016, accessed at http://talkbusiness.net/2016/04/big-river-steel-project-already-boosting-economic-activity-with-more-jobs-spending/; "Big River ramping up finishing ops, hiring," *American Metal Market*, March 18, 2016 and "Big River set to rev up finishing operations," *American Metal Market,* March 15, 2016 (as cited in Italian Producers' prehearing brief, p. 13); and Big River Steel, "BRS Fact Sheet," http://info.bigriversteel.com/factsheet-bigriversteel, accessed June 6, 2016.

[14] "Galvanizing Line with Continuous Anneal Capabilities," Big River Steel, accessed on May 4, 2016, at http://info.bigriversteel.com/galvanized-anticipated-capabilities-0-0 .

Table III-3
Corrosion-resistant steel: Important industry events since January 1, 2013

Date		Company	Action
Year	Month		
2013	June	AK Steel	The blast furnace at the Middletown, Ohio Works has an unplanned outage on June 22, 2013 and restarts on July 12, 2013. As a result of the unplanned outage, the company's steelmaking production during the quarter is reduced, resulting in a delay of shipments to some carbon steel spot market customers and an overall reduction in shipments during the third quarter of 2013.
	August		A new labor agreement is ratified with the United Auto Workers covering workers at the Rockport, Indiana Works. The previous agreement was set to expire on September 30, 2013 and the new agreement will expire on September 30, 2017. The Rockport Works is a finishing operation only (i.e. does not make steel) and produces corrosion-resistant steel as well as products outside of the product scope of these investigations, such as cold-rolled steel and stainless steel flat-rolled products.
			A new labor agreement is ratified with the United Steelworkers at the Ashland, KY Works. The old agreement expired on September 1, 2013. The new agreement takes effect September 1, 2013 and expires on March 1, 2015.

Table continued on next page.

Table III-3 -- Continued
Corrosion-resistant steel: Important industry events since January 1, 2013

Date		Company	Action
Year	Month		
2014	February	Arcelor Mittal	In a joint venture with Nippon Steel & Sumitomo Metal Corp., ArcelorMittal acquires ThyssenKrupp Steel USA, which is a steel processing plant in Calvert, Alabama. The Calvert plant produces hot-rolled, cold-rolled, and coated steel.
		AK Steel	The blast furnace at the Ashland, Kentucky facility has an unplanned outage on February 22, 2014 and resumes operation in March.
	March	U.S. Steel	On March 27, 2014, operations at the Great Lakes Works in Michigan are suspended because of a roof collapse at the Work's steelmaking shop. Repairs are scheduled to be completed by mid-May 2014.
	June	AK Steel	A new labor agreement with the International Association of Machinists and Aerospace Workers is ratified covering workers at the Middletown, Ohio Works. The previous agreement was set to expire on September 15, 2014 and the new agreement will expire on March 15, 2018.
	July		Announces an unplanned blast furnace outage at its Ashland, Kentucky facility. An announcement is made on September 3, 2014 that the blast furnace is back in operation although at reduced production levels. AK Steel also states that it would compensate for the lower production levels by purchasing slabs on the open market, boosting slab output at its Butler, Pennsylvania operations, and using output from its recently acquired Dearborn, Michigan facility.
	September	AK Steel	Acquires the former Severstal plant in Dearborn, Michigan. The Dearborn Works is an integrated steelmaking facility that produces flat-rolled products including hot- and cold-rolled steel, galvanized steel, as well as other products, and is active when acquired by AK Steel.
		Steel Dynamics	Acquires the former Severstal steel mill in Columbus, Mississippi for $1.6 billion. The Columbus plant produces a range of flat-rolled products including hot-rolled, cold-rolled, and coated steel and is active when acquired by Steel Dynamics.
	October	U.S. Steel	Announces its intent to install an electric arc furnace at its Fairfield Works in Alabama with a projected start date in 2017. The plan is to replace the blast furnace at Fairfield with an electric arc furnace.
	December	AK Steel	A new labor agreement with the United Steel Workers is ratified on December 12. The agreement, which covers workers at the Ashland Kentucky Works and becomes effective after the expiration of the old contract on March 1, 2015, will expire on September 1, 2018. The Ashland Works has steelmaking and casting operations but not cold-rolling operations. It also contains a hot-dip galvanizing line.
		Nucor	A new mill capable of producing 72-inch wide sheet begins production at the Berkeley County, South Carolina plant.

Table continued on next page.

Table III-3 -- Continued
Corrosion-resistant steel: Important industry events since January 1, 2013

Date		Company	Action
Year	Month		
2015	January	Worthington	Acquires Rome Strip Steel Co., Inc. located in Rome, New York. Rome manufactures cold-rolled steel to extremely tight tolerances, primarily for the automotive industry. The business will add a high value-added cold rolling and annealing production facility to the company.
	March	U.S. Steel	Announces plans to begin construction of an electric arc furnace at its Fairfield, Alabama facility in the second quarter of 2015 with a projected completion date of third quarter of 2016. The electric arc furnace represents an investment of $230 million. The company plans to continue steelmaking and finishing operations during the construction to serve both the tubular and flat-rolled industry segments, including galvanized steel.
	August	ArcelorMittal, U.S. Steel	As of August 31, 2015, labor contract negotiations continue at ArcelorMittal and U.S. Steel with the United Steelworkers union as the labor contracts at both companies expire at 11:59 pm. September 1, 2015. According to at least one industry source, the parties are “far apart” on several issues.
	August-November	U.S. Steel	Announces the intent to permanently close the blast furnace, the hot strip mill, the pickle line, the cold mill, the annealing facility, the stretch and temper line, and the coating line (i.e., all equipment to make flat-rolled products including cold-rolled steel) at its Fairfield Works in Fairfield, Alabama, on or after November 17, 2015. The decision does not impact Fairfield Tubular Operations or the electric arc furnace construction project.
		U.S. Steel	The steelmaking and finishing operations at the Granite City Works in Illinois are idled. The galvanizing operation continues to operate, utilizing purchased substrate from another steel company.
	December	AK Steel	Blast furnace and steelmaking operations are idled at Ashland, KY. The galvanizing line remains in operation.
		U.S. Steel	Announces the postponement of construction of its electric arc furnace at Fairfield Works in Birmingham, Alabama due to continued challenging market conditions in both the oil and gas and steel industries.
2016	February	U.S. Steel	A new 3-year labor agreement is reached with the United Steelworkers union. The previous agreement expired on September 1, 2015.
	April	ArcelorMittal	A tentative labor agreement is reached with the United Steelworkers union. If ratified, the agreement would run until September 1, 2018.The previous agreement expired on September 1, 2015.
	June	Nucor	Nucor forms a 50-50 joint venture with JFE Steel Corp. to build a $270 million continuous galvanizing line in Mexico.

Source: Compiled from information obtained from various news articles, press releases, and company websites.

Fourteen domestic producers that provided responses to the Commission's questionnaire in these investigations reported changes in their operations related to the production of corrosion-resistant steel since January 1, 2013. Such changes are presented in table III-4.

Table III-4
Corrosion-resistant steel: Reported changes in operations by U.S. producers

* * * * * * *

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Corrosion-resistant steel

U.S. producers' capacity, production, and capacity utilization data for corrosion-resistant steel are presented in table III-5. Domestic producers' aggregate capacity was relatively stable, increasing by 0.1 percent from 2013 to 2014 and declining by 0.1 percent from 2014 to 2015. Reported capacity was 0.01 percent lower in 2015 than reported in 2013. Domestic production followed a similar trend, increasing by 3.4 percent from 2013 to 2014 and declining by 3.2 percent from 2014 to 2015. Reported production was 0.1 percent higher in 2015 than reported in 2013. Capacity utilization likewise increased from 74.9 percent in 2013 to 77.4 percent in 2014 but fell to 75.0 percent in 2015. Although reported line shutdowns and production curtailments by 11 of the 19 responding U.S. producers (see table III-3) did not result in a downturn in the reported aggregate capacity data or the aggregate production data during 2013-14, they were reflected in the aggregate production data reported during 2014-15.

Table III-5
Corrosion-resistant steel: U.S. producers' capacity, production, and capacity utilization, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
Capacity[1]	24,055,641	24,079,937	24,053,359
Production	18,026,752	18,645,379	18,045,727
	Ratio (percent)		
Capacity utilization	74.9	77.4	75.0

[1] Most responding domestic producers reported corrosion-resistant steel capacity based on operating 156-168 hours per week. *******. All but one responding producer reported capacity based on operating 50-52 weeks per year. *******.

Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

As shown in table III-6, the majority of product produced by U.S. producers is subject corrosion-resistant steel, primarily hot-dip galvanized and galvanneal steel. Production of hot-dip galvanized and galvanneal steel accounted for *** percent of total production of all subject corrosion-resistant steel during 2015, followed by electrogalvanized steel (*** percent), 55% aluminum-zinc alloy coated steel (e.g., Galvalume) (*** percent), hot-dip aluminized steel (*** percent), diffusion-annealed nickel plated steel (*** percent), copper-plated steel (*** percent),[15] and other subject corrosion-resistant steel (*** percent).[16] A majority of responding firms reported that they do not produce alternative products on the same equipment or using the same employees. Firms that reported that they also produce nonsubject items on the same equipment as corrosion-resistant steel include ***. Production of nonsubject corrosion-resistant steel accounted for *** percent of total corrosion-resistant steel production during 2015.

Table III-6
Corrosion-resistant steel: U.S. producers' overall plant capacity and production on the same equipment as subject production, 2013-15

* * * * * * *

U.S. PRODUCERS' U.S. SHIPMENTS AND EXPORTS

Table III-7 presents U.S. producers' U.S. shipments, export shipments, and total shipments. These data show that the quantity and value of U.S. producers' total shipments, both U.S. and export, increased from 2013 to 2014, but were lower in 2015. Similarly, average unit values increased from 2013 to 2014 but fell in 2015.

*** of domestic producers' total shipments of corrosion-resistant steel were reported to be shipments to the U.S. commercial market. Domestic producers *** accounted for all reported internal consumption.[17] The following six domestic producers reported domestic transfers to related companies: ***.

[15] As noted previously in Part I of this report, diffusion-annealed nickel plated steel and copper-plated steel are produced in the United States by only one firm (Thomas/Apollo).

[16] Other subject corrosion-resistant steel includes zinc-aluminum-magnesium (***), zinc-copper and zinc-nickel (***), laminated sheet (***), and painted on galvanized and painted on Galvalume (***).

[17] Most (*** percent in 2015) of the internal consumption data were reported by ***. A smaller share (*** percent in 2015) of the internal consumption data were reported by ***, which produces outdoor storage products (e.g., sheds and chests).

Table III-7
Corrosion-resistant steel: U.S. producers' U.S. shipments, export shipments, and total shipments, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
U.S. shipments	16,923,465	17,371,112	16,833,387
Export shipments[1]	1,113,004	1,143,816	1,118,643
Total shipments	18,036,469	18,514,928	17,952,030
	Value (1,000 dollars)		
U.S. shipments	14,706,712	15,551,621	13,451,548
Export shipments[1]	1,049,509	1,083,450	1,055,313
Total shipments	15,756,221	16,635,071	14,506,861
	Unit value (dollars per short ton)		
U.S. shipments	869	895	799
Export shipments[1]	943	947	943
Total shipments	874	898	808
	Share of quantity (percent)		
U.S. shipments	93.8	93.8	93.8
Export shipments[1]	6.2	6.2	6.2
Total shipments	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments	93.3	93.5	92.7
Export shipments[1]	6.7	6.5	7.3
Total shipments	100.0	100.0	100.0

[1] Canada was reported as an export shipment destination by ***, Mexico was reported by ***, and China was reported by ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Domestic producers' exports accounted for 6.2 percent of U.S. producers' total shipments during 2015. The unit values of domestic producers' exports of corrosion-resistant steel ranged from $943 to $947 per short ton during 2013-15 and were 5.8-18.0 percent higher than the average unit values of U.S. shipments during 2013-15. Twelve responding domestic producers reported export shipments of the corrosion-resistant steel they produced. Principal export markets identified include Canada (reported by ***), Mexico (reported by ***), and China (reported by one producer (***)). *** accounted for *** percent of domestic producers' U.S. exports during 2015. ArcelorMittal and U.S. Steel, which accounted for *** and *** percent of domestic producers' U.S. exports during 2015, respectively, each have affiliates in Canada that produce corrosion-resistant steel.

U.S. PRODUCERS' INVENTORIES

Table III-8 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments during 2013-15. These data show that inventories increased by 16.9 percent during 2013-15 and were equivalent to between 7.1 and 8.3 percent of U.S. producers' total shipments. All domestic producers, with the exception of ***, reported holding end-of-period inventories of corrosion-resistant steel. *** producers held higher inventories in December 2015 than in December 2013. *** accounted for the largest share of the increase in inventories, holding *** percent of total domestic inventories by year-end 2015.

Table III-8
Corrosion-resistant steel: U.S. producers' inventories, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
U.S. producers' end-of-period inventories	1,275,592	1,403,969	1,490,774
	Ratio (percent)		
Ratio of inventories to.--			
U.S. production	7.1	7.5	8.3
U.S. shipments	7.5	8.1	8.9
Total shipments	7.1	7.6	8.3

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. PRODUCERS' IMPORTS AND PURCHASES

Several U.S. producers reported direct imports and domestic purchases of corrosion-resistant steel during 2013-15. In addition, several U.S. producers' related U.S. firms reported direct imports of corrosion-resistant steel. Specifically, ArcelorMittal, USS-POSCO, California Steel Industries, Thomas/Apollo, Nucor,[18] and Steelscape[19] are related to U.S. importers.

Also, several U.S. producers domestically purchased imports of subject merchandise: ***. With the exception of ***, U.S. producers' purchases of subject imports accounted for *** of each firm's U.S. production in any given time period. With respect to ***, U.S. purchases of subject imports, most of which were from ***, represented *** percent in 2013, *** percent in 2014, and *** percent in 2015.

U.S. producers' imports and purchases of corrosion-resistant steel, as well as the direct imports of related U.S. importers, are presented in table III-9.

[18] ***.

[19] Steelscape's related importer, BlueScope Steel, ***.

Table III-9
Corrosion-resistant steel: U.S. producers' U.S. production, imports, and purchases, 2013-15

* * * * * * *

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

A representative of the United Steelworkers testified at the Commission's conference in the preliminary phase of these investigations that its members faced lay-offs and reduced regular and overtime hours, and that hundreds of workers are currently working under the threat of 60-day warn notices.[20] U.S. Steel, one domestic producer that issued warn notices during its production downturns, explained that during the 60-day warn notice period (in compliance with its union contract concerning layoff minimization), the company first takes other actions, such as reducing the crew work week (e.g., from 40-hour work weeks to 32-hour work weeks) and the use of contract workers, before lay-offs begin. At the end of the 60-day warn notice period, if business conditions are not improved, then U.S. Steel indicated that it may lay people off.[21] In addition, domestic producers CSI and Nucor reported that their firms have "no layoff" policies in effect for their regular workers. Nucor testified that although it has a "no layoff" policy, its regular workers may nevertheless be affected by production downturns, because the company may respond to such downturns by reducing crew work weeks.[22] CSI testified that when market conditions force it to cut back on its mill operations, it eliminates overtime, reduces temporary employees and contractors, and stops hiring new employees. In addition, its regular employees are assigned to maintenance and repair activities or community service, so that the workers are available when the company returns to normal production levels.[23]

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[20] Conference transcript, p. 48 (Hart).

[21] Conference transcript, pp. 126-127 (Matthews). U.S. Steel reported the employment of *** production and related workers ("PRWs") in 2013, *** PRWs in 2014, and *** PRWs in 2015.

[22] Conference transcript, pp. 125-126 (Blume). Nucor reported the employment of *** PRWs in 2013, *** PRWs in 2014, and *** PRWs in 2015.

[23] Conference transcript, p. 45 (Walburg). CSI reported the employment of *** PRWs in 2013, *** PRWs in 2014, and *** PRWs in 2015.

U.S. producers' employment-related data as provided in response to Commission questionnaires are shown in table III-10. U.S. producers' employment measured by PRWs increased by 1.7 percent (or by 198 PRWs) from 2013 to 2015. Eleven U.S. producers reported declines in the number of PRWs during 2013-15 and seven U.S. producers reported increases. Of those firms reporting reductions in the number of PRWs, *** accounted for the largest share with an overall reduction of *** PRWs from 2013 to 2015. Of those firms reporting increases in the number of PRWs, *** accounted for the largest share with a combined increase of *** PRWs from 2013 to 2015. Total hours worked by production employees and unit labor costs followed the same upward trend, with *** accounting for the majority of the increase in hours worked. U.S. producers' hourly wages paid to PRWs and productivity followed the same trend, increasing from 2013 to 2014, but falling in 2015.

Table III-10
Corrosion-resistant steel: U.S. producers' employment related data, 2013-15

Item	Calendar year		
	2013	2014	2015
Production and related workers (PRWs) (number)	11,469	11,549	11,667
Total hours worked (1,000 hours)	24,793	24,914	25,524
Hours worked per PRW (hours)	2,162	2,157	2,188
Wages paid ($1,000)	939,505	998,763	1,005,250
Hourly wages (dollars per hour)	$37.89	$40.09	$39.38
Productivity (short tons per 1,000 hours)	727.1	748.4	707.0
Unit labor costs (dollars per short tons)	$52.12	$53.57	$55.71

Source: Compiled from data submitted in response to Commission questionnaires.

PART IV: U.S. IMPORTS, APPARENT U.S. CONSUMPTION, AND MARKET SHARES

U.S. IMPORTERS

The Commission issued importer questionnaires to 84 firms identified as possible importers of subject corrosion-resistant steel, as well as to all U.S. producers of corrosion-resistant steel.[1] Usable questionnaire responses were received from 60 companies, representing 92.8 percent of U.S. imports from subject countries, 86.3 percent of U.S. imports from nonsubject countries, and 90.2 percent of total U.S. imports during 2015.[2] For complete coverage, import data in this report are based on official Commerce statistics for corrosion-resistant steel, as adjusted to include micro-alloy steel data collected separately in questionnaire responses.

Tables IV-1 and IV-2 list all responding U.S. importers of corrosion-resistant steel, their locations, and their shares of reported 2015 subject and nonsubject U.S. imports, respectively.

Table IV-1
Corrosion-resistant steel: U.S. importers, their headquarters, and share of subject imports by source, 2015

* * * * * * *

[1] The Commission issued questionnaires to firms identified in the petition, along with firms that, based on a review of proprietary data provided by ***, may have accounted for more than one percent of total imports under the following HTS statistical reporting numbers since 2013: 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000. These HTS statistical reporting numbers also were used, as adjusted, to generate the import data presented in this report. In addition, questionnaires were issued to the largest importing firms under the following HTS statistical reporting numbers for "other alloy" steel: 7225.91.0000, 7225.92.0000, 7225.99.0090, 7226.99.0110, 7226.99.0130, 7226.99.0180. Several attempts by staff to contact 12 firms listed in the petition as U.S. importers were unsuccessful because of invalid contact information. Ten of the firms were not identified by *** as U.S. importers and two of the firms accounted for less than 0.5 percent of U.S. imports of corrosion-resistant steel from any individual country.

[2] Two additional importer questionnaire responses received from consignees *** were not included in the aggregate data presented in this report to avoid double-counting the import data. The importers of record for these two consignee firms also provided importer questionnaire responses and their import data are included in the aggregate data presented. The coverage estimates presented are based on official import statistics, as supplemented from Commission questionnaire responses for micro-alloy corrosion-resistant steel.

Table IV-2
Corrosion-resistant steel: U.S. importers and share of nonsubject and total imports by source, 2015

* * * * * * *

U.S. IMPORTS

U.S. imports from subject and nonsubject countries

Table IV-3 and figure IV-1 present data for U.S. imports of corrosion-resistant steel. Subject imports of corrosion-resistant steel increased by 83.0 percent from 2013 to 2014, but fell by 5.7 percent from 2014 to 2015 to a level that was 72.6 percent higher than that reported in 2013. As a share of total imports by quantity, subject imports increased from 53.7 percent in 2013 to 63.6 percent in 2014, before decreasing to 59.7 percent in 2015. The average unit values of subject imports, which were lower than those reported for nonsubject imports, decreased by 11.5 percent from 2013 to 2015.

Canada was the largest nonsubject source for U.S. imports of corrosion-resistant steel, accounting for *** percent of the quantity of total U.S. imports of corrosion-resistant steel in 2015. U.S. imports from all nonsubject sources combined increased by 35.3 percent from 2013 to 2015. The average unit values of imports from all nonsubject sources combined decreased by 11.2 percent from 2013 to 2015.

Table IV-3
Corrosion-resistant steel: U.S. imports, by source, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
U.S. imports from.--			
China	***	***	***
India	***	***	***
Italy	***	***	***
Korea	***	***	***
Taiwan	***	***	***
Subject sources	1,532,976	2,805,365	2,646,023
Canada	***	***	***
All other sources	***	***	***
Nonsubject sources	1,320,024	1,602,921	1,785,822
Total U.S. imports	2,852,999	4,408,286	4,431,844
	Value (1,000 dollars)		
U.S. imports from.--			
China	***	***	***
India	***	***	***
Italy	***	***	***
Korea	***	***	***
Taiwan	***	***	***
Subject sources	1,355,139	2,361,932	2,071,130
Canada	***	***	***
All other sources	***	***	***
Nonsubject sources	1,276,567	1,509,320	1,532,955
Total U.S. imports	2,631,706	3,871,252	3,604,085

Table continued on following page.

Table IV-3 -- Continued
Corrosion-resistant steel: U.S. imports, by source, 2013-15

Item	Calendar year		
	2013	2014	2015
	Unit value (dollars per short ton)		
U.S. imports from.--			
China	***	***	***
India	***	***	***
Italy	***	***	***
Korea	***	***	***
Taiwan	***	***	***
Subject sources	884	842	783
Canada	***	***	***
All other sources[1]	***	***	***
Nonsubject sources	967	942	858
Total U.S. imports	922	878	813
	Share of quantity (percent)		
U.S. imports from.--			
China	***	***	***
India	***	***	***
Italy	***	***	***
Korea	***	***	***
Taiwan	***	***	***
Subject sources	53.7	63.6	59.7
Canada	***	***	***
All other sources[1]	***	***	***
Nonsubject sources	46.3	36.4	40.3
Total U.S. imports	100.0	100.0	100.0

Table continued on following page.

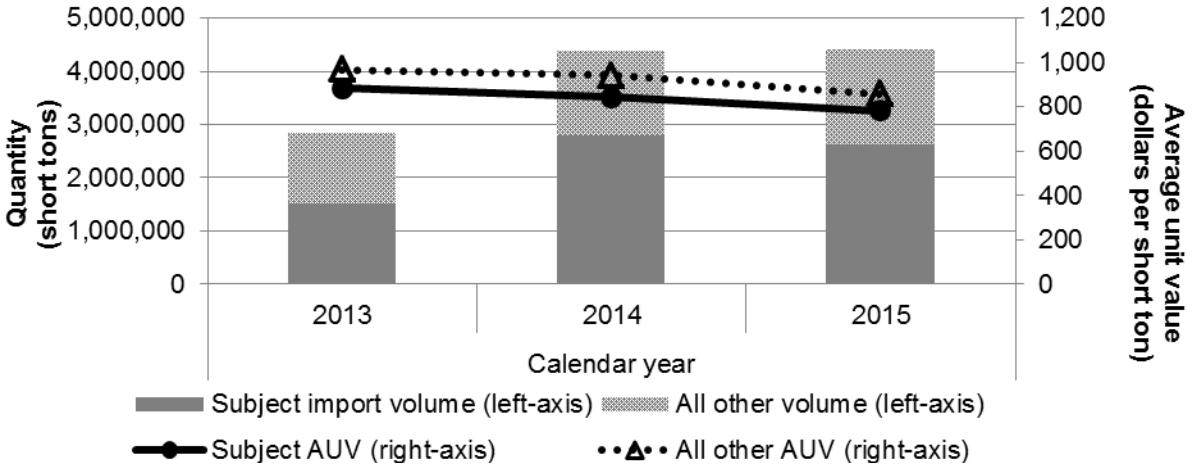
Table IV-3 -- Continued
Corrosion-resistant steel: U.S. imports, by source, 2013-15

Item	Calendar year		
	2013	2014	2015
	Share of value (percent)		
U.S. imports from.--			
China	***	***	***
India	***	***	***
Italy	***	***	***
Korea	***	***	***
Taiwan	***	***	***
Subject sources	51.5	61.0	57.5
Canada	***	***	***
All other sources[1]	***	***	***
Nonsubject sources	48.5	39.0	42.5
Total U.S. imports	100.0	100.0	100.0
	Ratio to U.S. production		
U.S. imports from.--			
China	***	***	***
India	***	***	***
Italy	***	***	***
Korea	***	***	***
Taiwan	***	***	***
Subject sources	8.5	15.0	14.7
Canada	***	***	***
All other sources[1]	***	***	***
Nonsubject sources	7.3	8.6	9.9
Total U.S. imports	15.8	23.6	24.6

[1] The largest "other" sources include Brazil, Mexico, Japan, South Africa, Netherlands, Germany, Turkey, United Kingdom, and Vietnam. Brazil accounted for the majority of the increase in "all other sources" from 2013 to 2015.

Source: Compiled from data submitted in response to Commission questionnaires for micro-alloy imports and from official Commerce import statistics (HTS statistical reporting numbers 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000).

Figure IV-1
Corrosion-resistant steel: U.S. import quantities and average unit values, 2013-15



Source: Compiled from data submitted in response to Commission questionnaires for micro-alloy imports and from official Commerce statistics with modifications based on proprietary Customs records (HTS statistical reporting numbers 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000).

Ratio of subject imports to U.S. production

The ratio of subject import quantity to U.S. production increased from 8.5 percent in 2013 to 15.0 percent in 2014, before falling to 14.7 percent in 2015 (table IV-3).

NEGLIGIBILITY

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[3] Negligible imports are generally defined in the Tariff Act of 1930, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the

[3] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[4]

The quantity of U.S. imports in the twelve-month period preceding the filing of the petitions (June 2014 through May 2015) and the share of quantity of total U.S. imports for which each accounted are presented in table IV-4. Subject imports from Italy, the subject country that accounted for the smallest share of total imports, represented *** percent of total imports of corrosion-resistant steel by quantity during June 2014-May 2015. Subject imports from India, the subject country that accounted for the next smallest share of total imports, represented *** percent of total imports of corrosion-resistant steel by quantity during June 2014-May 2015. Subject imports from all subject sources combined accounted for *** percent of total imports during June 2014-May 2015.[5]

Table IV-4
Corrosion-resistant steel: U.S. imports, June 2014 through May 2015

Item	June 2014 - May 2015	
	Quantity (short tons)	Share of quantity (percent)
U.S. imports from.--		
China	***	***
India	***	***
Italy	***	***
Korea[1]	***	***
Taiwan	***	***
Subject sources	3,117,414	65.4
Canada	***	***
All other sources	***	***
Nonsubject sources	1,648,063	34.6
Total U.S. imports	4,765,477	100.0

[1] The share of U.S. imports from Korea other than those from UnionSteel/Dongkuk was *** percent.

Source: Compiled from data submitted in response to Commission questionnaires for micro-alloy imports and from official Commerce statistics (HTS statistical reporting numbers 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000).

CRITICAL CIRCUMSTANCES

Commerce published its final determinations concerning critical circumstances on June 2, 2016 (see table I-2 presented in Part I of this report). These determinations are discussed below.

[4] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

[5] Shares are calculated based on official import statistics, as supplemented with questionnaire responses for micro-alloy corrosion-resistant steel.

Where Commerce has made affirmative final critical circumstances determinations, and if the Commission makes affirmative critical circumstances findings, certain subject imports may be subject to countervailing duties retroactive by 90 days from November 6, 2015, the effective date of Commerce's preliminary countervailing duty determinations. Further, certain subject imports may be subject to antidumping duties retroactive by 90 days from January 4, 2016, the effective date of Commerce's preliminary affirmative antidumping duty determinations.

China (antidumping duty)

In its final antidumping duty critical circumstances determination concerning China, Commerce determined that critical circumstances exist with regard to imports from China of corrosion-resistant steel from Hebei Iron & Steel Co., Ltd. (Tangshan Branch) ("Hebei Tangshan"); Baoshan Iron & Steel Co., Ltd. ("Baoshan"); and all other producers in China, other than Yieh Phui (China) Technomaterial Co., Ltd. ("Yieh Phui"). Table IV-5 presents monthly imports of corrosion-resistant steel by U.S. importers from Chinese producers Hebei Tangshan, Baoshan, and all other producers in China, other than Yieh Phui, for the six-month periods before and after the filing of the petition on June 3, 2015 (December 2014 through May 2015 and June 2015 through November 2015). These data show that U.S. imports from firms receiving affirmative final antidumping duty critical circumstances determinations during the six-month period after the filing of the petition were *** percent lower than during the six-month period prior to the filing of the petition.

Of the 36 firms that reported U.S. imports of corrosion-resistant steel from China during 2013-15, 19 indicated that inventories of the imported merchandise were held in the United States. Reported U.S. importers' inventories of corrosion-resistant steel imported from China amounted to *** short tons at yearend 2014 and *** short tons at yearend 2015. These data, however, are overstated for the purposes of critical circumstances considerations because they include inventories of Yieh Phui product for which Commerce made a negative finding.[6]

Table IV-5
Corrosion-resistant steel: Imports from Chinese producers Hebei Tangshan, Baoshan, and all other producers in China, other than Yieh Phui, December 2014-May 2015 and June 2015-November 2015

* * * * * * *

[6] Four of the 19 firms that held inventories in the United States were importers of product produced by Yieh Phui, as well as product produced by a number of additional firms in China for which there was an affirmative final critical circumstances determination by Commerce. These four firms together accounted for *** percent of total reported inventories of U.S. imports from China at yearend 2014 and *** percent at yearend 2015.

