

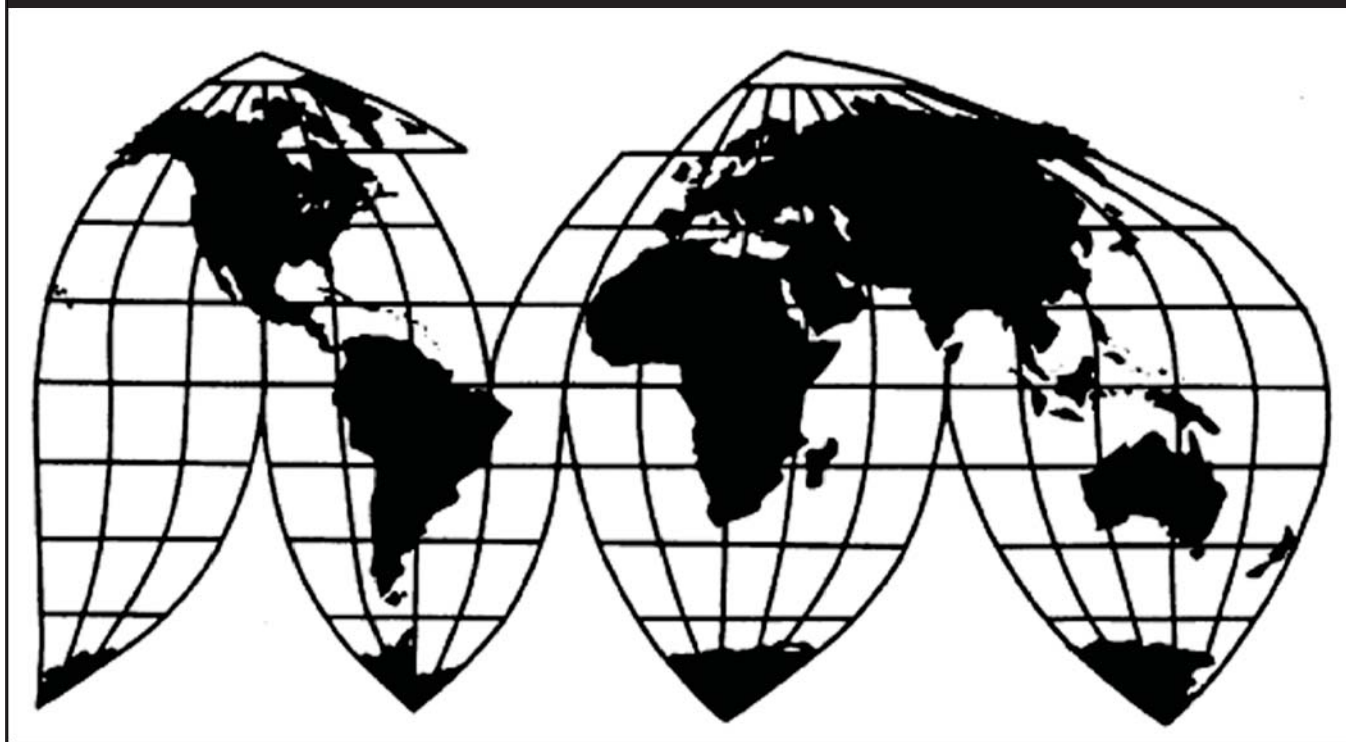
Stainless Steel Flanges from China

Investigation No. 701-TA-585 (Final)

Publication 4788

May 2018

U.S. International Trade Commission



Washington, DC 20436

U.S. International Trade Commission

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Note.—Information that would reveal confidential operations of individual concerns may not be published. Such information is identified by brackets or by parallel lines in confidential reports and is deleted and replaced with asterisks in public reports.

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 701-TA-585 (Final)

Stainless Steel Flanges from China

DETERMINATION

On the basis of the record¹ developed in the subject investigation, 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 stainless steel flanges from China that have been found by the U.S. Department of Commerce (“Commerce”) to be subsidized by the government of China.²

BACKGROUND

The Commission, pursuant to section 705(b) of the Act (19 U.S.C. 1671d(b)), instituted investigations effective August 16, 2017, following receipt of petitions filed with the Commission and Commerce by Core Pipe Products, Inc., Carol Stream, Illinois, and Maass Flange Corporation, Houston, Texas. The final phase of the investigations was scheduled by the Commission following notification of a preliminary determination by Commerce that imports of stainless steel flanges from China were being subsidized within the meaning of section 703(b) of the Act (19 U.S.C. 1671b(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* of February 7, 2018 (83 FR 5459). The hearing was held in Washington, DC, on April 10, 2018, and all persons who requested the opportunity were permitted to appear in person or by counsel.

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 *Countervailing Duty Investigation of Stainless Steel Flanges From the People’s Republic of China: Final Affirmative Determination*, 83 FR 15790, April 12, 2018.

Views of the Commission

Based on the record in the final phase of this investigation, we determine that an industry in the United States is materially injured by reason of imports of certain stainless steel flanges (“SS flanges”) found by the U.S. Department of Commerce (“Commerce”) to be subsidized by the government of China.

I. Background

The Coalition of American Flange Producers filed the petitions in these investigations on August 16, 2017, on behalf of itself and its individual members, Maass Flange Corporation (“Maass”), an integrated producer of SS flanges, and Core Pipe Products, Inc. (“Core Pipe”), a converter or finisher of SS flanges (collectively “petitioners”). Maass appeared at the hearing with counsel and submitted prehearing and posthearing briefs and final comments.¹

Several respondent entities participated jointly in the final phase of these investigations: Wuxi Jingxin Precision Machinery Co., Ltd. (“Wuxi”), a producer and exporter of subject merchandise from China, the China Chamber of International Commerce, a business association in China representing the SS flanges industry, and the Confederation of Chinese Metalforming Industry, a trade association (collectively “respondents”). Respondents appeared at the hearing with counsel and submitted joint prehearing and posthearing briefs and final comments.

U.S. industry data are based on the questionnaire responses of five firms that accounted for more than 80 percent of integrated U.S. production and independent finishing of SS flanges during 2017.² U.S. import data are based on official import statistics for Harmonized Tariff Schedules (“HTS”) subheadings 7307.21.10.00 and 7307.21.50.00.³ Foreign industry data are based on questionnaire responses from three producers accounting for *** percent of U.S.

¹ Petitioners filed countervailing duty and antidumping duty petitions on SS flanges from China and India on the same day, August 16, 2017. However, the investigations’ schedules became staggered when Commerce aligned only its antidumping and countervailing duty investigations regarding India, thereby necessitating an earlier final determination by the Commission in the countervailing duty investigation involving SS flanges from China. Commerce has not yet issued its final determinations in its antidumping duty and countervailing duty investigations regarding India nor its antidumping duty investigation regarding China. Pursuant to the statutory provision on staggered investigations, the record for each of these investigations will be the same except that the final Commerce antidumping or countervailing duty determinations and parties’ final comments concerning those determinations will be added to the record. See 19 U.S.C. § 1677(7)(G)(iii).

² Confidential Report (“CR”) at I-6; Public Report (“PR”) at I-4.

³ CR at IV-1; PR at IV-1. The Commission issued importer questionnaires to 37 firms believed to be importers of SS flanges and all firms believed to produce SS flanges in the United States. Usable questionnaire responses were received from 18 companies, representing *** percent of U.S. imports from China, *** percent from India, and *** percent from nonsubject countries in 2017. In light of this coverage, the Commission Report relies primarily on official import statistics. *Id.*

imports of SS flanges from China in 2017, and seven producers accounting for virtually all of U.S. imports of SS flanges from India in 2017.⁴

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, 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

⁴ CR at VII-3-4 and 11-12; PR at VII-3 and 8.

⁵ 19 U.S.C. § 1677(4)(A).

⁶ 19 U.S.C. § 1677(4)(A).

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.”).

Commerce's determination as to the scope of the imported merchandise that is subsidized or sold at less than fair value (LTFV"),¹¹ the Commission determines what domestic product is like the imported articles Commerce has identified.¹²

B. Product Description

In its final countervailing duty determination with respect to China, Commerce defined the imported merchandise within the scope of the investigation as:

Certain forged stainless steel flanges, whether unfinished, semifinished, or finished (certain forged stainless steel flanges). Certain forged stainless steel flanges are generally manufactured to, but not limited to, the material specification of ASTM/ASME A/SA182 or comparable domestic or foreign specifications. Certain forged stainless steel flanges are made in various grades such as, but not limited to, 304, 304L, 316, and 316L (or combinations thereof). The term "stainless steel" used in this scope refers to an alloy steel containing, by actual weight, 1.2 percent or less of carbon and 10.5 percent or more of chromium, with or without other elements.

Unfinished stainless steel flanges possess the approximate shape of finished stainless steel flanges and have not yet been machined to final specification after the initial forging or like operations. These machining processes may include, but are not limited to, boring, facing, spot facing, drilling, tapering, threading, beveling, heating, or compressing. Semifinished stainless steel flanges are unfinished stainless steel flanges that have undergone some machining processes.

The scope includes six general types of flanges. They are: (1) weld neck, generally used in butt-weld line connection; (2) threaded, generally used for threaded line connections; (3) slip-on, generally used to slide over pipe; (4) lap joint, generally used with stub-ends/butt-weld line connections; (5) socket weld, generally used to fit pipe into a machine recession; and (6) blind, generally used to seal off a line. The sizes and descriptions of the flanges within the scope include all pressure classes of

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).

ASME B16.5 and range from one-half inch to twenty-four inches nominal pipe size. Specifically excluded from the scope of these orders are cast stainless steel flanges. Cast stainless steel flanges generally are manufactured to specification ASTM A351.

The country of origin for certain forged stainless steel flanges, whether unfinished, semi-finished, or finished is the country where the flange was forged. Subject merchandise includes stainless steel flanges as defined above that have been further processed in a third country. The processing includes, but is not limited to, boring, facing, spot facing, drilling, tapering, threading, beveling, heating, or compressing, and/or any other processing that would not otherwise remove the merchandise from the scope of the investigations if performed in the country of manufacture of the stainless steel flanges.

Merchandise subject to the investigations is typically imported under headings 7307.21.1000 and 7307.21.5000 of the Harmonized Tariff Schedule of the United States (HTSUS). While HTSUS subheadings and ASTM specifications are provided for convenience and customs purposes, the written description of the scope is dispositive.¹³

Flanges can be made from a variety of materials (*e.g.*, cast iron, carbon steel, stainless steel, etc.) and are used to connect together pipe sections and piping components to form a piping system.¹⁴ Stainless steel pipes and flanges are generally used in piping systems that require corrosion resistance, contamination prevention, resistance to temperature extremes (high or low), or pressure containment.¹⁵ In general, pipes and flanges made from stainless steel are highly durable but more expensive than those made from carbon steel, with the result that SS flanges are used in more demanding applications than carbon steel flanges.¹⁶ For example, SS flanges are used in oil and gas refineries, nuclear power plants, chemical syntheses plants, paper mills, and food processing facilities.¹⁷

The manufacturing process for SS flanges involves three main steps: forging, heat treatment, and finishing. Integrated manufacturers perform all of these steps to produce a finished SS flange from stainless steel billets or bars. Converters, or non-integrated finishers,¹⁸ typically purchase forgings or semi-finished flanges and perform finishing steps to produce finished flanges.¹⁹

¹³ *Stainless Steel Flanges From the People's Republic of China: Final Affirmative Determination*, 83 Fed. Reg. 15790 (April 12, 2018).

¹⁴ CR at I-21; PR at I-16.

¹⁵ CR at I-26; PR at I-20.

¹⁶ CR at I-26; PR at I-20.

¹⁷ CR at I-27; PR at I-20.

¹⁸ The terms “converter”, “finisher”, and “non-integrated producer” are used interchangeably throughout this opinion.

¹⁹ CR at I-28-29; PR at I-21.

Stainless steel forgings are made from stainless steel billet or bar that is cut to size according to the input weight and length requirements of the subsequent flange. The forging process begins when the billet or bar is heated to forging temperature and then moved to an electro-hydraulic forging hammer which “forges” it into a shape that imparts the general dimensions of the finished flange. The forged material is then conveyed to a trim press where it receives its final shaping by trimming off the excess material. Once forged, the part is sent for post-forging heat treatment, which is required for certain flanges to impart specified mechanical properties or grain structure. When cooled, the forgings are ready to be transformed into finished SS flanges, a process which involves further machining, drilling, deburring, and marking. After finishing, the flanges are ready for shipment to the end user.²⁰

C. Domestic Like Product Analysis

In its preliminary determinations, the Commission defined a single domestic like product consisting of SS flanges, finished and unfinished, coextensive with the scope. The Commission applied its semi-finished products analysis in determining that unfinished flanges and finished flanges were appropriately within a single domestic like product definition.²¹

In the final phase of these investigations, both the petitioners and respondents maintain that the Commission should continue to define a single domestic like product that includes both finished and unfinished SS flanges, as it did in the preliminary determinations.²² The record of the final phase does not contain any information about the characteristics of finished and unfinished flanges different from that in the preliminary phase. In light of this and the lack of contrary argument, we define a single domestic like product consisting of finished and unfinished SS flanges, coextensive with the scope.²³

²⁰ CR at I-28-30; PR at I-21-22.

²¹ *Stainless Steel Flanges from China and India*, Inv. Nos. 701-TA-585-586 and 731-TA-1383-1384 (Preliminary), USITC Pub. 4734 (October 2017) at 8-10 (“*Preliminary Determinations*”).

²² Petitioners’ Prehearing Br. at 3 and Exh. 1; Hearing Tr. at 33 (Pickard); Hearing Tr. at 158 (Mills). In comments on the draft questionnaires for the final phase of these investigations, no party requested that the Commission collect separate data for finished and unfinished flanges. CR at I-31 n.77; PR at I-23 n.77.

²³ In its preliminary determinations, the Commission also did not expand the definition of the domestic like product to include flanges that are less than half an inch or more than 24-inches in nominal pipe size (“out-of-scope flanges”), but it noted the limited record regarding these products in the preliminary phase and stated that it would gather further data in any final phase of the investigations. *Preliminary Determinations*, USITC Pub. 4734 at 10 n.32. The data in the final phase indicate that out-of-scope flanges comprise a small portion of the U.S. market, both of domestic industry and subject import U.S. shipments. *Compare* CR/PR at Table C-1 and Table C-4. Further, no party has requested that the Commission define its domestic like product to include out-of-scope flanges. Accordingly, we continue to define the domestic like product to be coextensive with the scope.

III. Domestic Industry

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.”²⁴ In defining the domestic 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.

These investigations raise two sets of domestic industry issues. The first concerns what processing activities are sufficient to constitute domestic production. The second concerns whether appropriate circumstances exist to exclude any domestic producers from the domestic industry pursuant to the related parties provision.

In its preliminary determinations, the Commission found that firms engaged in finishing-only operations engaged in sufficient production-related activities and included such firms within its definition of the domestic industry.²⁵ The Commission also determined not to exclude domestic producers Core Pipe, Kerkau, or Maass from its definition of the domestic industry pursuant to the related parties provision, finding that the record of the preliminary phase indicated that each of these firms’ principal interests were in domestic production.²⁶

In the final phase of these investigations, petitioners contend that the Commission should define the domestic industry to include only integrated producers of SS flanges, *i.e.*, producers that forge and finish SS flanges, and that the Commission should not include finishers/converters in the domestic industry because such firms do not engage in sufficient production-related activities.²⁷ Petitioners further argue that U.S. producers Kerkau and Ameriforge should be excluded from the domestic industry as related parties.²⁸ Respondents argue that the Commission should continue to include non-integrated producers within the domestic industry, as it did in the preliminary determinations, and that no parties should be excluded from the domestic industry pursuant to the related parties provision.²⁹

A. Sufficient Production-Related Activities

In deciding whether a firm qualifies as a domestic producer of the domestic like product, the Commission generally considers certain factors in analyzing the overall nature of a firm’s

²⁴ 19 U.S.C. § 1677(4)(A).

²⁵ *Preliminary Determinations*, USITC Pub. 4734 at 11-14.

²⁶ *Preliminary Determinations*, USITC Pub. 4734 at 14-16.

²⁷ Petitioners’ Prehearing Br. at 4-14; Petitioners’ Posthearing Br. at Exh 1, 62-63.

²⁸ Petitioners’ Prehearing Br. at 21-25; Petitioners’ Posthearing Br. at 9-10 & Exh. 1, 8-9, 43-46.

²⁹ Respondents’ Posthearing Br. at 5; Respondents’ Posthearing Br., Resp. to Comm. Questions, at 37.