China (countervailing duty)

In its final countervailing duty critical circumstances determination for China, Commerce determined that critical circumstances exist with regard to imports from China of corrosion-resistant steel from Angang Group Hong Kong Co. Ltd. ("Angang"); Duferco S.A. ("Duferco"); Handan Iron & Steel Group ("Handan"); Changshu Everbright Material Technology ("Everbright"); and Baoshan. Table IV-6 presents monthly data of imports of corrosion-resistant steel by U.S. importers from Chinese producers Angang, Duferco, Handan, Everbright, and Baoshan for the six-month periods before and after the filing of the petition on June 3, 2015 (December 2014 through May 2015 and June 2015 through November 2015). These data show that U.S. imports from firms receiving affirmative final countervailing duty critical circumstances determinations during the six-month period after the filing of the petition were *** percent lower than during the six-month period prior to the filing of the petition.

Table IV-6
Corrosion-resistant steel: Imports by U.S. importers from Chinese producers Angang, Baoshan, Duferco, Everbright, and Handan, December 2014-May 2015 and June 2015-November 2015

* * * * * * *

Of the 36 firms that reported U.S. imports of corrosion-resistant steel from China during 2013-15, 14 firms imported from producers in China that received affirmative final countervailing duty critical circumstances determinations (i.e., from Chinese producers Angang, Baoshan, Duferco, Everbright, and Handan). Reported inventories of corrosion-resistant steel imported from China by these 14 firms amounted to *** short tons at yearend 2014 and *** short tons at yearend 2015. These data, however, are overstated for the purposes of critical circumstances considerations because 10 of the 14 importers also held inventories of product imported from firms in China for which Commerce made a negative finding.[7]

Italy (antidumping duty)

In its final antidumping duty critical circumstances determination for Italy, Commerce determined that critical circumstances exist with regard to imports from Italy of corrosion-resistant steel from Marcegaglia S.p.A. ("Marcegaglia"). Table IV-7 presents monthly imports of corrosion-resistant steel by U.S. importers from Italian producer Marcegaglia for the six-month periods before and after the filing of the petition on June 3, 2015 (December 2014 through May 2015 and June 2015 through November 2015). These data show that U.S. imports from Marcegaglia during the six-month period after the filing of the petition were *** percent higher than during the six-month period prior to the filing of the petition.

[7] These 10 firms together accounted for *** percent of inventories of U.S. imports from China held by the 14 firms at yearend 2014 and *** percent at yearend 2015.

Table IV-7
Corrosion-resistant steel: Imports by U.S. importers from Italian producer Marcegaglia, December 2014-May 2015 and June 2015-November 2015

* * * * * * *

Nine importers responding to the Commission's questionnaire in the final phase of these investigations reported U.S. imports of corrosion-resistant steel from Marcegaglia in Italy during 2013-15, *** of which reported holding inventories of the imported merchandise in the United States. There were *** inventories of Marcegaglia's corrosion-resistant steel held in the United States at yearend 2014. Reported yearend 2015 inventories of corrosion-resistant steel imported from Marcegaglia *** amounted to *** short tons.

Italy (countervailing duty)

In its final countervailing duty critical circumstances determination for Italy, Commerce determined that critical circumstances exist with regard to imports from Italy of corrosion-resistant steel from ILVA S.p.A. ("ILVA"). According to Italian producer ILVA and ***, *** is the *** importer of ILVA's corrosion-resistant steel from Italy. Table IV-8 presents monthly imports of corrosion-resistant steel by U.S. importers from Italian producer ILVA for the six-month periods before and after the filing of the petition on June 3, 2015 (December 2014 through May 2015 and June 2015 through November 2015). These data show that U.S. imports from ILVA during the six-month period before the filing of the petition were *** short tons. There were *** U.S. imports from ILVA during the six- month period following the filing of the petition. U.S. importer *** reported holding *** inventories of corrosion-resistant steel imported into the United States from ILVA at yearend 2014 and 2015.

Table IV-8
Corrosion-resistant steel: Imports from Italian producer ILVA, December 2014-May 2015 and June 2015-November 2015

* * * * * * *

Korea (antidumping duty)

In its final antidumping duty critical circumstances determination for Korea, Commerce determined that critical circumstances exist with regard to imports from Korea of corrosion-resistant steel from all producers/exporters in Korea other than Dongkuk Steel Mill Co., Ltd. ("Dongkuk/Union") and Hyundai. Table IV-9 presents monthly imports of corrosion-resistant steel by U.S. importers from all producers/exporters in Korea other than Dongkuk/Union and Hyundai for the six-month periods before and after the filing of the petition on June 3, 2015 (December 2014 through May 2015 and June 2015 through November 2015). These data show that U.S. imports during the six-month period after the filing of the petition were *** percent lower than during the six-month period prior to the filing of the petition.

Table IV-9
Corrosion-resistant steel: Imports from all producers/exporters in Korea, other than Dongkuk/Union and Hyundai, December 2014-May 2015 and June 2015-November 2015

* * * * * * *

Of the 14 firms that reported U.S. imports of corrosion-resistant steel from Korea (other than from Dongkuk/Union and Hyundai), 7 indicated that inventories of the imported merchandise were held in the United States. U.S. importers' end-of-period inventories of corrosion-resistant steel imported from all producers/exporters in Korea, other than Dongkuk/Union and Hyundai, were *** short tons at yearend 2014 and *** short tons at yearend 2015.

Korea (countervailing duty)

In its final countervailing duty critical circumstances determination for Korea, Commerce determined that critical circumstances exist with regard to imports from Korea of corrosion-resistant steel from all producers/exporters in Korea other than Dongbu Steel Co., Ltd. ("Dongbu") and Dongkuk/Union. Table IV-10 presents monthly imports of corrosion-resistant steel by U.S. importers from all producers/exporters in Korea, other than Dongbu and Dongkuk/Union, for the six-month periods before and after the filing of the petition on June 3, 2015 (December 2014 through May 2015 and June 2015 through November 2015). These data show that U.S. imports from firms receiving affirmative final countervailing duty critical circumstances determinations during the six-month period after the filing of the petition were *** percent higher than during the six-month period prior to the filing of the petition.

Table IV-10
Corrosion-resistant steel: Imports from all producers/exporters in Korea, other than Dongbu and Dongkuk/Union, December 2014 through May 2015 and June 2015 through November 2015

* * * * * * *

Of the ten firms that reported U.S. imports of corrosion-resistant steel from Korea (other than from Dongbu and Dongkuk/Union), five indicated that inventories of the imported merchandise were held in the United States. U.S. importers' end-of-period inventories of corrosion-resistant steel imported from all producers/exporters in Korea, other than from Dongbu and Dongkuk/Union, were *** short tons at yearend 2014 and *** short tons at yearend 2015.

Taiwan (antidumping duty)

In its final antidumping duty critical circumstances determinations for Taiwan, Commerce determined that critical circumstances exist with regard to imports from Taiwan of corrosion-resistant steel from all producers/exporters in Taiwan, other than Yieh Phui Enterprises Co., Ltd. ("Yieh Phui") and Prosperity Tieh Enterprises Co., Ltd ("Prosperity").

Table IV-11 presents monthly imports of corrosion-resistant steel by U.S. importers from all producers/exporters in Taiwan, other than Yieh Phui and Prosperity, for the six-month periods before and after the filing of the petition on June 3, 2015 (December 2014 through May 2015 and June 2015 through November 2015). These data show that U.S. imports from firms receiving affirmative final antidumping duty critical circumstances determinations during the six-month period after the filing of the petition were *** percent lower than during the six-month period prior to the filing of the petition.

Table IV-11
Corrosion-resistant steel: Imports from all producers/exporters in Taiwan, other than Yieh Phui and Prosperity, December 2014-May 2015 and June 2015-November 2015

* * * * * * *

Of the 20 firms that reported U.S. imports of corrosion-resistant steel from Taiwan, 5 reported such imports exclusively from firms receiving a negative final critical circumstances finding (i.e., Yieh Phui and Prosperity), 4 reported such imports exclusively from firms receiving an affirmative final critical circumstances finding, and 11 reported imports from both categories of producers. Of the 15 firms that reported imports from firms receiving an affirmative final critical circumstances finding, 11 indicated that inventories of the imported merchandise were held in the United States. The inventories of corrosion-resistant steel held by these 11 importers from Taiwan amounted to *** short tons at yearend 2014 and *** short tons at yearend 2015. These data, however, are overstated for the purposes of critical circumstances considerations because they include some inventories of Yieh Phui and Prosperity product for which Commerce made a negative finding.[8]

CUMULATION CONSIDERATIONS

In assessing whether imports should be cumulated, the Commission determines whether U.S. imports from the subject countries compete with each other and with the domestic like product and has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

[8] Eight of the 11 firms that held inventories in the United States were importers of product produced Yieh Phui and Prosperity, as well as product produced by a number of additional firms in Taiwan for which there was an affirmative final critical circumstances determination by Commerce. These 8 firms together accounted for *** percent of total reported inventories by the 11 importers at yearend 2014 and *** percent at yearend 2015.

Fungibility

Shipments of corrosion-resistant steel, by end use

Table IV-12 presents data for U.S. producers' and U.S. importers' commercial U.S. shipments of corrosion-resistant steel, by end use, during 2015. U.S. producers reported that corrosion-resistant steel is sold mainly for automotive and construction/structural end uses, whereas U.S. importers reported that a majority of U.S. commercial shipments of corrosion-resistant steel imported from the subject countries were sold primarily for construction/structural end uses. The data show that during 2015, 40.6 percent of U.S. commercial shipments of U.S.-produced corrosion-resistant steel was sold for automotive/transportation end uses, 29.6 percent of shipments was sold for construction/structural end uses, 5.0 percent was sold for appliance end uses, and the remaining 24.8 percent was for a wide variety of other end uses or its use was unknown.[9]

U.S. commercial shipments of corrosion-resistant steel imported from China were sold primarily for construction/structural end uses. During 2015, *** percent of U.S. commercial shipments of imports from China was sold for construction/structural end uses, *** percent of shipments was sold for automotive/transportation end uses, *** percent was sold for appliance end uses, and the remaining *** percent was for a variety of other end uses or its use was unknown.[10]

U.S. commercial shipments of corrosion-resistant steel imported from India were sold primarily for construction/structural end uses. During 2015, *** percent of U.S. commercial shipments of imports from India were sold for construction/structural end uses, *** percent were sold for automotive/transportation end uses, *** percent were sold for appliance end uses, and the remaining *** percent were for a variety of other end uses or its use was unknown.[11]

---

[9] Other end uses listed by U.S. producers include the following: batteries, ammunition, ceiling grids, lighting fixtures, furniture, doors, hardware, commercial and electrical equipment, HVAC, machinery and equipment, containers, agriculture, air filters, hose clamps, office furniture, computer cabinets, license plates, walk-in cooler panels, grill parts, expanded metal, tractor trailer, door panels, electronic cabinetry, racking, shelving, industrial fans, converters, grape stakes, grain bins, file folder rods, cooling towers, pipe and tube, swimming pools, and energy applications.

[10] Other end uses listed by U.S. importers of corrosion-resistant steel from China include the following: HVAC, sheet metal, paneling, shelves, cabinets, drums, and recycled materials.

[11] Other end uses listed by U.S. importers of corrosion-resistant steel from India include the following: industrial packaging, shelving, agriculture, tubing, HVAC, steel studs, pails, sheet metal, and swimming pools.

Table IV-12

Corrosion-resistant steel: U.S. producers' and U.S. importers' commercial U.S. shipments, by end use, 2015

Item	U.S. producers	Importers				
		China	India	Italy	Korea	Taiwan
	Quantity (short tons)					
Commercial U.S. shipments by end use.--						
Automotive/transportation	6,327,442	***	***	***	***	***
Construction/structural end Users	4,624,103	***	***	***	***	***
Appliance manufacturers	773,751	***	***	***	***	***
Other applications/end uses/unknown	3,874,916	***	***	***	***	***
Subtotal, commercial U.S. shipments	15,600,212	***	***	***	***	***
	Share of total quantity (percent)					
Commercial U.S. shipments by end use.--						
Automotive/transportation	40.6	***	***	***	***	***
Construction/structural end Users	29.6	***	***	***	***	***
Appliance manufacturers	5.0	***	***	***	***	***
Other applications/end uses/unknown	24.8	***	***	***	***	***
Subtotal, commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0	100.0

Item	Importers				
	Subject	Canada	Other	Nonsubject	Total
	Quantity (short tons)				
Commercial U.S. shipments by end use.--					
Automotive/transportation	322,786	***	***	793,229	1,116,015
Construction/structural end Users	2,221,226	***	***	541,783	2,763,010
Appliance manufacturers	67,943	***	***	21,759	89,702
Other applications/end uses/unknown	208,588	***	***	72,702	281,290
Subtotal, commercial U.S. shipments	2,820,544	***	***	1,429,473	4,250,017
	Share of total quantity (percent)				
Commercial U.S. shipments by end use.--					
Automotive/transportation	11.4	***	***	55.5	26.3
Construction/structural end Users	78.8	***	***	37.9	65.0
Appliance manufacturers	2.4	***	***	1.5	2.1
Other applications/end uses/unknown	7.4	***	***	5.1	6.6
Subtotal, commercial U.S. shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. commercial shipments of corrosion-resistant steel imported from Italy were sold primarily for construction/structural end uses. During 2015, *** percent of U.S. commercial shipments of imports from Italy were sold for construction/structural end uses, *** percent were for automotive/transportation end uses, and the remaining *** percent were sold for a variety of other end uses or its use was unknown.[12] None of the corrosion-resistant steel imported from Italy was reported to be for appliance end uses in 2015.

During 2015, *** percent of U.S. commercial shipments of imports from Korea were sold for construction/structural end uses and *** percent were sold for automotive/transportation end uses. Most of the remaining shipments were for appliance end uses (*** percent) with *** percent sold for other end uses or its use was unknown.[13]

U.S. commercial shipments of corrosion-resistant steel imported from Taiwan were sold primarily for construction/structural end uses. During 2015, *** percent of U.S. commercial shipments of imports from Taiwan were sold for construction/structural end uses, *** percent were sold for automotive/transportation end uses, *** percent were for appliance end uses, and *** percent were sold for other end uses or its use was unknown.[14]

Shipments of corrosion-resistant steel, by type

Table IV-13 presents data for U.S. producers' and U.S. importers' commercial U.S. shipments of corrosion-resistant steel, by type. The overwhelming majority of U.S. shipments by U.S. producers and importers of subject product from China, India, and Italy during 2015 was hot-dip galvanized/galvanneal corrosion-resistant steel. Hot-dip galvanized/galvanneal product and 55% Al-Zn alloy coated product ("Galvalume") accounted for *** percent and *** percent, respectively, of the U.S. shipments of imports from Korea during 2015. A majority of the U.S. shipments of imports from Taiwan was Galvalume, which accounted for *** percent of total U.S. shipments of imports from Taiwan during 2015. Hot-dip galvanized and galvanneal product accounted for *** percent of total U.S. shipments of imports from Taiwan during 2015.

Table IV-13
Corrosion-resistant steel: U.S. producers' shipments, by type, and U.S. importers' shipments by type and country, 2015

* * * * * * *

[12] Other end uses listed by U.S. importers of corrosion-resistant steel from Italy include the following: door skins, clean room manufacturing, medical equipment, refrigeration, walk-in coolers, entry doors, elevators, and commercial appliances.

[13] Other end uses listed by U.S. importers of corrosion-resistant steel from Korea include batteries and HVAC.

[14] The other end uses listed by U.S. importers of corrosion-resistant steel from Taiwan include the following: HVAC, steel studs, packaging, grapevine stakes, sheet metal, and recycled materials.

Galvalume

During 2015, *** percent (*** short tons) of the U.S. producers' shipments and *** percent (*** short tons) of the subject import shipments were Galvalume, which is used primarily in the construction segment of the market to produce steel building components, such as roofing, siding, and panels. The average unit value of 2015 shipments of domestically produced Galvalume was *** short ton. The average unit values of 2015 Galvalume shipments imported from China, India, and Korea at ***, ***, and *** per short ton, respectively, were lower than U.S.-produced Galvalume and the average unit value of 2015 Galvalume shipments imported from Taiwan, at *** per short ton, was higher than U.S.-produced Galvalume. Most (*** percent) of the 2015 shipments of subject imports of Galvalume was imported from Korea and Taiwan combined. Narrow and thin gauge Galvalume[15] accounted for *** percent (*** short tons) of U.S. producers' shipments of Galvalume during 2015 and *** percent (*** short tons) of U.S. shipments of Galvalume by subject imports.

The Korean and Taiwan producers argue that there is limited production of Galvalume in the United States and that domestic producers are not capable of supplying the increase in U.S. demand for the item, especially that of the narrow and thin gauge type. In addition, the Korean producers argue that the Korean-produced Galvalume is considered to be superior to the Galvalume produced in other subject countries in terms of surface condition, shape, and yield characteristics. Although respondents claim that there is a "substantial shortfall" of domestic supply to produce Galvalume,[16] domestic producers argue that the U.S. industry has the capacity to fully satisfy the entire U.S. demand for Galvalume.[17] Domestic producers submit that the only reason the domestic industry does not satisfy the entire U.S. demand for Galvalume "is the surge of imports of Galvalume at prices that significantly undercut the domestic industry price."[18] Six U.S. producers (***) reported in response to supplemental questions by Commission staff in the preliminary phase of these investigations that, given the appropriate market conditions, the combined theoretical maximum capacity to produce the Galvalume product by the U.S. industry is *** short tons.

AHSS 490 and 1180 HDG/ EG steels

As previously noted, the overwhelming majority of U.S. shipments by U.S. producers and importers of subject product from China, India, and Italy during 2015 was hot-dip

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[15] For purposes of this report, "narrow and thin gauge Galvalume" is Galvalume that measures 0.018 inches and thinner and less than 45 inches in width.

[16] Conference transcript, pp. 159-160 (Quartararo); Korean producers' prehearing brief, p. 15; Prosperity Tieh's prehearing brief, p. 14; hearing transcript, p. 205 (Ryoo) and p. 226 (Cameron).

[17] CSI and SDI's postconference brief, p. 13; U.S. Steel's prehearing brief, p. 22; ArcelorMittal's prehearing brief, exh. 3; AK Steel's prehearing brief, p. 11; Nucor's prehearing brief, pp. 29-30; hearing transcript, p. 49 (Teets), p. 60-61 (Matthews), and p. 308 (Schagrin).

[18] CSI and SDI's postconference brief, p. 13; hearing transcript, pp. 49-50 (Teets).

galvanized/galvanneal ("HDG") corrosion-resistant steel. Electrogalvanized ("EG") corrosion-resistant steel accounted for a much smaller share of U.S. producers' and subject importers' shipments at *** and *** percent of total shipments, respectively. Included in the HDG and EG categories are Advanced High Strength Steels ("AHSS") grades 490 and 1180, which are used primarily in the automotive sector. *** U.S. producer (***) reported U.S. shipments of domestically produced AHSS grades 490 and 1180 steel during 2015. During 2015, *** percent (*** short tons) of the U.S. producers' HDG and EG shipments and *** percent (*** short tons) of the subject import HDG and EG shipments was AHSS grade 490 and 1180 HDG and EG. Almost all (*** percent) of the 2015 shipments of subject imports of AHSS 490 and 1180 HDG and EG was imported from Korea.

The Korean respondents argue that although U.S. producers have made capital investments in the development of facilities that are geared toward AHSS grades 490 and 1180 steels, there is currently limited production of AHSS 490 and 1180 by the domestic producers and the U.S. producers are importing this type of steel from nonsubject countries (primarily Canada) to meet the increase in demand in the automotive sector.[19] According to questionnaire data, *** short tons of AHSS 490 and 1180 shipments were imported by ***, firms that are related to U.S. producers. *** reported that, in 2015, it domestically shipped *** short tons of AHSS 490 and 1180 steel imported from ***. *** reported that, in 2015, it domestically shipped *** short tons of AHSS 490 and 1180 steel imported from *** and *** short tons of AHSS 490 and 1180 steel imported from ***.

Light zinc EG steels

As previously indicated, EG corrosion-resistant steel accounted for a minor share of U.S. producers' and subject importers' shipments total domestic shipments of corrosion-resistant steel. Domestic producers' U.S. shipments of EG steels in 2015 amounted to *** short tons and subject importers' U.S. shipments of EG steels in 2015 amounted to *** short tons. Included in the EG category are light zinc EG steels,[20] which are often used in non-automotive products that do not require high corrosion resistance (e.g., precision instruments, such as slot machines, computer cases, and other electronic products). Four U.S. producers (***) reported U.S. shipments of domestically produced light zinc EG steels during 2015. During 2015, *** percent (*** short tons) of the U.S. producers' EG shipments and *** percent (*** short tons) of the subject import EG shipments was light zinc EG steel. Most (*** percent) of the 2015 shipments of subject imports of light zinc EG steel was imported from Korea.

[19] Hearing transcript, p. 203 (Ryoo), pp. 233-234 (Cameron), and p. 275 (Dougan).

[20] For purposes of this report, "light zinc EG" is electrogalvanized steel with a maximum zinc coating per side of 20 grams per square meter, or 40 grams per square meter on both sides.

Pre-painted or paint line quality

Thirteen of the responding 19 U.S. producers indicated that they made commercial U.S. shipments of corrosion-resistant steel that was pre-painted or paint line quality in 2015. These 13 producers reported that they commercially shipped to U.S. customers over 2 million short tons of pre-painted or paint line quality corrosion-resistant steel in 2015, which represented 14.1 percent of total commercial U.S. shipments of corrosion-resistant steel by U.S. producers during 2015.

Fourteen of the 29 firms that reported U.S. imports of corrosion-resistant steel from China in 2015 indicated that they made commercial U.S. shipments of corrosion-resistant steel that was pre-painted or paint line quality. These 14 firms reported that they commercially shipped to U.S. customers *** short tons of pre-painted or paint line quality corrosion-resistant steel in 2015, which accounted for *** percent of total commercial U.S. shipments of corrosion-resistant steel by U.S. importers from China in that year.

Seven of the responding 18 firms that reported U.S. imports of corrosion-resistant steel from India in 2015 indicated that they made commercial U.S. shipments of corrosion-resistant steel that was pre-painted or paint line quality in 2015. These seven firms reported that they commercially shipped to U.S. customers *** short tons of pre-painted or paint line quality corrosion-resistant steel in 2015, which accounted for *** percent of total commercial U.S. shipments of corrosion-resistant steel by U.S. importers from India in that year.

*** was the only U.S. importer of the responding four U.S. importers of corrosion-resistant steel from Italy that reported commercial U.S. shipments of corrosion-resistant steel that was pre-painted or paint line quality in 2015. ***'s commercial U.S. shipments of *** short tons of pre-paint or paint line quality product amounted to *** percent of total commercial U.S. shipments of subject corrosion-resistant steel by U.S. importers from Italy during 2015.

Five of the responding 13 U.S. importers of subject corrosion-resistant steel from Korea indicated that they made commercial U.S. shipments of corrosion-resistant steel that was pre-painted or paint line quality in 2015. These five firms reported that they commercially shipped to U.S. customers *** short tons of pre-painted or paint line quality corrosion-resistant steel in 2015, which accounted for *** percent of total commercial U.S. shipments of subject corrosion-resistant steel by U.S. importers from Korea in that year.

Fourteen of the 20 firms that reported U.S. imports of corrosion-resistant steel from Taiwan in 2015 indicated that they made commercial U.S. shipments of corrosion-resistant steel that was pre-painted or paint line quality in 2015. These 14 firms reported that they commercially shipped to U.S. customers *** short tons of pre-painted or paint line quality corrosion-resistant steel in 2015, which accounted for *** percent of total commercial U.S. shipments of corrosion-resistant steel by U.S. importers from Taiwan in that year.

*** U.S. importers of corrosion-resistant steel from nonsubject Canada that reported commercial U.S. shipments of corrosion-resistant steel that was pre-painted or paint line quality in 2015. *** reported that *** percent of its U.S. commercial shipments of imported corrosion-resistant steel from Canada was of pre-painted or paint line quality corrosion-resistant steel in 2015. ***'s commercial U.S. shipments of *** short tons amounted to ***

percent of total commercial U.S. shipments of corrosion-resistant steel by U.S. importers from Canada during 2015.

Seven of the responding 33 U.S. importers of corrosion-resistant steel from all other nonsubject countries indicated that they made commercial U.S. shipments of corrosion-resistant steel that was pre-painted or paint line quality in 2015. These seven firms reported that they commercially shipped to U.S. customers *** short tons of pre-painted or paint line quality corrosion-resistant steel in 2015, which accounted for *** percent of total commercial U.S. shipments of corrosion-resistant steel by U.S. importers from all other nonsubject countries in that year.

Geographical markets

As noted previously, corrosion-resistant steel production occurs throughout the United States and corrosion-resistant steel is shipped nationwide. As illustrated in table IV-14, the Houston-Galveston, New Orleans, and Los Angeles Customs districts accounted for approximately one-half of the imports of corrosion-resistant steel from the subject countries during 2015. Of the corrosion-resistant steel imported into the United States from China during 2015, more than two-thirds entered through the following three Customs districts: Los Angeles (36.0 percent), Houston-Galveston (21.0 percent), and New Orleans (16.0 percent). Of the corrosion-resistant steel imported into the United States from India during 2015, 79.2 percent entered through the following four Customs districts: Philadelphia (28.2 percent), Savannah (22.5 percent), Houston-Galveston (17.7 percent), and New Orleans (10.8 percent). Of the corrosion-resistant steel imported into the United States from Italy during 2015, 80.0 percent entered through the following three Customs districts: Tampa (32.8 percent), Houston-Galveston (25.7 percent), and Philadelphia (21.5 percent). Of the corrosion-resistant steel imported into the United States from Korea during 2015, more than three-fourths entered through the following three Customs districts: Mobile (37.6 percent), Houston-Galveston (23.6 percent), and New Orleans (17.5 percent).

Table IV-14
Corrosion-resistant steel: Major customs districts of entry for U.S. imports, 2015

Item	Calendar year 2015	
	Quantity (short tons)	Share of quantity (percent)
U.S. imports from China.--		
Los Angeles, CA	279,726	36.0
Houston-Galveston, TX	163,639	21.0
New Orleans, LA	124,638	16.0
Savannah, GA	51,820	6.7
Philadelphia, PA	50,325	6.5
All other districts	107,651	13.8
Total U.S. imports from China	777,799	100.0
U.S. imports from India.--		
Philadelphia, PA	91,420	28.2
Savannah, GA	72,903	22.5
Houston-Galveston, TX	57,320	17.7
New Orleans, LA	35,000	10.8
Tampa, FL	25,784	7.9
All other districts	41,928	12.9
Total U.S. imports from India	324,354	100.0
U.S. imports from Italy.--		
Tampa, FL	54,668	32.8
Houston-Galveston, TX	42,833	25.7
Philadelphia, PA	35,853	21.5
New Orleans, LA	8,963	5.4
Cleveland, OH	5,490	3.3
All other districts	18,629	11.2
Total U.S. imports from Italy	166,436	100.0
U.S. imports from Korea.--		
Mobile, AL	246,380	37.6
Houston-Galveston, TX	154,210	23.6
New Orleans, LA	114,418	17.5
Los Angeles, CA	36,758	5.6
Savannah, GA	26,602	4.1
All other districts	76,403	11.7
Total U.S. imports from Korea	654,771	100.0
U.S. imports from Taiwan.--		
New Orleans, LA	169,620	25.5
Houston-Galveston, TX	153,654	23.1
Savannah, GA	124,522	18.7
Los Angeles, CA	84,178	12.7
Philadelphia, PA	41,743	6.3
All other districts	91,223	13.7
Total U.S. imports from Taiwan	664,939	100.0

Note.-- Data presented do not include micro-alloy imports.

Source: Compiled from official Commerce statistics (HTS statistical reporting numbers 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000).

Presence in the market

Table IV-15 and figures IV-2 and IV-3 present monthly U.S. imports during 2013-15. These data show that imports of corrosion-resistant steel from the subject countries were present in the U.S. market in every month during the period examined from January 2013 to December 2015.

Table IV-15

Corrosion-resistant steel: Monthly U.S. imports and U.S. producers' total shipments, by source, January 2013 through April 2016

Item	Source								
	United States	China	India	Italy	Korea	Taiwan	Subject	Non-subject	Total imports
	Quantity (short tons)								
2013.--									
January	1,521,613	33,009	39,514	272	26,761	20,228	119,785	108,727	228,511
February	1,434,413	36,141	1,993	288	35,066	33,936	107,424	86,168	193,593
March	1,447,764	33,220	34,951	390	33,638	37,157	139,356	99,095	238,450
April	1,517,589	21,088	18,846	8,596	27,730	48,956	125,216	86,108	211,323
May	1,509,994	33,415	36,788	12,860	45,471	23,881	152,414	80,592	233,006
June	1,445,317	14,677	21,412	490	10,114	32,292	78,985	75,092	154,076
July	1,428,978	20,274	6,546	405	21,901	27,559	76,685	89,060	165,745
August	1,530,543	15,247	28,782	5,761	60,543	27,292	137,625	105,046	242,671
September	1,568,968	32,977	21,735	8,692	31,112	27,264	121,781	94,170	215,951
October	1,607,392	46,867	63,325	2,444	43,634	65,053	221,323	101,693	323,017
November	1,496,858	26,903	10,363	876	31,328	29,766	99,235	91,496	190,731
December	1,394,453	19,516	40,245	8,660	22,615	26,691	117,727	84,576	202,303
2014.--									
January	1,466,286	44,230	44,205	8,093	48,868	61,029	206,424	108,565	314,989
February	1,452,615	35,814	64,823	5,721	26,598	38,029	170,986	99,152	270,137
March	1,535,993	47,735	52,779	12,675	41,639	60,331	215,160	94,182	309,342
April	1,529,005	92,487	25,583	1,326	42,877	51,261	213,535	113,454	326,988
May	1,510,418	104,447	52,553	5,755	33,669	62,159	258,584	114,425	373,008
June	1,541,371	69,897	36,694	13,369	35,578	45,380	200,918	130,005	330,923
July	1,514,614	105,606	16,627	14,620	59,362	60,538	256,754	119,698	376,452
August	1,522,038	73,797	35,628	10,133	50,872	69,638	240,069	120,410	360,479
September	1,600,880	96,005	35,273	29,231	28,447	59,627	248,583	129,140	377,723
October	1,619,865	138,922	32,899	6,687	60,297	56,473	295,277	125,966	421,243
November	1,430,486	72,833	63,898	20,747	50,227	61,212	268,917	97,629	366,546
December	1,489,068	67,529	52,807	5,989	11,104	45,540	182,969	120,579	303,548

Table continued on following page.

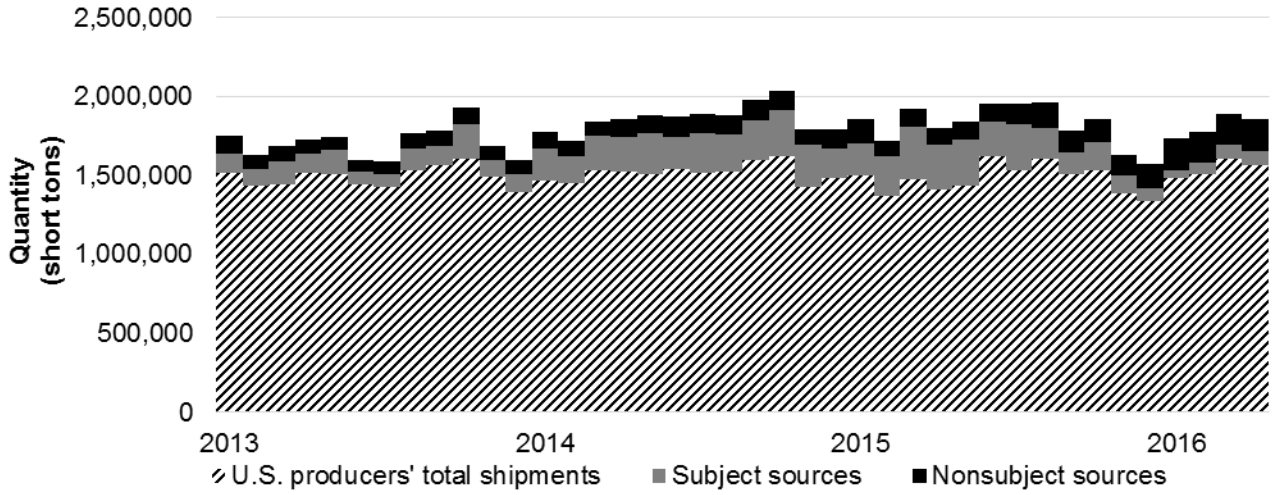
Table IV-15 -- Continued
Corrosion-resistant steel: Monthly U.S. imports and U.S. producers' total shipments, by source, January 2013 through April 2016

Item	Source								
	United States	China	India	Italy	Korea	Taiwan	Subject	Non-subject	Total imports
	Quantity (short tons)								
2015.--									
January	1,503,402	54,275	3,930	15,599	69,468	58,467	201,739	154,333	356,072
February	1,370,327	115,168	37,681	12,775	35,100	52,785	253,508	97,821	351,329
March	1,474,018	104,473	67,016	17,925	67,248	76,796	333,458	114,239	447,697
April	1,414,380	98,460	34,563	8,441	73,518	67,546	282,527	104,434	386,961
May	1,432,798	144,532	26,284	31,075	44,124	53,231	299,247	107,463	406,709
June	1,624,363	60,168	41,709	12,827	36,421	69,602	220,727	112,842	333,568
July	1,534,915	136,277	35,977	16,054	55,559	48,385	292,252	127,912	420,164
August	1,608,465	40,815	36,726	7,726	29,571	82,462	197,301	154,452	351,753
September	1,512,776	14,306	3,839	23,448	55,176	38,443	135,212	134,430	269,642
October	1,533,109	4,012	21,491	1,187	65,386	84,281	176,357	149,966	326,322
November	1,384,118	2,425	14,852	18,151	68,421	13,954	117,804	130,334	248,138
December	1,339,829	2,895	289	1,230	54,783	18,994	78,191	155,298	233,489
2016.--									
January	1,488,903	1,695	117	4,968	13,755	20,933	41,468	205,890	247,359
February	1,507,040	2,188	13,006	298	51,330	7,722	74,544	192,057	266,601
March	1,608,007	1,954	14,863	700	43,950	26,684	88,150	198,903	287,054
April	1,563,271	2,126	16,146	8,655	34,073	30,659	91,660	202,943	294,603

Source: AISI monthly alloy and carbon steel reports (reporting U.S. producers include ***), compiled May 31, 2016 (published with permission), and official U.S. import statistics using statistical reporting numbers 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000, accessed May 27, 2016. The data presented do not include micro-alloy imports.

Figure IV-2

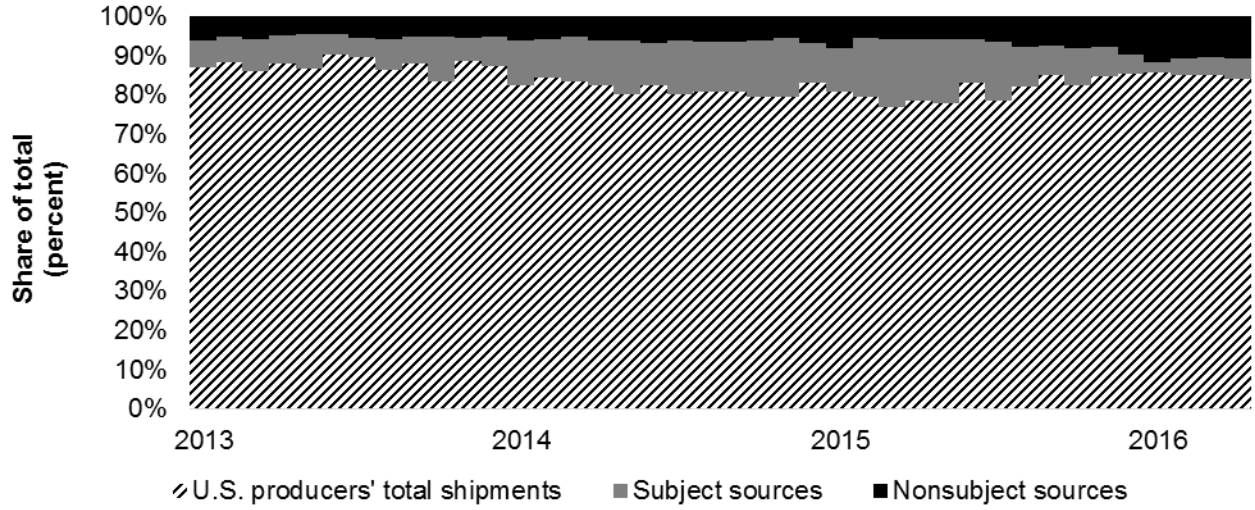
Corrosion-resistant steel: Monthly U.S. imports and U.S. producers' total shipments, by source, January 2013 through December 2015



Source: AISI monthly alloy and carbon steel reports, compiled May 31, 2016 (published with permission), and official U.S. import statistics using statistical reporting numbers 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000, accessed May 27, 2016. The data presented do not include micro-alloy imports.

Figure IV-3

Corrosion-resistant steel: Monthly U.S. imports and U.S. producers' total shipments, by source, January 2013 through December 2015



Source: AISI monthly alloy and carbon steel reports, compiled May 31, 2016 (published with permission), and official U.S. import statistics using statistical reporting numbers 7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000, accessed May 27, 2016. The data presented do not include micro-alloy imports.

APPARENT U.S. CONSUMPTION

Table IV-16 and figure VI-5 present data on apparent U.S. consumption of corrosion-resistant steel. These data show that apparent consumption quantity increased by 10.1 percent from 2013 to 2014 but fell by 2.4 percent from 2014 to 2015. An overall consumption increase of 7.5 percent was reported for 2013 to 2015.

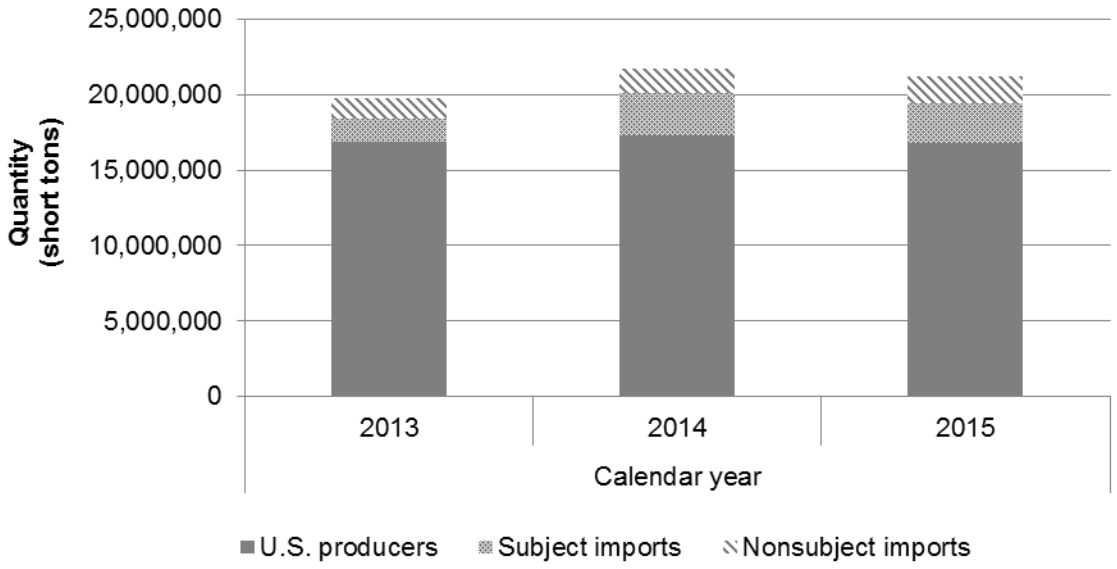
Table IV-16
Corrosion-resistant steel: Apparent U.S. consumption, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
U.S. producers' U.S. shipments	16,923,465	17,371,112	16,833,387
U.S. imports from.--			
China	***	***	***
India	***	***	***
Italy	***	***	***
Korea	***	***	***
Taiwan	***	***	***
Subject sources	1,532,976	2,805,365	2,646,023
Canada	***	***	***
All other sources	***	***	***
Nonsubject sources	1,320,024	1,602,921	1,785,822
Total U.S. imports	2,852,999	4,408,286	4,431,844
Apparent U.S. consumption	19,776,464	21,779,398	21,265,231
	Value (1,000 dollars)		
U.S. producers' U.S. shipments	14,706,712	15,551,621	13,451,548
U.S. imports from.--			
China	***	***	***
India	***	***	***
Italy	***	***	***
Korea	***	***	***
Taiwan	***	***	***
Subject sources	1,355,139	2,361,932	2,071,130
Canada	***	***	***
All other sources	***	***	***
Nonsubject sources	1,276,567	1,509,320	1,532,955
Total U.S. imports	2,631,706	3,871,252	3,604,085
Apparent U.S. consumption	17,338,418	19,422,873	17,055,633

Note.—Apparent U.S. consumption data calculated using U.S. shipments of imports from questionnaire responses are as follows: 2013--19,506,061 short tons ($17,124,625,000); 2014—21,070,256 ($18,886,239,000); and 2015—20,781,433 ($16,796,486,000).

Source: Compiled from data submitted in response to Commission questionnaires for micro-alloy imports and from official Commerce import statistics (7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000).

Figure IV-5
Corrosion-resistant steel: Apparent U.S. consumption, 2013-15



Source: Compiled from data submitted in response to Commission questionnaires for micro-alloy imports and from official Commerce import statistics (7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000).

U.S. MARKET SHARES

U.S. market share data for corrosion-resistant steel are presented in table IV-17. These data show that the U.S. producers' market share declined by 6.4 percentage points from 2013 to 2015 and that the market share held by the subject sources increased by 4.7 percentage points overall during the same period.

Table IV-17
Corrosion-resistant steel: Market shares, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
Apparent U.S. consumption	19,776,464	21,779,398	21,265,231
	Share of quantity (percent)		
U.S. producers' U.S. shipments	85.6	79.8	79.2
U.S. imports from.--			
China	***	***	***
India	***	***	***
Italy	***	***	***
Korea	***	***	***
Taiwan	***	***	***
Subject sources	7.8	12.9	12.4
Canada	***	***	***
All other sources	***	***	***
Nonsubject sources	6.7	7.4	8.4
Total U.S. imports	14.4	20.2	20.8
	Value (1,000 dollars)		
Apparent U.S. consumption	17,338,418	19,422,873	17,055,633
	Share of value (percent)		
U.S. producers' U.S. shipments	84.8	80.1	78.9
U.S. imports from.--			
China	***	***	***
India	***	***	***
Italy	***	***	***
Korea	***	***	***
Taiwan	***	***	***
Subject sources	7.8	12.2	12.1
Canada	***	***	***
All other sources	***	***	***
Nonsubject sources	7.4	7.8	9.0
Total U.S. imports	15.2	19.9	21.1

Source: Compiled from data submitted in response to Commission questionnaires for micro-alloy imports and from official Commerce import statistics (7210.30.0030, 7210.30.0060, 7210.41.0000, 7210.49.0030, 7210.49.0091, 7210.49.0095, 7210.61.0000, 7210.69.0000, 7210.70.6030, 7210.70.6060, 7210.70.6090, 7210.90.6000, 7210.90.9000, 7212.20.0000, 7212.30.1030, 7212.30.1090, 7212.30.3000, 7212.30.5000, 7212.40.1000, 7212.40.5000, 7212.50.0000, and 7212.60.0000).

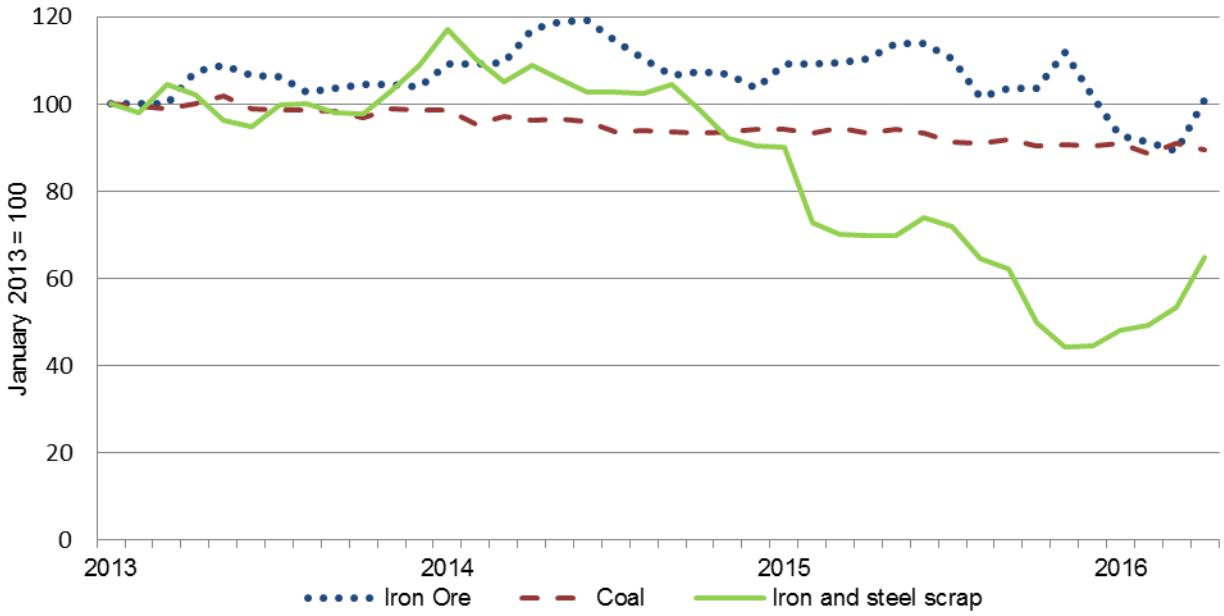
PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

The primary raw material inputs to corrosion-resistant steel include iron ore, coal, iron and steel scrap, and coating materials such as zinc and aluminum. Prices for these raw materials fluctuated during January 2013-December 2015, though the prices for each input showed an overall decrease. Prices for iron ore, coal, and iron and steel scrap decreased by 0.4 percent, 9.9 percent, and 56.6 percent, respectively, between January 2013 and December 2015 (figure V-1).[1] Zinc and aluminum also decreased. U.S. producers' raw materials costs as a share of the cost of goods sold (COGS) decreased from 68.8 percent in 2013 to 66.9 percent in 2015.

Figure V-1
Input prices: Producer price indexes of iron ore, coal, and iron and steel scrap in the United States, monthly, January 2013-April 2016



Source: U.S. Bureau of Labor Statistics, May 26, 2016.

[1] U.S. producers utilize different raw materials in their production of steel, and have different methods of procuring these raw materials, depending on their degree of vertical integration.

One source indicated that U.S. steel prices have little relation to benchmark iron ore prices in the short-term because of U.S. producers' captive production of iron ore, purchases of iron ore under long-term contracts, and use of steel scrap. Market Realist, http://marketrealist.com/2016/03/scrap-iron-ore-drives-us-steel-prices/, retrieved June 6, 2016.

Korean respondents stated that strong demand in U.S. scrap producers' export markets has resulted in increasing scrap prices in early 2016.[2]

The immediate upstream inputs to corrosion-resistant steel are cold-rolled steel sheet and hot-rolled steel sheet. This steel sheet is then coated or plated with a corrosion- or heat-resistant metal, such as zinc (galvanized), aluminum, or any of several zinc-aluminum alloys to create corrosion resistant steel.

Figure V-2 presents *** cash prices for zinc and aluminum, the main coating materials used in the production of corrosion-resistant steel. Prices for both zinc and aluminum fluctuated during January 2013-December 2015, though the price of zinc decreased overall by *** percent and the price of aluminum decreased by *** percent.[3]

Figure V-2

Coating material costs: * cash prices of zinc and aluminum, by month, January 2013-April 2016**

* * * * * * *

Figure V-3 shows the prices of cold-rolled steel, hot-rolled steel, and corrosion resistant steel. According to *** data, between January 2013 and December 2015, U.S. prices of hot-dipped galvanized steel decreased by *** percent, prices of cold-rolled coil decreased by *** percent, and prices of hot-rolled coil decreased by *** percent. Prices for hot-dipped galvanized steel increased by *** percent from December 2015 to April 2016. Prices for cold-rolled coil and hot-rolled coil, the upstream products for corrosion-resistant steel, have increased by *** and *** percent, respectively, in the first four months of 2016. The price spread between corrosion-resistant steel and cold-rolled was relatively stable, while the spread between corrosion-resistant steel and hot-rolled steel increased during 2013-15, particularly early-to-mid 2015. Both spreads widened in early 2016.[4]

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[2] Korean respondents' posthearing brief, Responses to Commissioner Questions, p. 58.

[3] Industry sources suggest that the primary drivers of these price changes are the concurrent increase in demand and decrease in supply of zinc, and a general weakness in demand – especially in China – for aluminum. See http://www.wallstreetdaily.com/2014/09/22/zinc-prices/, http://marketrealist.com/2014/09/why-rising-premiums-benefit-aluminum-companies/.

[4] Corrosion-resistant steel prices were *** per short ton higher than cold-rolled coil prices in both January 2013 and December 2015, but the spread increased to *** per short ton in April 2016. Corrosion-resistant steel prices were *** per short ton higher than hot-rolled coil prices in January 2013 and *** per short ton higher in December 2015. The spread increased to *** per ton in April 2016. According to American Metal Market, cold-rolled sheet and coated sheet prices have continued to increase through June 2016, increasing the spread between hot-rolled steel prices and cold-rolled and coated steel prices. American Metal Market, "Hot-rolled Stalls, Coated Races Ahead," June 3, 2016.

Figure V-3
Corrosion-resistant steel: Steel sheet product prices, USA Midwest, January 2013-April 2016

* * * * * * *

Most firms reported that raw material prices fluctuated or decreased from January 2013 to December 2015. Nine of 18 responding U.S. producers reported that raw material prices fluctuated, while eight reported that they decreased and one reported that they increased.[5]

U.S. producers that reported a decrease in raw material costs cited lower commodity steel, scrap, and slab pricing and reduced prices for hot-rolled based substrates for coating.[6]

Fifty of 52 responding importers reported that raw material prices decreased or fluctuated (25 importers each) from January 2013 to December 2015. The importers that reported a decrease in raw material costs cited decreases in iron ore, scrap, energy inputs, and substrate prices. Eighteen responding importers reported that prices trends of corrosion-resistant steel are consistent with the trends in raw material and hot-rolled steel prices.

Petitioners argued that pricing for iron ore and steel scrap is derived from demand, and that the decline in raw material prices was a result of declining demand due to "flat" production.[7]

Energy costs

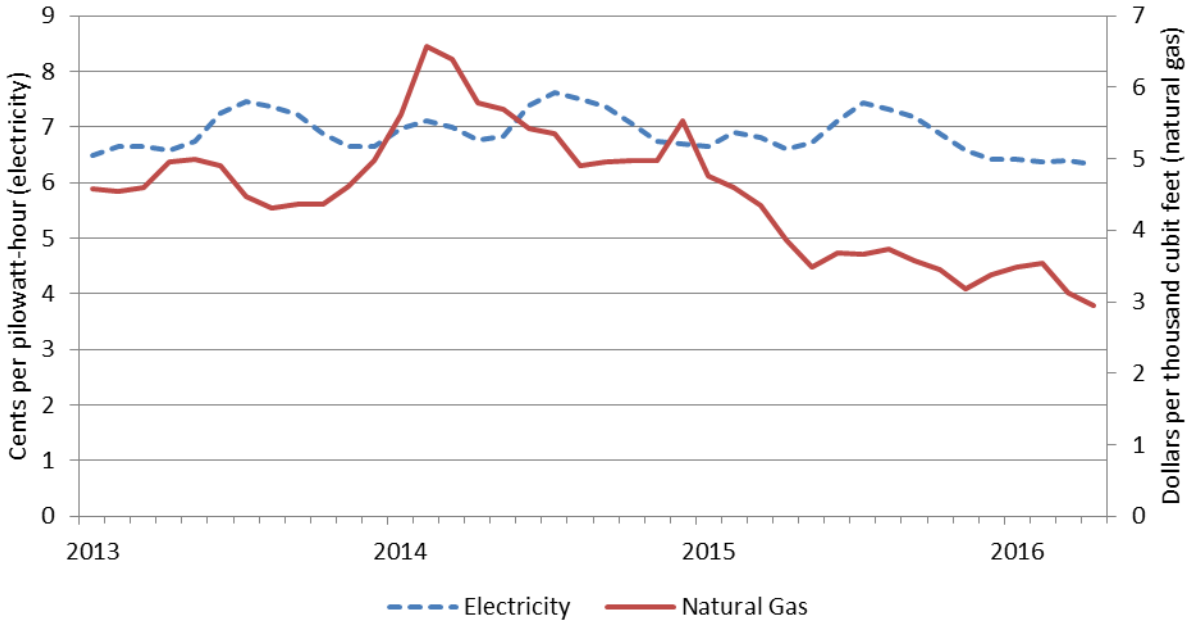
Energy costs are also a factor in corrosion-resistant steel production costs. As shown in figure V-4, electricity prices fluctuated slightly from January 2013 to December 2016, but decreased overall by 1.2 percent. Natural gas prices fluctuated between a low price of $3.18 per kilowatt hour in November 2015 and a high price of $6.58 per kilowatt hour in February 2014, and showed an overall decrease in price of 26.2 percent. Two U.S. producers, four importers, and three purchasers indicated that gas and oil prices may indirectly impact corrosion-resistant steel prices by affecting production and transportation costs.

[5] U.S. producer *** reported that the price of zinc increased *** since 2012, but that "***."

[6] In April 2015, during U.S. producer Nucor's quarterly earnings conference call, the firm's president and CEO noted that their St. James Parish, Louisiana facility – which produces direct-reduced iron ("DRI") – produced 1.3 million tons of DRI during the previous year, and that this was a "meaningful factor supporting February {2015}'s dramatic downward adjustment of more than $100 per ton in scrap pricing." Nucor Corporation's Q1 2015 Earnings conference call transcript, available at http://s.t.st/media/xtranscript/2015/Q2/13125011.pdf. Conference transcript, pp. 139-141 (Corkran, Blume).

[7] Nucor's prehearing brief, p. 28.

Figure V-4
Industrial natural gas and electricity: Monthly prices, January 2013-April 2016



Source: Short Term Energy Outlook, Energy Information Administration, www.eia.gov, June 2, 2016.

U.S. inland transportation costs

Twelve of 17 responding U.S. producers and 30 of 48 importers reported that they typically arrange transportation to their customers. U.S. producers reported that their U.S. inland transportation costs ranged from 2 to 11 percent (averaging 5.1 percent) of the total delivered costs. Nearly all responding importers reported that their U.S. inland transportation costs ranged from 1 to 10 percent (averaging 5.0 percent).[8]

PRICING PRACTICES

Pricing methods

U.S. producers and importers reported using mainly transaction-by-transaction negotiations and contracts to determine prices. As presented in table V-1, U.S. producers and importers reported primarily using transaction-by-transaction pricing methods and contracts, with importers using transaction-by-transaction pricing more often than U.S. producers. U.S. producers and importers reported small variations in pricing methods depending on the type of end user.

[8] One importer, ***, reported inland transportation costs of 18 percent to its customers ***.

Table V-1

Corrosion-resistant steel: U.S. producers and importers reported price setting methods, by number of responding firms[1]

Method	U.S. producers				
	Automotive	Construction	Appliances	Other end users	Distributors
Transaction-by-transaction	7	16	9	14	17
Contract	8	11	6	8	12
Set price list	1	1	1	1	1
Other	3	3	3	2	3
All responding firms	12	17	12	15	18
Method	**U.S. importers**				
	Automotive	**Construction**	**Appliances**	**Other end users**	**Distributors**
Transaction-by-transaction	10	34	6	17	32
Contract	12	11	5	6	13
Set price list	1	1	1	0	1
Other	0	0	0	0	0
All responding firms	19	40	12	19	38

[1] The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. producers reported that more than half of their sales were under annual and long-term contracts in 2015 (43.3 percent and 14.1 percent, respectively, of U.S. commercial shipments), while importers reported that more than 90 percent of sales were under short-term contracts and spot sales (48.7 percent and 45.6 percent, respectively), as shown in table V-2.

Table V-2

Corrosion-resistant steel: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2015

Item	U.S. producers	Subject U.S. importers
	Share (percent)	
Share of commercial U.S. shipments.--		
Long-term contracts	14.1	1.0
Annual contract	43.3	4.7
Short-term contracts	9.7	48.7
Spot sales	32.9	45.6

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

Source: Compiled from data submitted in response to Commission questionnaires.

Short-term contracts generally ranged from 30 to 180 days, and long-term contracts generally ranged from 1.5 to 3 years for both producers and importers. U.S. producer *** also reported evergreen contracts (long-term contracts that renew after a certain period of time unless cancelled by the customer). Respondents argued that since imports were filling a supply gap, they cannot get long-term contracts. Specifically, auto manufacturers want to maintain supply over a longer period of time because of the specifications and requirements for a particular model.[9] Ford stated that its contracts do not include maximum or minimum volume requirements to allow for the flexibility to match supply of steel with demand for vehicles using that steel.[10]

Most U.S. producers and importers do not offer price renegotiation or meet-or-release provisions under their short-term and annual contracts. Some U.S. producers reported offering price renegotiation under long-term contracts. Contract negotiations take place throughout the year, but for some business segments, contract negotiations generally start at the end of the third quarter and are concluded by the early part of the following year.[11]

Twenty-one purchasers reported that they purchase product monthly, seven purchase weekly, and eleven purchase daily. Forty of forty-two responding purchasers reported that their purchasing patterns had not changed since 2013. On average, purchasers contact between 2 and 6 suppliers before making a purchase. However, some purchasers reported that they contact as few as one supplier and as many as 18 suppliers.

The majority of purchasers reported that their purchases involve negotiations (38 of 41 purchasers), and that raw material prices affect these negotiations (37 of 42 purchasers). Most purchasers indicated that their purchase prices are not indexed to raw material costs in either contract purchases or spot purchases, but 11 purchasers (including large purchasers ***) reported use of CRU, Platts, and LME indexes.

There are a variety of contract arrangements. Some contracts follow spot pricing with a lag of three to six months, while other contracts may be fixed for the whole year.[12] Ford stated its contracts with domestic mills do not have index-based pricing, ***.[13] Korean respondents argued that raw material price trends, particularly for scrap and hot-rolled steel, are readily available, and customers are aware of these trends when negotiating contracts. [14] Ford enters into term contracts in which the supplier agrees to supply all of Ford's requirements at a fixed price for the term of the contract, but over time, the length of these contracts have shortened

[9] Hearing transcript, pp. 271-72 (Geroldi, Biagi, Dougan).