U.S. production-related activities; production-related activity at minimum levels could be insufficient to constitute domestic production.³⁰

Quantity/Types of Parts Sourced in the United States. The record in the final phase of these investigations continues to indicate, as in the preliminary phase, that domestic production of unfinished SS flanges (*i.e.*, forgings) for sale on the U.S. commercial market is extremely limited, and non-integrated producers rely primarily on subject imports for their supply of forgings. U.S. integrated producers reported shipping small amounts of unfinished SS flanges to the U.S. commercial market, *** of their total shipments by quantity or value in each year of the 2015 to 2017 period of investigation (“POI”).³¹ Non-integrated producers primarily relied on forgings from subject sources in their finishing operations.³² Most market participants reported that there is no market for forgings in the United States, and participants most frequently attributed the lack of such market to (i) an unwillingness to supply competitors or (ii) a lack of demand for unfinished flanges.³³ Notwithstanding petitioners’ argument that integrated producers are willing and have the capacity to supply forgings to other non-integrated producers, *** questionnaire responses directly contradict these arguments and indicate an unwillingness by integrated producers to supply competitors with forgings.³⁴

In 2017, U.S. production of finished flanges made from domestic forgings or semi-finished flanges totaled *** pounds for integrated production operations and *** pounds for finishing-only operations.³⁵

Technical Expertise. The record is mixed in terms of the technical expertise required in converting an unfinished or semi-finished flange into a finished one. In reporting the complexity of finishing operations, only U.S. non-integrated producer *** reported a relatively

³⁰ The Commission generally considers six factors: (1) quantity and type of parts sourced in the United States; (2) technical expertise involved in U.S. production activities; (3) employment levels; (4) value added to the product in the United States; (5) source and extent of the firm’s capital investment quantity and type of parts sourced in the United States; and (6) any other costs and activities in the United States directly leading to production of the like product. No single factor is determinative and the Commission may consider any other factors it deems relevant in light of the specific facts of any investigation. *Crystalline Silica Photovoltaic Cells and Modules from China*, Inv. Nos. 701-TA-481 and 731-TA-1190 (Final), USITC Pub. 4360 at 12-13 (Nov. 2012).

³¹ CR/PR at Table III-11. All reported commercial U.S. shipments were of ***, no commercial U.S. shipments of *** were reported by integrated U.S. producers. *Id.*

³² CR/PR at Table III-7. Forgings from subject sources comprised at least *** percent of production by quantity of U.S. producers finishing-only operations over the POI. *Id.*

³³ CR at II-15-16; PR at II-11-12. Four of five responding U.S. producers and 10 of 13 responding U.S. importers reported that there is no market for unfinished flanges. When asked for reasons, two U.S. producers and four U.S. importers reported that they do not want to supply competitors, and two U.S. producers and 7 U.S. importers reported that there is no demand for such products. *Id.*

³⁴ CR at II-16; PR at II-11-12; CR/PR at Table III-11. *** explanation for its commercial U.S. shipments of unfinished flanges indicate that such shipments were outside its normal course of business and only for other producers experiencing stock shortages, not products normally made available to its customers. U.S. Producer Questionnaire, EDIS Doc. ***, at IV-13.

³⁵ CR/PR at Table III-4a.

high level of complexity for such operations.³⁶ U.S. producer *** was the only firm to report research and development expenses during the POI, which were related to its ***.³⁷

Employment Levels. The record indicates that U.S. producers employed similar levels of production related workers (“PRWs”) for integrated operations and for finishing-only operations, although total employment levels were higher for integrated producers than for finishing-only operations.³⁸ U.S. producers reported higher wages for finishing-only operations than for integrated operations, both in total wages paid and average hourly wages.³⁹

Value added. The record indicates that domestic producers’ finishing operations add considerable value to finished SS flanges, albeit less than the forging activities of integrated producers. Questionnaire recipients reported that value added in integrated operations ranged from *** percent in 2017, and that such value for finishing-only operations ranged from *** percent in 2017.⁴⁰

Source/Extent of Capital Investment. The record in the final phase of these investigations indicates that capital investments for finishing operations are less than those for integrated operations. U.S. producers reported greater levels of capital expenditures for finishing-only operations than for integrated operations during the POI.⁴¹ Maass argues,

³⁶ CR/PR at Table III-4b. On a scale of one to five, *** rated the complexity of finishing operations as four, explaining that finishing requires ensuring ***. U.S. Producer Questionnaire, EDIS Doc. *** at II-3h. *** rated the complexity of finishing operations as three, explaining that finishing is usually only complex with ***. U.S. Producer Questionnaire, EDIS Doc. ***, at II-3h. Other U.S. producers reported the complexity of finishing operations as two or less.

³⁷ CR/PR at Table VI-8. *** reported decreasing R&D expenses over the POI, which were \$*** in 2015, \$*** in 2016, and \$*** in 2017. *Id.*

³⁸ CR/PR at Table III-17 and Table III-18. Integrated U.S. producers (two firms) reported employing *** PRWs in 2015, *** in 2016, and *** in 2017. For finishing operations, five U.S. producers reported employing *** PRWs in 2015, *** in 2016, and *** in 2017. *Id.* Integrated U.S. producer *** and U.S. finisher *** both reported staff reductions resulting from import competition. CR/PR at Table III-3. Integrated producers reported more total employee hours worked for their finishing operations than for forging. CR/PR at Table III-17.

³⁹ U.S. producers reported paying wages for integrated operations totaling \$*** in 2015, \$*** in 2016, and \$*** in 2017, and hourly wages of \$*** in 2015, \$*** in 2016, and \$*** in 2017. CR/PR at Table III-17. For finishing-only operations, U.S. producers reported paying wages totaling \$*** in 2015, \$*** in 2016, and \$*** in 2017, and hourly wages of \$*** in 2015, \$*** in 2016, and \$*** in 2017. CR/PR at Table III-18.

⁴⁰ CR/PR at Table III-4a. Petitioners argue that the value added by integrated producers should be *** percent, but such a calculation would not account for the value of the raw materials that undergo forging and finishing. As a ratio of total cost of goods sold (“COGS”) for U.S. producer’s integrated operations, raw materials accounted for *** percent in 2015, *** percent in 2016, and *** percent in 2017, which are consistent with the Commission’s data on value added by U.S. producer’s integrated operations. CR/PR at Table VI-1.

⁴¹ CR/PR at Table VI-8. U.S. producers reported capital expenditures for integrated operations totaling \$*** in 2015, \$*** in 2016, and \$*** in 2017, and capital expenditures for finishing-only operations totaling \$*** in 2015, \$*** in 2016, and \$*** in 2017. *Id.*

however, that forging operations require long-term capital investment that may not be captured by capital expenditures limited to the POI.⁴² Other factory costs reported by U.S. producers, which primarily serve to support production-related activities, indicate that integrated producers incur higher costs to maintain production than do finishing-only operations, supporting Maass' argument that forging operations entail higher long-term capital investments than do finishing-only operations.⁴³

While capital investment may be less for finishing-only operations than for integrated operations, the record indicates that capital investments for non-integrated producers are nonetheless substantial. Non-integrated producers *** and *** both reported the importance of capital investments for finishing operations.⁴⁴ While Maass argues that subject import competition has particularly depressed capital investments for integrated producers due to their higher costs in comparison with finishing operations, non-integrated producers also reported reductions in capital investments over the POI because of import competition, indicating that any understatement in such data would apply to both integrated and non-integrated operations.⁴⁵

Conclusion. On balance, we continue to find that non-integrated producers of finished SS flanges engage in sufficient production-related activities to be included in the domestic industry with integrated U.S. producers. While the record is mixed with regard to the technical expertise necessary for finishing operations, non-integrated producers accounted for a substantial number of PRWs and hours worked of U.S. producers. The value added by finishing operations is substantial, even if less than that for integrated operations. U.S. producers' integrated operations may require greater capital investment than finishing-only operations, but multiple U.S. producers, including ***, confirmed that finishing operations nonetheless require frequent and significant capital investments.⁴⁶

U.S. non-integrated producers reported sourcing fewer flanges domestically for their finishing operations than did integrated producers, but the record continues to indicate (as it did in the preliminary phase) that such imports are necessary because few domestically produced unfinished flanges are commercially available to non-integrated producers' finishing operations.

⁴² Petitioners' Prehearing Br. at 5-6 and Exh. 4.

⁴³ Compare CR/PR at Table VI-1 and Table VI-3. The ratio of other factory costs to COGS reported by U.S. producers' integrated operations ranged from *** percent, and for finishing-only operations ranged from *** percent. *Id.* Maass also points to its reported asset values as evidence for the greater capital investment for integrated operations. Petitioners' Posthearing Br. at Exh. 1, 62. However, the majority of Maass' capital investments ***, making such measures an unreliable indicator of capital investments. CR/PR at Table VI-9, n.2.

⁴⁴ CR/PR at Table III-4a & Table III-4b. For instance, *** estimates an investment of \$***. See CR/PR at Table III-4a.

⁴⁵ CR/PR at Table VI-11. ***. *Id.*

⁴⁶ Indeed, finisher *** reported the highest levels of capital expenditures of any firm during the POI, and indicated that it invested in additional equipment to increase capacity *** during the POI. CR at VI-22 n.17; PR at VI-5 n.17.

Accordingly, we define the domestic industry to be all producers of SS flanges, including both integrated domestic producers and non-integrated domestic producers that engage in only finishing operations. This is consistent with our prior determinations on SS flanges, which included non-integrated producers in the domestic industry.⁴⁷

B. Related Parties

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.⁴⁸ Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.⁴⁹

Ameriforge, Core Pipe, Kerkau and Maass have imported subject merchandise and thus are each a related party.⁵⁰ We have considered whether appropriate circumstances exist to exclude each from the domestic industry.

Ameriforge. Ameriforge is a U.S. integrated producer that also has finishing-only operations.⁵¹ Ameriforge imports subject merchandise, which are ***.⁵² Ameriforge reported imports of subject merchandise totaled *** pounds in 2015, *** pounds in 2016, and *** in

⁴⁷ *Stainless Steel Flanges from India and Taiwan*, Inv. Nos. 731-TA-639-640 (Final), USITC Pub. 2724 (Feb. 1994) at I-8; *Stainless Steel Flanges from India and Taiwan*, Inv. Nos. 731-TA-639-640 (Review), USITC Pub. 3827 at 5 (“SS Flanges Review”).

⁴⁸ 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).

⁴⁹ 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.

⁵⁰ CR/PR at Table III-15 and Table III-16.

⁵¹ CR at III-21; PR at III-8.

⁵² CR at III-21; PR at III-8; CR/PR at Table III-15, n.1. Ameriforge did not provide a U.S. importer questionnaire. Ameriforge confirmed to staff, however, that ***. *Id.*

2017.⁵³ Ameriforge's subject imports as a share of its finishing-only domestic production was *** throughout the POI.⁵⁴ Ameriforge *** the petitions and constitutes *** percent of integrated production and *** percent of finishing-only operations.⁵⁵

Ameriforge's domestic production ***, which indicates that its primary interest lies in domestic production rather than importation. Thus, we find that appropriate circumstances do not exist to exclude it from the domestic industry as a related party.

Core Pipe. Core Pipe is a U.S. non-integrated producer that sources unfinished SS flanges for its finishing operations *** from subject sources, but also sources ***.⁵⁶ Core Pipe imported *** pounds of subject imports in 2015, *** pounds in 2016, and *** pounds in 2017.⁵⁷ It imported ***, although its imports ***.⁵⁸ Core Pipe's subject imports as a share of domestic production was ***.⁵⁹ Core Pipe accounted for *** percent of non-integrated finishing operations in the United States in 2017.⁶⁰

While Core Pipe's subject imports as a share of domestic production was *** throughout the POI, imports of unfinished flanges for its finishing operations appear to be necessary because of the unavailability of domestically produced forgings in the U.S. market. The fact that Core Pipe imports *** suggests that its primary interest lies in domestic production of finished flanges. Core Pipe's *** financial performance also indicates that ***.⁶¹ Moreover, Core Pipe is a petitioner and supports the petitions.⁶² On balance, we find that appropriate circumstances do not exist to exclude Core Pipe from the domestic industry as a related party.

Kerkau. Kerkau is a U.S. non-integrated producer that sources unfinished SS flanges for its finishing operations primarily from subject sources, but also ***.⁶³ Kerkau reported that ***.⁶⁴ Its subject imports as a share of domestic production was ***.⁶⁵ Kerkau *** regarding

⁵³ CR/PR at Table III-16.

⁵⁴ CR/PR at Table III-16. Ameriforge's ratio of subject imports to domestic production was *** percent in 2015, *** percent in 2016, and *** percent in 2017. *Id.*

⁵⁵ CR/PR at Table III-1.

⁵⁶ U.S. Producer Questionnaires, EDIS Doc. 639024, at II-11. In addition, Core Pipe reported that ***. CR/PR at Table III-2.

⁵⁷ CR/PR at Table III-16.

⁵⁸ Core Pipe appears to have imported ***; Core Pipe appears to have imported ***. U.S. Importer Questionnaires, EDIS Doc. 639025, at II-5a and II-6a.

⁵⁹ CR/PR at Table III-16. Core Pipe's ratio of subject imports to domestic production was *** percent in 2015, *** percent in 2016, and *** percent in 2017. *Id.*

⁶⁰ CR/PR at Table III-1.

⁶¹ CR/PR at Table VI-7. Core Pipe reported *** net sales and operating incomes over the POI, including an ***. *Id.*

⁶² CR/PR at Table III-1.

⁶³ U.S. Producer Questionnaires, EDIS Doc. 642507, at II-11. It imported *** pounds from subject sources in 2015, *** pounds in 2016, and *** pounds in 2017. CR/PR at Table III-16.

⁶⁴ Correspondence, EDIS Doc. 640510.

⁶⁵ CR/PR at Table III-16. Kerkau's ratio of subject imports to domestic production was *** percent in 2015, *** percent in 2016, and *** percent in 2017. *Id.*

the petitions and accounted for *** percent of non-integrated finishing operations in the United States in 2017.⁶⁶ It indicated that its reason for importing is that ***.⁶⁷ Kerkau also reported the *** for any domestic producer in connection with its finishing operations during the POI.⁶⁸

While Kerkau's subject imports of unfinished flanges as a share of its domestic production of finished flanges was ***, the record of the final phase continues to indicate (as in the preliminary phase) that domestically produced unfinished flanges are largely not available in the U.S. market and thus necessitate imports for U.S. producers with only finishing operations.⁶⁹ The fact that it imported *** indicates that its primary interest lies in its domestic finishing operations. Moreover, although Kerkau's financial performance during the POI was *** than that of other domestic producers,⁷⁰ it *** into its finishing operations. On balance, we find that appropriate circumstances do not exist to exclude Kerkau from the domestic industry as a related party.

Maass. Maass is a U.S. integrated producer that also has finishing-only operations that rely on forgings sourced ***.⁷¹ Maass imported *** quantities of finished subject imports from *** during the POI. It imported *** pounds of subject imports in 2015, *** pounds in 2016, and *** pounds in 2017.⁷² Its subject imports as a share of domestic production *** over the POI, *** percent in 2017.⁷³ In addition, Maass reports that it is related to a producer and exporter of SS flanges in India ***.⁷⁴ Maass is a petitioner.⁷⁵ It accounted for *** percent of reported integrated production in the United States in 2017 and *** percent of non-integrated finishing operations in the United States in 2017.⁷⁶ Maass' financial performance was *** than that of the other domestic producers during the POI, albeit ***.⁷⁷

⁶⁶ CR/PR at Table III-1.

⁶⁷ CR/PR at Table III-16.

⁶⁸ CR/PR at Table VI-8.

⁶⁹ As noted by Kerkau, ***, and its imports of unfinished flanges will necessarily weigh more than its finished flanges produced domestically. CR at III-21; PR at III-8.

⁷⁰ CR/PR at Table VI-7. Kerkau's net sales and operating income ***, and Kerkau's operating income was *** of any domestic producer during the POI. *Id.*

⁷¹ U.S. Producer Questionnaire, EDIS Doc. 638587, at II-11.

⁷² U.S. Importer Questionnaire, EDIS Doc. 643152, at II-6a. ***. *Id.*

⁷³ CR/PR at Table III-15. Maass' ratio of subject imports to integrated domestic production was *** percent in 2015, *** percent in 2016, and *** percent in 2017. *Id.*

⁷⁴ CR/PR at Table III-2. While Maass reported that Maass India ***, Maass also reported importing subject merchandise in the 2005 review of SS flanges from India and Taiwan. *See SS Flanges Review*, USITC Pub. 3827, at 6 (noting that Maass reported importing small quantities of subject merchandise but that the limited record of the expedited reviews did not contain further information on quantities or source).

⁷⁵ CR/PR at Table III-1.

⁷⁶ CR/PR at Table III-1.

⁷⁷ CR/PR at Table VI-7. Maass' net sales, for integrated and finishing-only operations, *** over the POI, although its operating income was *** in 2017 than in 2015. *Id.* Maass' capital expenditures were \$*** in 2015, \$*** in 2016, and \$*** in 2017. CR/PR at Table VI-8.

While Maass' quantities of subject imports ***, such imports ***, indicating that its primary interest lies in domestic production. Maass has also reported that it acted only as ***, indicating that it did not benefit from its imports of subject merchandise. Maass' reported capital expenditures were the *** of those reported by U.S. producers, and Maass has indicated that these expenditures do not capture the full investment necessary for its forging operations, which it estimates to be \$***. Finally, Maass is a petitioner in these investigations. We find that appropriate circumstances do not exist to exclude Maass from the domestic industry as a related party.

IV. Cumulation⁷⁸

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.⁷⁹

⁷⁸ 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). For August 2016-July 2017, the 12-month period preceding the filing of the petitions, subsidized imports from China were 14.9 percent as a share of total imports. CR/PR at Table IV-12. Accordingly, negligibility is not an issue in these investigations.

⁷⁹ 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).