[10] Ford's posthearing brief, p. 6.

[11] Hearing transcript, pp. 105-6, 111 (Longhi, Blume, Mull).

[12] U.S. Steel's prehearing brief, p. 33; Nucor's prehearing brief, pp. 23, 26; hearing transcript, pp. 106-7, 112, 154 (Blume, Longhi, Mull, and Lauschke).

[13] Ford's posthearing brief, p. 5.

[14] Korean respondents' posthearing brief, Responses to Commission Questions, p. 64.

from *** in some cases, despite its consistent preference for long-term contracts that offer more pricing and availability predictability.[15]

Some contracts have adjustments based on raw material prices.[16] Petitioner AK Steel stated that ***.[17]

According to petitioners, many customers attempt to renegotiate contracts through "foreign fighter" requirements, which require U.S. producers to match subject import prices or discount their own prices to maintain contract volumes.[18] Through these requirements, customers request that U.S. producers meet the competing price, or lose their business.[19] Ford stated that the prices it pays are determined ***.[20]

Sales terms and discounts

U.S. producers typically quote prices on an f.o.b. basis, while importers typically quote on a delivered basis. Most producers and importers reported no discounts. Some U.S. producers reported offering quantity and/or annual total volume discounts, and others reported that while their firms do not have a specific discount policy, they occasionally offer volume incentives or discounts on a case-by-case basis. U.S. producer *** reported that it offers annual volume discounts to some consumer appliance end users and some steel service centers and distributors, but that it does not offer such discounts to automotive or construction end users. U.S. producer *** reported some volume discounts for *** OEMs. Five importers reported discounts for early payment, and one importer *** reported that it occasionally offers quantity discounts on back-to-back orders.

The most commonly reported sales term among U.S. producers and importers was net 30 days, regardless of customer type. The next most commonly reported sales terms were net 60 days, and ½ 10 net 30 days. U.S. producer *** reported that some OEM business carries net 60 day terms, and importer *** reported that it usually offers net 30 day terms for construction and consumer appliance end users, and net 30 and net 60 day terms for steel service centers and distributors. Two importers (***) reported requiring cash in advance.

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[15] Ford's prehearing brief, p. 13. Ford stated that it generally pays a higher price for the longer contracts, but has accepted contract terms shorter than its preference because it is unwilling to pay these higher prices. Ford's posthearing brief, pp. 6-7.

[16] Hearing transcript, p. 154 (Lauschke).

[17] AK Steel's posthearing brief, Responses to Questions from the Commission, p. 24.

[18] U.S. Steel's posthearing brief, Response to Commissioner's Questions, p. 13. ***. AMUSA's posthearing brief, Exhibit 1, p. 24.

[19] AMUSA's prehearing brief, p. 9; hearing transcript, p. 177 (Hausman).

[20] Ford's prehearing brief, p. 4.

Paint rebates

Most purchasers (32 of 35) reported that they did not receive rebates from a paint producer for painted corrosion-resistant steel purchases. Two of the three purchasers that reported rebates indicated that the rebates are not reflected in the final price paid to the corrosion-resistant steel producer. Purchaser *** reported that rebates may be reflected in the final price, depending on the supplier and the supply chain. Purchaser *** reported that foreign producers do not offer rebate programs while domestic producers do offer such programs: "for painted material that is produced in the United States, the paint manufacturer will offer a rebate at the end of the year to the {paint} purchaser based on the volume of paint consumed for that year. Therefore prices of paint material produced in the United States will appear higher than the actual cost after the rebate is received."

Price leadership

Many purchasers reported that U.S. producers Nucor (14 purchasers), Arcelor Mittal (8), U.S. Steel (6), and AK Steel (5) were price leaders. Other firms reported as price leaders include CSI, Duferco, Top Gun/NLMK, Prosperity, SDI, Thomas Steel, Tata Steel, and Steelscape (reported by one purchaser each). Purchaser *** reported that Nucor drives the minimill pricing and ArcelorMittal drives prices as a global company. Purchaser *** reported that the largest U.S. mills are the main drivers of price in the United States.

PRICE DATA

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following corrosion-resistant steel products shipped to unrelated U.S. customers during 2013-15.[21] [22]

***Product 1*.--** Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), *bare*, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, *not* sold by contract

***Product 2*.--** Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), *pre-painted*, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, *not* sold by contract

[21] Contract sales include sales under annual or long-term contracts.

[22] The final phase questionnaires did not define "sold by contract." Staff followed up with all firms reporting contract sales to verify the length of the contract. Sales not made under annual or long-term contracts were reassigned to "not sold by contract." Staff made these adjustments for the following 13 importers: ***.

***Product 3*.--** Hot-dipped galvanized steel sheet, *unpainted,* commercial steel type, B, G-30 to G-60 coating weight, 24 inches to 60 inches in width, 0.012 inches to 0.018 inches in thickness, *not* sold by contract

***Product 4*.--** Hot-dipped galvanized steel sheet, *unpainted*, structural steel quality, G-60 to G-90 coating weight, 24 inches to 60 inches in width, 0.024 inches to 0.06 inches in thickness, *not* sold by contract

***Product 5*.--** Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), *bare*, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, sold by contract

***Product 6*.--** Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), *pre-painted*, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, sold by contract

***Product 7*.--** Hot-dipped galvanized steel sheet, *unpainted,* commercial steel type, B, G-30 to G-60 coating weight, 24 inches to 60 inches in width, 0.012 inches to 0.018 inches in thickness, sold by contract

***Product 8*.--** Hot-dipped galvanized steel sheet, *unpainted*, structural steel quality, G-60 to G-90 coating weight, 24 inches to 60 inches in width, 0.024 inches to 0.06 inches in thickness, sold by contract

Thirteen U.S. producers and 39 importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[23] Pricing data reported by these firms accounted for approximately 13.6 percent of U.S. producers' U.S. commercial shipments of corrosion-resistant steel in 2015, 26.9 percent of product from China, 46.2 percent of product from India, 39.5 percent of product from Italy, 22.7 percent of product from Korea, and 52.5 percent of product from Taiwan.

Price data for products 1-8 are presented in tables V-3 to V-10 and figures V-5 to figure V-12. Prices for nonsubject imports from Canada are presented in Appendix D.

[23] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

Table V-3

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of domestic and imported product 1[1] and margins of underselling/(overselling), by quarters, January 2013-December 2015

Period	United States		China			India		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:								
Jan.-Mar.	949	35,099	***	***	***	***	***	***
Apr.-Jun.	918	38,976	***	***	***	---	***	---
Jul.-Sep.	943	33,617	903	1,756	4.2	***	***	***
Oct.-Dec.	935	40,169	794	4,599	15.1	***	***	***
2014:								
Jan.-Mar.	970	24,484	811	26,643	16.5	***	***	***
Apr.-Jun.	965	27,626	887	5,296	8.1	***	***	***
Jul.-Sep.	964	28,735	928	5,972	3.7	***	***	***
Oct.-Dec.	955	24,236	***	***	***	***	***	***
2015:								
Jan.-Mar.	919	20,868	***	***	***	***	***	***
Apr.-Jun.	816	29,433	***	***	***	***	***	***
Jul.-Sep.	812	35,439	***	***	***	***	***	***
Oct.-Dec.	788	33,261	***	***	***	***	***	***

Period	Italy			Korea			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:									
Jan.-Mar.	---	***	---	***	***	***	***	***	***
Apr.-Jun.	---	***	---	***	***	***	***	***	***
Jul.-Sep.	---	***	---	***	***	***	***	***	***
Oct.-Dec.	---	***	---	***	***	***	***	***	***
2014:									
Jan.-Mar.	---	***	---	***	***	***	***	***	***
Apr.-Jun.	---	***	---	***	***	***	***	***	***
Jul.-Sep.	---	***	---	***	***	***	***	***	***
Oct.-Dec.	---	***	---	***	***	***	***	***	***
2015:									
Jan.-Mar.	---	***	---	***	***	***	***	***	***
Apr.-Jun.	---	***	---	***	***	***	***	***	***
Jul.-Sep.	---	***	---	***	***	***	***	***	***
Oct.-Dec.	---	***	---	***	***	***	***	***	***

[1] Product 1: Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), bare, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, not sold by contract.

Note.-- Staff removed pricing data reported by ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-4

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of domestic and imported product 2[1] and margins of underselling/(overselling), by quarters, January 2013-December 2015

Period	United States		China			India		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:								
Jan.-Mar.	1,337	44,843	1,055	2,011	21.1	---	***	---
Apr.-Jun.	1,321	51,507	1,094	2,711	17.2	---	***	---
Jul.-Sep.	1,355	57,530	995	1,852	26.6	---	***	---
Oct.-Dec.	1,401	52,326	865	3,288	38.2	***	***	***
2014:								
Jan.-Mar.	1,406	35,647	***	***	***	***	***	***
Apr.-Jun.	1,378	48,850	***	***	***	---	***	---
Jul.-Sep.	1,394	44,218	***	***	***	***	***	***
Oct.-Dec.	1,384	40,989	1,014	766	26.8	***	***	***
2015:								
Jan.-Mar.	1,345	38,111	1,044	1,948	22.3	---	***	---
Apr.-Jun.	***	***	***	***	***	---	***	---
Jul.-Sep.	***	***	***	***	***	---	***	---
Oct.-Dec.	***	***	---	***	---	---	***	---

Period	Italy			Korea			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:									
Jan.-Mar.	---	***	---	***	***	***	***	***	***
Apr.-Jun.	---	***	---	***	***	***	***	***	***
Jul.-Sep.	---	***	---	***	***	***	***	***	***
Oct.-Dec.	---	***	---	***	***	***	***	***	***
2014:									
Jan.-Mar.	---	***	---	***	***	***	***	***	***
Apr.-Jun.	---	***	---	***	***	***	***	***	***
Jul.-Sep.	---	***	---	***	***	***	***	***	***
Oct.-Dec.	---	***	---	***	***	***	***	***	***
2015:									
Jan.-Mar.	---	***	---	***	***	***	***	***	***
Apr.-Jun.	---	***	---	***	***	***	***	***	***
Jul.-Sep.	---	***	---	***	***	***	***	***	***
Oct.-Dec.	---	***	---	***	***	***	***	***	***

[1] Product 2: Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), pre-painted, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, not sold by contract.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-5

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of domestic and imported product 3[1] and margins of underselling/(overselling), by quarters, January 2013-December 2015

Period	United States		China			India		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:								
Jan.-Mar.	1,000	51,946	764	10,526	23.6	910	20,516	8.9
Apr.-Jun.	831	58,450	802	3,806	3.4	931	21,195	(12.0)
Jul.-Sep.	851	57,562	775	5,387	9.0	1,025	20,193	(20.5)
Oct.-Dec.	902	50,470	728	9,172	19.3	894	31,353	0.9
2014:								
Jan.-Mar.	906	53,502	822	14,653	9.2	829	30,497	8.4
Apr.-Jun.	938	47,923	816	22,091	13.0	864	36,128	7.9
Jul.-Sep.	913	48,450	827	25,041	9.5	906	26,349	0.8
Oct.-Dec.	948	43,722	737	28,434	22.3	927	21,104	2.2
2015:								
Jan.-Mar.	828	40,717	795	15,180	3.9	833	19,659	(0.7)
Apr.-Jun.	717	46,542	770	13,718	(7.3)	778	23,312	(8.5)
Jul.-Sep.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***

Period	Italy			Korea			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:									
Jan.-Mar.	---	***	---	***	***	***	***	***	***
Apr.-Jun.	---	***	---	***	***	***	***	***	***
Jul.-Sep.	---	***	---	***	***	***	***	***	***
Oct.-Dec.	---	***	---	***	***	***	***	***	***
2014:									
Jan.-Mar.	---	***	---	***	***	***	***	***	***
Apr.-Jun.	---	***	---	***	***	***	***	***	***
Jul.-Sep.	---	***	---	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***	***
2015:									
Jan.-Mar.	***	***	***	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***	***	***	***
Oct.-Dec.	---	***	---	***	***	***	***	***	***

[1] Product 3: Hot-dipped galvanized steel sheet, unpainted, commercial steel type, B, G-30 to G-60 coating weight, 24 inches to 60 inches in width, 0.012 inches to 0.018 inches in thickness, not sold by contract.

Note.-- Staff removed pricing data reported by ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-6

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of domestic and imported product 4[1] and margins of underselling/(overselling), by quarters, January 2013-December 2015

Period	United States		China			India			
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	
2013:									
Jan.-Mar.	761	274,557	765	10,008	(0.5)	***	***	***	
Apr.-Jun.	762	196,130	806	4,733	(5.8)	***	***	***	
Jul.-Sep.	767	232,884	767	7,903	(0.0)	***	***	***	
Oct.-Dec.	789	263,416	735	10,542	6.8	***	***	***	
2014:									
Jan.-Mar.	809	275,817	776	16,377	4.2	***	***	***	
Apr.-Jun.	820	288,720	767	29,263	6.4	***	***	***	
Jul.-Sep.	831	248,794	779	39,385	6.3	***	***	***	
Oct.-Dec.	816	318,318	766	47,810	6.0	***	***	***	
2015:									
Jan.-Mar.	780	217,017	752	33,974	3.6	***	***	***	
Apr.-Jun.	657	247,937	707	58,526	(7.6)	***	***	***	
Jul.-Sep.	***	***	***	***	***	***	***	***	
Oct.-Dec.	***	***	***	***	***	---	***	---	

Period	Italy			Korea			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:									
Jan.-Mar.	***	***	***	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***	***
2014:									
Jan.-Mar.	***	***	***	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***	***
2015:									
Jan.-Mar.	***	***	***	***	***	***	***	***	***
Apr.-Jun.	***	***	***	***	***	***	***	***	***
Jul.-Sep.	***	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***	***

[1] Product 4: Hot-dipped galvanized steel sheet, unpainted, structural steel quality, G-60 to G-90 coating weight, 24 inches to 60 inches in width, 0.024 inches to 0.06 inches in thickness, not sold by contract.

Note.-- Staff removed pricing data reported by ***.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-7

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of domestic and imported product 5[1] and margins of underselling/(overselling), by quarters, January 2013-December 2015

Period	United States		China			India		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:								
Jan.-Mar.	978	2,846	---	***	---	---	***	---
Apr.-Jun.	954	2,659	---	***	---	---	***	---
Jul.-Sep.	952	7,025	---	***	---	---	***	---
Oct.-Dec.	946	9,044	---	***	---	---	***	---
2014:								
Jan.-Mar.	***	***	---	***	---	---	***	---
Apr.-Jun.	***	***	---	***	---	---	***	---
Jul.-Sep.	***	***	---	***	---	---	***	---
Oct.-Dec.	961	6,933	---	***	---	---	***	---
2015:								
Jan.-Mar.	941	4,048	---	***	---	---	***	---
Apr.-Jun.	820	6,753	---	***	---	---	***	---
Jul.-Sep.	***	***	---	***	---	---	***	---
Oct.-Dec.	***	***	---	***	---	---	***	---

Period	Italy			Korea			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:									
Jan.-Mar.	---	***	---	---	***	---	***	***	***
Apr.-Jun.	---	***	---	---	***	---	***	***	***
Jul.-Sep.	---	***	---	---	***	---	***	***	***
Oct.-Dec.	---	***	---	---	***	---	***	***	***
2014:									
Jan.-Mar.	---	***	---	---	***	---	***	***	***
Apr.-Jun.	---	***	---	---	***	---	***	***	***
Jul.-Sep.	---	***	---	---	***	---	***	***	***
Oct.-Dec.	---	***	---	---	***	---	***	***	***
2015:									
Jan.-Mar.	---	***	---	---	***	---	***	***	***
Apr.-Jun.	---	***	---	---	***	---	***	***	***
Jul.-Sep.	---	***	---	---	***	---	***	***	***
Oct.-Dec.	---	***	---	---	***	---	***	***	***

[1] Product 5: Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), bare, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, sold by contract.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-8

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of domestic and imported product 6[1] and margins of underselling/(overselling), by quarters, January 2013-December 2015

Period	United States		China			India		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:								
Jan.-Mar.	***	***	---	***	---	---	***	---
Apr.-Jun.	***	***	---	***	---	---	***	---
Jul.-Sep.	***	***	---	***	---	---	***	---
Oct.-Dec.	***	***	---	***	---	---	***	---
2014:								
Jan.-Mar.	***	***	---	***	---	---	***	---
Apr.-Jun.	***	***	---	***	---	---	***	---
Jul.-Sep.	***	***	---	***	---	---	***	---
Oct.-Dec.	***	***	---	***	---	---	***	---
2015:								
Jan.-Mar.	***	***	---	***	---	---	***	---
Apr.-Jun.	***	***	---	***	---	---	***	---
Jul.-Sep.	***	***	---	***	---	---	***	---
Oct.-Dec.	***	***	---	***	---	---	***	---

Period	Italy			Korea			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:									
Jan.-Mar.	---	***	---	---	***	---	---	***	---
Apr.-Jun.	---	***	---	---	***	---	---	***	---
Jul.-Sep.	---	***	---	---	***	---	---	***	---
Oct.-Dec.	---	***	---	---	***	---	---	***	---
2014:									
Jan.-Mar.	---	***	---	---	***	---	---	***	---
Apr.-Jun.	---	***	---	---	***	---	***	***	***
Jul.-Sep.	---	***	---	---	***	---	---	***	---
Oct.-Dec.	---	***	---	---	***	---	***	***	***
2015:									
Jan.-Mar.	---	***	---	---	***	---	***	***	***
Apr.-Jun.	---	***	---	---	***	---	***	***	***
Jul.-Sep.	---	***	---	---	***	---	---	***	---
Oct.-Dec.	---	***	---	---	***	---	***	***	***

[1] Product 6: Hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g., Galvalume), pre-painted, structural steel quality, AZ50 to AZ55 coating, 24 inches to 60 inches in width, 0.014 inches to 0.018 inches in thickness, sold by contract.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-9

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of domestic and imported product 7[1] and margins of underselling/(overselling), by quarters, January 2013-December 2015

Period	United States		China			India		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:								
Jan.-Mar.	882	29,414	---	***	---	***	***	***
Apr.-Jun.	870	25,540	---	***	---	***	***	***
Jul.-Sep.	880	27,107	---	***	---	***	***	***
Oct.-Dec.	910	27,662	---	***	---	***	***	***
2014:								
Jan.-Mar.	943	27,127	---	***	---	***	***	***
Apr.-Jun.	940	26,221	---	***	---	***	***	***
Jul.-Sep.	963	29,203	---	***	---	***	***	***
Oct.-Dec.	945	26,617	---	***	---	***	***	***
2015:								
Jan.-Mar.	898	21,119	---	***	---	***	***	***
Apr.-Jun.	763	22,405	---	***	---	***	***	***
Jul.-Sep.	***	***	---	***	---	***	***	***
Oct.-Dec.	***	***	---	***	---	***	***	***

Period	Italy			Korea			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:									
Jan.-Mar.	---	***	---	---	***	---	---	***	---
Apr.-Jun.	---	***	---	---	***	---	---	***	---
Jul.-Sep.	---	***	---	---	***	---	---	***	---
Oct.-Dec.	---	***	---	---	***	---	---	***	---
2014:									
Jan.-Mar.	---	***	---	---	***	---	---	***	---
Apr.-Jun.	---	***	---	---	***	---	---	***	---
Jul.-Sep.	---	***	---	---	***	---	---	***	---
Oct.-Dec.	---	***	---	---	***	---	---	***	---
2015:									
Jan.-Mar.	---	***	---	---	***	---	---	***	---
Apr.-Jun.	---	***	---	---	***	---	---	***	---
Jul.-Sep.	---	***	---	---	***	---	---	***	---
Oct.-Dec.	---	***	---	---	***	---	***	***	***

[1] Product 7: Hot-dipped galvanized steel sheet, unpainted, commercial steel type, B, G-30 to G-60 coating weight, 24 inches to 60 inches in width, 0.012 inches to 0.018 inches in thickness, sold by contract.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-10

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of domestic and imported product 8[1] and margins of underselling/(overselling), by quarters, January 2013-December 2015

Period	United States		China			India		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:								
Jan.-Mar.	808	145,938	---	***	---	---	***	---
Apr.-Jun.	793	165,310	---	***	---	---	***	---
Jul.-Sep.	813	137,501	---	***	---	---	***	---
Oct.-Dec.	823	150,538	---	***	---	---	***	---
2014:								
Jan.-Mar.	848	153,416	---	***	---	---	***	---
Apr.-Jun.	847	149,353	---	***	---	---	***	---
Jul.-Sep.	856	142,153	---	***	---	---	***	---
Oct.-Dec.	828	146,723	---	***	---	---	***	---
2015:								
Jan.-Mar.	793	146,441	---	***	---	---	***	---
Apr.-Jun.	671	138,213	---	***	---	---	***	---
Jul.-Sep.	***	***	---	***	---	---	***	---
Oct.-Dec.	***	***	---	***	---	---	***	---

Period	Italy			Korea			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2013:									
Jan.-Mar.	---	***	---	---	***	---	---	***	---
Apr.-Jun.	---	***	---	---	***	---	***	***	***
Jul.-Sep.	---	***	---	---	***	---	---	***	---
Oct.-Dec.	---	***	---	---	***	---	***	***	***
2014:									
Jan.-Mar.	---	***	---	---	***	---	***	***	***
Apr.-Jun.	---	***	---	---	***	---	***	***	***
Jul.-Sep.	---	***	---	***	***	***	***	***	***
Oct.-Dec.	---	***	---	***	***	***	***	***	***
2015:									
Jan.-Mar.	---	***	---	***	***	***	***	***	***
Apr.-Jun.	---	***	---	***	***	***	***	***	***
Jul.-Sep.	---	***	---	***	***	***	***	***	***
Oct.-Dec.	---	***	---	***	***	***	***	***	***

[1] Product 8: Hot-dipped galvanized steel sheet, unpainted, structural steel quality, G-60 to G-90 coating weight, 24 inches to 60 inches in width, 0.024 inches to 0.06 inches in thickness, sold by contract.

Note.--Staff removed pricing data reported by importer *** because it reflected an expedited shipping order, substantially increasing the f.o.b. value.

Source: Compiled from data submitted in response to Commission questionnaires.

Figure V-5

Corrosion-resistant steel: Weighted-average prices and quantities of domestic and imported product 1, by quarters, January 2013-December 2015

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Figure V-6

Corrosion-resistant steel: Weighted-average prices and quantities of domestic and imported product 2, by quarters, January 2013-December 2015

* * * * * * *

Figure V-7

Corrosion-resistant steel: Weighted-average prices and quantities of domestic and imported product 3, by quarters, January 2013-December 2015

* * * * * * *

Figure V-8

Corrosion-resistant steel: Weighted-average prices and quantities of domestic and imported product 4, by quarters, January 2013-December 2015

* * * * * * *

Figure V-9

Corrosion-resistant steel: Weighted-average prices and quantities of domestic and imported product 5, by quarters, January 2013-December 2015

* * * * * * *

Figure V-10

Corrosion-resistant steel: Weighted-average prices and quantities of domestic and imported product 6, by quarters, January 2013-December 2015

* * * * * * *

Figure V-11

Corrosion-resistant steel: Weighted-average prices and quantities of domestic and imported product 7, by quarters, January 2013-December 2015

* * * * * * *

Figure V-12

Corrosion-resistant steel: Weighted-average prices and quantities of domestic and imported product 8, by quarters, January 2013-December 2015

* * * * * * *

Price trends

Prices generally decreased during 2013-15. Table V-11 summarizes the price trends, by country and by product. As shown in the table, domestic price decreases ranged from *** to ***percent during 2013-15 while import price decreases ranged from *** to *** percent. Chinese products 1 and 3 showed price increases of *** percent and *** percent, respectively, during 2013-15, and prices for product 2 from Taiwan increased by *** percent.

Annual and long-term contract prices for products 5, 6, and 8 exhibited larger price decreases than spot and short-term contract prices for the equivalent products 1, 2, and 4 over the period, and contract prices for pricing product 7 exhibited a smaller price decrease than the equivalent product 3. Petitioners explained that this pattern occurred because spot prices move continuously, whereas contract prices move at intervals, with precipitous drops as they follow the downward trend of spot pricing.[24]

[24] CSI and SDI's posthearing brief, Answers to Commission Questions, p. A-5; U.S. Steel's posthearing brief, Response to Commissioner's Questions, p. 37; AMUSA's posthearing brief, Exhibit 1, p. 35.

Table V-11

Corrosion-resistant steel: Summary of weighted-average f.o.b. prices for products 1-8 from the United States and subject countries

Item	Number of quarters	Low price (dollars per short ton)	High price (dollars per short ton)	Change in price over period[1] (percent)
Product 1:				
United States	12	788	970	(17.0)
China	***	***	***	***
India	***	***	***	***
Italy	***	***	***	---
Korea	***	***	***	***
Taiwan	***	***	***	***
Product 2:				
United States	***	***	***	***
China	***	***	***	---
India	***	***	***	---
Italy	***	***	***	---
Korea	***	***	***	***
Taiwan	***	***	***	***
Product 3:				
United States	***	***	***	***
China	***	***	***	***
India	***	***	***	***
Italy	***	***	***	---
Korea	***	***	***	***
Taiwan	***	***	***	***
Product 4:				
United States	***	***	***	***
China	***	***	***	***
India	***	***	***	---
Italy	***	***	***	---
Korea	***	***	***	***
Taiwan	***	***	***	***

Table continued.

Table V-11--Continued

Corrosion-resistant steel: Summary of weighted-average f.o.b. prices for products 1-8 from the United States and subject countries

Item	Number of quarters	Low price (dollars per short ton)	High price (dollars per short ton)	Change in price over period[1] (percent)
Product 5:				
United States	***	***	***	***
China	***	***	***	---
India	***	***	***	---
Italy	***	***	***	---
Korea	***	***	***	---
Taiwan	***	***	***	***
Product 6:				
United States	***	***	***	***
China	***	***	***	---
India	***	***	***	---
Italy	***	***	***	---
Korea	***	***	***	---
Taiwan	***	***	***	---
Product 7:				
United States	***	***	***	***
China	***	***	***	---
India	***	***	***	***
Italy	***	***	***	---
Korea	***	***	***	---
Taiwan	***	***	***	---
Product 8:				
United States	***	***	***	***
China	***	***	***	---
India	***	***	***	---
Italy	***	***	***	---
Korea	***	***	***	---
Taiwan	***	***	***	---

[1] Percentage change from the first quarter in which data were available to the last quarter in which price data were available.

Source: Compiled from data submitted in response to Commission questionnaires.

Price comparisons

The following tables show underselling/overselling by country (table V-12a), by pricing product (table 12-b), and by year (table V-12c). As shown in table V-12a, prices for corrosion-resistant steel imported from subject countries were below those for U.S.-produced product in 140 of 239 instances (1,644,729 short tons). Margins of underselling ranged from 0.2 to 38.2 percent. In the remaining 99 instances (626,749 short tons), prices for corrosion-resistant steel from subject sources were between 0.04 and 68.6 percent above prices for the domestic product.

Table V-12a

Corrosion-resistant steel: Instances of underselling/overselling and the range and average of margins, by country, January 2013-December 2015

Source	Underselling				
	Number of quarters	Quantity (short tons)	Average margin (percent)	Margin range (percent)	
				Min	Max
China	36	430,361	14.5	2.5	38.2
India	25	299,010	8.2	0.6	24.6
Italy	11	77,342	5.8	1.2	16.7
Korea	28	271,638	10.8	1.1	23.0
Taiwan	40	566,378	5.5	0.2	17.3
Total, underselling	140	1,644,729	9.4	0.2	38.2
Source	(Overselling)				
	Number of quarters	Quantity (short tons)	Average margin (percent)	Margin range (percent)	
				Min	Max
China	11	114,153	(8.0)	(0.04)	(24.2)
India	25	200,117	(8.5)	(0.3)	(26.9)
Italy	4	27,261	(3.2)	(0.1)	(6.8)
Korea	23	68,539	(17.5)	(0.1)	(68.6)
Taiwan	36	216,679	(8.5)	(0.04)	(32.2)
Total, overselling	99	626,749	(10.3)	(0.04)	(68.6)

[1] These data include only quarters in which there is a comparison between the U.S. and subject product.

Source: Compiled from data submitted in response to Commission questionnaires.

Table V-12b

Corrosion-resistant steel: Instances of underselling/overselling and the range and average of margins, by product, January 2013-December 2015

Source	Underselling				
	Number of quarters	Quantity (short tons)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	35	728,822	6.0	0.2	16.5
Product 2	39	184,038	17.8	2.8	38.2
Product 3	23	329,147	8.4	0.8	23.6
Product 4	19	276,849	4.6	0.5	9.0
Product 5	5	3,115	5.1	3.1	8.3
Product 6	5	1,274	4.4	2.6	6.3
Product 7	10	119,890	7.4	2.7	12.2
Product 8	4	1,594	1.5	0.5	2.1
Total, underselling	140	1,644,729	9.4	0.2	38.2
Source	**(Overselling)**				
	Number of quarters	**Quantity (short tons)**	**Average margin (percent)**	**Margin range (percent)**	
				Min	**Max**
Product 1	12	218,130	(6.6)	(0.82)	(16.2)
Product 2	0	0	---	---	---
Product 3	29	213,087	(7.9)	(0.1)	(24.2)
Product 4	36	141,955	(9.5)	(0.04)	(32.2)
Product 5	7	2,572	(4.2)	(0.04)	(14.7)
Product 6	0	0	---	---	---
Product 7	3	30,730	(6.8)	(1.90)	(11.9)
Product 8	12	20,275	(26.5)	(0.1)	(68.6)
Total, overselling	99	626,749	(10.3)	(0.04)	(68.6)

[1] These data include only quarters in which there is a comparison between the U.S. and subject product.