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.⁸⁰ Only a “reasonable overlap” of competition is required.⁸¹

The statutory threshold for cumulation is satisfied in these investigations because petitioners filed the antidumping and countervailing duty petitions with respect to both subject countries on the same day, August 16, 2017.⁸² Petitioners argue that all criteria for cumulation are satisfied in these investigations, consistent with the preliminary determination and prior investigations of SS flanges.^{83 84}

Fungibility. Domestic producers reported that SS flanges from China, India, and the United States were “always,” “frequently,” or “sometimes” interchangeable, while the vast majority of U.S. importers and purchasers reported that such products were “always” or “frequently” interchangeable.⁸⁵ The vast majority of U.S. producers, importers, and purchasers reported that non-price differences between SS flanges from each source were “sometimes” or “never” significant,⁸⁶ and purchasers most frequently cited price or total cost as an important purchasing factor.⁸⁷ Nearly all purchasers reported that SS flanges from China, India, and the United States “always” or “usually” meet minimum quality specifications.⁸⁸

In 2017, the large majority of commercial U.S. shipments for domestic producers and U.S. importers of subject merchandise from both China and India were of finished SS flanges.⁸⁹

⁸⁰ See, e.g., *Wieland Werke, AG v. United States*, 718 F. Supp. 50 (Ct. Int’l Trade 1989).

⁸¹ The Statement of Administrative Action for the Uruguay Round Agreements Act (“SAA”), which is an authoritative expression by the United States concerning the interpretation and application of the statute, 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.” SAA, 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.”).

⁸² None of the statutory exceptions to cumulation apply.

⁸³ Petitioners’ Prehearing Br. at 26-29.

⁸⁴ Respondents do not address the issue of whether the Commission should cumulate subject imports from China and India.

⁸⁵ CR/PR at Table II-9.

⁸⁶ CR/PR at Table II-11.

⁸⁷ CR/PR at Table II-5. A total of 25 purchasers reported price/cost as an important purchasing factor, 23 reported quality, 17 reported availability/lead time, and 17 reported other factors. Quality was most frequently ranked first in importance, followed by price. *Id.*

⁸⁸ CR/PR at Table II-10. Only one purchaser reported that SS flanges from China “rarely or never” met minimum quality standards. *Id.*

⁸⁹ CR/PR at Table IV-8. U.S. producers reported *** U.S. commercial shipments of unfinished flanges, U.S. importers of SS flanges from China reported ***, and U.S. importers of SS flanges from India reported *** percent of their total quantity. *Id.*

Both U.S. producers and importers also reported commercial U.S. shipments in 2017 of each type (e.g., weld neck, threaded, slip-on, etc.) and size of SS flange, albeit in different concentrations.⁹⁰

Channels of Distribution. The record indicates that the vast majority of SS flanges from China, India, and the United States were sold to distributors.⁹¹

Geographic Overlap. The record indicates that SS flanges from China, India, and the United States were sold in all regions of the United States.⁹²

Simultaneous Presence in Market. The domestic like product and imports from each subject country were present in the U.S. market throughout the POI.⁹³

Conclusion. Based on the record, we find that subject imports from China and India appear to be fungible with one another and with the domestic like product, and SS flanges manufactured in China, India, and the United States were sold simultaneously in overlapping geographical markets and through the same channels of distribution. Because the record indicates a reasonable overlap of competition among SS flanges from China, India, and the United States, we accordingly assess subject imports from China and India on a cumulated basis to determine whether there is material injury by reason of subject imports.

V. Material Injury by Reason of Subject Imports

Based on the record in the final phase of this investigation, we find that an industry in the United States is materially injured by reason of imports of SS flanges that Commerce has found to be subsidized by the government of China.

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.⁹⁴ 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

⁹⁰ CR/PR at Table IV-9 and Table IV-10. U.S. producers (integrated and finishing-only) reported most shipments as being weld neck flanges. U.S. importers most frequently reported shipments of slip-on for subject merchandise from both China and India, although shipments of weld neck flanges were the next most frequently reported type for both sources. CR/PR at Table IV-9.

⁹¹ CR/PR at Table II-1.

⁹² CR/PR at Table II-2.

⁹³ CR/PR at Table IV-12 (showing monthly imports over POI); CR/PR at Tables V-4 through V-8 (showing quarterly pricing data for the domestic like product).

⁹⁴ 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.

like product, but only in the context of U.S. production operations.⁹⁵ The statute defines “material injury” as “harm which is not inconsequential, immaterial, or unimportant.”⁹⁶ 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.⁹⁷ 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.”⁹⁸

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,⁹⁹ 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.¹⁰⁰ 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.¹⁰¹

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

⁹⁵ 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).

⁹⁶ 19 U.S.C. § 1677(7)(A).

⁹⁷ 19 U.S.C. § 1677(7)(C)(iii).

⁹⁸ 19 U.S.C. § 1677(7)(C)(iii).

⁹⁹ 19 U.S.C. §§ 1671d(a), 1673d(a).

¹⁰⁰ *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).

¹⁰¹ 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 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).

inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.¹⁰² In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.¹⁰³ 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 as nonsubject imports, which may be contributing to overall injury to an industry.¹⁰⁴ It is clear that the existence of injury caused by other factors does not compel a negative determination.¹⁰⁵

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

¹⁰² 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.

¹⁰³ 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.”).

¹⁰⁴ S. Rep. 96-249 at 74-75; H.R. Rep. 96-317 at 47.

¹⁰⁵ *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.”).

the subject imports.”¹⁰⁶ Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed “rigid adherence to a specific formula.”¹⁰⁷

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 finding of material injury in cases involving commodity products and a significant market presence of price-competitive nonsubject imports.¹⁰⁸ 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.¹⁰⁹ 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.¹¹⁰

¹⁰⁶ *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*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission’s causation analysis as comporting with the Court’s guidance in *Mittal*.

¹⁰⁷ *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.”).

¹⁰⁸ *Mittal Steel*, 542 F.3d at 875-79.

¹⁰⁹ *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).

¹¹⁰ 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 nonsubject 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

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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.¹¹¹ Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.¹¹²

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.

1. Demand Considerations

Demand for SS flanges in the U.S. market depends on demand for U.S.-produced downstream products.¹¹³ SS flanges are used to connect piping systems in refineries, power plants, and pulp/paper plants, among others.¹¹⁴ The vast majority of questionnaire respondents indicated that there are no substitutes for SS flanges.¹¹⁵ SS flanges account for a small share of the cost (ranging from less than one percent to 15 percent) of the direct downstream product in which it is used.¹¹⁶

Demand in downstream sectors impacts demand for SS flanges, with refining operations in the oil and gas market particularly driving demand for SS flanges.¹¹⁷ Prices for crude oil and natural gas generally declined between 2015 and 2016 and increased between 2016 and 2017, albeit with fluctuations.¹¹⁸ The number of active oil rigs in the United States decreased through 2015 before gradually increasing in 2016 and 2017.¹¹⁹ Majorities of U.S. producers and importers reported that demand for SS flanges in the oil and gas sector decreased in 2015 and

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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.

¹¹¹ We provide in our discussions below a full analysis of other factors alleged to have caused any material injury experienced by the domestic industry.

¹¹² *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.”).

¹¹³ CR at II-9; PR at II-7.

¹¹⁴ CR at II-9; PR at II-7.

¹¹⁵ CR at II-16; PR at II-12. Two of three U.S. producers, all 16 importers, and 25 of 26 purchasers reported that there were no substitutes for SS flanges. U.S. producer *** reported that flanges made from other materials may provide a substitute in some applications. *Id.*

¹¹⁶ CR at II-9; PR at II-7.

¹¹⁷ CR at II-11; PR at II-7.

¹¹⁸ CR/PR at Figure II-1(a) and Figure II-1(b).

¹¹⁹ CR/PR at Figure II-2.

2016 before increasing in 2017.¹²⁰ In other sectors, however, a majority of U.S. producers reported that demand for SS flanges had decreased in 2015 and 2016 while increasing in 2017. U.S. importers were divided on trends in demand over the POI, and a majority of U.S. purchasers reported that demand had not changed throughout the POI.¹²¹

Demand, as measured by apparent U.S. consumption, declined between 2015 and 2016 before increasing to its highest level of the POI in 2017. Apparent U.S. consumption was *** pounds in 2015, *** pounds in 2016, and *** pounds in 2017.¹²²

2. Supply Considerations

The domestic industry, subject imports, and imports from nonsubject sources all supplied the U.S. market over the POI. Cumulated subject imports were the largest source of supply to the United States. The market share of cumulated subject imports by quantity fluctuated over the POI but reached its highest point in 2017, initially declining from *** percent in 2015 to *** percent in 2016 before increasing to *** percent in 2017.¹²³ We note that the decline in market share for cumulated subject imports in 2016 corresponded with the Commission's issuance of a limited exclusion order under section 337 of the Tariff Act of 1930 against stainless steel products, including flanges, manufactured by Viraj Profiles Limited ("Viraj"), a major producer of subject merchandise in India.¹²⁴

Nonsubject imports were the second largest source of supply during the POI. By quantity, the share of the U.S. market held by nonsubject imports was *** percent in 2015, *** percent in 2016, and *** percent in 2017, the lowest level of the POI.¹²⁵ The largest sources of nonsubject imports during the POI were Canada, the Philippines, Mexico, and Germany.¹²⁶

¹²⁰ CR/PR at Table II-3a. U.S. purchasers were evenly divided in reporting that demand in the oil and gas sector had not changed versus decreased in 2015 and 2016, and a majority reported that demand had not changed in 2017. *Id.*

¹²¹ CR/PR at Table II-3a. Four of five U.S. producers reported that demand for SS flanges in sectors other than oil and gas decreased between 2015 and 2016, and four of five U.S. producers reported that demand increased in 2017. In reporting changes in demand between 2015 and 2016, four U.S. importers reported that demand had increased, four that there was no change, and three that it had decreased. For 2017, three U.S. importers reported that demand had increased, three that there was no change, and four that demand had decreased. Eleven of 22 responding U.S. purchasers reported that demand for SS flanges in sectors other than oil and gas had not changed in 2015 and 2016, and 14 of 23 purchasers reported that demand had not changed in 2017. *Id.*

¹²² CR/PR at Table IV-14.

¹²³ CR/PR at Table IV-14.

¹²⁴ CR at I-12-13; PR at I-9. *See also Certain Stainless Steel Products*, 81 Fed. Reg. 35058 (June 1, 2016) (issuing exclusion order against Viraj in Inv. No. 337-TA-933).

¹²⁵ CR/PR at Table IV-14. We note that the increase in market share for nonsubject imports in 2016 corresponded with the issuance of the exclusion order against subject merchandise produced by Viraj.

¹²⁶ CR/PR at Table IV-4.

The domestic industry accounted for the smallest market share over the POI, with its share of apparent U.S. consumption declining from *** percent in 2015 to *** percent in 2016 and *** percent in 2017.¹²⁷ For integrated producers, production capacity decreased over the POI, from *** pounds in 2015 to *** pounds in 2017.¹²⁸ For finishing-only operations, production capacity fluctuated but ended the POI lower, decreasing from *** pounds in 2015 to *** pounds in 2017.¹²⁹ Both integrated producers and finishers operated below capacity throughout the POI and had the ability to increase production.¹³⁰ Integrated and non-integrated producers reported being able to produce products other than SS flanges on the same equipment and machinery used to make SS flanges, with SS flanges accounting for between *** percent of production on forging machinery and between *** percent on finishing machinery.¹³¹ Domestic producers reported commercial U.S. shipments of all types (e.g., weld neck, threaded, etc.) and all sizes of SS flanges in 2017, indicating an ability to manufacture and supply all such products.¹³²

3. Substitutability and Other Conditions

For the reasons discussed below, we find that there is a high degree of substitutability between subject imports and the domestic like product, and we further find that price plays an important role in purchasing decisions.

SS flanges encompass a variety of products with different dimensions and specifications tailored to particular end-uses, which necessarily entails that not all varieties of SS flanges are

¹²⁷ CR/PR at Table IV-14. We note that, consistent with Commission practice and to avoid double counting, the domestic industry's market share by quantity in Table IV-14 includes domestic finished SS flanges made from domestic forgings but not finished flanges made from imported forgings, as entries of such forgings are reflected already in the import data. When domestic finished SS flanges made from imported forgings are added into the domestic industry's shipments (and imports correspondingly reduced), the domestic industry still accounted for the smallest, and decreasing, market share over the POI. Using this second method to calculate market share, the domestic industry's market share by quantity declined from *** percent in 2015 to *** percent in 2016 to *** percent in 2017. *Calculated from* CR/PR at Table IV-15. While respondents argue that the Commission should rely on value data in measuring market shares to account for the domestic industry's shipments of finished flanges made from imported forgings, value-based market share data for subject imports may be distorted by relative changes in prices for subject, nonsubject, and domestic SS flanges and are thus less probative in measuring market share trends over the POI. Instead, the Commission's quantity data by weight provide a more accurate measure of market share in these investigations.

¹²⁸ CR/PR at Table III-5.

¹²⁹ CR/PR at Table III-6.

¹³⁰ CR/PR at Table III-5 and Table III-6. For integrated producers, average capacity utilization rates were *** percent in 2015, *** percent in 2016, and *** percent in 2017. For finishers, average capacity utilization was *** percent in 2015, *** percent in 2016, and *** percent in 2017. *Id.*

¹³¹ CR at II-6; PR at II-4-5; CR/PR at Table III-8 and Table III-9.

¹³² CR/PR at Table IV-9 and Table IV-10.

interchangeable.¹³³ For SS flanges with similar dimensions and specifications, the record indicates that there is a high degree of substitutability between domestically produced SS flanges and those imported from subject countries.

A majority of U.S. producers and the vast majority of U.S. importers reported that the domestic like product and imports from each subject country are “always” or “frequently” interchangeable.¹³⁴ The vast majority of U.S. purchasers reported such products were “always” interchangeable.¹³⁵

With one exception, all U.S. producers reported that non-price differences are “sometimes” or “never” significant in comparisons of the domestic like product and subject imports from each of the subject countries, as well as in all comparisons of each subject source.¹³⁶ Majorities of U.S. importers and purchasers similarly reported that non-price differences between the domestic like product and subject imports were “sometimes” or “never” significant.¹³⁷ In comparisons of subject imports between each subject country, the vast majority of U.S. importers and purchasers reported that non-price differences were “sometimes” or “never” significant.¹³⁸ The record also shows that price is an important factor in purchasing decisions, with the vast majority of U.S. purchasers reporting that price was “very important” in purchasing decisions.¹³⁹ Most purchasers reported that they “usually” purchase SS flanges that are offered at the lowest price.¹⁴⁰

The record indicates that being on approved manufacturer lists (“AMLs”) does not substantially affect the substitutability of the domestic like product and subject merchandise. U.S. producers and importers both reported that a portion of their shipments required an AML

¹³³ CR at II-1; PR at II-1.

¹³⁴ CR/PR at Table II-9.

¹³⁵ CR/PR at Table II-9.

¹³⁶ CR/PR at Table II-11. One U.S. producer reported that non-price differences were “frequently” significant in comparisons between SS flanges manufactured in the United States and imported from each subject country. *Id.*

¹³⁷ CR/PR at Table II-11. Nine of 11 U.S. importers reported non-price differences were “sometimes” or “never” significant between the domestic like product and subject imports from China, and five of six that such differences were “sometimes” or “never” significant between the domestic like product and subject imports from India. Thirteen of 19 U.S. purchasers reported that non-price differences were “sometimes” or “never” significant between the domestic like product and subject imports from China, and 15 of 22 reported that such differences were “sometimes” or “never” significant between the domestic like product and subject imports from India. *Id.*

¹³⁸ CR/PR at Table II-11.

¹³⁹ CR/PR at Table II-6. Twenty-four of 27 responding U.S. purchasers indicated that price was “very important” in purchasing decisions. Other factors ranked as very important by strong majorities of U.S. purchasers include product consistency (26 of 27), availability (25 of 27), quality meets industry standards (25 of 26), reliability of supply (25 of 27), and delivery time (23 of 27). *Id.*

¹⁴⁰ CR at II-19; PR at II-13. Sixteen of 27 purchasers “usually” buy lowest priced product, 9 “sometimes” do, and 2 “never” do.

listing, albeit in varying amounts.¹⁴¹ In comparing SS flanges made by firms on AMLs with those made by firms not on AMLs, two U.S. producers reported that such products were “always” interchangeable and three U.S. producers reported that such products were “sometimes” interchangeable.¹⁴² Firms maintain AMLs with different suppliers, and the record indicates that such lists change frequently and may include both domestic producers and producers of subject merchandise.¹⁴³ Nearly all U.S. purchasers indicated that SS flanges from the United States and each subject country “always” or “usually” meet minimum quality specifications.¹⁴⁴ Additionally, nearly all U.S. purchasers (23 of 26 responding firms) reported that no domestic producer or foreign supplier had failed its attempt to qualify its SS flanges or had lost its approved status since 2015.¹⁴⁵

The raw material for producers that engage in forging or integrated production of SS flanges is stainless steel billet or bar. The raw material for finishers is unfinished or semi-finished flanges.¹⁴⁶ Most U.S. producers reported that raw materials costs declined notably between 2015 and 2016 before increasing to a lesser degree in 2017.¹⁴⁷

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.”¹⁴⁸

Cumulated subject imports had a significant presence in the U.S. market throughout the POI. Cumulated subject import volumes decreased from *** pounds in 2015 to *** pounds in

¹⁴¹ CR at II-20; PR at II-14-15. All five U.S. producers reported that some portion of their shipments required an AML listing, ranging from 5 percent (***) to 80 percent (***). Five of 18 U.S. importers reported that some portion of their shipments required an AML listing, ranging from 5 percent (***) to 75 percent (***). *Id.*

¹⁴² CR at II-20-21; PR at II-15. U.S. importers were evenly divided as to whether SS flanges produced by firms on AMLs were “always” or “usually” interchangeable with those made by firms not on AMLs (7 firms) versus those reporting such products were “never” interchangeable (7 firms). *Id.*

¹⁴³ CR at II-21; PR at II-15.