Source**:** Compiled from data submitted in response to Commission questionnaires.

Table V-12c

Corrosion-resistant steel: Instances of underselling/overselling and the range and average of margins, by year, January 2013-December 2015

Source	Underselling				
	Number of quarters	Quantity (short tons)	Average margin (percent)	Margin range (percent)	
				Min	Max
2013	45	385,208	9.9	0.5	38.2
2014	64	843,972	9.6	0.2	34.1
2015	31	415,549	8.1	0.2	22.3
Total, underselling	140	1,644,729	9.4	0.2	38.2
Source	**(Overselling)**				
	Number of quarters	**Quantity (short tons)**	**Average margin (percent)**	**Margin range (percent)**	
				Min	**Max**
2013	28	134,001	(7.9)	(0.04)	(32.2)
2014	18	37,358	(8.6)	(0.1)	(33.5)
2015	53	455,390	(12.1)	(0.1)	(68.6)
Total, overselling	99	626,749	(10.3)	(0.04)	(68.6)

[1] These data include only quarters in which there is a comparison between the U.S. and subject product.

Source**:** Compiled from data submitted in response to Commission questionnaires.

As shown in table V-12b, subject imports of the hot-dipped 55 percent aluminum-zinc alloy-coated steel sheet (e.g. Galvalume) products, bare and prepainted (products 1, 2, 5, and 6) were priced lower than U.S.-produced product in 84 of 103 comparisons (917,249 of 1,137,951 tons), and the prepainted products 2 and 6 were priced lower than domestic product in all comparisons. Subject imports of the hot-dipped galvanized commercial steel (products 3 and 7) were priced lower than domestic products in 33 of 65 instances, (449,037 of 692,854 tons). Subject imports of hot-dipped galvanized steel sheet of structural quality (products 4 and 8) were priced higher than 48 of 71 instances (162,230 of 440,673 short tons). Table V-12c indicates that subject imports were priced lower than U.S.-produced product in a majority of instances and for the majority of the volume during 2013-14. Subject imports were priced higher than domestic product in 2015 both by the number of instances and by volume.

LOST SALES AND LOST REVENUE

In the preliminary phase of the investigations, the Commission requested U.S. producers of corrosion-resistant steel to report purchasers where they experienced instances of lost sales or revenue due to competition from imports of corrosion-resistant steel from China, India, Italy, Korea, and Taiwan during January 2012 to March 2015. A summary of purchaser responses can be found in Appendix E.

In the final phase of the investigations, of the 18 responding U.S. producers, 15 reported that they had to reduce prices and 12 reported that they had to roll back announced price increases. Fifteen firms reported that they had lost sales. As noted in Part II, the Commission received purchaser questionnaire responses from 42 purchasers.[25] Responding purchasers reported purchasing 31.2 million short tons of corrosion-resistant steel during 2013-15 (table V-13).

Table V-13
Corrosion-resistant steel: Purchasers' responses to purchasing patterns

* * * * * * *

Of the 41 responding purchasers, 13 reported that they had shifted purchases of corrosion-resistant steel from U.S. producers to subject imports since 2013 and 12 of those purchasers reported that the imported product was priced lower than the domestic product. Twelve of these purchasers reported that price was the reason for the shift, and the reported estimated share of purchases shifted ranged from *** percent to *** percent of their total purchases (table V-14).[26]

Table V-14
Corrosion-resistant steel: Purchasers' responses to shifting supply sources

* * * * * * *

Purchaser *** reported that it shifted from domestic sources because price and quality were not acceptable; *** reported shifting purchases from domestic sources because supply shortages required it to purchase on the spot market; *** reported that it shifted purchases to China and Italy for quality; and *** reported that it shifted to Korea and Taiwan because of availability and "negotiating leverage."

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[25] Twenty-four purchasers submitted lost sales lost revenue survey responses in the preliminary phase, but did not submit purchaser questionnaire responses in the final phase. Sixteen purchasers were contacted but did not submit responses: ***. Commission staff did not have sufficient information from U.S. producers to contact the remaining eight purchasers: ***.

[26] Shaded rows indicate unconfirmed lost sales. Purchaser *** did not provide a response.

With the exception of one purchaser of product from Korea, (***), all purchasers that reported shifting sources reported that imports were priced lower than domestic product. With the exception of one purchaser of product from Italy (***), all purchasers reported that price was a primary reason for the shift (table V-15).

Table V-15

Corrosion-resistant steel: Purchasers' responses to shifting supply sources, by country

Country	Count of purchasers reporting shifting sources	Count of purchasers reporting that imports were priced lower	Count of purchasers reporting that price a primary reason for the shift	Quantity shifted (short tons)	Other reasons for shift
China	8	8	8	90,164	2
India	3	3	4	36,734	1
Italy	4	4	3	100,949	2
Korea	4	3	3	5,990	3
Taiwan	3	3	4	25,163	1
Total	13	12	12	259,000	1

Note.-- U.S. purchaser *** from India did not respond to the initial questions regarding shifting sources and lower priced imports, however it did report that price was a primary reason for the shift. U.S. purchaser *** reported that it did not switch to imports from Taiwan, however it did report that price was a primary reason for its shift.

Source: Compiled from data submitted in response to Commission questionnaires.

Of the 41 responding purchasers, 10 reported that U.S. producers had reduced prices in order to compete with lower-priced imports from subject countries (table V-16); 25 purchasers reported that they did not know if producers had reduced prices to compete with any source.[27] Purchasers reported that U.S. producers' price reductions ranged from 5.0 to 35.0 percent.

Table V-16

Corrosion-resistant steel: Purchasers' responses to U.S. producer price reductions

* * * * * * *

[27] Shaded rows indicate unconfirmed lost revenues. Purchaser *** did not provide a response.

The average estimated U.S. price reduction was greatest with respect to competition with China (26.0 percent) and least with respect to competition with Italy (12.0 percent), as shown in table V-17.

Table V-17
Corrosion-resistant steel: Purchasers' responses to U.S. producers' price reductions, by country

Country	Count of purchasers reporting U.S. producers' reduced prices	Average estimated U.S. price reduction (percent)	Range of estimated U.S. price reduction (percent)
China	9	26.0	10.0 to 35.0
India	4	17.5	5.0 to 30.0
Italy	2	12.0	12.0 to 12.0
Korea	5	18.0	5.0 to 25.0
Taiwan	6	16.0	5.0 to 25.0
Total	10	20.4	5.0 to 35.0

[1] Indicates the count of purchasers reporting that U.S. producers reduced prices to compete with subject countries.

Source: Compiled from data submitted in response to Commission questionnaires.

Purchasers *** reported that price reductions to compete with China, India, or Taiwan occurred during 2014 and 2015. Purchaser *** reported that it *** Korea and Taiwan and has seen price reductions since January 2013, and also stated that imports from China influenced the decline in the CRU index.

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

BACKGROUND

The financial results of seventeen U.S. producers of corrosion-resistant steel are presented in this section of the report.[1] [2] The majority of overall operations is made up of U.S. producers that manufacture and further process their own steel, while a smaller share reflects operations in which the underlying steel was purchased from related and/or unrelated sources.[3] Revenue primarily reflects commercial sales, but also includes transfers and a small volume of internal consumption.[4] Collectively, internal consumption and transfers accounted for *** percent of net sales quantity during 2013-15, and are not shown separately in this section of the report.

Three U.S. producers purchased the plant and equipment of other firms: ArcelorMittal USA purchased the assets of the Calvert, Alabama mill from ThyssenKrupp, forming a joint venture with Nippon Steel and Sumitomo; AK Steel purchased the Dearborn, Michigan mill from Severstal; and Steel Dynamics purchased the Columbus, Mississippi mill from Severstal. These acquisitions all occurred in 2014 and ThyssenKrupp and Severstal exited the U.S. steel industry.

OPERATIONS ON CORROSION-RESISTANT STEEL

Table VI-1 presents aggregated data on U.S. producers' operations in relation to corrosion-resistant steel, while table VI-2 presents selected company-specific financial data.[5]

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[1] The Commission received incomplete financial data from ***. These companies accounted for a combined *** percent of the U.S. shipments reported in 2015. The financial data for these companies are not included in this section of the report.

[2] With the exception of Steelscape, which reported on the basis of International Financial Reporting Standards ("IFRS"), U.S. producers reported their financial results on the basis of generally accepted accounting principles ("GAAP"). The majority of annual financial results were also reported on a calendar-year ("CY") basis. The exceptions were as follows: ***. Commission staff completed an offsite verification of U.S. Steel's sales and cost data on June 9, 2016. *See* Staff Verification Report, June 9, 2016.

[3] Purchased/transferred-in steel reflects primarily cold-rolled and hot-rolled steel.

[4] The majority of internal consumption was reported by *** which indicated in its response to the U.S. producer questionnaire that ***. *** U.S. producer questionnaire response at II-18. ***. It stated that this internal consumption reflects ***, email message with attachment to USITC auditor, June 18, 2015. ***.

[5] ***.

Table VI-1
Corrosion-resistant steel: Results of operations of U.S. producers, 2013-15

Item	Fiscal year		
	2013	2014	2015
	Quantity (short tons)		
Total net sales[1]	17,972,946	18,490,085	17,846,648
	Value (1,000 dollars)		
Total net sales[1]	15,691,553	16,608,156	14,436,485
Cost of goods sold.-- Raw materials	10,076,391	10,632,848	8,935,234
Direct labor	1,109,923	1,116,402	1,112,004
Other factory costs	3,450,817	3,665,405	3,303,371
Total COGS	14,637,131	15,414,655	13,350,609
Gross profit	1,054,422	1,193,501	1,085,876
SG&A expense	508,837	584,006	557,194
Operating income or (loss)	545,585	609,495	528,682
Other expense or (income), net	202,827	198,075	464,151
Net income or (loss)	342,758	411,420	64,531
Depreciation/amortization	378,613	333,719	361,972
Cash flow	721,371	745,139	426,503
	Ratio to net sales (percent)		
Cost of goods sold.-- Raw materials	64.2	64.0	61.9
Direct labor	7.1	6.7	7.7
Other factory costs	22.0	22.1	22.9
Average COGS	93.3	92.8	92.5
Gross profit	6.7	7.2	7.5
SG&A expense	3.2	3.5	3.9
Operating income or (loss)	3.5	3.7	3.7
Net income or (loss)	2.2	2.5	0.4

Table continued on next page.

Table VI-1—Continued
Corrosion-resistant steel: Results of operations of U.S. producers, 2013-15

Item	Fiscal year		
	2013	2014	2015
	Ratio to total COGS (percent)		
Cost of goods sold.-- Raw materials	68.8	69.0	66.9
Direct labor	7.6	7.2	8.3
Other factory costs	23.6	23.8	24.7
Average COGS	100.0	100.0	100.0
	Unit value (dollars per short ton)		
Total net sales[1]	873	898	809
Cost of goods sold.-- Raw materials	561	575	501
Direct labor	62	60	62
Other factory costs	192	198	185
Average COGS	814	834	748
Gross profit	59	65	61
SG&A expense	28	32	31
Operating income or (loss)	30	33	30
Net income or (loss)	19	22	4
	Number of firms reporting		
Operating losses	3	3	6
Net losses	6	5	8
Data	17	17	17

[1] Net sales primarily represent commercial sales, but also include a relatively small volume of transfers to related firms and internal consumption (collectively representing *** percent of net sales quantity during 2013-15).

Source: Compiled from data submitted in response to Commission questionnaires.

Table VI-2
Corrosion-resistant steel: Results of operations of U.S. producers, by firm, 2013-15

Item	Fiscal year		
	2013	2014	2015
	Total net sales (short tons)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal net sales quantity, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal net sales quantity, toll	***	***	***
Total net sales quantity	17,972,946	18,490,085	17,846,648
	Total net sales ($1,000)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal net sales value, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal net sales value, toll	***	***	***
Total net sales value	15,691,553	16,608,156	14,436,485

Table continued on next page.

Table VI-2—Continued
Corrosion-resistant steel: Results of operations of U.S. producers, by firm, 2013-15

Item	Fiscal year		
	2013	2014	2015
	Cost of goods sold ($1,000)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal COGS, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal COGS, toll	***	***	***
Total COGS	14,637,131	15,414,655	13,350,609
	Gross profit or (loss) ($1,000)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal gross profit (loss), non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal gross profit (loss), toll	***	***	***
Total gross profit	1,054,422	1,193,501	1,085,876

Table continued on next page.

Table VI-2—Continued
Corrosion-resistant steel: Results of operations of U.S. producers, by firm, 2013-15

Item	Fiscal year		
	2013	2014	2015
	SG&A expenses ($1,000)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal SG&A expenses, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal SG&A expenses, toll	***	***	***
Total SG&A expenses	508,837	584,006	557,194
	Operating Income (loss) ($1,000)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal operating income or (loss), non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal operating income or (loss), toll	***	***	***
Total operating income or (loss)	545,585	609,495	528,682

Table continued on next page.

Table VI-2—Continued
Corrosion-resistant steel: Results of operations of U.S. producers, by firm, 2013-15

Item	Fiscal year		
	2013	2014	2015
	Net Income or (loss) ($1,000)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal net income or (loss), non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal net income or (loss), toll	***	***	***
Total net income or (loss)	342,758	411,420	64,531
	COGS to net sales ratio (percent)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal COGS to net sales, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal COGS to net sales, toll	***	***	***
Average COGS to net sales ratio	93.3	92.8	92.5

Table continued on next page.

Table VI-2—Continued
Corrosion-resistant steel: Results of operations of U.S. producers, by firm, 2013-15

Item	Fiscal year		
	2013	2014	2015
	Gross profit or (loss) to net sales (percent)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal gross profit (loss) to net sales ratio, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal gross profit (loss) to net sales ratio, toll	***	***	***
Average gross profit or (loss) to net sales ratio	6.7	7.2	7.5
	SG&A expense to net sales ratio (percent)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal SG&A expenses to net sales ratio, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal SG&A expenses to net sales ratio, toll	***	***	***
Average SG&A expense to net sales ratio	3.2	3.5	3.9

Table continued on next page.

Table VI-2—Continued
Corrosion-resistant steel: Results of operations of U.S. producers, by firm, 2013-15

Item	Fiscal year		
	2013	2014	2015
	Operating income or (loss) to net sales ratio (percent)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal operating income (loss) to net sales, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal operating income (loss) to net sales, toll	***	***	***
Average operating income or (loss) to net sales ratio	3.5	3.7	3.7
	Net income or (loss) to net sales ratio (percent)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal net income or (loss) to net sales, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal net income or (loss) to net sales, toll	***	***	***
Average net income or (loss) to net sales ratio	2.2	2.5	0.4

Table continued on next page.

Table VI-2—Continued
Corrosion-resistant steel: Results of operations of U.S. producers, by firm 2013-15

Item	Fiscal year		
	2013	2014	2015
	Unit net sales value (dollars per short ton)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal unit net sales value, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal unit net sales value, toll	***	***	***
Average unit net sales value	873	898	809
	Unit raw materials (dollars per short ton)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal unit raw materials, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal unit raw materials, toll	***	***	***
Average raw materials	561	575	501

Table continued on next page.

Table VI-2—Continued
Corrosion-resistant steel: Results of operations of U.S. producers, by firm, 2013-15

Item	Fiscal year		
	2013	2014	2015
	Unit direct labor cost (dollars per short ton)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal unit direct labor cost, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal unit direct labor cost, toll	***	***	***
Average direct labor cost	62	60	62
	Unit other factory cost (dollars per short ton)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal other factory cost, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal other factory cost, toll	***	***	***
Average other factory cost	192	198	185

Table continued on next page.

Table VI-2—Continued
Corrosion-resistant steel: Results of operations of U.S. producers, by firm, 2013-15

Item	Fiscal year		
	2013	2014	2015
	Unit COGS (dollars per short ton)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal unit COGS, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal unit COGS, toll	***	***	***
Average COGS	814	834	748
	Unit gross profit or (loss) (dollars per short ton)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal unit gross profit or (loss), non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal unit gross income or (loss), toll	***	***	***
Average gross profit or (loss)	59	65	61

[1] ***.

Source: Compiled from data submitted in response to Commission questionnaires.

The tabulation below shows the change in average unit values between yearly periods.

Item	Fiscal year comparison		
	2013-15	2013-14	2014-15
	Changes in unit values (dollars per short ton)		
Total net sales	(64)	25	(89)
Cost of goods sold.--			
Raw materials	(60)	14	(74)
Direct labor	1	(1)	2
Other factory costs	(7)	6	(13)
Average COGS	(66)	19	(86)
Gross profit	2	6	(4)
SG&A expense	3	3	(0)
Operating income or (loss)	(1)	3	(3)
Net income or (loss)	(15)	3	(19)

Source: Calculated from the data in table VI-1.

Net sales quantity and value

As shown in table VI-1, corrosion-resistant steel sales quantity and value increased in 2014 before falling in 2015. The directional trend of the individual firms' sales quantities between 2013 and 2015 were mixed, with 10 of 17 companies reporting increasing sales quantities and nine of 17 companies reporting decreasing quantities. However, by value, individual firms' sales were more uniform, with 12 of 17 companies reporting decreasing sales between 2013 and 2015. Unit sales values for the industry as a whole increased from $873 per short ton in 2013 to $898 per short ton in 2014, before falling to $809 per short in 2015. Company-specific unit sales values were uniform with average sales values lower for all responding firms when comparing 2015 to 2013.

Cost of goods sold and gross profit or (loss)

Raw material costs represent the largest component of overall COGS. The total cost of raw materials as a share of COGS increased slightly from 2013 to 2014, but decreased from 2014 to 2015 to the lowest level of the period (see table VI-1). On a per-short ton basis, raw materials increased from $561 per short ton in 2013 to $575 per short ton in 2014 before decreasing to $501 per short ton in 2015. As producers using the same basic steel making process, AK Steel, ArcelorMittal, and U.S. Steel generally reported that their raw material costs reflect the same primary inputs: iron ore, coke, coal, alloy additions and scrap, along with aluminum and zinc galvanizing inputs.[6] In contrast, and while identifying *** as primary raw material inputs, electric arc furnace ("EAF") steel producers Nucor and Steel Dynamics also

[6] ***. *** to USITC auditor follow-up questions, June 22, 2015. ***. *** email message to USITC auditor, June 22, 2015.

specifically identified several raw material inputs which did not overlap: Nucor (***) and Steel Dynamics (***).[7] [8]

With respect to their U.S. operations, several producers reported that they purchase inputs from related parties: ***.[9] [10] [11]

Other factory costs increased in 2014 and decreased in 2015 on an absolute basis, and as a share of total COGS ranged from 23.6 percent in 2013 to 24.7 percent in 2015.[12] As shown in table VI-2, company-specific average other factory costs generally appear to be consistent with differences in their underlying operations; e.g., ***.[13] Direct labor, as a share of total COGS, remained within a relatively narrow range from 7.2 percent (2014) to 8.3 percent (2015).

Gross profit increased from 2013 to 2014 but decreased in 2015 on an absolute basis. However, as a ratio to net sales, gross profit increased from 2014 to 2015 mainly due to a 13.0 percent decrease in net sales during this time. Table VI-2 shows that the majority of companies' reported gross profits followed a similar directional trend (increasing in 2014 and decreasing in 2015). ***, while the majority of U.S. producers generated gross profits. ***.

SG&A expenses and operating income or (loss)

As shown in table VI-1, the industry's SG&A expense ratios (i.e., total SG&A expenses divided by total revenue) moved within a relatively narrow range during 2013-15: 3.2 percent (2013) to 3.9 percent (2015).

Table VI-2 shows that from 2013 to 2015 the pattern of company-specific SG&A expense ratios was not uniform in terms of directional trend. Nine of 17 producers reported a higher SG&A to net sales ratio in 2015 compared with 2013. ***.[14]

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[7] ***. Nucor response to USITC auditor follow-up questions, June 23, 2015.

[8] ***, email message with attachment to USITC auditor, June 18, 2015.

[9] *** U.S. producer questionnaires, responses to III-7.

[10] The majority of U.S. producers reported ***. U.S. producer questionnaire responses at III-7 and ***.

[11] The Commission's current practice requires that relevant cost information associated with input purchases from related suppliers correspond to the manner in which this information is reported in the U.S. producer's own accounting books and records. See *1,1,1,2-Tetrafluoroethane from China, Inv. Nos. 701-TA-509 and 731-TA-1244 (Final),* USITC Publication 4503, December 2014, pp. 23 and 37.

[12] ***.

[13] Fixed costs at a product line basis typically represent an allocation from total costs to a subset of the firm's product-lines within a facility or facilities. Reduced production or idled capacity typically leads to higher fixed costs per unit produced in a multi-product plant as fixed costs are spread over a smaller base. In an integrated operation, such costs may accrue from upstream raw material input producing facilities and downstream to ironmaking, steelmaking, casting, and rolling operations. This may include prolonged shutdowns, curtailment of operations, and reported lower capacity utilization. For example, *** ***.

[14] ***.

On an overall basis, operating income increased from 2013 to 2014, but decreased in 2015 to a level 3.1 percent lower than in 2013. While three companies reported operating losses in 2013 and 2014, six companies reported operating losses in 2015. Of the six companies that reported operating losses in 2015, *** reported that the majority of their 2015 sales were spot sales.[15]

Other expenses and net income or (loss)

Classified below the operating income level are interest expense, other expense, and other income, which are usually allocated to the product line from high levels in the corporation. In table VI-1, these items are aggregated and only the net amount is shown. For the industry as a whole, interest expense was at a period high in ***. The net amount of all other expenses shown in table VI-1 decreased *** from *** in 2013 to *** in 2014,[16] but increased by *** to $*** in 2015. The vast majority of this increase is attributable to ***.[17] [18] By definition, items classified at this level in the income statement only affect net income or (loss). Overall net income of the corrosion-resistant steel industry increased from 2013 to 2014 (from $342.8 million to $411.4 million), but decreased to $64.5 million in 2015.

[15] Conversely, an additional *** U.S. producers reported that the majority of their 2015 sales were spot sales while also reporting an operating income.

[16] ***.

[17] ***. *** U.S. producer questionnaire response at ***. In U.S. Steel's 2015 annual report, these expenses are listed as (1) loss on shutdown of coke production facilities, (2) Granite City Works temporary idling charges, (3) loss on shutdown of Fairfield flat-rolled operations, and (4) restructuring and other charges. U.S. Steel's 2015 annual report, p. F-17. Restructuring and other charges include employee related costs (severance, supplemental unemployment benefits, and continuation of health care benefits), accelerated depreciation, pension and other benefits curtailment charges, charges associated with take or pay contracts, asset impairments, environmental and other closure costs. U.S. Steel's 2015 annual report, p. 71.

[18] ***. AK Steel's 2015 10K reports that it has a "49.9 percent interest in the Magnetation joint venture." Through an offtake agreement with Magnetation, AK Steel has the right to purchase, based on a formula that includes a discount to the iron ore index ("IODEX"), all the pellets the pellet plant produces and an obligation to purchase a portion of those pellets. Magnetation and its subsidiaries filed voluntary petitions for Chapter 11 bankruptcy on May 5, 2015. AK Steel's 2015 10K, p. 32.

Variance analysis

A variance analysis for the operations of U.S. producers of corrosion-resistant steel is presented in table VI-3.[19] The information for this variance analysis is derived from table VI-1. The analysis illustrates that from 2013 to 2015, the decrease in operating income is primarily attributable to a higher unfavorable price variance despite a favorable cost/expense variance (i.e., prices decreased more than costs and expenses).

Table VI-3
Corrosion-resistant steel: Variance analysis on the operations of U.S. producers, 2013-15

Item	Between fiscal years		
	2013-15	2013-14	2014-15
	Value (1,000 dollars)		
Net sales:			
Price variance	(1,144,802)	465,107	(1,593,723)
Volume variance	(110,266)	451,496	(577,948)
Net sales variance	(1,255,068)	916,603	(2,171,671)
COGS:			
Cost variance	1,183,665	(356,367)	1,527,631
Volume variance	102,857	(421,157)	536,415
COGS variance	1,286,522	(777,524)	2,064,046
Gross profit variance	31,454	139,079	(107,625)
SG&A expenses:			
Cost/expense variance	(51,933)	(60,528)	6,489
Volume variance	3,576	(14,641)	20,323
Total SG&A expense variance	(48,357)	(75,169)	26,812
Operating income variance	(16,903)	63,910	(80,813)
Summarized (at the operating income level) as:			
Price variance	(1,144,802)	465,107	(1,593,723)
Net cost/expense variance	1,131,733	(416,895)	1,534,120
Net volume variance	(3,834)	15,698	(21,210)

Source: Compiled from data submitted in response to Commission questionnaires.

[19] The Commission's variance analysis is calculated in three parts: Sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. As summarized at the bottom of the table, the price variance is from sales, the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances. The overall volume component of the variance analysis is generally small.

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

Table VI-4 presents capital expenditures and research and development ("R&D") expenses by firm. Capital expenditures and acquisitions are among the largest single items in the section "cash flows from investing activities" in the statement of cash flows of a firm. In accounting terms, both capital expenditures and acquisitions increase the value of specific plant and equipment and total assets, while charges for depreciation and amortization (in the case of intangible assets), impairments, and divestitures decrease the value of assets. Capital expenditures are made and R&D expenses are incurred to achieve improvements in equipment and the quality of products produced. Acquisitions are typically made to expand a company's production of an existing product, enter into a new product line, access technology, and the like. As shown in table VI-4, ***.[20] ***.[21]

[20] According to ***.

[21] In its questionnaire response, ***.

Table VI-4
Corrosion-resistant steel: Capital expenditures and research and development expenses of U.S. producers, 2013-15

Item	Fiscal year		
	2013	2014	2015
	Capital expenditures ($1,000)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal capital expenditures, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal capital expenditures, toll	***	***	***
Total capital expenditures	234,251	223,104	220,992
	Research and development expenses ($1,000)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal R&D expenses, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal R&D expenses, toll	***	***	***
Total R&D expenses	16,974	17,567	30,730

Source: Compiled from data submitted in response to Commission questionnaires.

ASSETS, INVESTMENT, AND CAPITAL

Table VI-5 presents data on the U.S. producers' total assets[22] and the ratio of operating income or (loss) and net income or (loss) to assets. As reported by the U.S. industry, total assets decreased from $10.4 billion in 2013 to $8.6 billion in 2015.

As mentioned previously in this section, three firms purchased the plant and equipment of other firms in 2014. These included: Steel Dynamics, which bought the mill at Columbus, Mississippi in September 2014; ArcelorMittal USA, which completed the purchase of the Calvert, Alabama mill from ThyssenKrupp Steel USA in February 2014 and formed a 50/50 joint venture with Nippon Steel and Sumitomo Metal Corp. to operate the plant; and AK Steel, which acquired the Dearborn, Michigan integrated steel production facility from Severstal in July 2014.

In contrast to these acquisitions, U.S. Steel decided to permanently close its cokemaking operations at Granite City Works and Gary Works facilities in April and May 2015, respectively and blast furnace number eight was shutdown permanently on August 13, 2015 at its facilities in Fairfield, Alabama. As noted earlier, U.S. Steel recorded $***. The value of U.S. Steel's assets allocated to corrosion-resistant steel ***.

[22] With respect to a company's overall operations, staff notes that a total asset value (i.e., the bottom line number on the asset side of a company's balance sheet) reflects an aggregation of a number of assets which are generally not product specific. Accordingly, high-level allocation factors were required in order to report a total asset value for corrosion-resistant steel.

Table VI-5
Corrosion-resistant steel: U.S. producers' total assets and return on assets, 2013-15

Firm	Fiscal years		
	2013	2014	2015
	Total net assets (1,000 of dollars)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal net assets, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal net assets, toll	***	***	***
Total net assets	10,408,583	8,705,855	8,559,682
	Operating return on assets (percent)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Average operating return on assets, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Average operating return on assets, toll	***	***	***
Average operating return on assets	5.2	7.0	6.2

Table continued on next page.

Table VI-5—Continued
Corrosion-resistant steel: U.S. producers' total assets and return on assets, 2013-15

Firm	Fiscal years		
	2013	2014	2015
	Asset turnover ratio (percent)		
AK Steel	***	***	***
ArcelorMittal	***	***	***
CSI	***	***	***
CSN	***	***	***
Gregory	***	***	***
Nucor	***	***	***
Steel Dynamics	***	***	***
Steelscape	***	***	***
Ternium	***	***	***
Thomas/Apollo	***	***	***
Top Gun	***	***	***
U.S. Steel	***	***	***
USS-POSCO	***	***	***
Wheeling-Nisshin	***	***	***
Worthington	***	***	***
Subtotal asset turnover ratio, non-toll	***	***	***
National	***	***	***
Precoat	***	***	***
Subtotal asset turnover ratio, toll	***	***	***
Average asset turnover ratio	1.5	1.9	1.7

Note.—the asset turnover ratio is sales divided by total assets, which provides an indication of how efficiently $1 of assets generates $1 of sales.

Source: Compiled from data submitted in response to Commission questionnaires.