¹⁴⁴ CR/PR at Table II-10. One (of 19) U.S. purchaser reported that SS flanges from China “never” meet minimum quality standards. *Id.*

¹⁴⁵ CR at II-22; PR at II-15. Of the three purchasers reporting that a producer had failed or lost its qualification, one reported that such firm was a domestic producer, one reported that it was producer of SS flanges from a nonsubject country, and one reported that a producer of subject merchandise and a producer of merchandise from nonsubject countries had lost such status. *Id.*

¹⁴⁶ CR at V-1; PR at V-1.

¹⁴⁷ CR/PR at Table VI-7. For integrated U.S. producers, raw materials as a share of the cost of goods sold (“COGS”) declined from *** percent in 2015 to *** percent in 2017. For U.S. producers’ finishing-only operations, raw materials as a share of COGS declined from *** percent in 2015 to *** percent in 2017. CR at V-1; PR at V-1. Only ***, a non-integrated producer, reported increases in average raw material costs (*e.g.*, imported forgings) throughout the POI. CR at VI-3-4; PR at VI-3.

¹⁴⁸ 19 U.S.C. § 1677(7)(C)(i).

2016, and increased to *** pounds in 2017, the highest level of the POI.¹⁴⁹ Subject import volumes followed trends in apparent U.S. consumption. While cumulated subject imports declined to a greater extent than apparent U.S. consumption between 2015 and 2016, cumulated subject imports increased more than apparent U.S. consumption in 2017.¹⁵⁰ As a result, cumulated subject imports gained market share at the expense of the domestic industry during the POI. Their share of apparent U.S. consumption declined from *** percent in 2015 to *** percent in 2016 and increased to *** percent in 2017, their highest level of the POI.¹⁵¹ In contrast, the domestic industry's share of apparent U.S. consumption declined from 2015 to 2017, from *** percent in 2015 to *** percent in 2016 and *** percent in 2017.¹⁵²

Based on the record of these investigations, we find that the volume and increase of cumulated subject imports from China and India is significant both in absolute terms and relative to consumption in the United States.¹⁵³

¹⁴⁹ CR/PR at Table IV-2. Respondents argue that the increase in cumulated subject imports primarily resulted from increases in subject imports by domestic producers, especially U.S. producer *** increase in subject imports in 2017. Respondents' Prehearing Br. at 10-11; Respondents' Posthearing Br. at 1-4. U.S. producers, however, accounted for only a minority of cumulated subject imports over the POI, with their share declining from *** percent in 2015 to *** percent in 2016 and *** percent in 2017. CR/PR at Table IV-3. While *** reported imports of *** pounds of subject merchandise in 2017, overall imports of subject merchandise increased by *** pounds from 2016 to 2017, a far greater volume than *** imports in 2017. U.S. Importer Questionnaire, EDIS Doc. ***; CR/PR at Table IV-14.

¹⁵⁰ CR/PR at Table C-1. Between 2015 and 2016, cumulated subject import volumes decreased by 24.3 percent while apparent U.S. consumption declined by only *** percent. As noted above, this decline corresponded with the Commission's issuance of a limited exclusion order on Viraj. Between 2016 and 2017, cumulated subject imports increased by 51.3 percent while apparent U.S. consumption increased only by *** percent. *Id.*

¹⁵¹ CR/PR at Table IV-14.

¹⁵² CR/PR at Table IV-14. Respondents argue that much of the imports of subject merchandise during the POI were of unfinished flanges, which are not otherwise available in the U.S. market and which support domestic production of finished flanges. Respondents' Prehearing Br. at 14-15. As an initial matter, official U.S. import data do not clarify the volume of imports of finished flanges versus semi-finished/unfinished flanges, and neither respondents nor any other party requested that the Commission collect such data in the final phase of these investigations. CR at IV-1; PR at IV-1 (relying on official import statistics for HTS subheading 7307.21.10.00, which includes unfinished flanges, and subheading 7307.21.50.00, which includes finished and semi-finished flanges); Comments on Draft Questionnaires, EDIS Doc. 633952. Regardless, even re-allocating the domestic industry's U.S. shipments of finished flanges made from imported forgings into the domestic industry's market share does not significantly alter the trends described above, with the domestic industry's market share declining from *** percent in 2015 to *** percent in 2017 while the market share for cumulated subject imports increased from *** percent in 2015 to *** percent in 2017. CR/PR at Table IV-15.

¹⁵³ Both petitioners and respondents allege that various parties have failed to cooperate in the Commission investigation, pointing either to questionnaire revisions or a failure to respond to questionnaires. Respondents' Final Comments at 1-8; Petitioners' Prehearing Br. at 15. We note that the petitioners elected not to request that Commerce align the countervailing duty and antidumping duty investigations regarding China, which necessitated that Commerce issue an earlier final

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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.¹⁵⁴

As stated above, we find a high degree of substitutability between subject imports and the domestically produced product. The record also indicates that price is an important factor in purchasing decisions.

The Commission requested that U.S. producers and importers provide quarterly pricing data for five SS flange products shipped to unrelated U.S. customers between January 2015 and December 2017.¹⁵⁵ All five U.S. producers and nine importers submitted usable pricing data on

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countervailing duty determination regarding China and that the Commission conduct the final phase of these investigations over a shortened time period. This constrained timeline has impacted all questionnaire recipients, such that multiple revisions or fewer responses to questionnaires are not unexpected. Nonetheless, Commission staff worked closely with parties to obtain data and revise questionnaire responses as necessary. With respect to respondents' allegations that *** has provided inaccurate data regarding its imports, we recognize that *** provided numerous revisions but also note that its revised data are generally consistent with proprietary customs data and that it provided reasoned explanations for its revisions. Import Statistics, EDIS Doc. 644090; U.S. Importer Questionnaire, EDIS Doc. ***.

¹⁵⁴ 19 U.S.C. § 1677(7)(C)(ii).

¹⁵⁵ The pricing products were: **Product 1.**—Weld neck stainless steel flanges, finished, 2-inch nominal pipe size, class 150, of 316/316L alloy steel meeting ASME/ANSI B16.5 specifications; **Product 2.**—Weld neck stainless steel flanges, finished, 2-inch nominal pipe size, class 150, of 304/304L alloy steel meeting ASME/ANSI B16.5 specifications; **Product 3.**—Slip-on stainless steel flanges, finished, 2-inch nominal pipe size, class 150, of 316/316L alloy steel meeting ASME/ANSI B16.5 specifications; **Product 4.**—Slip-on stainless steel flanges, finished, 4-inch nominal pipe size, class 150, of 304/304L alloy steel meeting ASME/ANSI B16.5 specifications; **Product 5.**—Slip-on stainless steel flanges, finished, 6-inch nominal pipe size, class 150, of 304/304L alloy steel meeting ASME/ANSI B16.5 specifications. CR at V-10-11; PR at V-7.

In our preliminary determinations, we requested that parties propose alternative pricing products in an effort to improve pricing coverage. Preliminary Determinations, USITC Pub. 4734 at 27, n. 138. In response, Petitioners proposed four pricing products in addition to those three pricing

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sales of the requested products, although not all firms reported pricing for all products for all quarters.¹⁵⁶

The pricing data yielded a total of 120 direct price comparisons with integrated producers and finishing-only operations, with cumulated subject imports underselling the domestic like product in all quarterly price comparisons (involving 409,724 pieces of subject imports) at underselling margins that averaged 48.7 percent.¹⁵⁷ While we recognize that coverage is relatively low for price comparison data, albeit more so for domestic producers than for subject imports, this level of coverage is not uncommon for investigations that include a wide variety of products.^{158 159}

Moreover, these comparisons are confirmed by a majority of responding purchasers, who reported that: (i) subject imports were lower priced than domestically produced SS flanges and (ii) price was a primary reason why they had purchased subject imports instead of the domestic like product. Specifically, 21 of 27 responding purchasers reported purchasing cumulated subject imports rather than the domestic like product.¹⁶⁰ Of these purchasers, 18 reported that cumulated subject imports were lower priced than the U.S. product, and 16 reported that price was a primary reason for purchasing subject imports rather than the domestic product.^{161 162} Twelve of these purchasers estimated that they purchased *** pounds

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products from the preliminary phase. Petitioners' Comments on Draft Questionnaires, EDIS Doc. 633592. We accepted two of the additional pricing products proposed by petitioners.

¹⁵⁶ CR at V-11, PR at V-7. The pricing data accounted for approximately *** percent of integrated producers' U.S. shipments and *** percent of finishers' U.S. shipments of the domestic like product in 2017, *** percent of U.S. shipments of subject imports from China in 2017, and *** percent of U.S. shipments of subject imports from India in 2017. *Id.*

¹⁵⁷ CR/PR at Table V-10b. Underselling margins ranged from 7.6 percent to 64.1 percent. *Id.*

¹⁵⁸ See, e.g., *Certain Iron Mechanical Transfer Drive Components from Canada and China*, Inv. Nos. 701-TA-550 and 731-TA-1304-1305 (Final), USITC Pub. 4652 (Dec. 2016) at 40. Further, while respondents argue that the pricing data are unrepresentative because of their alleged low coverage, we note that respondents did not suggest additional or alternative pricing products for the final phase of these investigations. Respondents' Prehearing Br. at 19; Hearing Tr. at 148-149 (Peterson).

¹⁵⁹ Respondents also argue that U.S. importers' pricing data are distorted by the alleged inclusion of prices for unfinished flanges rather than finished flanges, with specific reference to the response for ***. Respondents' Prehearing Br. at 21. ***, however, revised its questionnaire to clarify that its reported pricing were only for finished flanges. Questionnaire, EDIS Doc. ***. Respondents have otherwise cited no record evidence to indicate that parties have misreported pricing data.

¹⁶⁰ CR/PR at Table V-12.

¹⁶¹ CR/PR at Table V-12.

¹⁶² Respondents argue that purchasers' reported lost sales volumes were not because of price but quality, pointing to purchasers' ranking of factors in purchasing decisions. Respondents' Prehearing Br. at 22-23. However, the lost sales data summarized above are drawn from a question to purchasers specifically asking whether "price was a primary reason for purchasing subject imports rather than the domestic like product?", to which 16 purchasers replied in the affirmative. Blank Questionnaires, Purchaser Questionnaire at III-29(c), EDIS Doc. 639807; CR/PR at Table V-12. These data are also consistent with purchasers' ranking of purchasing factors for SS flanges cited to by respondents. While

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of subject imports rather than the domestic like product over the POI because of price.^{163 164} This volume of confirmed lost sales encompasses a substantial portion of the U.S. market for SS flanges, equaling *** percent of apparent U.S. consumption and *** percent of the domestic industry's U.S. shipments over the POI.¹⁶⁵ These confirmed lost sales are consistent with evidence discussed above indicating that cumulated subject imports increased their market share at the expense of the domestic industry from 2015 to 2017.¹⁶⁶ Given this record, we find there has been significant price underselling by cumulated subject imports.

We have also considered price trends during the POI. Prices for each of the U.S.-produced products, combining data from integrated producers and finishing operations, declined over the POI; prices also declined for the majority of pricing products for cumulated subject imports.¹⁶⁷ Nonetheless, price decreases for both the domestic like product and subject imports would be expected in light of other market factors, such as substantial decreases in apparent U.S. consumption between 2015 and 2016, as well as decreases in raw material

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more purchasers ranked quality as the "first" factor in purchasing decisions for SS flanges, more purchasers overall ranked price (25) versus quality (23) as a top purchasing factor. CR/PR at Table II-5. Moreover, nearly all purchasers reported that the domestic like product and cumulated subject imports "always" or "usually" meet minimum quality standards, and majorities of purchasers reported that there were only "sometimes" or "never" differences other than price between subject imports and the domestic like product, further supporting that purchases of cumulated subject imports were because of price. CR/PR at Table II-10 and Table II-11. Sixteen of 27 purchasers also reported "usually" purchasing the lowest priced SS flange. CR at II-19; PR at II-13.

¹⁶³ CR/PR at Table V-12.

¹⁶⁴ Respondents argue that lost sales volumes are inflated by (i) double counting of subject imports, specifically *** purchases from ***, and (ii) purchases of subject merchandise from domestic producers' own affiliates, specifically *** purchases from **. Respondents' Prehearing Br. at 23; Respondents' Posthearing Br. at 9. *** reported purchases from *** were small (**% percent and **% percent, respectively), making any double counting among these parties minimal. U.S. Purchaser Questionnaire, EDIS Doc, *** at II-4; U.S. Purchaser Questionnaire, EDIS Doc. ***, at II-4. *** purchases from *** constitute purchases of subject merchandise regardless of the particular source, and respondents have cited no authority for their suggestion that we disregard them. Even were we to adopt respondents' suggestion, the record indicates that *** total purchases from *** would account for *** pounds, or less than *** percent of the total reported volume of lost sales, with the remaining volumes of confirmed lost sales still significant. U.S. Purchaser Questionnaire, EDIS Doc. ***, at II-4 (applying the percentage of *** purchases from *** in 2017, *** percent, to purchases in 2015 and 2016 as well).

¹⁶⁵ Calculated from CR/PR at Table V-12 and Table C-1.

¹⁶⁶ CR/PR at Table IV-14. The U.S. market share for U.S. shipments of cumulated subject imports increased *** percentage points between 2015 and 2017, while that of the domestic industry declined by *** percentage points over this period. *Id.*

¹⁶⁷ CR/PR at Table V-9.

costs.¹⁶⁸ Indeed, no purchasers reported that domestic producers reduced prices over the POI to compete with subject imports in their responses to Commission questionnaires.¹⁶⁹ Pricing data for certain pricing products indicate modest price increases for the domestic like product in the latter portion of 2017, which corresponded with increases in apparent U.S. consumption and raw material costs.¹⁷⁰ As a result, we do not find that cumulated subject imports depressed prices for the domestic like product to a significant degree.

We also considered whether cumulated subject imports prevented increases in prices of the domestic like product that otherwise would have occurred to a significant degree. During the POI, the domestic industry's COGS to net sales ratio decreased from *** percent in 2015 to *** percent in 2016 and *** percent in 2017.¹⁷¹ Additionally, both raw material costs and average unit COGS were lower in 2017 than in 2015.¹⁷² Because price increases were unlikely in light of falling costs, we do not find that cumulated subject imports prevented price increases, which otherwise would have occurred, to a significant degree.

As explained above, we find that the significant volume of subject imports significantly undersold the prices of the domestic like product, resulting in the domestic industry losing sales and market share to subject imports. We consequently conclude that the cumulated subject imports had significant price effects.

E. Impact of the Subject Imports

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."¹⁷³ These factors include output, sales, inventories, capacity

¹⁶⁸ CR/PR at Table VI-5 (showing raw material costs declined from 2015 to 2016 before increasing in 2017, albeit to a lower level than 2015) Table C-1 (showing declines in apparent U.S. consumption between 2015 and 2016).

¹⁶⁹ CR/PR at Table V-13. Nine purchasers affirmatively reported that domestic producers had not reduced prices to compete with lower-priced imports from China, and 17 firms reported that they did not know if this had occurred. With respect to subject imports from India, 14 firms affirmatively reported that domestic producers had not lowered prices to compete with such products and 13 reported that they did not know if this had occurred. No responding purchaser affirmatively indicated that domestic producers had reduced prices to compete with lower-priced subject imports from either country. *Id.*

¹⁷⁰ CR/PR at Figure V-4, Figure V-5, and V-6 (showing price increases for pricing products 2, 3, and 4 of the domestic like product between July-September 2017 and October-December 2017); CR/PR at Table VI-5 (showing raw material costs were higher in 2017 than in 2016); CR/PR at Table C-1. Prices for pricing products 2, 3, and 4 for cumulated subject imports also increased over this time period. *Id.*

¹⁷¹ CR/PR at Table VI-5.

¹⁷² CR/PR at Table VI-5. Raw material costs for U.S. producers were \$*** in 2015 and \$*** in 2017; average unit COGS were \$*** in 2015 and \$*** in 2017. *Id.*

¹⁷³ 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
(Continued...)

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.”¹⁷⁴

While apparent U.S. consumption increased between 2016 and 2017 to its highest level of the POI, significant volumes of low-priced subject imports took market share from the domestic industry that resulted in fewer net sales for it. This shrinking market share was especially significant because the domestic industry already constitutes the U.S. market’s smallest source of supply. As a result, the domestic industry’s performance was worse than it might otherwise have been in an expanding market.

As discussed above, the domestic industry’s market share declined from *** percent of apparent U.S. consumption in 2015 to *** percent in 2016 and *** percent in 2017.¹⁷⁵ The domestic industry’s capacity,¹⁷⁶ production,¹⁷⁷ and U.S. shipments¹⁷⁸ were lower in 2017 than in 2015, at a time when apparent U.S. consumption was at its highest level of the POI. The domestic industry’s capacity utilization increased for forging operations and decreased for finishing operations.¹⁷⁹ End of period inventories increased over the POI.¹⁸⁰

(...continued)

may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.”).

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

¹⁷⁵ CR/PR at Table IV-14. When domestic finished SS flanges made from imported forgings are added into the domestic industry’s shipments (and imports correspondingly reduced), the domestic industry’s market share by quantity declined from *** percent in 2015 to *** percent in 2016 to *** percent in 2017. *Calculated from* CR/PR at Table IV-15.