The Commission requested U.S. producers of corrosion-resistant steel to describe any actual or potential negative effects on their return on investment or growth, ability to raise capital, existing development and production efforts (including efforts to develop a derivative or more advanced version of the product), or the scale of capital investments as a result of imports of corrosion-resistant steel from China, India, Italy, Korea, and Taiwan. Table VI-6 presents the number of firms reporting an impact in each category for the actual and anticipated negative effects of imports. Thirteen of 17 U.S. producers reported that they experienced at least one of the five categories of negative effects of imports on investment, while 14 of 17 companies reported experiencing at least one of the negative effects of imports on growth and development. Fourteen of 17 U.S. producers responded "yes" to anticipated negative effects of imports, while two U.S. producers responded "no."[23]

Table VI-6
Corrosion-resistant steel: Actual and anticipated negative effects of imports on investment, growth, and development

Item	No	Yes
Negative effects on investment	4	13
Cancellation, postponement, or rejection of expansion projects		9
Denial or rejection of investment proposal		5
Reduction in the size of capital investments		6
Return on specific investments negatively impacted		***
Other		10
Negative effects on growth and development	3	14
Rejection of bank loans		***
Lowering of credit rating		4
Problem related to the issue of stocks or bonds		***
Ability to service debt		***
Other		13
Anticipated negative effects of imports	***	***

Source: Compiled from data submitted in response to Commission questionnaires.

[23] ***.

Jim Baske, CEO of ArcelorMittal North America testified at the hearing that the corrosion-resistant steel industry is cyclical and that it is "critical to our long-term health that we are able to achieve adequate returns on investment while the market is strong to ensure we can reinvest in the business and survive the periods of downturn."[24] Table VI-7 provides the narrative responses from companies regarding the actual and anticipated impact of imports from subject sources.

Table VI-7
Corrosion-resistant steel: Negative impact of imports from subject sources

* * * * * * *

[24] Hearing transcript, p. 47 (Baske).

PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

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

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

---

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

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

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

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the nature of the subsidies was presented earlier in this report; information on the volume and pricing of imports of the subject merchandise is presented in *Parts IV* and *V*; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in *Part VI*. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

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

THE INDUSTRY IN CHINA

Presented in the tabulation below are 2013-17 data for production and consumption of galvanized sheet in China as published by ***.

* * * * * * *

Production and consumption of galvanized sheet in China increased by *** and *** percent, respectively, from 2013 to 2015. Consumption is expected to continue to increase from 2015 to 2017 (by *** percent), but production is expected to decline in the same period (by *** percent). Production was *** percent higher than consumption during 2013, *** percent higher in 2014, and *** percent higher during 2015, or by *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015. Projections indicate that the gap between production and capacity is expected to narrow somewhat from *** percent in 2016 to *** percent in 2017, resulting in production exceeding consumption by *** short tons in 2016 and *** short tons in 2017.

Overview

The Commission issued foreign producers' or exporters' questionnaires to 153 firms believed to produce and/or export corrosion-resistant steel from China.[3] Usable responses to the Commission's questionnaire were received from 11 firms: Angang, Baoshan, Beijing Shougang, Benxi, Handan, Maanshan, POSCO China Guangdong Steel, Shanghai Meishan, Shougang Jingtang, Tangshan, and Wisco.[4] These firms' exports to the United States accounted for *** percent of U.S. imports of corrosion-resistant steel from China during 2015. Staff believes that the 11 responses provided by producers of corrosion-resistant steel in China represented approximately *** of all production of corrosion-resistant steel in China.[5] Table VII-1 lists the Chinese producers of corrosion-resistant steel that responded to the Commission's questionnaire and certain 2015 summary data.

---

[3] These firms were identified through a review of information contained in the petition, on the record of the preliminary phase of the investigations, in ***. Several attempts by staff to contact 22 firms listed in the petition were unsuccessful because of invalid contact information.

[4] Two firms (***) that responded to the Commission's questionnaire in the preliminary phase of these investigations did not provide a response in these final phase investigations. Another firm (***) did not respond to the Commission's questionnaire in the preliminary phase but provided a response in these final phase investigations.

[5] According to estimates provided by the responding Chinese producers, the production of corrosion-resistant steel in China reported in questionnaire responses accounted for almost *** of all production of corrosion-resistant steel in China during 2015. This coverage estimate is roughly consistent with that based on total 2015 production of galvanized sheet in China of *** short tons as reported by ***.

Table VII-1
Corrosion-resistant steel: Summary data on firms in China, 2015

* * * * * * *

Changes in operations

As presented in table VII-2, *** producers in China reported in their questionnaire responses operational or organizational changes since January 1, 2013.

Table VII-2
Corrosion-resistant steel: Reported changes in operations by firms in China

* * * * * * *

Operations on corrosion-resistant steel

Table VII-3 presents information on the corrosion-resistant steel operations of the responding producers and exporters in China for 2013-15, as well as projections for 2016-17.

Table VII-3
Corrosion-resistant steel: Data on the industry in China, 2013-15, and calendar year projections 2016 and 2017

* * * * * * *

Chinese production, capacity utilization, inventories, and shipments increased from 2013 to 2015, whereas capacity declined in the same period. Projections indicate that although capacity is expected to remain stable during 2016-17, production and shipments are expected to decline somewhat. Inventories are expected to increase overall from 2015 to 2017. Home market sales accounted for the majority of total shipments by the Chinese producers, declining from *** percent of total shipments in 2013 to *** percent of total shipments in 2015. Export markets other than the United States accounted for between *** percent and *** percent of the responding Chinese producers' total shipments since 2013. Other export markets identified include ***.

Exports of corrosion-resistant steel to the United States by the 11 producers in China increased from 2013 to 2014, but fell in 2015 to a level that was higher than that reported in 2013. The Chinese producers project that there will be a further decline in exports to the United States in 2016-17. As a share of Chinese producers' total shipments, exports to the United States increased from *** percent in 2013 to *** percent in 2014, but fell to *** percent in 2015. Chinese companies project that the share will drop *** percent by 2017. The Chinese

respondents argue that "the increase in imports into the U.S. has been demand driven . . . in situations where U.S. producers could not, or chose not to, supply the customers.[6]

Alternative products

As shown in table VII-4, almost all reported corrosion-resistant steel production by Chinese producers is subject merchandise. Production of hot-dip galvanized and galvanneal steel accounted for the large majority (*** percent) of total production of corrosion-resistant steel in China during 2015, followed by electrogalvanized steel (*** percent), 55% aluminum-zinc alloy coated (e.g., Galvalume) (*** percent), and other subject corrosion-resistant steel (*** percent).[7] Producers of corrosion-resistant steel in China reported that there was no production of hot-dip aluminized, diffusion-annealed nickel plated, or copper-plated corrosion-resistant steel in their facilities during 2013-15.

Table VII-4
Corrosion-resistant steel: Chinese producers' overall capacity and production on the same equipment as subject production, 2013-15

* * * * * * *

Exports

According to *Global Trade Atlas* ("GTA"), China's top export market for corrosion-resistant steel has been Korea since at least 2013 (table VII-5). During 2014, the United States became the second largest export destination for the Chinese product but, during 2015, Chinese exports to the United States fell and the United States dropped to the seventh largest export market. The United States accounted for 3.8 percent of total exports from China of corrosion-resistant steel in 2015.

[6] Chinese respondents' prehearing, p. 3.

[7] Other subject corrosion-resistant steel includes prepainted products (***) and color coated plate (***).

Table VII-5

Corrosion-resistant steel: Total exports from China to top destination markets and the United States, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
China's exports to the United States	367,242	1,025,167	724,968
China's exports to other major destination markets.--Korea	2,070,675	2,981,730	2,836,496
Vietnam	566,200	705,554	1,317,866
Belgium	424,443	543,217	1,073,590
India	134,715	338,243	786,184
Thailand	700,083	707,672	781,307
Philippines	592,659	834,046	744,468
Chile	296,893	418,019	494,454
Spain	201,293	225,162	442,589
All other destination markets	6,997,137	8,907,712	9,662,218
Total China exports	12,351,341	16,686,522	18,864,141
	Value (1,000 dollars)		
China's exports to the United States	279,107	714,698	443,907
China's exports to other major destination markets.--Korea	1,290,907	1,757,721	1,317,274
Vietnam	366,988	426,087	600,493
Belgium	270,213	336,140	467,309
India	108,278	223,670	366,660
Thailand	505,075	475,009	433,398
Philippines	421,941	563,723	392,711
Chile	202,969	287,654	272,996
Spain	128,825	142,034	198,998
All other destination markets	5,156,758	6,284,501	5,586,301
Total China exports	8,731,061	11,211,238	10,080,046

Table continued on following page.

Table VII-5 -- Continued

Corrosion-resistant steel: Total exports from China to top destination markets and the United States, 2013-15

Item	Calendar year		
	2013	2014	2015
	Unit value (dollars per short ton)		
China's exports to the United States	760	697	612
China's exports to other major destination markets.-- Korea	623	589	464
Vietnam	648	604	456
Belgium	637	619	435
India	804	661	466
Thailand	721	671	555
Philippines	712	676	528
Chile	684	688	552
Spain	640	631	450
All other destination markets	737	706	578
Total China exports	707	672	534
	Share of quantity (percent)		
China's exports to the United States	3.0	6.1	3.8
China's exports to other major destination markets.-- Korea	16.8	17.9	15.0
Vietnam	4.6	4.2	7.0
Belgium	3.4	3.3	5.7
India	1.1	2.0	4.2
Thailand	5.7	4.2	4.1
Philippines	4.8	5.0	3.9
Chile	2.4	2.5	2.6
Spain	1.6	1.3	2.3
All other destination markets	56.7	53.4	51.2
Total China exports	100.0	100.0	100.0

Source: Official export statistics as reported by China Customs in the GTIS/GTA database, HTS subheadings 7210.30, 7210.41, 7210.49, 7210.61, 7210.69, 7212.20, 7212.30, 7212.40, 7212.50, 7212.60, 7210.70, and 7210.90, accessed April 8, 2016.

THE INDUSTRY IN INDIA

Presented in the tabulation below are 2013-17 data for production and consumption of galvanized sheet in India as published by ***.

* * * * * * *

Production of galvanized sheet in India increased by *** from 2013 to 2014, but declined by *** percent from 2014 to 2015 to a level that was *** below that reported for 2013. Consumption of galvanized sheet in India increased by *** percent from 2013 to 2015. Both production and consumption are expected to increase from 2015 to 2017 (by *** percent for production and by *** percent for consumption). Production of galvanized sheet in India was *** percent higher than consumption during 2013, *** percent higher in 2014, and *** percent higher during 2015, or by *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015. Projections indicate that the gap between production and capacity is expected to broaden somewhat from *** percent in 2016 to *** percent in 2017, with production exceeding consumption by *** short tons in 2016 and by *** short tons in 2017.

Overview

The Commission issued foreign producers' or exporters' questionnaires to 24 firms believed to produce and/or export corrosion-resistant steel from India.[8] Usable responses to the Commission's questionnaire were received from five firms: JSW, National, POSCO Maharashtra, SAIL, and Uttam Galva.[9] These firms' exports to the United States accounted for *** percent of U.S. imports of corrosion-resistant steel from India during 2015. According to estimates provided by the responding Indian producers, the production of corrosion-resistant steel in India reported in questionnaire responses accounted for *** percent of all production of corrosion-resistant steel in India during 2015. Staff believes that the five responses provided by producers of corrosion-resistant steel in India represented *** percent of all production of

[8] These firms were identified through a review of information submitted in the petition and contained in ***. One firm identified in the petition (***) responded in the preliminary phase of these investigations that it is not a producer of corrosion-resistant steel in India.

[9] One firm (***) that responded to the Commission's questionnaire in the preliminary phase of these investigations did not provide a response in these final phase investigations. Two firms (***) did not respond to the Commission's questionnaire in the preliminary phase but provided a response in these final phase investigations. In addition, *** declined to provide a response to the Commission's questionnaire, indicating that it is a producer of corrosion-resistant steel in India, but that it does not ship merchandise outside of West Bengal and has never exported to the United States.

corrosion-resistant steel in India.[10] Table VII-6 lists the Indian producers of corrosion-resistant steel that responded to the Commission's questionnaire and certain 2015 summary data.

Table VII-6
Corrosion-resistant steel: Summary data on firms in India, 2015

* * * * * * *

Changes in operations

As presented in table VII-7, producers in India reported in their questionnaire responses several operational or organizational changes since January 1, 2013.

Table VII-7
Corrosion-resistant steel: Reported changes in operations by firms in India

* * * * * * *

Operations on corrosion-resistant steel

Table VII-8 presents information on the corrosion-resistant steel operations of the responding producers and exporters in India for 2013-15, as well as projections for 2016-17. Indian capacity, production, inventories, and total shipments increased overall from 2013 to 2015, as three of the responding Indian producers reported plant expansions (table VII-7). Projections indicate that, although capacity is expected to remain stable during 2016-17, production and shipments are expected to increase and inventories are expected to fall. Capacity utilization remained relatively stable at *** percent during 2013-15 but projections show that, with stable capacity and increasing production, capacity utilization is expected to rise to *** percent by 2017.

Table VII-8
Corrosion-resistant steel: Data on the industry in India, 2013-15, and calendar year projections 2016 and 2017

* * * * * * *

Home market sales accounted for *** percent of total shipments by the producers in India during 2015, and export markets other than the United States accounted for *** percent of those shipments. Other export markets identified by Indian producers include ***. Exports of corrosion-resistant steel by Indian producers to the United States, which accounted for ***

[10] The coverage estimate is based on total 2015 production of galvanized sheet in India of *** short tons as reported by ***.

percent of their total shipments in 2015, increased in terms of quantity by *** percent from 2013 to 2014, but decreased in 2015 to a level that was *** percent lower than that reported in 2013. The Indian producers report that further overall declines in exports to the United States are expected from 2015 to 2017. As a share of Indian producers' total shipments, exports to the United States increased from *** percent in 2013 to *** percent in 2014, but fell to *** percent in 2015. Indian companies project that the share will drop to *** percent in 2016.

Alternative products

As shown in table VII-9, *** of total facility manufacturing by Indian producers of corrosion-resistant steel is production of subject merchandise. Production of hot-dip galvanized and galvanneal steel accounted for the majority (*** percent) of total facility production by Indian producers of corrosion-resistant steel during 2015, followed by 55% aluminum-zinc alloy coated (e.g., Galvalume) (*** percent), and other subject corrosion-resistant steel (*** percent).[11] Producers of corrosion-resistant steel in India reported that there was no production of hot-dip aluminized, electrogalvanized, diffusion-annealed nickel plated, or copper-plated corrosion-resistant steel in their facilities during 2013-15.

Table VII-9
Corrosion-resistant steel: Indian producers' overall capacity and production on the same equipment as subject production, 2013-15

* * * * * * *

[11] Other subject corrosion-resistant steel includes prepainted Galvalume and prepainted galvanized steel (***).

Exports

According to *GTA*, India's top export markets for corrosion-resistant steel are the United States and the United Arab Emirates (table VII-10). During 2015, the United States and the United Arab Emirates accounted for 12.9 and 12.3 percent of total exports from India of corrosion-resistant steel, respectively.

Table VII-10

Corrosion-resistant steel: Total exports from India to top destination markets and the United States, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
India's exports to the United States	361,487	442,173	263,381
India's exports to other major destination markets.--United Arab Emirates	261,639	284,255	250,813
Ethiopia	113,311	115,291	121,969
Spain	64,860	141,341	112,691
Belgium	149,496	107,211	106,629
Italy	119,044	99,565	100,563
Iran	92,642	141,253	72,360
Peru	58,503	75,542	64,678
Portugal	39,239	60,300	59,945
All other destination markets	1,252,443	1,145,450	893,731
Total India exports	2,512,666	2,612,381	2,046,759
	Value (1,000 dollars)		
India's exports to the United States	255,538	324,065	168,068
India's exports to other major destination markets.--United Arab Emirates	192,576	206,578	151,217
Ethiopia	93,479	93,610	88,427
Spain	56,456	104,325	64,998
Belgium	101,487	70,986	50,770
Italy	98,238	73,614	56,680
Iran	97,719	105,310	47,135
Peru	44,359	58,989	42,853
Portugal	33,007	49,521	39,504
All other destination markets	994,876	898,053	597,031
Total India exports	1,967,737	1,985,051	1,306,684

Table continued on following page.

Table VII-10 -- Continued

Corrosion-resistant steel: Total exports from India to top destination markets and the United States, 2013-15

Item	Calendar year		
	2013	2014	2015
	Unit value (dollars per short ton)		
India's exports to the United States	707	733	638
India's exports to other major destination markets.-- United Arab Emirates	736	727	603
Ethiopia	825	812	725
Spain	870	738	577
Belgium	679	662	476
Italy	825	739	564
Iran	1,055	746	651
Peru	758	781	663
Portugal	841	821	659
All other destination markets	794	784	668
Total India exports	783	760	638
	Share of quantity (percent)		
India's exports to the United States	14.4	16.9	12.9
India's exports to other major destination markets.-- United Arab Emirates	10.4	10.9	12.3
Ethiopia	4.5	4.4	6.0
Spain	2.6	5.4	5.5
Belgium	5.9	4.1	5.2
Italy	4.7	3.8	4.9
Iran	3.7	5.4	3.5
Peru	2.3	2.9	3.2
Portugal	1.6	2.3	2.9
All other destination markets	49.8	43.8	43.7
Total India exports	100.0	100.0	100.0

Source: Official export statistics as reported by India's Ministry of Commerce in the GTIS/GTA database, HTS subheadings 7210.30, 7210.41, 7210.49, 7210.61, 7210.69, 7212.20, 7212.30, 7212.40, 7212.50, 7212.60, 7210.70, and 7210.90, accessed April 8, 2016.

THE INDUSTRY IN ITALY

Presented in the tabulation below are 2013-17 data for production and consumption of galvanized sheet in Italy as published by ***.

* * * * * * *

Production and consumption of galvanized sheet in Italy declined by *** and *** percent, respectively, from 2013 to 2015; however, both production and consumption are expected to increase from 2015 to 2017 by *** percent and *** percent, respectively. Production was *** percent higher than consumption during 2013, *** percent higher in 2014, and *** percent higher during 2015, or by *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015. Projections indicate that the gap between production and capacity is expected to increase somewhat from *** percent in 2016 to *** percent in 2017, with production exceeding consumption by *** short tons in 2016 and by *** short tons in 2017.

Overview

The Commission issued foreign producers' or exporters' questionnaires to seven firms believed to produce and/or export corrosion-resistant steel from Italy.[12] Usable responses to the Commission's questionnaire were received from the following five firms: ArcelorMittal Avellino, ArcelorMittal Piombino,[13] Arvedi, Ilva, and Marcegaglia. Although the responding firms' exports to the United States accounted for *** percent of U.S. imports of corrosion-resistant steel from Italy during 2015, staff believes that the responses provided by these producers represented all known capacity and production of corrosion-resistant steel in Italy.[14]

Table VII-11 lists the Italian producers of corrosion-resistant steel that responded to the Commission's questionnaire and certain 2015 summary data.

Table VII-11
Corrosion-resistant steel: Summary data on firms in Italy, 2015

* * * * * * *

[12] These seven firms were identified through a review of information submitted in the petition and contained in proprietary Customs records. Two additional firms identified as Italian producers in the petition, ***, indicated in the preliminary phase of these investigations that they are not producers of corrosion-resistant steel in Italy.

[13] ArcelorMittal Avellino and ArcelorMittal Piombino combined their firms' operations into a single questionnaire response (referred to hereinafter as "ArcelorMittal Italy").

[14] According to ***, the Italian firms that responded to the Commission's questionnaire are the only known producers of corrosion-resistant steel in Italy. ***.

Changes in operations

As presented in table VII-12, producers in Italy reported in their questionnaire responses several operational or organizational changes since January 1, 2013.

Table VII-12
Corrosion-resistant steel: Reported changes in operations by firms in Italy

* * * * * * *

Operations on corrosion-resistant steel

Table VII-13 presents information on the corrosion-resistant steel operations of the responding producers and exporters in Italy for 2013-15, as well as projections for 2016-17. Italian capacity, production, utilization, exports to the United States, and shipments increased overall from 2013 to 2015. Capacity increased from 2013 to 2015 as two Italian producers (***) opened additional facilities or expanded production lines (table VII-12). All responding Italian producers projected capacity expansions into 2016 and 2017. Projections also indicate that production and total shipments are expected to increase during 2016-17, although exports to the United States are expected to decline to levels below that reported for 2013 as shipments to the home market and other export markets are expected to increase. Capacity utilization increased from *** percent in 2013 to *** percent in 2014, declined to *** percent in 2015, and is expected to be *** percent in 2016 and *** percent in 2017.

Table VII-13
Corrosion-resistant steel: Data on the subject firms in Italy, 2013-15, and projections 2016 and 2017

* * * * * * *

Home market shipments of Italian corrosion-resistant steel accounted for the largest share of total shipments by the Italian producers in 2015 at *** percent, followed by export markets other than the United States at *** percent. Other export markets identified by the Italian producers include ***. Exports of corrosion-resistant steel to the United States by the producers in Italy, which *** in terms of quantity from 2013 to 2015, accounted for *** percent of the subject Italian producers' total shipments in 2013 and *** percent in 2014 and 2015.

Alternative products

As shown in table VII-14, all reported corrosion-resistant steel production by Italian producers is subject merchandise. Production of hot-dip galvanized and galvanneal steel accounted for the large majority (*** percent) of total subject production during 2015,

followed by hot-dip aluminized and electrogalvanized (accounting for *** percent each), and other subject corrosion-resistant steel (*** percent).[15] Producers of corrosion-resistant steel in Italy reported that there was no production of 55% aluminum-zinc alloy coated (e.g., Galvalume), diffusion-annealed nickel plated, or copper-plated corrosion-resistant steel in their facilities during 2013-15.

Table VII-14
Corrosion-resistant steel: Subject Italian producers' overall capacity and production on the same equipment as subject production, 2013-15

* * * * * * *

[15] Other subject corrosion-resistant steel includes galvanized strips, prepainted coils, and hire works (***) and pre-painted coils, sheets, and strips (***).

Exports

According to *GTA*, Italy's top export markets for corrosion-resistant steel are largely European countries (table VII-15). The top three export markets, Germany, Spain, and France, accounted for 20.6, 11.4, and 8.5 percent of total exports from Italy of corrosion-resistant steel during 2015, respectively. The United States was the seventh largest market for exports from Italy in 2015, accounting for only 4.8 percent of such exports.

Table VII-15

Corrosion-resistant steel: Total exports from Italy to top destination markets and the United States, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
Italy's exports to the United States	70,151	133,660	149,429
Italy's exports to other major destination markets.-- Germany	757,050	712,376	637,624
Spain	275,537	364,937	350,873
France	302,266	320,643	263,981
Turkey	109,484	180,103	256,163
Poland	197,769	209,998	239,891
United Kingdom	127,736	185,372	155,748
Romania	76,541	98,865	148,237
Austria	70,019	95,025	93,480
All other destination markets	726,332	733,514	792,536
Total Italy exports	2,712,885	3,034,492	3,087,963
	Value (1,000 dollars)		
Italy's exports to the United States	53,889	102,173	101,257
Italy's exports to other major destination markets.-- Germany	550,071	501,479	346,687
Spain	203,325	254,483	189,257
France	234,129	239,012	161,621
Turkey	86,096	117,755	124,305
Poland	184,029	194,189	160,643
United Kingdom	84,410	124,280	85,326
Romania	75,477	95,919	110,093
Austria	55,340	75,661	55,164
All other destination markets	613,056	602,186	511,801
Total Italy exports	2,139,823	2,307,137	1,846,153

Table continued on following page.

Table VII-15 -- Continued

Corrosion-resistant steel: Total exports from Italy to top destination markets and the United States, 2013-15

Item	Calendar year		
	2013	2014	2015
	Unit value (dollars per short ton)		
Italy's exports to the United States	768	764	678
Italy's exports to other major destination markets.-- Germany	727	704	544
Spain	738	697	539
France	775	745	612
Turkey	786	654	485
Poland	931	925	670
United Kingdom	661	670	548
Romania	986	970	743
Austria	790	796	590
All other destination markets	844	821	646
Total Italy exports	789	760	598
	Share of quantity (percent)		
Italy's exports to the United States	2.6	4.4	4.8
Italy's exports to other major destination markets.-- Germany	27.9	23.5	20.6
Spain	10.2	12.0	11.4
France	11.1	10.6	8.5
Turkey	4.0	5.9	8.3
Poland	7.3	6.9	7.8
United Kingdom	4.7	6.1	5.0
Romania	2.8	3.3	4.8
Austria	2.6	3.1	3.0
All other destination markets	26.8	24.2	25.7
Total Italy exports	100.0	100.0	100.0

Note.—Data presented are for exports from all producers in Italy, including exports of excluded Italian producer Marcegaglia.

Source: Official export statistics as reported by EuroStat in the GTIS/GTA database, HTS subheadings 7210.30, 7210.41, 7210.49, 7210.61, 7210.69, 7212.20, 7212.30, 7212.40, 7212.50, 7212.60, 7210.70, and 7210.90, accessed April 8, 2016.

THE INDUSTRY IN KOREA

Presented in the tabulation below are 2013-17 data for production and consumption of galvanized sheet in Korea as published by ***.

* * * * * * *

Production and consumption of galvanized sheet in Korea increased by *** and *** percent, respectively, from 2013 to 2014; however, both production and consumption declined from 2014 to 2015 by *** and *** percent, respectively, for an overall increase over 2013 levels of *** and *** percent. Both production and consumption are expected to decline from 2015 to 2017 by *** percent and *** percent, respectively. Production was *** percent higher than consumption during 2013, *** percent higher in 2014, and *** percent higher during 2015, or by *** short tons in 2013, *** short tons in 2014, and *** short tons in 2015. Projections indicate that the gap between production and capacity is expected to narrow somewhat from 2016 to 2017, with production exceeding consumption by *** short tons in 2016 and by *** short tons in 2017.

Overview

The Commission issued foreign producers' or exporters' questionnaires to 10 firms believed to produce and/or export corrosion-resistant steel from Korea.[16] Usable responses to the Commission's questionnaire were received from the following firms: Dongbu, Dongkuk (merged with Union Steel ***), Hyundai (Hyundai Hysco merged into Hyundai Steel Co. on ***), POSCO, POSCO C&C, and TCC. The responding firms' exports to the United States accounted for 95.2 percent of U.S. imports of corrosion-resistant steel from Korea during 2015. According to estimates provided by the responding Korean producers, the production of corrosion-resistant steel in Korea reported in questionnaire responses accounted for all production of corrosion-resistant steel in Korea during 2015. Staff believes that the six responses provided by producers of corrosion-resistant steel in Korea represented *** percent of all capacity and all production of corrosion-resistant steel in Korea.[17]

Table VII-16 lists the Korean producers of corrosion-resistant steel that responded to the Commission's questionnaire and certain 2015 summary data.

[16] These firms were identified through a review of information submitted in the petition and contained in ***. Several attempts by staff to contact one firm listed in the petition were unsuccessful because of invalid contact information.

[17] The coverage estimate is based on total capacity of hot-dipped galvanized and electrolytically galvanized sheet in Korea and total production of galvanized sheet in Korea as reported by ***.

Table VII-16
Corrosion-resistant steel: Summary data on firms in Korea, 2015

* * * * * * *

Changes in operations

As presented in table VII-17, producers in Korea reported in their questionnaire responses several operational or organizational changes since January 1, 2013.

Table VII-17
Corrosion-resistant steel: Reported changes in operations by firms in Korea

* * * * * * *

Operations on corrosion-resistant steel

Table VII-18 presents information on the corrosion-resistant steel operations of the responding producers and exporters in Korea for 2013-15, as well as projections for 2016-17. Korean production, capacity utilization, exports to the United States, and overall shipments increased from 2013 to 2015; however, inventories declined. Korean capacity also declined slightly by 1.7 percent during the same period as lines were taken down for equipment replacement (***) and as product mix changed (***) (table VII-17). Company projections indicate that capacity, production, and total shipments are expected to increase into 2017, whereas inventories are expected to continue to decline. Capacity utilization increased from 80.0 percent in 2013 to 90.3 percent in 2015, and a further increase to 91.4 percent is projected for 2017.

Home market sales accounted for the majority of total shipments made by the Korean producers, declining slightly from 53.8 percent of total shipments in 2013 to 52.9 percent of total shipments in 2015. Export markets other than the United States, which accounted for 42.1 percent total shipments in 2015, include ***. Exports of corrosion-resistant steel to the United States by the producers in Korea increased in terms of quantity by 50.1 percent from 2013 to 2015. As a share of Korean producers' total shipments, exports to the United States increased from 3.7 percent in 2013 to 5.0 percent in 2015. Projections indicate that exports to the United States are expected to remain at 4.6 percent of total shipments in 2016 and 2017.

Table VII-18
Corrosion-resistant steel: Data on the industry in Korea, 2013-15, and calendar year projections 2016 and 2017

Item	Actual experience			Projections	
	Calendar year				
	2013	2014	2015	2016	2017
	Quantity (short tons)				
Capacity	15,040,036	14,789,040	14,779,682	15,256,619	15,353,647
Production	12,027,073	13,133,187	13,340,710	13,571,849	14,036,211
End-of-period inventories	507,468	508,114	466,039	419,151	396,767
Shipments:					
Home market shipments:					
Internal consumption/transfers	296,316	303,664	228,792	196,369	208,160
Commercial shipments	6,170,717	6,635,231	6,852,165	7,058,488	7,302,628
Subtotal, home market shipments	6,467,033	6,938,895	7,080,957	7,254,857	7,510,788
Export shipments to:					
United States	442,618	628,031	664,430	628,373	653,588
All other markets	5,104,535	5,563,616	5,636,924	5,735,508	5,894,221
Total exports	5,547,153	6,191,647	6,301,354	6,363,881	6,547,809
Total shipments	12,014,186	13,130,542	13,382,311	13,618,738	14,058,597
	Ratios and shares (percent)				
Capacity utilization	80.0	88.8	90.3	89.0	91.4
Inventories/production	4.2	3.9	3.5	3.1	2.8
Inventories/total shipments	4.2	3.9	3.5	3.1	2.8
Share of shipments:					
Home market shipments:					
Internal consumption/transfers	2.5	2.3	1.7	1.4	1.5
Commercial shipments	51.4	50.5	51.2	51.8	51.9
Subtotal, home market shipments	53.8	52.8	52.9	53.3	53.4
Export shipments to:					
United States	3.7	4.8	5.0	4.6	4.6
All other markets	42.5	42.4	42.1	42.1	41.9
Total exports	46.2	47.2	47.1	46.7	46.6
Total shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

Alternative products

As shown in table VII-19, the very large majority (*** percent in 2015) of all reported corrosion-resistant steel production by Korean producers is subject merchandise. Production of hot-dip galvanized and galvanneal steel accounted for more than half (*** percent) of total production during 2015, followed by electrogalvanized (*** percent), 55% aluminum-zinc alloy coated (e.g., Galvalume) (*** percent), hot-dip aluminized (*** percent), and diffusion-annealed nickel plated and copper-plated (***) percent each. Other subject corrosion-resistant steel accounted for *** percent of total production during 2015.[18]

Table VII-19
Corrosion-resistant steel: Korean producers' overall capacity and production on the same equipment as subject production, 2013-15

* * * * * * *

[18] Other subject corrosion-resistant steel includes ***.

Exports

According to *GTA*, Korea's top export market for corrosion-resistant steel is China (table VII-20). During 2015, the top three export markets for corrosion-resistant steel from Korea were China, accounting for 19.1 percent of total exports from Korea, followed by the United States, accounting for 9.6 percent, and Japan, accounting for 9.2 percent.

Table VII-20

Corrosion-resistant steel: Total exports from Korea to top destination markets and the United States, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
Korea's exports to the United States	437,282	558,811	603,771
Korea's exports to other major destination markets.--China	1,231,046	1,354,365	1,202,972
Japan	487,482	625,071	575,184
Mexico	363,489	380,814	434,641
Thailand	435,278	408,379	346,187
India	272,761	286,546	286,376
Slovenia	172,839	207,127	203,114
Belgium	165,965	151,364	197,698
Turkey	134,462	167,794	180,459
All other destination markets	2,386,015	2,262,391	2,254,610
Total Korea exports	6,086,619	6,402,661	6,285,013
	Value (1,000 dollars)		
Korea's exports to the United States	370,528	479,003	471,758
Korea's exports to other major destination markets.--China	1,035,290	1,169,980	936,283
Japan	350,263	431,392	314,647
Mexico	327,137	347,487	365,821
Thailand	398,029	353,718	281,466
India	269,932	284,471	256,240
Slovenia	142,460	173,697	134,002
Belgium	137,116	119,553	113,715
Turkey	111,965	142,017	124,846
All other destination markets	2,129,129	2,024,805	1,645,154
Total Korea exports	5,271,849	5,526,122	4,643,932

Table continued on following page.

Table VII-20 -- Continued

Corrosion-resistant steel: Total exports from Korea to top destination markets and the United States, 2013-15

Item	Calendar year		
	2013	2014	2015
	Unit value (dollars per short ton)		
Korea's exports to the United States	847	857	781
Korea's exports to other major destination markets.--China	841	864	778
Japan	719	690	547
Mexico	900	912	842
Thailand	914	866	813
India	990	993	895
Slovenia	824	839	660
Belgium	826	790	575
Turkey	833	846	692
All other destination markets	892	895	730
Total Korea exports	866	863	739
	Share of quantity (percent)		
Korea's exports to the United States	7.2	8.7	9.6
Korea's exports to other major destination markets.--China	20.2	21.2	19.1
Japan	8.0	9.8	9.2
Mexico	6.0	5.9	6.9
Thailand	7.2	6.4	5.5
India	4.5	4.5	4.6
Slovenia	2.8	3.2	3.2
Belgium	2.7	2.4	3.1
Turkey	2.2	2.6	2.9
All other destination markets	39.2	35.3	35.9
Total Korea exports	100.0	100.0	100.0

Source: Official export statistics as reported by Korea Customs and Trade Development Institution in the GTIS/GTA database, HTS subheadings 7210.30, 7210.41, 7210.49, 7210.61, 7210.69, 7212.20, 7212.30, 7212.40, 7212.50, 7212.60, 7210.70, and 7210.90, accessed April 8, 2016.

THE INDUSTRY IN TAIWAN

Presented in the tabulation below are 2013-17 data for production and consumption of galvanized sheet in Taiwan as published by ***.

* * * * * * *

Production and consumption of galvanized sheet in Taiwan increased by *** and *** percent, respectively, from 2013 to 2014; however, both production and consumption declined from 2014 to 2015 by *** and *** percent, respectively, for an overall increase over 2013 levels of *** and *** percent. Both production and consumption are expected to decline from 2015 to 2017 by *** percent and *** percent, respectively. Production was *** percent higher than consumption during 2013, *** percent higher in 2014, and *** percent higher during 2015, or by *** to *** short tons during 2013-15. Projections indicate that the gap between production and capacity is expected to increase from 2016 to 2017, with production exceeding consumption by *** short tons in 2016 and by *** short tons in 2017.

Overview

The Commission issued foreign producers' or exporters' questionnaires to ten firms believed to produce and/or export corrosion-resistant steel from Taiwan.[19] Usable responses to the Commission's questionnaire were received from four firms: China Steel, Great Grandeul, Prosperity, and Sheng Yu.[20] The responding firms' exports to the United States accounted for *** percent of U.S. imports of corrosion-resistant steel from Taiwan during 2015. According to estimates provided by the responding producers in Taiwan, the production of corrosion-resistant steel in Taiwan reported in questionnaire responses accounted for *** percent of all production of corrosion-resistant steel in Taiwan during 2015. Staff believes that the four responses provided by producers of corrosion-resistant steel in Taiwan represented *** percent of total production of corrosion-resistant steel in Taiwan.[21]

[19] These firms were identified through a review of information submitted in the petition, information on the record of the preliminary phase investigations, and information contained in ***. Several attempts by staff to contact three firms listed in the petition were unsuccessful because of invalid contact information.

[20] One firm (***) that responded to the Commission's questionnaire in the preliminary phase of these investigations did not provide a response in these final phase investigations.

[21] The coverage estimate is based on total 2015 production of galvanized sheet in Taiwan of *** short tons as reported by ***.

Table VII-21 lists the producers of corrosion-resistant steel in Taiwan that responded to the Commission's questionnaire and certain 2015 summary data.

Table VII-21
Corrosion-resistant steel: Summary data on firms in Taiwan, 2015

* * * * * * *

Changes in operations

As presented in table VII-22, producers in Taiwan reported in their questionnaire responses several operational or organizational changes since January 1, 2013.

Table VII-22
Corrosion-resistant steel: Reported changes in operations by firms in Taiwan

* * * * * * *

Operations on corrosion-resistant steel

Table VII-23 presents information on the corrosion-resistant steel operations of the responding producers and exporters in Taiwan for 2013-15, as well as projections for 2016-17.

Table VII-23
Corrosion-resistant steel: Data on the industry in Taiwan, 2013-15, and calendar year projections 2016 and 2017

* * * * * * *

Production, capacity utilization, inventories, home market shipments, and exports to the United States and to all other destinations by producers of corrosion-resistant steel in Taiwan increased overall from 2013 to 2015, whereas capacity declined. Company projections indicate that production and total shipments are expected to be higher in 2017 than reported in 2015, whereas capacity, inventories, and exports to the United States are expected to be lower. Capacity utilization increased from *** percent in 2013 to *** percent in 2015, and a further increase to *** percent is projected for 2017.

Home market sales, which accounted for *** percent of total shipments made by the producers in Taiwan in 2015, increased from 2013 to 2014, but were lower in 2015. Company projections indicate that home market sales are expected to increase to *** percent of total shipments by 2017. Export markets other than the United States, which accounted for *** percent of the responding producers' total shipments in 2015, included ***.

Exports of corrosion-resistant steel to the United States by the responding producers in Taiwan increased in terms of quantity by *** percent from 2013 to 2014, but decreased by *** percent from 2014 to 2015. As a share of the producers' total shipments, exports to the United States increased from *** percent in 2013 to *** percent in 2014, but declined to *** percent of total shipments during 2015. Responding producers in Taiwan project that exports to the United States will fall to *** percent of their total shipments by 2017. In the preliminary phase of these investigations, China Steel argued that Taiwan's exports to the United States consist mainly of Galvalume product, and the increase in U.S. imports from Taiwan was due to the "fast growing market demand for Galvalume goods" in the United States that the U.S. industry was "ill-equipped in capacity to supply."[22]

Alternative products

As shown in table VII-24, all reported corrosion-resistant steel production by producers in Taiwan is merchandise that meets the product description of Commerce's scope. Production of hot-dip galvanized and galvanneal steel accounted for the majority (*** percent) of total production during 2015, followed by 55% aluminum-zinc alloy coated (e.g., Galvalume) (*** percent), electrogalvanized (*** percent), and other subject corrosion-resistant steel (*** percent).[23] Producers of corrosion-resistant steel in Taiwan reported that there was no production of hot-dip aluminized, diffusion-annealed nickel plated, or copper-plated corrosion-resistant steel in their facilities during 2013-15.

Table VII-24
Corrosion-resistant steel: Taiwan producers' overall capacity and production on the same equipment as subject production, 2013-15

* * * * * * *

[22] China Steel's postconference brief, p. 6.

[23] Other subject corrosion-resistant steel includes prepainted hot-dip galvanized and prepainted hot-dip 55 percent Al-Zn alloy coated corrosion-resistant steel (***).

Exports

According to *GTA*, Taiwan's top export market for corrosion-resistant steel is the United States (table VII-25). China is the second largest export destination for corrosion-resistant steel from Taiwan. During 2015, the United States and China accounted for 28.5 and 12.9 percent of total exports of corrosion-resistant steel from Taiwan, respectively.

Table VII-25

Corrosion-resistant steel: Total exports from Taiwan to top destination markets and the United States, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
Taiwan's exports to the United States	470,061	749,792	620,247
Taiwan's exports to other major destination markets.--China	339,721	385,191	281,423
Thailand	170,892	136,631	155,049
Mexico	138,699	133,655	143,983
Malaysia	177,530	158,215	138,214
Australia	127,028	123,073	126,232
Japan	92,594	108,219	78,427
Saudi Arabia	59,750	49,040	71,657
Belgium	34,210	23,444	57,753
All other destination markets	591,246	548,000	505,179
Total Taiwan exports	2,201,732	2,415,260	2,178,163
	Value (1,000 dollars)		
Taiwan's exports to the United States	434,198	661,461	527,782
Taiwan's exports to other major destination markets.--China	257,216	293,420	192,740
Thailand	133,856	104,633	104,419
Mexico	105,563	98,502	103,800
Malaysia	126,682	111,908	84,251
Australia	101,531	96,284	82,862
Japan	65,566	73,981	42,114
Saudi Arabia	41,961	32,607	37,701
Belgium	26,247	18,792	27,010
All other destination markets	472,713	433,668	331,433
Total Taiwan exports	1,765,533	1,925,256	1,534,112

Table continued on following page.

Table VII-25 -- Continued

Corrosion-resistant steel: Total exports from Taiwan to top destination markets and the United States, 2013-15

Item	Calendar year		
	2013	2014	2015
	Unit value (dollars per short ton)		
Taiwan's exports to the United States	924	882	851
Taiwan's exports to other major destination markets.--China	757	762	685
Thailand	783	766	673
Mexico	761	737	721
Malaysia	714	707	610
Australia	799	782	656
Japan	708	684	537
Saudi Arabia	702	665	526
Belgium	767	802	468
All other destination markets	800	791	656
Total Taiwan exports	802	797	704
	Share of quantity (percent)		
Taiwan's exports to the United States	21.3	31.0	28.5
Taiwan's exports to other major destination markets.--China	15.4	15.9	12.9
Thailand	7.8	5.7	7.1
Mexico	6.3	5.5	6.6
Malaysia	8.1	6.6	6.3
Australia	5.8	5.1	5.8
Japan	4.2	4.5	3.6
Saudi Arabia	2.7	2.0	3.3
Belgium	1.6	1.0	2.7
All other destination markets	26.9	22.7	23.2
Total Taiwan exports	100.0	100.0	100.0

Source: Official export statistics as reported by Taiwan Directorate General of Customs in the GTIS/GTA database, HTS subheadings 7210.30, 7210.41, 7210.49, 7210.61, 7210.69, 7212.20, 7212.30, 7212.40, 7212.50, 7212.60, 7210.70, and 7210.90, accessed April 8, 2016.

THE INDUSTRIES IN THE SUBJECT COUNTRIES

Table VII-26 presents cumulated information on the corrosion-resistant steel operations of the responding subject producers and exporters in the five subject countries for 2013-15, as well as projections for 2016-17.

Table VII-26
Corrosion-resistant steel: Data on subject industries cumulated, 2013-15, and calendar year projections 2016 and 2017

Item	Actual experience			Projections	
	Calendar year			Calendar year	
	2013	2014	2015	2016	2017
	Quantity (short tons)				
Capacity	47,710,138	48,030,739	48,789,133	49,644,917	50,041,360
Production	39,243,584	42,208,594	42,543,429	43,422,552	44,394,204
End-of-period inventories	1,816,659	2,244,147	2,117,507	2,093,878	1,961,918
Shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial shipments	***	***	***	***	***
Subtotal, home market shipments	25,665,861	26,661,029	27,323,430	28,130,359	28,799,242
Export shipments to:					
United States	1,384,035	2,367,981	1,845,026	1,295,924	1,407,332
All other markets	12,052,913	12,786,182	13,505,429	14,004,066	14,319,193
Total exports	13,436,948	15,154,163	15,350,455	15,299,990	15,726,525
Total shipments	39,102,809	41,815,192	42,673,885	43,430,349	44,525,767
	Ratios and shares (percent)				
Capacity utilization	82.3	87.9	87.2	87.5	88.7
Inventories/production	4.6	5.3	5.0	4.8	4.4
Inventories/total shipments	4.6	5.4	5.0	4.8	4.4
Share of shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Home market shipments	***	***	***	***	***
Subtotal, home market shipments	65.6	63.8	64.0	64.8	64.7
Export shipments to:					
United States	3.5	5.7	4.3	3.0	3.2
All other markets	30.8	30.6	31.6	32.2	32.2
Total exports	34.4	36.2	36.0	35.2	35.3
Total shipments	100.0	100.0	100.0	100.0	100.0

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-27 presents data on U.S. importers' reported inventories of corrosion-resistant steel.

Table VII-27
Corrosion-resistant steel: U.S. importers' end-of-period inventories of imports by source, 2013-15

Item	Calendar year		
	2013	2014	2015
Imports from China			
Inventories (short tons)	***	***	***
Ratio to U.S. imports (percent)	***	***	***
Ratio to U.S. shipments of imports (percent)	***	***	***
Ratio to total shipments of imports (percent)	***	***	***
Imports from India:			
Inventories (short tons)	***	***	***
Ratio to U.S. imports (percent)	***	***	***
Ratio to U.S. shipments of imports (percent)	***	***	***
Ratio to total shipments of imports (percent)	***	***	***
Imports from Italy:			
Inventories (short tons)	***	***	***
Ratio to U.S. imports (percent)	***	***	***
Ratio to U.S. shipments of imports (percent)	***	***	***
Ratio to total shipments of imports (percent)	***	***	***
Imports from Korea:			
Inventories (short tons)	***	***	***
Ratio to U.S. imports (percent)	***	***	***
Ratio to U.S. shipments of imports (percent)	***	***	***
Ratio to total shipments of imports (percent)	***	***	***
Imports from Taiwan:			
Inventories (short tons)	***	***	***
Ratio to U.S. imports (percent)	***	***	***
Ratio to U.S. shipments of imports (percent)	***	***	***
Ratio to total shipments of imports (percent)	***	***	***
Imports from subject sources:			
Inventories (short tons)	192,575	393,707	327,012
Ratio to U.S. imports (percent)	13.6	14.9	13.3
Ratio to U.S. shipments of imports (percent)	13.5	16.3	13.0
Ratio to total shipments of imports (percent)	13.2	16.1	12.9
Imports from Canada:			
Inventories (short tons)	***	***	***
Ratio to U.S. imports (percent)	***	***	***
Ratio to U.S. shipments of imports (percent)	***	***	***
Ratio to total shipments of imports (percent)	***	***	***

Table continued on following page.

Table VII-27 -- Continued
Corrosion-resistant steel: U.S. importers' end-of-period inventories of imports by source, 2013-15

Item	Calendar year		
	2013	2014	2015
Imports from all other sources:			
Inventories (short tons)	***	***	***
Ratio to U.S. imports (percent)	***	***	***
Ratio to U.S. shipments of imports (percent)	***	***	***
Ratio to total shipments of imports (percent)	***	***	***
Imports from nonsubject sources:			
Inventories (short tons)	9,316	67,737	139,401
Ratio to U.S. imports (percent)	0.8	5.0	9.0
Ratio to U.S. shipments of imports (percent)	0.8	5.3	9.7
Ratio to total shipments of imports (percent)	0.8	5.2	9.4
Imports from all sources:			
Inventories (short tons)	201,891	461,444	466,413
Ratio to U.S. imports (percent)	7.8	11.6	11.7
Ratio to U.S. shipments of imports (percent)	7.8	12.5	11.8
Ratio to total shipments of imports (percent)	7.7	12.3	11.6

Source: Compiled from data submitted in response to Commission questionnaires.

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they had imported or arranged for the importation of corrosion-resistant steel for delivery after December 31, 2015. Forty-three firms reported data concerning such imports or arrangements of imports, only 23 of which reported imports from the subject countries (one from China, six from India, one from Italy, nine from Korea, and ten from Taiwan). Data concerning U.S. imports subsequent to December 31, 2015 are presented in table VII-28.

Table VII-28
Corrosion-resistant steel: U.S. imports subsequent to December 31, 2015

Item	Period				
	Jan-Mar 2016	Apr-Jun 2016	Jul-Sept 2016	Oct-Dec 2016	Total
China	***	***	***	***	***
India	***	***	***	***	***
Italy	***	***	***	***	***
Korea	***	***	***	***	***
Taiwan	***	***	***	***	***
Subtotal, subject	253,998	316,947	123,811	78,878	773,634
Canada	***	***	***	***	***
All other sources	***	***	***	***	***
Subtotal, nonsubject	***	***	***	***	***
Total U.S. imports	663,506	740,847	370,793	255,272	2,030,418

Source: Compiled from data submitted in response to Commission questionnaires.

IMPORT RELIEF PROCEEDINGS IN THIRD-COUNTRY MARKETS

The Commission asked questionnaire recipients to identify whether the products subject to this proceeding have been the subject of any other import relief proceedings in the United States or in any other countries. Staff also requested in the preliminary phase of these investigations that parties identify any such proceedings in their postconference briefs. Information obtained from such requests is presented in table VII-29.

Table VII-29
Corrosion-resistant steel: Import relief proceedings in third-country markets

Export market	Subject country	Date/Measure
Australia	Korea	2012: Results of investigation were 0% for G/L and GI produced by Union Steel
Australia	Korea China (AD and CVD)	August 5, 2013: AD and CVD orders on aluminum zinc coated steel
Australia	China (AD and CVD) Korea Taiwan	August 5, 2013: AD and CVD orders on zinc coated (galvanized) steel
Australia	Korea Taiwan	May 2015: Initiated anti-circumvention on galvanized steel
Australia	India	June 16, 2015: AD investigation on zinc coated (galvanized) steel products terminated after finding no dumping by Uttam Galva, JSW, and POSCO Maharashtra and no injury to domestic industry
Brazil	Korea	2011: Investigation initiated but later terminated after finding no injury.
Brazil	China	May 2015: AD investigation on prepainted galvanized steel sheet
China	Korea	3-10% duty on electro-galvanized and hot-dip galvanized sheet
Colombia	China	March 6, 2014: AD order on galvanized smooth sheet
European Union	China	Investigation on galvanized steel terminated in 2009
European Union	China	2012: Provisional AD duties on certain organic coated steel products/color-coated sheet
GCC member states	All countries	June 9, 2016: The GCC initiated a safeguard investigation on flat-rolled products of iron or non-alloy steel, of a width of 600mm or more, clad, plated, or coated.
India	All countries	June 2015: Increased tariffs on flat-rolled steel from 7.5% to 10%

Table continued on following page.

Table VII-29 -- Continued

Corrosion-resistant steel: Import relief proceedings in third-country markets

Export market	Subject country	Date/Measure
Indonesia	All countries (except certain developing countries) Rp 4,314,161 per ton (July 2015-July 2016) Rp. 3,629,538 per ton (July 2016-July 2017)	July 2014: Safeguard duty (for 3 years)
Indonesia	Most-favored nation countries	May 30, 2015: Increased tariffs on galvanized and coated steel products from 12.5% to 20%
Iran	All countries	February 28, 2015: Increased import duties on steel sheet products to 15%
Kazakhstan	China Korea	Potential AD investigation on galvanized steel
Malaysia	China	May 2015: AD investigation initiated on prepainted/ painted/color-coated steel
Mexico	China Taiwan	Ongoing antidumping investigation initiated on December 17, 2015 on coated flat steel.
Morocco	All countries (except for certain developing countries)	22% duty on all coated flat imports effective Dec. 31, 2015; 20% during 2016; 18% for 2017; and 16% for 2018
Pakistan	Italy Korea Taiwan	January 2015: 5% duty on galvanized plated sheets
Russia	China Korea	Potential AD investigation on galvanized steel
Thailand	Korea	Initiated 2011: Results of investigation were 0% for prepainted steel and 13.82% for G/L for Union Steel.
Thailand	China Korea Taiwan	January 10, 2013: AD orders on prepainted galvanized and zinc-aluminum coated steel and unpainted zinc-aluminum coated steel

Source: Compiled from data submitted in response to Commission questionnaires; Chinese respondents' postconference brief, p. 14 (citing *Commission Regulation (EU) No. 845/2012*, September 18, 2012); Indian companies' postconference brief, pp. 18-19 and exh. 10 (citing *Statement of Essential Facts, Report No. 249, Alleged Dumping of Zinc Coated (Galvanised) Steel Exported from India and the Socialist Republic of Vietnam*, Australian Government Anti-Dumping Commission, June 16, 2015); ArcelorMittal postconference brief, exh. 22 (citing Semi-Annual Reports of the World Trade Organization, Commission foreign producer questionnaire responses, and various public articles); and *Notification Under Article 12.1(A) of the Agreement on Safeguards on Initiation of an Investigation and the Reasons for it: Bahrain, Kingdom of Kuwait, the State of Oman, the Sultana of Qatar, the State of Saudi Arabia, the Kingdom of the United Arab Emirates (Cooperation Council for the Arab Sates of the Gulf ("GCC"))*, June 9, 2016, accessed at https://docs.wto.org/dol2fe/Pages/FE_Search/FE_S_S009-DP.aspx?language=E&CatalogueIdList=229286&CurrentCatalogueIdIndex=0&FullTextHash=.

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INFORMATION ON NONSUBJECT COUNTRIES

Table VII-30 presents data on actual and forecasted global production. Although production increased globally during 2013-15, production did not increase in all countries. Most of the global increase during 2013-15 was accounted for by China which increased production by *** short tons. Production increased during this period for nonsubject countries other than Canada and Japan by *** short tons, while production in Canada and Japan was lower by *** and *** short tons, respectively, in 2015 than in 2013.

Table VII-30
Corrosion-resistant steel: Production, global by country, 2013-17

* * * * * * *

Table VII-31 presents data on actual and forecasted global consumption. Apparent gross consumption increased globally by *** short tons. Most of the increase is accounted for by China, where gross consumption increased by *** short tons. Gross consumption in Canada and Japan increased from 2013 to 2014 and decreased in 2015, whereas gross consumption in the other nonsubject countries increased from 2013 to 2015 by *** short tons.

Table VII-31
Corrosion-resistant steel: Apparent gross consumption, global by country and region, 2013-17

* * * * * * *

Table VII-32 presents data on global exports of corrosion-resistant steel. From 2013 through 2015, total world exports of corrosion-resistant steel increased by 3.9 million short tons, an increase of 7.1 percent. Exports from the five subject countries combined increased by 6.6 million tons, or 25.5 percent, from 2013 to 2015.

Table VII-32
Corrosion-resistant steel: Global total exports by countries subject to this proceeding and other top exporters, 2013-15

Item	Calendar year		
	2013	2014	2015
	Quantity (short tons)		
United States	1,609,738	1,544,191	1,342,620
Subject exporters.--			
China	12,351,341	16,686,522	18,864,141
India	2,512,666	2,612,381	2,046,759
Italy	2,712,885	3,034,492	3,087,963
Korea	6,086,619	6,402,661	6,285,013
Taiwan	2,201,732	2,415,260	2,178,163
Subtotal, subject exporters	25,865,243	31,151,316	32,462,039
All other top exporters.--			
Belgium	4,421,989	4,036,825	4,189,270
Germany	3,223,403	3,144,585	2,974,124
Netherlands	2,050,095	2,584,140	2,740,673
Japan	3,757,370	3,293,077	2,709,994
France	2,208,079	2,158,803	2,161,811
Austria	1,532,783	1,431,964	1,478,730
Slovakia	712,945	848,090	953,987
Canada	821,996	820,868	810,134
Luxembourg	603,392	725,913	665,007
All other exporting countries.	8,094,374	7,901,333	6,302,360
Total global exports	54,901,407	59,641,106	58,790,749

Table continued on following page.

Table VII-32 -- Continued
Corrosion-resistant steel: Global total exports by countries subject to this proceeding and other top exporters, 2013-15

Item	Calendar year		
	2013	2014	2015
	Share of quantity (percent)		
United States	2.9	2.6	2.3
Subject exporters.--			
China	22.5	28.0	32.1
India	4.6	4.4	3.5
Italy	4.9	5.1	5.3
Korea	11.1	10.7	10.7
Taiwan	4.0	4.0	3.7
Subtotal, subject exporters	47.1	52.2	55.2
All other top exporters.--			
Belgium	8.1	6.8	7.1
Germany	5.9	5.3	5.1
Netherlands	3.7	4.3	4.7
Japan	6.8	5.5	4.6
France	4.0	3.6	3.7
Austria	2.8	2.4	2.5
Slovakia	1.3	1.4	1.6
Canada	1.5	1.4	1.4
Luxembourg	1.1	1.2	1.1
All other exporting countries.	14.7	13.2	10.7
Total global exports	100.0	100.0	100.0

Source: Official export statistics as reported by various national authorities in the GTIS/GTA database, HTS subheadings 7210.30, 7210.41, 7210.49, 7210.61, 7210.69, 7212.20, 7212.30, 7212.40, 7212.50, 7212.60, 7210.70, and 7210.90, accessed April 9, 2016.

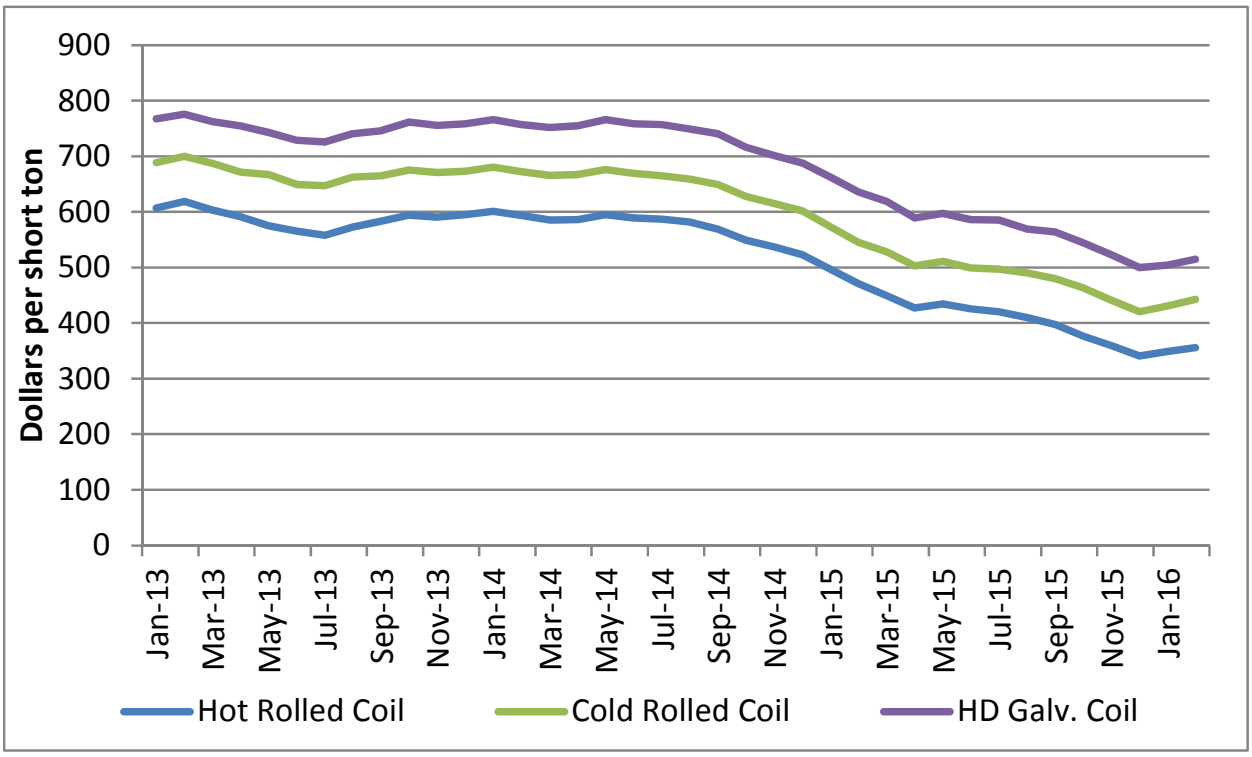
Table VII-33 and figure VII-1 present data on global monthly prices of hot-rolled coil, cold-rolled coil, and hot-dipped galvanized coil as published by MEPS International, Ltd.