¹⁷⁶ The integrated domestic producers capacity was *** pounds in 2015, *** pounds in 2016, and *** pounds in 2017; the domestic industry’s capacity for finishing operations was *** pounds in 2015, *** pounds in 2016, and *** pounds in 2017. CR/PR at Table III-5 and Table III-6.

¹⁷⁷ The domestic industry’s production for forging operations decreased from *** pounds in 2015 to *** pounds in 2016, and increased to *** pounds in 2015 to *** pounds in 2016, and increased slightly to *** pounds in 2017, a lower level than in 2015. CR/PR at Table III-9.

¹⁷⁸ The domestic industry’s U.S. shipments were *** pounds in 2015, *** pounds in 2016, and *** pounds in 2017. CR/PR at Table III-13. When domestic finished SS flanges made from imported forgings are added into the domestic industry’s shipments, the domestic industry’s shipments were *** pounds in 2015, *** pounds in 2016, and *** pounds in 2017. *Calculated from* CR/PR at Table IV-15.

¹⁷⁹ The domestic industry’s capacity utilization for forging operations was *** percent in 2015, *** percent in 2016, and *** percent in 2017. CR/PR at Table III-5. The increase in capacity utilization for forging operations in 2017 resulted from ***. CR at III-9; PR at III-4. The domestic industry’s capacity utilization for finishing-only operations was *** percent in 2015, *** percent in 2016, and *** percent in 2017. CR/PR at Table III-6.

¹⁸⁰ The domestic industry’s inventories increased from *** pounds in 2015 to *** pounds in 2016 and 2017. CR/PR at Table III-14. The domestic industry’s ratio of inventories to U.S. shipments

(Continued...)

Employment-related indicators for the domestic industry were mixed during the POI. The number of PRWs and hourly wages increased slightly; total hours worked and wages paid declined; and productivity and unit labor costs trends differed between integrated producers and U.S. producers' finishing-only operations.¹⁸¹

Many of the domestic industry's financial indicators followed trends in apparent U.S. consumption, decreasing between 2015 and 2016 before improving in 2017, although many indicators were lower in 2017 than in 2015. Net sales,¹⁸² unit net sales value,¹⁸³ and gross profit¹⁸⁴ all followed this pattern. Operating income¹⁸⁵ and net income¹⁸⁶ were both higher in 2017 than in 2015 and increased as a share of net sales over the POI.¹⁸⁷

Domestic producers' capital expenditures were lower in 2017 than in 2015.¹⁸⁸ Domestic producers reported mixed responses on the negative effects on investment and on growth and development due to subject imports.¹⁸⁹

(...continued)

also increased, from *** percent in 2015 to *** percent in 2016, and decreased to *** percent in 2017, a higher level than in 2015. *Id.*

¹⁸¹ The domestic industry's PRWs was 213 in 2015, 198 in 2016, and 218 in 2017; hourly wages were \$17.00 in 2015, \$16.91 in 2016, and \$17.41 in 2017. CR/PR at Table III-19. Total hours worked declined from 436,000 in 2015 to 386,000 in 2016, and were 424,000 in 2017; wages paid were \$7.4 million in 2015, \$6.5 million in 2016, and \$7.4 million in 2017 (at a lower level than in 2015). *Id.* For integrated producers, productivity declined from *** pounds per hour in 2015 to *** in 2016, and increased to *** in 2017, the highest level of the POI; unit labor costs decreased from \$*** per pound in 2015 and 2016 to \$*** in 2017. CR/PR at Table III-17. For U.S. producers' finishing-only operations, productivity declined from *** pounds per hour in 2015 to *** in 2016 and *** in 2017; unit labor costs increased from \$*** per pound in 2015 to \$*** in 2016 and \$*** in 2017. CR/PR at Table III-18.

¹⁸² The domestic industry's total net sales declined from \$*** in 2015 to \$*** in 2016, and increased to \$*** in 2017. CR/PR at Table VI-5.

¹⁸³ The domestic industry's unit net sales value declined from \$*** per pound in 2015 to \$*** per pound in 2016, and increased to \$*** in 2017. CR/PR at Table VI-5.

¹⁸⁴ The domestic industry's gross profit declined from \$*** in 2015 to \$*** in 2016 and then increased to \$*** in 2017. CR/PR at Table VI-5.

¹⁸⁵ The domestic industry's operating income was \$*** in 2015, \$*** in 2016, and \$*** in 2017. CR/PR at Table VI-5.

¹⁸⁶ The domestic industry's net income was \$*** in 2015, \$*** in 2016, and \$*** in 2017. CR/PR at Table VI-5.

¹⁸⁷ The domestic industry's operating income as a share of net sales decreased from *** percent in 2015 to *** percent in 2016, and increased to *** percent in 2017. The domestic industry's net income as a share of net sales increased from *** percent in 2015 to *** percent in 2016 and *** percent in 2017. CR/PR at Table VI-5.

¹⁸⁸ Capital expenditures declined from \$*** in 2015 to \$*** in 2016, and increased to \$*** in 2017, a lower level than in 2015. CR/PR at Table VI-8. The relatively high levels of capital expenditures in 2015 were reported by ***. CR at VI-21-22 n.17; PR at VI-5 n.17. Only one firm reported research and development expenses for the POI. CR/PR at Table VI-8.

¹⁸⁹ CR/PR at Table VI-10. *** firms reported that subject imports had not negatively impacted investment and growth, while *** firms reported that subject imports did have a negative impact. *Id.*

We recognize that the domestic industry was profitable and experienced improvements in certain financial indicators during the POI.¹⁹⁰ These improvements, however, were concurrent with the domestic industry's costs declining more than prices (especially raw material costs), which allowed the domestic industry's gross profit as a ratio of net sales to increase over the POI.¹⁹¹ Indeed, these improvements in financial performance took place notwithstanding that the domestic industry's net sales were lower in 2017 than in 2015, even as apparent U.S. consumption increased over this period.¹⁹²

As discussed above, significant volumes of low-priced cumulated subject imports entered the U.S. market and significantly undersold the domestic like product, as evidenced by the pricing data and purchasers' lost sales responses to the Commission questionnaires. These large volumes of low-priced subject imports took market share from the domestic industry. The domestic industry operated at low capacity utilization levels throughout the POI, indicating an ability to supply more of the U.S. market. As a result, the domestic industry's output, revenues and financial performance were lower than they would otherwise be in an expanding market.¹⁹³ We therefore find that subject imports had a significant adverse impact on the domestic industry.

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 any such other factor to subject imports. As noted above, apparent U.S. consumption declined between 2015 and 2016. While these declines in consumption resulted in declining U.S. shipments for both the domestic industry and cumulated subject imports, the domestic industry's shipments declined to a greater degree than apparent U.S. consumption, as indicated by the domestic industry's declining market share in this period.¹⁹⁴ Apparent U.S. consumption grew by ***

¹⁹⁰ As noted above, the domestic industry experienced positive and improving operating income and net income during the POI. CR/PR at Table VI-5.

¹⁹¹ The domestic industry's total COGS were \$*** in 2015, \$*** in 2016, and \$*** in 2017. Declines in raw material costs accounted for the greatest portion of these declines in COGS, with raw material costs declining \$*** between 2015 and 2017. The domestic industry's COGS as a share of net sales declined from *** percent in 2015 to *** percent in 2016 and *** percent in 2017. The domestic industry's gross profit as a ratio of net sales increased from *** percent in 2015 to *** percent in 2016 and *** percent in 2017. CR/PR at Table VI-5.

¹⁹² Pricing data indicate that prices increased in the latter half of 2017, which corresponded with increases in apparent U.S. consumption and raw material costs. CR/PR at Figures V-4, V-5, V-6, and V-7 (indicating price increases during 2017 for domestic integrated producers' shipments of pricing products 2, 3, 4, and 5, and price increases during the latter half of 2017 for all U.S. producers combined shipments for pricing products 2, 3, and 4). Because the domestic industry's COGS were still lower in 2017 than in 2015, the domestic industry experienced its highest level of profitability in 2017 even though net sales were lower.

¹⁹³ While respondents argue that the domestic industry's profitability over the POI indicates that the domestic industry has not suffered material injury, a finding of present material injury does not require that the domestic industry experience a loss during the POI. 19 U.S.C. § 1677(7)(J).

¹⁹⁴ CR/PR at Table C-1.

percent from 2016 to 2017, to end the period at a level that was *** percent higher than in 2015. Domestic shipments increased only modestly from 2016 to 2017 despite the substantial growth in apparent U.S. consumption, as subject imports garnered a greater market share in 2017. Thus, we find that changes in apparent U.S. consumption do not explain the observed declines in the domestic industry's shipments and market share.¹⁹⁵

Respondents argue that shifts in market share during the POI resulted from the domestic industry's imports of subject merchandise, particularly *** imports.¹⁹⁶ As noted above, however, the share and volume of cumulated subject imports controlled by domestic producers declined over the POI,¹⁹⁷ while cumulated subject import volumes increased by *** pounds.¹⁹⁸ Accordingly, the declines in the domestic industry's market share cannot be attributed to its imports of subject merchandise.

Respondents further argue that the domestic industry was not adversely impacted by subject imports but rather benefitted from its imports of subject merchandise.¹⁹⁹ As discussed above, we find that the domestic industry's profitability was concurrent with its costs decreasing more than prices during the POI. While declining costs for finishing-only operations resulted from declining prices for imported forgings, integrated producers also reported declining COGS over the POI, including declines in raw material costs, direct labor, and other factory costs, which cannot be attributed to imports of subject merchandise.²⁰⁰ Further, domestic producers (both integrated and non-integrated) maintained significant direct labor and other factory costs throughout the POI to support domestic production,²⁰¹ and operated at

¹⁹⁵ Respondents argue that declines in the domestic industry's productivity and shipments resulted from declines in demand for SS flanges in the oil and gas market. Respondents' Posthearing Br. at 11. While declining demand in the oil and gas sector explains declines in apparent U.S. consumption between 2015 and 2016, the domestic industry's shipments declined more than apparent U.S. consumption, as evidenced by its declining market share in this period. Demand and domestic industry shipments recovered between 2016 and 2017, however, yet the domestic industry's shipments increased less than demand and resulted in a further decline in its market share in this period. And as noted above, the domestic industry's low capacity utilization throughout the POI indicates its ability to supply more of the U.S. market than its small share. CR/PR at Table C-1.

¹⁹⁶ Respondents' Posthearing Br. at 11-12.

¹⁹⁷ Subject imports controlled by U.S. producers declined from *** percent in 2015 to *** percent in 2016 and *** percent in 2017. CR/PR at Table IV-3.

¹⁹⁸ Compare CR/PR at Table IV-3 and Table IV-14. Similarly, *** reported imports of *** pounds of subject merchandise in 2017, less than the increase in cumulated subject imports in 2017. U.S. Importer Questionnaire, EDIS Doc. ***.

¹⁹⁹ Respondents' Prehearing Br. at 26-27.

²⁰⁰ Total COGS for U.S. producers' finishing-only operations declined from \$*** in 2015 to \$*** in 2016, and increased to \$*** in 2017, a lower level than in 2015, and these declines primarily resulted from declining costs for purchases of imported forgings. CR/PR at Table VI-3. For integrated producers, total COGS declined from \$*** in 2015 to \$*** in 2016 and \$*** in 2017, reflecting declines in raw materials, direct labor, and other factory costs. CR/PR at Table VI-1.

²⁰¹ The domestic industry's direct labor costs were \$*** in 2015, \$*** in 2016, and \$*** in 2017; other factory costs were \$*** in 2015, \$*** in 2016, and \$*** in 2017. As a ratio of net sales, combined

(Continued...)

low capacity utilization rates.²⁰² With respect to ***, it reported acting only as a freight forwarder for its imports of subject merchandise and that these sales were not entered into its books and records.²⁰³ Accordingly, we find that the domestic industry's importation of subject merchandise did not alleviate the impact of its declining market share and shipments.²⁰⁴

We have also considered the role of nonsubject imports in these investigations. While nonsubject imports' share of apparent U.S. consumption increased between 2015 and 2016, from *** percent in 2015 to *** percent in 2016, this increase appears to have resulted from the decrease in subject imports in 2016 following the Commission's issuance of a limited exclusion order against subject merchandise produced by Viraj.²⁰⁵ Indeed, cumulated subject import volumes recovered in 2017 and took market share from both nonsubject imports and the domestic industry, with nonsubject imports reaching their lowest market share of the POI in 2017 (***) percent).²⁰⁶ While available pricing data for nonsubject imports indicate that they undersold the domestic like product in all price comparisons, nonsubject imports oversold cumulated subject imports in a majority of price comparisons.²⁰⁷ And as noted above, purchasers indicated that they would likely have purchased some portion of reported lost sales volumes from the domestic industry but for lower-priced subject imports in their responses to

(...continued)

direct labor and other factory costs were *** percent in 2015, *** percent in 2016, and *** percent in 2017. CR/PR at Table VI-5.

²⁰² Integrated producers' highest capacity utilization rate during the POI was *** percent in 2017, and finishers' highest rate was *** percent in 2015. CR/PR at Table C-1.

²⁰³ U.S. Importer Questionnaire, EDIS Doc. ***, at II-6a.

²⁰⁴ Respondents also argue that because the domestic industry experienced its highest levels of profitability in 2017, even as subject imports were at their highest volumes, subject imports did not have a significant impact on the domestic industry. Respondents' Prehearing Br. at 26; Respondents' Posthearing Br. at 6-7. As described above, however, the domestic industry's increasing profitability in 2017 resulted from price increases during a time of increasing apparent U.S. consumption even as the domestic industry's COGS remained lower than in 2015. CR/PR at Figures V-4, V-5, V-6, and V-7 (indicating price increases during 2017 for domestic integrated producers' shipments of pricing products 2, 3, 4, and 5, and price increases during the latter half of 2017 for all U.S. producers combined shipments for pricing products 2, 3, and 4); CR/PR at Table VI-5 (indicating total COGS and the domestic industry's COGS as a ratio of net sales were both lower in 2017 than in 2015). The domestic industry continued to lose market share to cumulated subject imports during this time, indicating that the domestic industry's revenues and profits would have been stronger if not for the impact of cumulated subject imports.

²⁰⁵ *Certain Stainless Steel Products*, 81 Fed. Reg. 35058 (June 1, 2016).

²⁰⁶ CR/PR at Table IV-14. In 2017, the increase in cumulated subject import market share (***) percentage points) corresponds with the combined decline in market share for nonsubject imports (***) percentage points) and the domestic industry (***) percentage points). *Id.*

²⁰⁷ The Commission received usable pricing data from two importers of nonsubject merchandise from the Philippines. CR at E-3; PR at E-3. In pricing comparisons, nonsubject imports undersold the domestic like product in all 60 price comparisons; nonsubject imports oversold cumulated subject imports in 37 of 60 price comparisons. CR/PR at Table E-6.

the Commission's lost sales survey.²⁰⁸ Accordingly, we find that nonsubject imports cannot explain the domestic industry's declining shipments and market share over the POI.

For the reasons discussed above, we find that cumulated subject imports had a significant adverse impact on the domestic industry.

VI. Conclusion

For the reasons stated above, we determine that an industry in the United States is materially injured by reason of subject imports of SS flanges that Commerce has found to be subsidized by the government of China.

²⁰⁸ CR/PR at Table V-12.

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 Core Pipe Products, Inc. (“Core Pipe”), Carol Stream, Illinois, and Maass Flange Corporation (“Maass”), Houston, Texas, on August 16, 2017, 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 forged stainless steel flanges (“stainless steel flanges”)¹ from China and India. The following tabulation provides information relating to the background of these investigations.^{2 3}

Effective date	Action
August 16, 2017	Petition filed with Commerce and the Commission; institution of Commission investigation (82 FR 39914, August 22, 2017)
September 11, 2017	Commerce’s notice of initiation of less-than-fair-value investigations (82 FR 42649, September 11, 2017)
September 11, 2017	Commerce’s notice of initiation of countervailing duty investigations (82 FR 42654, September 11, 2017)
October 2, 2017	Commission’s preliminary determinations (82 FR 46831, October 6, 2017)
January 23, 2018	Commerce’s preliminary CVD determination, for China (83 FR 3124, January 23, 2018)
January 23, 2018	Commerce’s preliminary CVD determination, for India (83 FR 3118, January 23, 2018)
January 23, 2018	Scheduling of final phase of Commission investigations (83 FR 5459, February 7, 2018)
March 28, 2018	Commerce’s preliminary LTFV determination, for China (83 FR 13244, March 28, 2018)
March 28, 2018	Commerce’s preliminary LTFV determination, for India (83 FR 13246, March 28, 2018)
April 10, 2018	Commission’s hearing
April 12, 2018	Commerce’s final CVD determination, for China (83 FR 15790, April 12, 2018)

¹ See the section entitled “The Subject Merchandise” in *Part I* of this report for a complete description of the merchandise subject in this proceeding.

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

³ Appendix B of this report presents a list of witnesses appearing at the hearing.

Effective date	Action
May 11, 2018	Commission's vote (China CVD)
May 29, 2018	Commission's views (China CVD)
TBD	Commerce's final LTFV determination for China (pending)
TBD	Commerce's final LTFV determination for India (pending)
TBD	Commerce's final CVD determination for India (pending)

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/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

Stainless steel flanges are generally used to connect stainless steel pipe sections and piping components (valves, pumps, tanks and other equipment) to form a piping system. The leading U.S. integrated producers of stainless steel flanges are Ameriforge Group Inc.⁶

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

⁶ Ameriforge Group Inc. launched in 1996 as a forged products manufacturer and in 2013 rebranded as AFGlobal Corporation to reflect its global footprint. See <https://www.prnewswire.com/news-releases/ameriforge-group-rebrands-as-afglobal-corporation-206251531.html> (accessed April 16, 2018).