Table VII-33
World carbon steel product monthly prices, January 2013-February 2016

Month and year	Hot rolled coil	Cold rolled coil	Hot-dipped galvanized coil
		(Dollars per short ton)	
2013:			
January	607	689	767
February	619	699	776
March	603	687	762
April	591	671	755
May	575	667	743
June	565	650	728
July	558	647	726
August	572	662	740
September	583	665	746
October	594	675	761
November	591	670	756
December	595	673	758
2014:			
January	601	680	766
February	593	672	757
March	585	666	752
April	586	667	755
May	595	676	766
June	589	670	758
July	587	665	757
August	582	659	748
September	569	650	740
October	549	628	716
November	537	615	701
December	523	601	688
2015:			
January	497	573	662
February	471	545	636
March	449	528	619
April	427	503	589
May	435	511	597
June	425	499	586
July	420	497	585
August	410	490	569
September	397	480	563
October	376	464	544
November	359	441	523
December	341	420	500
2016:			
January	349	431	504
February	356	443	514

Source: MEPS International, Ltd., http://www.meps.co.uk/World%20Carbon%20Price.htm.

Figure VII-1
World carbon steel product monthly prices, January 2013-February 2016



Source: MEPS International, Ltd., http://www.meps.co.uk/World%20Carbon%20Price.htm.

Canada

The leading nonsubject country exporter to the United States was Canada. The industry producing corrosion-resistant steel in Canada includes a firm related to petitioner ArcelorMittal and a firm related until October 2015 to petitioner U.S. Steel.[24] ArcelorMittal Dofasco and ArcelorMittal Coteau-du-Lac have combined capacity of over 3 million short tons of hot-dipped galvanized sheet, and U.S. Steel Canada has hot-dipped capacity of 700,000 short tons.[25] A third firm, Metal Koting, has an electrogalvanizing line with capacity of 45,000 short tons.[26]

[24] U.S. Steel Canada, which was a subsidiary of U.S. Steel Corporation, filed for relief from creditors under Canada's Companies' Creditors Arrangement Act (CCAA) in September 2014. In October 2015, the Ontario Court of Justice approved a plan that split U.S. Steel Canada from U.S. Steel Corp. As a result, U.S. Steel Corporation no longer has any control over the operations of U.S. Steel Canada. See; *Court OKs U.S. Steel Canada split from USS*, American Metal Market, Oct. 9, 2015.

[25] GalvInfo Center and Steel Technology Services Inc.

[26] GalvInfo Center and Steel Technology Services Inc.

Production of galvanized steel in Canada during 2015 was *** short tons, which is roughly *** percent of capacity.[27]

Canada is a net importer of galvanized steel; in 2015, exports of 810,000 short tons were more than offset by imports of 1.1 million short tons. Of the imports, 63 percent were from the United States and 84 percent of the exports were to the United States.[28]

Japan

Japan is the seventh-largest exporter of galvanized sheet products.[29] Japan is the third largest producer of corrosion-resistant sheet steel, after China and the United States. Japan has multiple producers, including JFE Steel Corp. ("JFE") and Nippon Steel & Sumitomo Metal Corp. ("Nippon"), which are among the largest steel companies in the world. JFE, Nippon, Kobe Steel, and Nisshin Steel account for more than 90 percent of the galvanizing capacity in Japan, and all are related to U.S. producers of corrosion-resistant steel.[30] The capacity to produce hot-dipped galvanized steel in Japan is *** short tons and the capacity to produce electrogalvanized steel is *** short tons. Production of galvanized steel in 2015 was *** short tons, or roughly *** percent of capacity.[31]

In 2015, Japan's exports totaled 2.7 million short tons. Its markets were primarily other countries in Asia, particularly Thailand, China, Vietnam, and Indonesia. Japan exported 165,000 short tons to Mexico, but only 78,000 short tons to the United States.[32]

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[27] *** and GalvInfo Center and Steel Technology Services Inc.

[28] NTIS. *Global Trade Atlas.*

[29] Reported exports from Belgium, Germany, and the Netherlands, which exceed those from Japan, may include product from other EU countries.

[30] Nippon is a joint owner, with ArcelorMittal, of I/N Kote and AM/NS Calvert; Nippon is also a co-owner, with BlueScope Steel Ltd. (an Australian steel company), of Steelscape; JFE is a joint owner, with Vale (a Brazilian company), of California Steel Industries; Kobe Steel is a joint owner, with U.S. Steel, of Pro-Tec Coating; and Nisshin owns Wheeling Nisshin Inc.

[31] ***.

[32] NTIS. *Global Trade Atlas.*

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, *Federal Register* notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
80 FR 32606 June 9, 2015	*Certain Corrosion-Resistant Steel Products From China, India, Italy, Korea, and Taiwan; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	http://www.gpo.gov/fdsys/pkg/FR-2015-06-09/pdf/2015-14028.pdf
80 FR 37223 June 30, 2015	*Certain Corrosion-Resistant Steel Products From the People's Republic of China, India, Italy, the Republic of Korea, and Taiwan: Initiation of Countervailing Duty Investigations*	http://www.gpo.gov/fdsys/pkg/FR-2015-06-30/pdf/2015-16067.pdf
80 FR 37228 June 30, 2015	*Certain Corrosion-Resistant Steel Products From Italy, India, the People's Republic of China, the Republic of Korea, and Taiwan: Initiation of Less-Than-Fair-Value Investigations*	http://www.gpo.gov/fdsys/pkg/FR-2015-06-30/pdf/2015-16061.pdf
80 FR 44151 July 24, 2015	*Certain Corrosion-Resistant Steel Products From China, India, Italy, Korea, and Taiwan: Determinations*	https://www.gpo.gov/fdsys/pkg/FR-2015-07-24/pdf/2015-18125.pdf
80 FR 61793 October 14, 2015	*Certain Corrosion-Resistant Steel Products From India, Italy, the People's Republic of China, the Republic of Korea, and Taiwan: Postponement of Preliminary Determinations of Antidumping Duty Investigations*	https://www.gpo.gov/fdsys/pkg/FR-2015-10-14/pdf/2015-26138.pdf
80 FR 68504 November 5, 2015	*Antidumping and Countervailing Duty Investigations of Corrosion-Resistant Steel Products From India, Italy, the People's Republic of China, the Republic of Korea, and Taiwan: Preliminary Determinations of Critical Circumstances*	https://www.gpo.gov/fdsys/pkg/FR-2015-11-05/pdf/2015-28252.pdf
80 FR 68854 November 6, 2015	*Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From India: Preliminary Affirmative Determination*	https://www.gpo.gov/fdsys/pkg/FR-2015-11-06/pdf/2015-28447.pdf

Citation	Title	Link
80 FR 68839 November 6, 2015	*Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Italy: Preliminary Affirmative Determination*	https://www.gpo.gov/fdsys/pkg/FR-2015-11-06/pdf/2015-28452.pdf
80 FR 68852 November 6, 2015	*Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Taiwan: Preliminary Negative Countervailing Duty Determination*	https://www.gpo.gov/fdsys/pkg/FR-2015-11-06/pdf/2015-28455.pdf
80 FR 68843 November 6, 2015	*Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the People's Republic of China: Preliminary Affirmative Determination*	https://www.gpo.gov/fdsys/pkg/FR-2015-11-06/pdf/2015-28453.pdf
80 FR 68842 November 6, 2015	*Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the Republic of Korea: Preliminary Affirmative Determination*	https://www.gpo.gov/fdsys/pkg/FR-2015-11-06/pdf/2015-28454.pdf
80 FR 72685 November 20, 2015	*Countervailing Duty Investigations of Certain Corrosion-Resistant Steel Products From India, Italy, the People's Republic of China, the Republic of Korea, and Taiwan: Alignment of Final Countervailing Duty Determinations With Final Antidumping Duty Determinations*	https://www.gpo.gov/fdsys/pkg/FR-2015-11-20/pdf/2015-29721.pdf
81 FR 63 January 4, 2016	*Certain Corrosion-Resistant Steel Products From India: Affirmative Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination*	https://www.gpo.gov/fdsys/pkg/FR-2016-01-04/pdf/2015-32758.pdf
81 FR 69 January 4, 2016	*Certain Corrosion-Resistant Steel Products From Italy: Preliminary Affirmative Determination of Sales at Less Than Fair Value and Postponement of Final Determination*	https://www.gpo.gov/fdsys/pkg/FR-2016-01-04/pdf/2015-32759.pdf
81 FR 72 January 4, 2016	*Certain Corrosion-Resistant Steel Products from Taiwan: Negative Preliminary Determination of Sales at Less Than Fair Value*	https://www.gpo.gov/fdsys/pkg/FR-2016-01-04/pdf/2015-32761.pdf
81 FR 75 January 4, 2016	*Certain Corrosion-Resistant Steel Products From the People's Republic of China: Affirmative Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination*	https://www.gpo.gov/fdsys/pkg/FR-2016-01-04/pdf/2015-32763.pdf

Citation	Title	Link
81 FR 78 January 4, 2016	*Certain Corrosion-Resistant Steel Products From the Republic of Korea: Affirmative Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination*	https://www.gpo.gov/fdsys/pkg/FR-2016-01-04/pdf/2015-32762.pdf
81 FR 4255 January 26, 2016	*Certain Corrosion-Resistant Steel Products From Taiwan: Postponement of Final Determination of Sales at Less Than Fair Value*	https://www.gpo.gov/fdsys/pkg/FR-2016-01-26/pdf/2016-01566.pdf
81 FR 7585 February 12, 2016	*Certain Corrosion-Resistant Steel Products From China, India, Italy, Korea, and Taiwan; Scheduling of the Final Phase of Countervailing Duty and Antidumping Duty Investigations*	https://www.gpo.gov/fdsys/pkg/FR-2016-02-12/pdf/2016-02914.pdf
81 FR 28104 May 9, 2016	*Certain Corrosion-Resistant Steel Products From China, India, Italy, Korea, and Taiwan: Revised Hearing Schedule*	https://www.gpo.gov/fdsys/pkg/FR-2016-05-09/pdf/2016-10742.pdf
81 FR 35299 June 2, 2016	*Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Taiwan: Final Negative Countervailing Duty Determination*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-02/pdf/2016-12977.pdf
81 FR 35303 June 2, 2016	*Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-02/pdf/2016-12979.pdf
81 FR 35308 June 2, 2016	*Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Affirmative Determination, and Final Affirmative Critical Circumstances Determination, in Part*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-02/pdf/2016-12962.pdf
81 FR 35310 June 2, 2016	*Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From the Republic of Korea: Final Affirmative Determination, and Final Affirmative Critical Circumstances Determination, in Part*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-02/pdf/2016-12978.pdf

Citation	Title	Link
81 FR 35320 June 2, 2016	*Certain Corrosion-Resistant Steel Products From Italy: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-02/pdf/2016-12969.pdf
81 FR 35323 June 2, 2016	*Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From India: Final Affirmative Determination*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-02/pdf/2016-12967.pdf
81 FR 35326 June 2, 2016	*Countervailing Duty Investigation of Certain Corrosion-Resistant Steel Products From Italy: Final Affirmative Determination and Final Affirmative Critical Circumstances, in Part*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-02/pdf/2016-12971.pdf
81 FR 35329 June 2, 2016	*Certain Corrosion-Resistant Steel Products From India: Final Determination of Sales at Less Than Fair Value and Final Negative Determination of Critical Circumstances*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-02/pdf/2016-12986.pdf
81 FR 35313 June 2, 2016	*Certain Corrosion-Resistant Steel Products From Taiwan: Final Determination of Sales at Less Than Fair Value and Final Affirmative Determination of Critical Circumstances, in Part*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-02/pdf/2016-12975.pdf
81 FR 35316 June 2, 2016	*Certain Corrosion-Resistant Steel Products From the People's Republic of China: Final Determination of Sales at Less Than Fair Value, and Final Affirmative Critical Circumstances Determination, in Part*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-02/pdf/2016-12965.pdf
81 FR 38671 June 14, 2016	*Certain Corrosion-Resistant Steel Products From India: Notice of Correction to Final Affirmative Determination; Negative Determination of Critical Circumstances*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-14/pdf/2016-14072.pdf
81 FR 38735 June 14, 2016	*Certain Corrosion-Resistant Steel Products From Taiwan; Termination of Investigation*	https://www.gpo.gov/fdsys/pkg/FR-2016-06-14/pdf/2016-13978.pdf

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject:	Certain Corrosion-Resistant Steel Products from China, India, Italy, Korea, and Taiwan
Inv. Nos.:	701-TA-534-538 and 731-TA-1274-1278 (Final)
Date and Time:	May 26, 2016 - 10:00 am

Sessions were held in connection with these investigations in the Main Hearing Room (Room 101), 500 E Street, S.W., Washington, DC.

CONGRESSIONAL APPREARANCES:

The Honorable Joe Donnelly, United States Senator, Indiana

The Honorable Peter J. Visclosky, U.S. Representative, 1st District, Indiana

The Honorable Patrick J. Tiberi, U.S. Representative, 12th District, Ohio

The Honorable Richard M. Nolan, U.S. Representative, 8th District, Minnesota

OPENING REMARKS:

Petitioners (**Paul C. Rosenthal**, Kelley Drye & Warren LLP)
Respondents (**Julie C. Mendoza**, Morris Manning & Martin LLP)

In Support of the Imposition of
Antidumping and Countervailing Duty Orders:

Schagrin Associates
Washington, DC
on behalf of

California Steel Industries ("CSI")
Steel Dynamics, Inc. ("SDI")

Dick Teets, President *and* Chief Operating Officer, SDI

Barry Schneider, Senior Vice President of Flat Rolled Products, SDI

John Walburg, Manager, Marketing and Sales Administration, CSI

Roger B. Schagrin)
) – OF COUNSEL
Christopher T. Cloutier)

Kelley Drye & Warren LLP
Washington, DC
on behalf of

ArcelorMittal USA LLC ("AMUSA")

James Baske, Chief Executive Officer, ArcelorMittal North America

Daniel Mull, Executive Vice President of Sales and Marketing, AMUSA

Sheila Janin, Director of Coated Products, AMUSA

Leo Gerard, International President, United Steelworkers

Gina Beck, Economic Consultant, Georgetown Economic Services, LLC

Paul C. Rosenthal)
Kathleen W. Cannon) – OF COUNSEL
R. Alan Luberda)

In Support of the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Wiley Rein LLP
Washington, DC
on behalf of

Nucor Corporation

Rick Blume, Vice President *and* General Manager, Commercial, Nucor Corporation

Scott Meredith, Director of Sales and Marketing, Flat-Products, Nucor Corporation

Dr. Jerry A. Hausman, MacDonald Professor of Economics at the Massachusetts Institute of Technology

Alan H. Price)
Timothy C. Brightbill) – OF COUNSEL
Maureen E. Thorson)

King & Spalding LLP
Washington, DC
on behalf of

AK Steel Corporation

Scott M. Lauschke, Vice President, Sales and Customer Service, AK Steel Corporation

J.B. Chronister, General Manger, Products, AK Steel Corporation

Stephen A. Jones)
) – OF COUNSEL
Stephen P. Vaughn)

Skadden, Arps, Slate, Meagher & Flom LLP
Washington, DC
on behalf of

United States Steel Corporation

Mario Longhi, President *and* Chief Executive Officer, United States Steel Corporation

Douglas R. Matthews, Senior Vice President of Industrial, Service Center and Mining Solutions, United States Steel Corporation

In Support of the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Robert Y. Kopf, General Manager, Revenue Management,
United States Steel Corporation

Jeffrey D. Gerrish)
) – OF COUNSEL
Nathaniel B. Bolin)

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders:

Morris Manning & Martin LLP
Washington, DC
on behalf of

Korea Iron and Steel
POSCO
POSCO Coated & Color Steel Co., Ltd.
Hyundai Steel Co., Ltd.
Dongkuk Steel Mill Co., Ltd.
Dongbu Steel Co., Ltd.
(collectively "Korean Producers")

Hyein Kim, Manager of Sales, POSCO America

John Ryoo, Manager of Sales, POSCO America

Won Kim, Manager, Hyundai Steel Trade Affairs & Planning Team

Stanley Shin, Sales and Procurement, Hyundai Steel America

James P. Dougan, Vice President, Economic Consulting Services, LLC

Curtis Eward, Staff Economist, Economic Consulting Services, LLC

Donald B. Cameron)
R. Will Planert)
) – OF COUNSEL
Julie C. Mendoza)
Mary S. Hodgins)

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Morris Manning & Martin LLP
Washington, DC
on behalf of

Marcegaglia Carbon Steel
Acciaieria Arvedi S.p.A.
Federacciai Federation of Italian Companies
(collectively "Italian Producers")

Lorenzo Biagi, Sales and Marketing Director, Processed Flat Rolled Products, Marcegaglia Carbon Steel

Livia Schizzerotto, General Counsel, Finarvedi SpA

Alessandro Geroldi, Export Area Manager, Acciaieria Arvedi S.p.A

James P. Dougan, Vice President, Economic Consulting Services, LLC

Curtis Eward, Staff Economist, Economic Consulting Services, LLC

Julie C. Mendoza)
Donald B. Cameron)
) – OF COUNSEL
R. Will Planert)
Mary S. Hodgins)

Morris Manning & Martin LLP
Washington, DC
on behalf of

Prosperity Tieh Enterprise Co., Ltd ("Prosperity Tieh")

Donald B. Cameron) – OF COUNSEL

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Arent Fox
Washington, DC
on behalf of

Jindal South West Steel Ltd.
Uttam Galva Steels Limited
Uttam Galva North America, Inc.
(collectively "Indian Respondents")

Stephen Schoop, Chief Executive Officer, Uttam Galva North America, Inc.

Daniel Bain, Chief Financial Officer, Uttam Galva North America, Inc.

John M. Gurley)
) – OF COUNSEL
Nancy A. Noonan)

Husch Blackwell LLP
Washington, DC
on behalf of

Chinese Respondents

Bruce Malashevich, President, Economic Consulting Services

Jeffrey S. Neeley)
) – OF COUNSEL
Cortney O. Morgan)

White & Case LLP
Washington, DC
on behalf of

Minmetals, Inc. ("Minmetals USA")

Adams C. Lee) – OF COUNSEL

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Vorys, Sater, Seymour and Pease LLP
Washington, DC
on behalf of

Stemcor USA Inc. ("Stemcor")

Frederick P. Waite)
) – OF COUNSEL
Kimberly R. Young)

REBUTTAL/CLOSING REMARKS:

Petitioners (**Roger B. Schagrin**, Schagrin Associates *and* **Timothy C. Brightbill**, Wiley Rein LLP)
Respondents (**R. Will Planert**, Morris Manning & Martin LLP *and* **John Gurley**, Arent Fox

APPENDIX C

SUMMARY DATA

Table C-1
Corrosion-resistant steel: Summary data concerning the U.S. market, 2013-15
(Quantity=short tons; value=1,000 dollars; unit values, unit labor costs, and unit expenses=dollars per short ton; period changes=percent--exceptions noted)

	Report data			Period changes		
	Calendar year			Calendar year		
	2013	2014	2015	2013-15	2013-14	2014-15
U.S. consumption quantity:						
Amount	19,776,464	21,779,398	21,265,231	7.5	10.1	(2.4)
Producers' share (fn1)	85.6	79.8	79.2	(6.4)	(5.8)	(0.6)
Importers' share (fn1):						
China	***	***	***	***	***	***
India	***	***	***	***	***	***
Italy	***	***	***	***	***	***
Korea	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***
Subtotal, subject sources	7.8	12.9	12.4	4.7	5.1	(0.4)
Canada	***	***	***	***	***	***
All other sources	***	***	***	***	***	***
Subtotal, nonsubject sources	6.7	7.4	8.4	1.7	0.7	1.0
Total imports	14.4	20.2	20.8	6.4	5.8	0.6
U.S. consumption value:						
Amount	17,338,418	19,422,873	17,055,633	(1.6)	12.0	(12.2)
Producers' share (fn1)	84.8	80.1	78.9	(6.0)	(4.8)	(1.2)
Importers' share (fn1):						
China	***	***	***	***	***	***
India	***	***	***	***	***	***
Italy	***	***	***	***	***	***
Korea	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***
Subtotal, subject sources	7.8	12.2	12.1	4.3	4.3	(0.0)
Canada	***	***	***	***	***	***
All other sources	***	***	***	***	***	***
Subtotal, nonsubject sources	7.4	7.8	9.0	1.6	0.4	1.2
Total imports	15.2	19.9	21.1	6.0	4.8	1.2
U.S. imports from:						
China:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
India:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
Italy:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
Korea:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
Taiwan:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
Subject, subject sources:						
Quantity	1,532,976	2,805,365	2,646,023	72.6	83.0	(5.7)
Value	1,355,139	2,361,932	2,071,130	52.8	74.3	(12.3)
Unit value	$884	$842	$783	(11.5)	(4.8)	(7.0)
Ending inventory quantity	192,575	393,707	327,012	69.8	104.4	(16.9)
Canada:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
All other sources:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***
Subtotal, nonsubject sources:						
Quantity	1,320,024	1,602,921	1,785,822	35.3	21.4	11.4
Value	1,276,567	1,509,320	1,532,955	20.1	18.2	1.6
Unit value	$967	$942	$858	(11.2)	(2.6)	(8.8)
Ending inventory quantity	9,316	67,737	139,401	1,396.4	627.1	105.8
Total imports:						
Quantity	2,852,999	4,408,286	4,431,844	55.3	54.5	0.5
Value	2,631,706	3,871,252	3,604,085	36.9	47.1	(6.9)
Unit value	$922	$878	$813	(11.8)	(4.8)	(7.4)
Ending inventory quantity	201,891	461,444	466,413	131.0	128.6	1.1

Table C-1--Continued
Corrosion-resistant steel: Summary data concerning the U.S. market, 2013-15
(Quantity=short tons; value=1,000 dollars; unit values, unit labor costs, and unit expenses=dollars per short ton; period changes=percent--exceptions noted)

	Report data			Period changes		
	Calendar year				Calendar year	
	2013	2014	2015	2013-15	2013-14	2014-15
U.S. producers':						
Average capacity quantity	24,055,641	24,079,937	24,053,359	(0.0)	0.1	(0.1)
Production quantity	18,026,752	18,645,379	18,045,727	0.1	3.4	(3.2)
Capacity utilization (fn1)	74.9	77.4	75.0	0.1	2.5	(2.4)
U.S. shipments:						
Quantity	16,923,465	17,371,112	16,833,387	(0.5)	2.6	(3.1)
Value	14,706,712	15,551,621	13,451,548	(8.5)	5.7	(13.5)
Unit value	$869	$895	$799	(8.0)	3.0	(10.7)
Export shipments:						
Quantity	1,113,004	1,143,816	1,118,643	0.5	2.8	(2.2)
Value	1,049,509	1,083,450	1,055,313	0.6	3.2	(2.6)
Unit value	$943	$947	$943	0.0	0.5	(0.4)
Ending inventory quantity	1,275,592	1,403,969	1,490,774	16.9	10.1	6.2
Inventories/total shipments (fn1)	7.1	7.6	8.3	1.2	0.5	0.7
Production workers	11,469	11,549	11,667	1.7	0.7	1.0
Hours worked (1,000s)	24,793	24,914	25,524	2.9	0.5	2.4
Wages paid ($1,000)	939,505	998,763	1,005,250	7.0	6.3	0.6
Hourly wages (dollars)	$37.89	$40.09	$39.38	3.9	5.8	(1.8)
Productivity (short tons per 1,000 hours)	727.1	748.4	707.0	(2.8)	2.9	(5.5)
Unit labor costs	$52.12	$53.57	$55.71	6.9	2.8	4.0
Net sales:						
Quantity	17,972,946	18,490,085	17,846,648	(0.7)	2.9	(3.5)
Value	15,691,553	16,608,156	14,436,485	(8.0)	5.8	(13.1)
Unit value	$873	$898	$809	(7.3)	2.9	(9.9)
Cost of goods sold (COGS)	14,637,131	15,414,655	13,350,609	(8.8)	5.3	(13.4)
Gross profit or (loss)	1,054,422	1,193,501	1,085,876	3.0	13.2	(9.0)
SG&A expenses	508,837	584,006	557,194	9.5	14.8	(4.6)
Operating income or (loss)	545,585	609,495	528,682	(3.1)	11.7	(13.3)
Net income or (loss)	342,758	411,420	64,531	(81.2)	20.0	(84.3)
Capital expenditures	234,251	223,104	220,992	(5.7)	(4.8)	(0.9)
Unit COGS	$814	$834	$748	(8.1)	2.4	(10.3)
Unit SG&A expenses	$28	$32	$31	10.3	11.6	(1.2)
Unit operating income or (loss)	$30	$33	$30	(2.4)	8.6	(10.1)
Unit net income or (loss)	$19	$22	$4	(81.0)	16.7	(83.7)
COGS/sales (fn1)	93.3	92.8	92.5	(0.8)	(0.5)	(0.3)
Operating income or (loss)/sales (fn1)	3.5	3.7	3.7	0.2	0.2	(0.0)
Net income or (loss)/sales (fn1)	2.2	2.5	0.4	(1.7)	0.3	(2.0)

fn1.--Report data are in percent and period changes are in percentage points.

Source: Compiled using data from official U.S. import statistics (see part IV for details) and data submitted in response to Commission questionnaries.

APPENDIX D

NONSUBJECT COUNTRY PRICE DATA

Three importers reported price data for imports from Canada for products 1-4.[1] Price data reported by these firms accounted for *** percent of U.S. commercial shipments of product from Canada in 2015. These price items and accompanying data are comparable to those presented in tables V-3 to V-6. Price and quantity data for Canada are shown in tables D-1 and in figures D-1 to D-4 (with domestic and subject sources).

In comparing Canada pricing data with U.S. producer pricing data, prices for product imported from Canada were lower than prices for U.S.-produced product in *** instances (*** tons) and higher in *** instances (*** tons). In comparing Canadian pricing data with subject country pricing data, prices for product imported from Canada were lower than prices for product imported from subject countries in *** instances (*** tons) and higher in *** instances (*** tons). A summary of price differentials is presented in table D-2.

Table D-1

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of imported products 1 through 4, by quarters, January 2013-December 2015

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Figure D-1

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of domestic and imported product 1, by quarters, January 2013-December 2015

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Figure D-2

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of imported product 2, by quarters, January 2013-December 2015

* * * * * * *

Figure D-3

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of imported product 3, by quarters, January 2013-December 2015

* * * * * * *

[1] No pricing data were reported for annual or long-term contracts (pricing products 5-8).

Figure D-4

Corrosion-resistant steel: Weighted-average f.o.b. prices and quantities of imported product 4, by quarters, January 2013-December 2015

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Table D-2

Corrosion-resistant steel: Summary of price differentials, by country, January 2013-December 2015

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APPENDIX E

LOST SALES AND LOST REVENUE ALLEGATIONS FROM THE PRELIMINARY PHASE OF THE INVESTIGATIONS

Effective October 1, 2015, the Commission changed its rules associated with domestic industry provision of allegations of lost sales and lost revenue. The Commission rules were changed to ask petitioners to provide a list of purchasers where they lost sales or revenue, instead of transaction-specific incidents. This appendix contains the information from the preliminary phase related to lost sales and lost revenue allegations under the prior Commission rules as provided in the preliminary phase staff report.

The Commission requested U.S. producers of corrosion-resistant steel to report any instances of lost sales or revenue they experienced due to competition from imports of corrosion-resistant steel from China, India, Italy, Korea or Taiwan since January 1, 2012. Of the 18 responding U.S. producers, 15 firms reported that they had to reduce prices and/or roll back announced price increases, and 15 firms reported that they had lost sales. Five of these producers (***) provided usable lost sales and/or lost revenues information.

The 47 lost sales allegations totaled $50.4 million and involved 55,916 short tons of corrosion-resistant steel. The 19 lost revenue allegations totaled $1.3 million and involved 19,999 short tons of corrosion-resistant steel. Staff contacted 34 purchasers, and a summary of the information obtained follows in tables E-1 and E-2.

In addition, purchasers responding to the lost sales allegations were asked whether they shifted their purchases of corrosion-resistant steel from U.S. producers to suppliers of corrosion-resistant steel from subject countries since 2012. They were also asked whether U.S. producers reduced their prices in order to compete with suppliers of corrosion-resistant steel from subject countries (table E-3). Six of the 13 responding purchasers reported that they had shifted purchases of corrosion-resistant steel from U.S. producers to subject imports since 2012, and five of these purchasers reported that price was the reason for the shift. Four purchasers reported that the U.S. producers had reduced their prices in order to compete with the prices of subject imports since 2012.

Three purchasers provided additional comments.

* * * * * * *

Table E-1
Corrosion-resistant steel: U.S. producers' lost sales allegations

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Table E-2
Corrosion-resistant steel: U.S. producers' lost revenue allegations

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Table E-3
Corrosion-resistant steel: Purchasers' responses regarding shifting supply and price reductions

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