("Ameriforge"), also d/b/a as AFGlobal Corporation⁷ ("AFGlobal"), and Maass. The leading non-integrated finishers of stainless steel flanges from forgings produced by another firm include Core Pipe and Kerkau Manufacturing ("Kerkau"). The leading producers of stainless steel flanges outside the United States include Jiangyin Shengda Brite Line Kasugai Flange Co., Ltd. ("SBK Flange") of China, Viraj Profiles Limited ("Viraj"), and Bebitz Flanges Works Private Limited ("Bebitz") of India.

The leading U.S. importers of stainless steel flanges from China are ***, while the leading importers of stainless steel flanges from India are ***. Leading importers of stainless steel flanges from nonsubject countries (primarily Canada, Italy, Mexico and the Philippines) include ***.

The leading U.S. purchasers of stainless steel flanges are firms that are primarily distributors, but some are non-integrated finishers or end-users. Based on purchaser questionnaire responses, the largest purchasers of stainless steel flanges during 2015-17 were ***. All three of these firms are distributors.

Apparent U.S. consumption of stainless steel flanges totaled approximately *** pounds (\$179.8 million) in 2017. Currently, ten firms are believed to produce stainless steel flanges in the United States. Five producers provided usable questionnaire responses.

Responding U.S. producers' U.S. shipments of stainless steel flanges totaled *** pounds (\$40.2 million) in 2017, and accounted for *** percent of apparent U.S. consumption by quantity and 22.4 percent by value.⁸ U.S. imports from subject sources totaled 34.9 million pounds (\$77.8 million) in 2017 and accounted for *** percent of apparent U.S. consumption by quantity and 43.3 percent by value. U.S. imports from nonsubject sources totaled 15.4 million pounds (\$61.7 million) in 2017 and accounted for *** percent of apparent U.S. consumption by quantity and 34.3 percent by value.

SUMMARY DATA AND DATA SOURCES

A summary of data collected in these investigations is presented in appendix C. Except as noted, U.S. industry data are based on questionnaire responses of the five responding firms that accounted for more than 80.0 percent of integrated U.S. production and independent finishing of stainless steel flanges during 2017. U.S. imports are based on official import statistics.^{9 10}

⁷ AFGlobal filed for bankruptcy in April of 2017 and completed its recapitalization transaction in June of that year to reduce the company's debt. The company reported that business was conducted in normal course during this restructuring period. See <http://www.afglobalcorp.com/about-us/news-and-events/news/afglobal-completes-recapitalization-reduces-debt-by-680-million>.

⁸ This calculation is based on the volume of flanges produced from U.S. forgings, plus the incremental value of U.S. finishing.

⁹ The U.S. Department of Commerce did not align the final countervailing duty determination for its investigation on stainless steel flanges from China with the final antidumping duty determination, nor did it postpone its final antidumping duty determination on stainless steel flanges from China. Accordingly, all data were collected on a compressed schedule.

PREVIOUS AND RELATED INVESTIGATIONS

Forged stainless steel flanges

The Commission determined in February 1994 that an industry in the United States was threatened with material injury by reason of imports of forged stainless steel flanges from India and Taiwan that Commerce had determined to be sold in the United States at LTFV.¹¹ In February 1994, Commerce issued antidumping duty orders on forged stainless steel flanges from India and Taiwan. The Commission conducted first and second expedited five-year reviews in July 2000 and December 2005, and determined that revocation of the antidumping duty orders on forged stainless steel flanges from India and Taiwan would likely lead to a continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.¹²

Commerce and the Commission initiated a third sunset review of the orders in November 2010. However, because Commerce did not receive a notice of intent to participate from domestic interested parties, it subsequently revoked the orders, effective January 23, 2011.^{13 14}

Other flange and fitting products

Steel flanges and fittings have been the subject of prior Commission investigations. All previous and related investigations involving such products are presented in table I-1.

(...continued)

¹⁰ Ameriforge, one of the five responding U.S. producers, provided partial usable responses to its U.S. producer questionnaire.

¹¹ The scope in the prior investigations of stainless steel flanges from India and Taiwan differed from the scope in these preliminary investigations, as there was no size restriction on the flanges covered.

¹² *Forged Stainless Steel Flanges From India and Taiwan, Investigation Nos. 731-TA-639 and 640 (Review)*, USITC Publication 3329, July 2000; *Forged Stainless Steel Flanges From India and Taiwan, Investigation Nos. 731-TA-639 and 640 (Second Review)*, USITC Publication 3827, December 2005.

¹³ *Forged Stainless Steel Flanges From India and Taiwan: Final Results of Sunset Reviews and Revocation of Antidumping Duty Orders*, 76 FR 5331, January 31, 2011.

¹⁴ Domestic interested parties testified that the value of the antidumping duty order had diminished after Viraj, XJ, and Hilton Forging received zero margins in their Commerce administrative reviews; hearing transcript, p. 91 (Maass and Pickard).

Table I-1
Steel flanges and fittings: Previous and related title VII investigations

Original investigation				First review		Second review		Third review		Current status
Date ¹	Number	Country	Outcome	Date ¹	Outcome	Date ¹	Outcome	Date ¹	Outcome	
1988	731-TA-376 (Stainless butt-weld fittings)	Japan	Affirmative	2000	Affirmative	2005	Affirmative	2010	-	ITA Revoked 11/5/2010 ²
1993	731-TA-563 (Stainless butt-weld fittings)	Korea	Affirmative	2000	Affirmative	2005	Affirmative	2010	-	ITA Revoked 11/5/2010 ²
1993	731-TA-564 (Stainless butt-weld fittings)	Taiwan	Affirmative	2000	Affirmative	2005	Affirmative	2010	-	ITA Revoked 11/5/2010 ²
1999	731-TA-864 (Stainless butt-weld fittings)	Germany	Negligible ³	-	-	-	-	-	-	-
1999	731-TA-865 (Stainless butt-weld fittings)	Italy	Affirmative	2006	Affirmative	2012	Affirmative	2017	Affirmative	Order in effect ⁴
1999	731-TA-866 (Stainless butt-weld fittings)	Malaysia	Affirmative	2006	Affirmative	2012	Affirmative	2017	Affirmative	Order in effect ⁴
1999	731-TA-867 (Stainless butt-weld fittings)	Philippines	Affirmative	2006	Affirmative	2012	Affirmative	2017	Affirmative	Order in effect ⁴
2016	701-TA-563 (Carbon flanges)	India	Affirmative	-	-	-	-	-	-	Order in effect
2016	731-TA-1331 (Carbon flanges)	India	Affirmative	-	-	-	-	-	-	Order in effect
2016	731-TA-1332 (Carbon flanges)	Italy	Affirmative	-	-	-	-	-	-	Order in effect
2016	731-TA-1333 (Carbon flanges)	Spain	Affirmative	-	-	-	-	-	-	Order in effect

¹ "Date" refers to the year in which the investigation or review was instituted by the Commission.

² Commerce did not receive a notice of intent to participate from domestic interested parties and subsequently revoked the order.

³ The Commission found subject imports to be negligible, and its investigation was thereby terminated.

⁴ On December 20, 2017, the Commission published its determination that revocation of the antidumping duty orders on stainless steel butt-weld pipe fittings from Italy, Malaysia, and the Philippines would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

Source: *Stainless Steel Butt-Weld Pipe Fittings From Japan, Korea, and Taiwan, Investigation Nos. 731-TA-376, 563 and 564 (Second Review)*, USITC Publication 3801, September 2005; *Certain Stainless Steel Butt-Weld Pipe Fittings From Japan, South Korea and Taiwan; Final Results of Sunset Reviews and Revocation of Antidumping Duty Orders*, 75 FR 68324, November 5, 2010; *Certain Stainless Steel Butt-Weld Pipe Fittings From Germany, Investigation No. 731-TA-864 (Final)*, USITC Publication 3372, November 2000; *Certain Stainless Steel Butt-Weld Pipe Fittings from Italy, Malaysia, and the Philippines, Investigation Nos. 731-TA-865-867 (Second Review)*, USITC Publication 4337, June 2012; *Finished Carbon Steel Flanges from Spain, Investigation No. 731-TA-1333 (Final)*, USITC Publication 4696, June 2017; *Finished Carbon Steel Flanges from India and Italy, Investigation Nos. 701-TA-563 and 731-TA-1331-1332 (Final)*, USITC Publication 4714, August 2017; *USITC Votes to Expedite Five-Year (Sunset) Reviews Concerning Stainless Steel Butt-Weld Pipe Fittings from Italy, Malaysia, and the Philippines*, USITC News Release 170124, September 5, 2017; *Stainless Steel Butt-Weld Pipe Fittings from Italy, Malaysia, and the Philippines, Investigation Nos. 731-TA-865–867 (Third Review), Notice of Determinations*, 82 FR 60419, December 20, 2017. USITC Publication 4751, January 2018, *Stainless Steel Butt-Weld Pipe Fittings from Italy, Malaysia, and the Philippines: Investigation Nos. 731–TA–865–867 (Third Review)*.

Safeguard investigation

The Commission conducted a safeguard investigation under section 201 of the Trade Act of 1974 concerning certain steel products, which included stainless steel fittings and flanges.¹⁵ After receiving a request from the Office of the United States Trade Representative (“USTR”) on June 22, 2001, the Commission instituted an investigation.¹⁶ On July 26, 2001, the Commission received a resolution adopted by the Committee on Finance of the United States Senate requesting that the Commission investigate certain steel imports under section 201 of the Trade Act of 1974. Consistent with the Senate Finance Committee’s resolution, the Commission consolidated the investigation requested by the Committee with the Commission’s previously instituted Investigation No. TA-201-73.¹⁷

On December 20, 2001, the Commission issued its determinations and remedy recommendations. It reached an affirmative determination with respect to certain steel products, but was evenly divided on stainless steel flanges. The three Commissioners that voted in the affirmative recommended different remedies, including increased tariffs or quotas for two to four years.¹⁸

Presidential Proclamation 7529 implemented safeguard measures concerning certain steel products, principally in the form of tariffs and tariff-rate quotas, effective March 20, 2002, which were originally intended to last for a period of three years and one day. The President did not include stainless steel flanges in his proclamation, although carbon and alloy flanges and fittings were included.¹⁹ On December 4, 2003, President Bush terminated the increased tariffs under the safeguard measure.²⁰

¹⁵ *Steel, Investigation No. TA-201-73, Volume 1*, USITC Publication 3479, December 2001.

¹⁶ *Steel*, 66 FR 35267, July 3, 2001.

¹⁷ *Steel*, 66 FR 44158, August 22, 2001; *Steel; Correction*, 66 FR 45324, August 28, 2001.

¹⁸ *Steel, Investigation No. TA-201-73, Volume 1*, USITC Publication 3479, December 2001, p. 22.

¹⁹ *Proclamation 7529 of March 5, 2002, To Facilitate Positive Adjustment to Competition From Imports of Certain Steel Products*, 67 FR 10553, March 7, 2002.

²⁰ *Proclamation 7741 of December 4, 2003, To Provide for the Termination of Action Taken With Regard to Imports of Certain Steel Products*, 68 FR 68481, December 8 2003.

Section 232 investigation (Commerce)

On April 19, 2017, Commerce initiated an investigation under Section 232 of the Trade Expansion Act of 1962 on steel imports into the United States.^{21 22} Section 232 investigations are initiated to determine the effects of imports of any articles on U.S. national security.

Commerce launched the investigation on steel imports in light of the large volumes of excess steel production and capacity in foreign markets. Commerce released the results²³ of the investigations on February 16, 2018. The President issued proclamation 9705²⁴ on March 8, 2018 adjusting imports of steel into the United States by imposing a 25 percent ad valorem tariff on steel articles, effective March 23, 2018. While the proclamation does not include unfinished, semi-finished, and finished stainless steel flanges, which are typically classified under heading 7307 of the HTS, the proclamation covers raw materials (billets) used by integrated producers of stainless steel flanges. Billets are usually classified under heading 7218 of the HTS.^{25 26}

²¹ U.S. Department of Commerce website: <https://www.commerce.gov/page/section-232-investigation-effect-imports-steel-us-national-security> (accessed January 29, 2018).

²² Section 232 of the Trade Expansion Act of 1962 (19 U.S.C. §1862) authorizes the Secretary of Commerce to conduct these investigations.

²³ U.S. Department of Commerce website: *Secretary Ross Releases Steel and Aluminum 232 Reports in Coordination with White House*, <https://www.commerce.gov/news/press-releases/2018/02/secretary-ross-releases-steel-and-aluminum-232-reports-coordination>.

²⁴ *Presidential Proclamation No. 9705 of March 8, 2018, Adjusting Imports of Steel Into the United States*, 83 FR 11625, March 15, 2018.

²⁵ Hearing transcript, p. 92 (Maass).

²⁶ On March 22, 2018, the President issued a proclamation to suspend until May 1, 2018, the following countries from the steel tariffs: Argentina, Australia, Brazil, Canada, Korea, Mexico, and members of the European Union. By May 1, 2018, the President will decide whether to continue to exempt these countries from the steel tariffs, based on the status of the discussions. See web page <https://www.whitehouse.gov/presidential-actions/presidential-proclamation-adjusting-imports-steel-united-states-2/> (retrieved April 23, 2018).

Section 337

On September 5, 2014, Valbruna Slater Stainless, Inc., *et. al.* (“Valbruna”) filed a Section 337 complaint against several respondents. The complaint alleged misappropriation of trade secrets related to a number of stainless steel products including flanges, forgings, and fasteners.²⁷

On December 8, 2015, the presiding administrative law judge (“ALJ”) issued an initial determination finding respondent Viraj Profiles Limited (an Indian producer of stainless steel flanges) in default for spoliation of evidence.²⁸ The Commission ultimately upheld the ALJ’s initial determination, finding a violation of Section 337 as to Viraj²⁹ and issuing a limited exclusion order for stainless steel products using Valbruna’s trade secrets imported by Viraj, or its affiliated companies, subsidiaries, parents, or other related business entities for a period of 16.7 years.³⁰ On September 11, 2017, the U.S. Court of Appeals for the Federal Circuit issued a summary affirmance of the Commission’s determination.³¹ On December 1, 2017, complainant Valbruna filed a motion to institute bond forfeiture proceedings and forfeit bond amounts to Valbruna.³²

On February 13, 2018, the Commission issued a letter to U.S. Treasury Secretary Mnuchin regarding a seizure and forfeiture order on articles covered by the limited exclusion order and that Krones, Inc. attempted to import into the United States.³³ On March 14, 2018, the Commission’s Administrative Law Judge issued an initial determination to grant Valbruna’s motion to institute bond forfeiture proceedings and forfeit bond amounts to Valbruna.

²⁷ *Certain Stainless Steel Products, Certain Processes for Manufacturing or Relating to Same and Certain Products Containing Same (337-TA-933)*; Complaint, pp. 18–19, September 5, 2014.

²⁸ 337-TA-933; Order No. 17, p. 41, December 8, 2015.

²⁹ 337-TA-933; Commission Opinion, p. 56, June 9, 2016.

³⁰ 337-TA-933; Limited Exclusion Order, p. 2, May 25, 2016.

³¹ *Viraj Profiles Ltd. v. Int’l Trade C’mmn*, Court No. 2016-2482, 2017 WL 3980535 (Fed. Cir. Sept. 11, 2017).

³² Complainant’s Motion to Institute Bond Forfeiture Proceedings and Forfeit Bond Amounts, Valbruna, December 1, 2017, EDIS No. 630423.

³³ See letter of Secretary to the Commission Lisa Barton to Secretary of the Treasury on Seizure and Forfeiture Order, February 13, 2018, EDIS No. 636353.

NATURE AND EXTENT OF SUBSIDIES AND SALES AT LTFV

Subsidies

On April 12, 2018, Commerce published a notice in the *Federal Register* of its final determination of countervailable subsidies for producers and exporters of stainless steel flanges from China.³⁴

Table I-2 presents Commerce's findings of subsidization of stainless steel flanges in China.

Table I-2
Stainless steel flanges: Commerce's final subsidy determination with respect to imports from China

Entity	Final countervailable subsidy margin (percent)
Bothwell (Jiangyan) Steel Fittings Co., Ltd.	174.73
Hydro-Fluids Controls Limited	174.73
Jiangyin Shengda Brite Line Kasugai Flange Co., Ltd.	174.73
Qingdao I-Flow Co., Ltd.	174.73
All others	174.73

Source: 83 FR 15790, April 12, 2018.

Commerce determined all of the government programs identified below to be countervailable for China:³⁵

Program Name

1. Provision of Electricity for LTAR
2. Provision of Water for LTAR
3. Provision of Stainless Steel Billets for LTAR
4. Provision of Stainless Steel Bar for LTAR
5. Provision of Land-Use Rights for LTAR
6. Provision of Land to State-Owned Enterprises for LTAR
7. Policy Loans to the Flange Industry
8. Preferential Loans for SOEs
9. Loan and Interest Subsidies Provided Pursuant to the Northeast Revitalization Program
10. Foreign Trade Development Fund Grants
11. Support Fund for the Development of Foreign Trade
12. Export Assistance Grants

³⁴ *Countervailing Duty Investigation of Stainless Steel Flanges From the People's Republic of China: Final Affirmative Determination*, 83 FR 15790, April 12, 2018.

³⁵ *Decision Memorandum for the Preliminary Affirmative Determination: Countervailing Duty Investigation of Stainless Steel Flanges from the People's Republic of China*, Case C-570-065, January 16, 2018. For the purposes of the final determination, Commerce has made no changes to the preliminary determination.

13. Export Interest Subsidies
14. Subsidies for Development of “Famous Brands” and China World Top Brands
15. Sub-Central Government Subsidies for Development of Famous Brands and China World Top Brands
16. Funds for Outward Expansion of Industries in Guangdong Province
17. Provincial Fund for Fiscal and Technological Innovation
18. State Key Technology Renovation Fund
19. Shandong Province’s Special Fund for the Establishment of Key Enterprise Technology Centers
20. Shandong Province’s Environmental Protection Industry Research and Development Funds
21. Funds of Guangdong Province to Support the Adoption of E-Commerce by Foreign Trade Enterprises
22. Income Tax Reductions under Article 28 of the Enterprise Income Tax
23. Tax Offsets for Research and Development under the Enterprise Income Tax
24. Tax Benefits for Enterprises in the Northeast Region
25. Forgiveness of Tax Arrears for Enterprises Located in the Old Industrial Bases of Northeast China
26. Income Tax Credits for Domestically Owned Companies Purchasing Domestically Produced Equipment
27. Income Tax Benefits for Foreign-Invested Enterprises Based on Geographic Locations
28. Local Income Tax Exemption and Reduction Programs for “Productive” Foreign-Invested Enterprises
29. Tax Refunds for Reinvestment of FIE Profits in Export-Oriented Enterprises
30. Export Seller’s Credit
31. Export Buyer’s Credit
32. Value-Added Tax and Import Duty Exemptions for Use of Imported Equipment
33. Value-Added Tax Rebate Exemptions on Foreign Invested Enterprise Purchases of Chinese-Made Equipment

On January 23, 2018, Commerce published a notice in the *Federal Register* of its preliminary determination of countervailable subsidies for producers and exporters of stainless steel flanges from India.³⁶ Table I-3 presents Commerce’s findings of subsidization of stainless steel flanges in India.

³⁶ *Stainless Steel Flanges From India: Preliminary Affirmative Countervailing Duty Determination, Preliminary Affirmative and Alignment of Final Determination With Final Antidumping Duty Determination*, 83 FR 3118, January 23, 2018.

Table I-3**Stainless steel flanges: Commerce's preliminary subsidy determination with respect to imports from India**

Entity	Preliminary countervailable subsidy margin (percent)	Final countervailable subsidy margin (percent)
Bebitz Flanges Works	239.61	Pending
Echjay Forgings Private Limited	5.00	Pending
All others	5.00	Pending

Source: 83 FR 3118, January 23, 2018.

Commerce preliminarily determined all of the government programs identified below to be countervailable for India:³⁷

Program Name

1. Advance License Program
2. Advance Authorization Program
3. Duty Free Import Authorization Scheme
4. Duty Drawback Program
5. Export Oriented Units - Duty-Free Import of Goods, Including Capital Goods and Raw Materials
6. Export Oriented Units - Reimbursements of Central Sales Tax Paid on Goods Manufactured in India
7. Export Oriented Units - Duty Drawback on Fuel Procured from Domestic Oil Companies
8. Export Oriented Units - Exemption from Payment of Central Excise Duty on Goods Manufactured in India and Procured from a Domestic Tariff Area
9. Export Promotion of Capital Goods Scheme
10. Merchandise Exports from India Scheme
11. Interest Equalization Scheme
12. Status Holder Incentive Scheme
13. Pre-Shipment and Post-Shipment Export Financing
14. Market Development Assistance Scheme
15. Market Access Initiative
16. Focus Product Scheme
17. GOI Loan Guarantees
18. Status Certificate Program
19. Income Deduction Program (80-IB Tax Program)
20. Special Economic Zones - SEZ Income Tax Exemption
21. Special Economic Zones - Exemption from Payment of Central Sales Tax on Purchases of Capital Goods and Raw Materials, Components, Consumables, Intermediates, Spare Parts, and Packing Material¹⁹²
22. Special Economic Zones - Exemption from Electricity Duty and Cess on Electricity Supplied to a SEZ Unit

³⁷ *Decision Memorandum for the Preliminary Determination in the Countervailing Duty Investigation of Stainless Steel Flanges from India*, Case No. C-570-065, January 16, 2018.

23. Special Economic Zones - Duty-Free Importation of Capital Goods and Raw Materials, Components, Consumables, Intermediates, Spare Parts, and Packing Material
24. Special Economic Zones - Service Tax Exemption
25. Special Economic Zones - Exemption from Payment of Local Government Taxes and Duties, Such as Sales Tax and Stamp Duties
26. Special Economic Zones - Steel Development Funds Loans
27. Provision of Stainless Steel, Billet, and Bar by SAIL for Less Than Adequate Remuneration (LTAR)
28. Incremental Exports Incentive Scheme
29. State Government of Andhra Pradesh (SGAP) Subsidy Programs - Grant Under the Industrial Investment Promotion Policy: 25 Percent Reimbursement of the Cost of Land in Industrial Estates and Development Areas
30. SGAP Subsidy Programs - Grant Under the Industrial Investment Promotion Policy: Reimbursement of Power at the Rate of Rs.0.75 per Unit
31. SGAP Subsidy Programs - Grant under the Industrial Investment Promotion Policy: 50 Percent Subsidy for Expenses Incurred for Quality Certification
32. SGAP Subsidy Programs - Grant under the Industrial Investment Promotion Policy: 50 Percent Subsidy on Expenses Incurred in Patent Registration
33. SGAP Subsidy Programs - Grant under the Industrial Investment Promotion Policy: 25- or 35-Percent Subsidy in Cleaner Production Measures
34. SGAP Subsidy Programs - Tax Incentives under the Industrial Investment Promotion Policy: 100 Percent Reimbursement of Stamp Duty and Transfer Duty Paid for the Purchase of Land and Buildings and the Obtaining of Financial Deeds and Mortgages
35. SGAP Subsidy Programs - Tax Incentives under the Industrial Investment Promotion Policy: Reimbursement on VAT, CST, and State Goods and Services Tax
36. SGAP Subsidy Programs - Tax Incentives under the Industrial Investment Promotion Policy: Exemption from SGAP Non- Agricultural Land Assessment
37. SGAP Subsidy Programs - Provision of Goods and Services for LTAR under the Industrial Investment Promotion Policy: Provision of Infrastructure for Industries Located More than 10 Kilometers from Existing Industrial Estates or Development Areas
38. SGAP Subsidy Programs - Provision of Goods and Services for LTAR under the Industrial Investment Promotion Policy: Guaranteed Stable Water Prices and Reservation of Municipal Water
39. State Government of Maharashtra (SGOM) Subsidy Programs - SGOM Sales Tax Program
40. SGOM Subsidy Programs - Infrastructure Assistance for Mega Projects under the Maharashtra Industrial Policy of 2013 and Other SGOM Industrial Promotion Policies to Support Mega Projects
41. SGOM Subsidy Programs - Subsidies for Mega Projects under the Package Scheme of Incentives
42. SGOM Subsidy Programs – Special Capital Incentive Under Package Scheme of Incentives 1988 Scheme

Sales at LTFV

On March 28, 2018, Commerce published its preliminary determinations of sales at less-than-fair-value (LTFV) with respect to imports from China and India.³⁸

³⁸ *Stainless Steel Flanges From the People's Republic of China: Preliminary Affirmative Determination of Sales at Less Than Fair Value*, 83 FR 13244, March 28, 2018. *Stainless Steel Flanges From India:*

(continued...)

Final determinations on LTFV for stainless steel flanges from China will be made no later than 75 days from the signature of the preliminary determination. Commerce also preliminarily found that critical circumstances exist for Chandan Steel, the Bebitz/Viraj single entity, and the Echjay single entity, and all other producers and exporters. Commerce is scheduled to make its final determination on LTFV for stainless steel flanges from India no later than 135 days after the date of publication of the preliminary determination.

Tables I-4 and I-5 present Commerce's dumping margins with respect to imports of stainless steel flanges from China and India.

Table I-4
Stainless steel flanges: Commerce's preliminary and final weighted-average LTFV margins with respect to imports from China

Country	Firm	Preliminary dumping margin (percent)	Final dumping margin (percent)
China	Shanxi Guanjiaying Flange Forging Group Co., Ltd	257.11	Pending
	China-Wide	257.11	Pending

Source: 83 FR 13244, March 28, 2018

Table I-5
Stainless steel flanges: Commerce's preliminary and final weighted-average LTFV margins with respect to imports from India

Country	Firm	Preliminary dumping margin (percent)	Cash deposit rate, adjusted for subsidy offset (s) (percent)	Final dumping margin (percent)
India	Bebitz Flanges Works Pvt. Ltd/Viraj	145.25	145.25	Pending
	Echjay Single Entity	145.25	145.25	Pending
	Chandan Steel Limited	18.10	13.15	Pending
	All Others	18.10	13.15	Pending

Source: 83 FR 13246, March 28, 2018

THE SUBJECT MERCHANDISE

Commerce's scope

In the current proceedings, Commerce has defined the scope as follows:

(...continued)

Preliminary Affirmative Determination of Sales at Less Than Fair Value, Preliminary Affirmative Determination of Critical Circumstances, Postponement of Final Determination, and Extension of Provisional Measures, 83 FR 13246, March 28, 2018.

...certain forged stainless steel flanges, whether unfinished, semifinished, or finished (certain forged stainless steel flanges). Certain forged stainless steel flanges are generally manufactured to, but not limited to, the material specification of ASTM/ASME A/SA182 or comparable domestic or foreign specifications. Certain forged stainless steel flanges are made in various grades such as, but not limited to, 304, 304L, 316, and 316L (or combinations thereof). The term "stainless steel" used in this scope refers to an alloy steel containing, by actual weight, 1.2 percent or less of carbon and 10.5 percent or more of chromium, with or without other elements.

Unfinished stainless steel flanges possess the approximate shape of finished stainless steel flanges and have not yet been machined to final specification after the initial forging or like operations. These machining processes may include, but are not limited to, boring, facing, spot facing, drilling, tapering, threading, beveling, heating, or compressing. Semifinished stainless steel flanges are unfinished stainless steel flanges that have undergone some machining processes.

The scope includes six general types of flanges. They are: (1) Weld neck, generally used in butt-weld line connection; (2) threaded, generally used for threaded line connections; (3) slip-on, generally used to slide over pipe; (4) lap joint, generally used with stub-ends/butt-weld line connections; (5) socket weld, generally used to fit pipe into a machine recession; and (6) blind, generally used to seal off a line. The sizes and descriptions of the flanges within the scope include all pressure classes of ASME B16.5 and range from one-half inch to twenty-four inches nominal pipe size. Specifically excluded from the scope of these orders are cast stainless steel flanges. Cast stainless steel flanges generally are manufactured to specification ASTM A351.

The country of origin for certain forged stainless steel flanges, whether unfinished, semifinished, or finished is the country where the flange was forged. Subject merchandise includes stainless steel flanges as defined above that have been further processed in a third country. The processing includes, but is not limited to, boring, facing, spot facing, drilling, tapering, threading, beveling, heating, or compressing, and/or any other processing that would not otherwise remove the merchandise from the scope of the investigations if performed in the country of manufacture of the stainless steel flanges. Merchandise subject to the investigations is typically imported under headings 7307.21.1000 and 7307.21.5000 of the Harmonized Tariff Schedule of the United States (HTSUS). While HTSUS subheadings and ASTM specifications are provided

*for convenience and customs purposes, the written description of the scope is dispositive.*³⁹

Tariff treatment

Based upon the scope set forth by the Department of Commerce, information available to the Commission indicates that the merchandise subject to these investigations are imported under subheadings 7307.21.10 (forged stainless steel flanges that are tube or pipe fittings, not machined, tooled or otherwise processed after forging) and 7307.21.50 (stainless steel flanges, other than those of 7307.21.10 (i.e. forged stainless steel flanges that are tube or pipe fittings, machined, tooled or otherwise processed after forging)) of the Harmonized Tariff Schedule of the United States (“HTS” or “HTSUS”). The 2018 general rate of duty is 3.3 percent *ad valorem* for HTS subheading 7307.21.10 and 5.6 percent *ad valorem* for HTS subheading 7037.21.50. Forged stainless steel flanges imported from India under HTS subheading 7307.21.50 are eligible for duty-free treatment under the Generalized System of Preferences (GSP) Program, but not if imported under subheading HTS 7307.21.10.⁴⁰ Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

THE PRODUCT

Stainless steel flanges are used to connect stainless steel pipe sections and piping components (valves, pumps, tanks, and other equipment) to form a piping system. Stainless steel flanges are usually welded or screwed to the ends of pipes or other equipment requiring a connection (i.e., joint). Flanged joints are made by bolting together two flanges with a gasket⁴¹ between them to provide a seal. Flanged (bolted) joints are frequently used in applications where the components being joined are not otherwise capable of being welded together, where quick field assembly is required, or the pipe sections that are joined must be frequently accessed or removed for service.⁴²

³⁹ *Stainless Steel Flanges From India and the People’s Republic of China; Initiation of Less-Than-Fair-Value investigations*, 82 FR 42654, September 11, 2017.

⁴⁰ USITC, “General Notes, Products of Countries Designated Beneficiary Developing Countries for Purposes of the Generalized System of Preferences (GSP),” HTSUS (2018) Revision 2, March 29, 2018, pp. GN 14-GN 17.

⁴¹ A gasket is a material or combination of materials designed to clamp between the mating faces of a flange joint. The primary function of a gasket is to seal the irregularities of each face of the flange, thereby preventing leakage of the service fluid from inside the flange to the outside. Mohinder L. Nayyar, *Piping Handbook: Seventh Edition*, 2000, p. A.339.

⁴² Mohinder L. Nayyar, *Piping Handbook: Seventh Edition*, 2000, pp. A.87-A.88.

In general, flanges are specified by production method (forged or cast), level of finishing (unfinished, semifinished, or finished), type of metal (cast iron, carbon, stainless, and other alloy steels),^{43 44} type or configuration (weld neck, slip-on, socket weld, lap joint, threaded, or blind), type of face (e.g. flat, full, raised, ring joint, tongue and groove),⁴⁵ overall flange size, nominal pipe size of the connecting pipe, wall thickness of connecting pipe (only applicable to weld-neck and socket-weld flanges), number of bolt holes in the flange, and pressure ratings.⁴⁶

The stainless steel flanges subject to these investigations are forged⁴⁷ and can be unfinished, semifinished, or finished.⁴⁸ Subject stainless steel flanges are made from stainless steel⁴⁹ and are generally manufactured to, but not limited to, the material specification of ASTM A182/A182M⁵⁰ or comparable domestic or foreign specifications.

Petitioner Maass stated that stainless steel flanges made from “300 series” grades of stainless steel represented the majority of the volume of subject flanges sold in the U.S. market.⁵¹ These stainless steel grades include 304/304L and 316/316L.⁵²

⁴³ Usually specified by ASTM specification number with grades and classes (if applicable). Boltex Mfg. Co. at <http://www.boltex.com/about-flanges.html>, retrieved September 13, 2017.

⁴⁴ The type of metal from which a flange is made usually matches the pipe. Welding metals with the same chemical composition and physical properties is easier for installers than welding dissimilar metals.

⁴⁵ The face has to be machined to specific dimensions and tolerances to match the gasket used to seal the flanges when they are bolted together.

⁴⁶ Pressure classes are defined by ASME or other standards-producing organizations and specify pressure ratings for a range of temperatures. For ASME, the classes are 150, 300, 400, 600, 900, 1500, and 2500. Boltex Mfg. Co. at: <http://www.boltex.com/about-flanges.html>, retrieved September 13, 2017.

⁴⁷ Commerce’s scope excludes flanges that are cast.

⁴⁸ Semifinished stainless steel flanges have undergone some machining processes, but have not yet been machined to final specifications. Unfinished stainless steel flanges are forgings that possess the approximate shape of finished stainless steel flanges but have not been machined or processed after the initial forging operations.

⁴⁹ The definition of stainless steel in Commerce’s scope matches that in the Explanatory Notes in Section 15 of the HTS: “Alloy steels containing, by weight 1.2 percent or less of carbon and 10.5 percent or more of chromium, with or without other elements.”

⁵⁰ ASTM A182 / A182M – 16a Standard Specification for Forged or Rolled Alloy and Stainless Steel Pipe Flanges, Forged Fittings, and Valves and Parts for High-Temperature Service. ASTM International. <https://www.astm.org/Standards/A182.htm>.

⁵¹ Conference transcript, p. 74 (Maass).

⁵² Type 304 (sometimes referred to as 18-8 stainless) is the most widely used alloy of the austenitic group. It has a nominal composition of 18 percent chromium and 8 percent nickel. It withstands ordinary rusting in architecture, is resistant to food processing environments (except some high-temperature conditions involving high acid and chloride contents), and resists inorganic and organic chemicals. Type 304L (low carbon) resists nitric acid and sulfuric acids at moderate temperatures. It is used extensively for storage of liquefied gases. Types 316 and 316L (low carbon) contain slightly more nickel than Type

(continued...)

Subject stainless steel flanges range from one-half to 24 inches in nominal pipe size and meet sizes and description standards for all pressure classes of ASME B16.5.⁵³

The six general types or configurations of stainless steel flanges that are covered by these investigations (figure I-1) are described below:

- Weld neck (also called welding neck) flanges are distinguished from other flanges by their long, tapered hub (neck) and gentle transition to the region where the flange is butt welded⁵⁴ to the pipe. These flanges are installed by welding the pipe to the neck of the flange.⁵⁵ The smooth transition of the taper from flange thickness to pipe wall thickness imparts, under conditions of repeated bending caused by line expansion or other forces, an endurance strength that is equivalent to that of a butt-welded joint between pipes, which, in practice, is the same as that of unwelded pipe. Weld neck flanges are typically used in applications involving high pressures or hazardous fluids and are also used in environments where pipes are exposed to extreme temperatures.⁵⁶
- Slip-on flanges are fitted over the pipe and then fillet welded⁵⁷ both inside and outside to provide sufficient strength and prevent leakage. Slip-on flanges are sometimes preferred to weld-neck flanges owing to lower cost and ease of installation. Their calculated strength under internal pressure is about two-thirds of that of weld-neck

(...continued)

304, and 2-3 percent molybdenum giving it better resistance to corrosion than Type 304. They are used in sulfite pulp mills and handling chemicals in process industries. *Design Guidelines for the Selection and Use of Stainless Steel*, The Nickel Institute, p. 5, https://www.nickelinstitute.org/~Media/Files/TechnicalLiterature/DesignGuidelinesfortheSelectionandUseofStainlessSteels_9014_.pdf, retrieved September 8, 2017.

⁵³ ASME B16.5 Pipe Flanges and Flanged Fittings: NPS 1/2 through NPS 24 Metric/Inch Standard covers pressure-temperature ratings, materials, dimensions, tolerances, marking, testing, and methods of designating openings for pipe flanges and flanged fittings. It includes flanges with rating class designations 150, 300, 400, 600, 900, and 1500 in nominal pipe sizes from one-half to 24 inches and flanges with rating class designation 2500 in nominal pipe sizes from one-half to 12 inches. The American Society of Mechanical Engineers (ASME) website, <https://www.asme.org/products/codes-standards/b165-2013-pipe-flanges-flanged-fittings-nps-12>, retrieved September 13, 2017.

⁵⁴ A butt weld is a circumferential butt welded joint, and the most common type of joint employed in the fabrication of welded pipe systems. A butt joint is the most universally used method of joining pipe to itself, fittings, flanges, Valves, and other equipment. See http://www.wermac.org/others/welding_basic-welding-joints_butt-weld_fillet-weld.html for an illustration of butt welded joints.

⁵⁵ The inside diameter of weld neck is machined to match the inside diameter of the pipe.

⁵⁶ Mohinder L. Nayyar, *Piping Handbook: Seventh Edition*, 2000, p. A.335 and Maass Global Group website at http://www.maassflange.com/sites/site_40.html, retrieved September 12, 2017.

⁵⁷ A fillet weld is the most common type of weld. Fillet welds occur when two perpendicular or overlapping lengths are welded together. <http://www.weldguru.com/weldtypesandpositions.html> for an illustration of various fillet welds.

flanges. They are typically used on low-pressure, low-hazard services such as fire-fighting water, cooling water, etc.⁵⁸

- Socket-weld flanges are attached by inserting the pipe into the socket end and applying a fillet weld around the top. This allows for a smooth bore and better flow of the fluid or gas inside of the pipe. These flanges were initially developed for use in small-diameter, high-pressure lines. Internally welded socket flanges are typically used in chemical processes, hydraulic applications, and steam distribution lines.⁵⁹
- A lap-joint is similar to a slip-on flange, with the main difference being that it has a curved radius at the bore and face to house a lap-joint stub end. A pipe is usually welded to the stub end and the lap-joint pipe flange is free to rotate around the stub end. The face on the stub end forms the gasket face on the flange. Because the flange itself is not welded, it can be easily rotated for alignment and is typically used in applications where sections of piping systems need to be dismantled quickly and easily for inspection or replacement.⁶⁰
- Threaded, or screwed, flanges are used to connect other threaded components in low-pressure, non-critical applications. This is similar to a slip-on flange, but the bore⁶¹ is threaded, thus enabling assembly without welding. They are used with pipes that have external threads. Threaded pipe flanges are often used for small-diameter pipes and are not suitable for conditions involving temperature or bending stresses, particularly under cyclical conditions, where leakage through the threads may occur in relatively few cycles of heating or stress.⁶²
- Blind flanges are used to blank off pipe lines, valves or pumps. Blind, or “blanking,” flanges also permit easy access to vessels or piping systems for inspection purposes. Blind flanges can be supplied with or without center hubs. Blind flanges are subjected to more stress from internal pressure than other types of flanges.⁶³

⁵⁸ Boltex Mfg. Co. at : <http://www.boltex.com/about-flanges.html>, retrieved September 12, 2017 and Maass Global Group website at http://www.maassflange.com/sites/site_41.html, retrieved September 12, 2017.

⁵⁹ Boltex Mfg. Co. at: <http://www.boltex.com/about-flanges.html>, retrieved September 12, 2017 and Maass Global Group website at http://www.maassflange.com/sites/site_46.html, retrieved September 12, 2017, and Coastal Flange website at <http://www.coastalflange.com/pipe-flanges.html>, retrieved September 13, 2017.

⁶⁰ Boltex Mfg. Co. at: <http://www.boltex.com/about-flanges.html>, retrieved September 12, 2017 and Palmer Engineering website at <http://www.forgedflangesandfittings.com/carbon-steel-forged-flanges/lap-joint-flanges.html>, retrieved September 12, 2017.

⁶¹ A flange bore is the center hole through which the gas or liquid flows.

⁶² Boltex Mfg. Co. at: <http://www.boltex.com/about-flanges.html>, retrieved September 12, 2017, Palmer Engineering website at <http://www.forgedflangesandfittings.com/carbon-steel-forged-flanges/threaded-flanges.html>, retrieved September 12, 2017, and Coastal Flange website at <http://www.coastalflange.com/pipe-flanges.html>, retrieved September 13, 2017.

⁶³ Boltex Mfg. Co. at: <http://www.boltex.com/about-flanges.html>, retrieved September 12, 2017 and Maass Global Group website at http://www.maassflange.com/sites/site_42.html, September 12, 2017.

Figure I-1

Stainless steel flanges: Common types of stainless steel flanges



Source: Wermac, "Explore the World of Piping," http://www.wermac.org/flanges/flanges_welding-neck_socket-weld_lap-joint_screwed_blind.html, retrieved September 12, 2017.

Forged stainless steel flanges are generally used in applications where one or more of the following conditions are a factor in designing the piping system: (1) corrosion resistance; (2) contamination prevention; (3) high temperatures (in excess of 300 degrees Fahrenheit); (4) extremely low temperatures; and/or (5) pressure containment. In general, pipes (and flanges) made from stainless steel and other steel alloys are highly durable, but much more expensive than pipes of regular carbon steel. Accordingly, stainless steel and alloy steel products are mostly used in highly corrosive or demanding conditions unsuitable for regular carbon steel, whereas carbon steel products are mostly used in standard applications where their lower cost is a more important consideration.

Forged stainless steel flanges are a component of stainless steel process piping in oil and gas refineries, nuclear power plants, chemical synthesis plants, paper mills, food processing facilities, and other applications where cleanliness and corrosion resistance are required and in power plants where their high-temperature properties are needed.⁶⁴

In 2017, stainless steel pipe is anticipated to account for about 9.4 percent of total pipe and tube industry sales revenue in the United States.⁶⁵ Maass estimates that approximately *** percent of subject flanges are used in the oil refining industry, *** percent in the petrochemical industry, and *** percent in the power generation industry. The remaining ***, is used in the pharmaceutical, nuclear energy, defense, and food processing industries. Petitioner Maass stated that the stainless steel flanges subject to this investigation are used in the midstream (storage and transport of oil and gas) and downstream (refining of oil and gas) segments of the oil and gas industry and not in the upstream (exploration and production) segment.⁶⁶

⁶⁴ Mohinder L. Nayyar, *Piping Handbook: Seventh Edition*, 2000, p. A.296.

⁶⁵ *IBISWorld Industry Report 33121 Metal Pipe & Tube Manufacturing in the US* at <https://www.ibisworld.com/industry-trends/market-research-reports/manufacturing/primary-metal/metal-pipe-tube-manufacturing.html>, retrieved July 14, 2017.

⁶⁶ Hearing transcript, pp. 117-118 (Maass).

Many of the integrated producers and the bulk of domestic production capacity are located in Texas, near the oil refining and petrochemical industries.⁶⁷

Manufacturing processes⁶⁸

The manufacturing process for forged stainless steel flanges involves three main steps: (1) forging,⁶⁹ (2) heat treatment, and (3) finishing.⁷⁰ Integrated manufacturers perform all of these steps to produce a finished stainless steel flange from stainless steel billets or bars. Converters or non-integrated finishers typically purchase rough forgings or semifinished flanges⁷¹ and perform finishing steps⁷² to produce finished flanges.

Stainless steel flanges are made from stainless steel billet or bar (of rectangular or round cross-sectional shape), which is sorted by heat lot number. The bar or billet is cut to size according to the input weight and length requirements of the subsequent forging process. The cut pieces are then transferred to a staging area to await the forging process. The forging process begins when the cut steel billet or bar is heated to forging temperature, typically from 1,900 to 2,300 degrees Fahrenheit, in either electro-inductive ovens or natural gas-fired furnaces. After the cut steel billet or bar has reached the target temperature, it is moved to a forging hammer line, where an electro-hydraulic forging hammer “forges” it into a forging shape. The forging shape is determined by the engineered closed die forging tooling, installed on the forging equipment, which imparts the general dimensions of finished flanges, with sufficient allowances for machining and forging flaws. Upon completing the closed die forging process, the forged material is then conveyed to the trim press where it receives its final shaping and all excess material is trimmed off the part.

⁶⁷ Petitioners’ postconference brief, pp. 32-33.

⁶⁸ Unless otherwise indicated, information in this section was taken from the Petition, Volume 2, pp. 14-16 and Counsel for petitioners, email message to staff, August 31, 2017.

⁶⁹ Forging is the manufacturing process where metal is pressed, pounded or squeezed under great pressure into high strength parts known as forgings. The process is normally (but not always) performed hot by preheating the metal to a desired temperature before it is worked. The forging process differs from the casting (or foundry) process, as metal used to make forged parts is never melted and poured (as in the casting process). *Forging Industry Association website* at: <https://www.forging.org/about>, retrieved September 13, 2017.

⁷⁰ Petitioners note that, to the best of their knowledge, the manufacturing process for integrated producers *** in China is similar to that of ***. Petition, Volume 2, p. 14.

⁷¹ A flange that has been forged and machined and requires minimal processing, such as drilling bolt holes, to finish. Conference transcript, pp. 18-19 (Maass).

⁷² Finishing steps are machining processes that may include, but are not limited to, boring, facing, spot facing, drilling, tapering, threading, beveling, heating, or compressing.

Once these parts are completely forged, they are either directly water quenched (solution annealed) or loaded into steel containers for controlled still-air cooling and are then sent for post-forging heat treatment. Post-forging heat treatment is required for certain flanges to impart the specified mechanical properties or grain structure.⁷³ First, the forgings are stacked on pallets and placed in ovens where they are heated to the desired temperature. Next, the forgings are either still-air cooled or quenched in a controlled temperature water tank. After cooling to ambient temperature, they are reloaded into ovens for tempering to assure optimal mechanical properties and achieve material hardness. Once cooled, these parts are completed forgings. At this point in the production process, the completed forgings are ready to be transformed into finished stainless steel flanges.

The finishing process typically requires setting up tooling on a programmable Computer Numeric Controlled (“CNC”) lathe, which includes carbide milling inserts, drill bits, etc. The CNC program instructs the lathe to move both the tooling and the forging so that the part may be consistently machined. Once a CNC lathe is set up for a production run, the operator will run the first piece and conduct a first article inspection, ensuring that the dimensional characteristics meet the technical specifications. During this finishing stage, each flange goes through a four-stage machining process. The face and internal diameter is machined first, then the back face and outer diameter. Once the lathe work is completed, the flange moves to the drilling department, where CNC machining centers drill the bolt holes of each flange. After drilling, the flange is moved to the marking department, where it is deburred,⁷⁴ and hard engraved or stamped for identification and traceability.⁷⁵ After marking, the flange is inspected and cleaned prior to shipment.

Stainless steel flanges are then packed onto freight pallets or wooden crates as required by customers. If the customers do not pick up the flanges, producers will typically ship them via standard freight lines or local trucking companies, depending on how far the customers are from the manufacturer.

⁷³ Heat treatment is a process that alters the properties of steel by subjecting it to a series of temperature changes. It is done to increase the hardness, strength, or ductility of steel so that it is suitable for additional applications. The steel is heated and then cooled as necessary to provide changes in the structural form that will impart the desired characteristics. The time spent at each temperature and the rates of cooling have a significant impact on the effect of the treatment. American Iron and Steel Institute website at: <http://www.steel.org/making-steel/glossary/glossary-f-j.aspx>, retrieved September 13, 2017.

⁷⁴ The process smooths the sharp edges of a cut piece of steel.

⁷⁵ The finished flange is marked with the following information: Manufacturer’s emblem, nominal pipe size, pressure rating and specification, material grade, and the heat lot number of the steel used.

DOMESTIC LIKE PRODUCT ISSUES

The petitioners propose that the domestic like product should be coextensive with Commerce's scope. In the preliminary phase of these investigations, the Commission did not define the domestic like product to include stainless steel flanges smaller than one-half inch and larger than 24 inches nominal pipe size, which are excluded from the scope, but did indicate its intention to explore this issue further in the final phase of these investigations.⁷⁶ The Commission's decision regarding the appropriate domestic product(s) that are "like" the subject imported product is based on a number of factors including: (1) physical characteristics and uses; (2) common manufacturing facilities and production employees; (3) interchangeability; (4) customer and producer perceptions; (5) channels of distribution; and (6) price.⁷⁷ Information regarding these factors is presented in table I-6 and discussed as follows.

⁷⁶ *Stainless Steel Flanges from China and India, Investigation Nos. 701-TA-585-586 and 731-TA-1383-1384 (Preliminary)*, USITC Publication 4734, October 2017, p. 10 n. 32.

⁷⁷ In the preliminary phase of these investigations, the Commission also applied the semi-finished product analysis to determine whether flange forgings and finished flanges are appropriately included in a single domestic like product definition. Based on its analysis, and in particular the facts that the unfinished flange imparts essential characteristics to the finished flange and is dedicated to use as a finished flange, and there is no independent end-use market for unfinished flanges, the Commission defined a single domestic like product consisting of finished and unfinished stainless steel flanges. *Stainless Steel Flanges from China and India, Investigation Nos. 701-TA-585-586 and 731-TA-1383-1384 (Preliminary)*, USITC Publication 4734, October 2017, p. 10. As a practical matter, the volume of unfinished domestically-produced stainless steel flanges sold commercially is small, accounting for less than *** percent of all U.S. commercial shipments by integrated U.S. producers in 2017. The volume of semi-finished domestically-produced stainless steel flanges is smaller still, with *** shipments. In commenting on draft questionnaires, no party requested additional data on unfinished or semi-finished products.

Table I-6

Stainless steel flanges: U.S. producers' and U.S. purchasers' comparisons of in-scope stainless steel flanges vs stainless steel flanges excluded by NPS (nominal pipe size), by factor

Item	U.S. producers				U.S. purchasers			
	Fully	Mostly	Somewhat	Not at all	Fully	Mostly	Somewhat	Not at all
In-scope stainless steel flanges vs. stainless steel flanges excluded by NPS.-- Physical characteristics	---	---	2	2	6	1	1	2
Interchangeability	---	---	---	4	6	1	1	4
Manufacturing	---	2	---	2	2	3	2	---
Channels	1	1	1	2	5	3	---	1
Perceptions	---	---	2	2	5	2	1	---
Price	---	---	1	4	3	---	4	3

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

Physical characteristics and uses

In the preliminary phase of these investigations, petitioners argue that there is a clear dividing line between stainless steel flanges that are within the size range contained in the scope (larger than one-half inch and smaller than 24 inches nominal pipe size), and those of smaller or larger range. Petitioners argue that stainless steel flanges outside the scope's size are non-standard and custom-made to certain specifications. As such, petitioners' contended that stainless steel flanges of smaller or larger sizes outside the scope have different uses and are not interchangeable with those in the scope that meet the standard specifications.⁷⁸ In general, U.S. producers viewed in-scope flanges as "somewhat" or "not at all" comparable in terms of physical characteristics and uses to smaller or larger flanges, while a majority of U.S. purchasers found them to be "fully" comparable for most factors.

Manufacturing facilities and production employees

Of the five responding producers of stainless steel flanges, three (including both integrated producers) also produce small and/or large flanges that are excluded from the scope of investigations on the basis of nominal pipe size, while two do not produce such products. This is broadly consistent with the views of domestic producers on the comparability of manufacturing facilities and production employees ("mostly" or "not at all"). Purchasers viewed manufacturing facilities and production employees as "fully," "mostly," or "somewhat" comparable.

⁷⁸ Petitioners' prehearing brief, p. 3-4.

Interchangeability

As stated above, petitioners have contended that excluded flanges are mostly non-standard, tending toward different end uses, and are therefore not interchangeable with flanges having diameters within the scope of the investigations. Table I-6 shows that U.S. producers view in-scope stainless steel flanges are “not at all” interchangeable with stainless steel flanges excluded by nominal pipe size (“NPS”), while U.S. purchasers are divided, with most responding either “fully” comparable or “not at all” comparable.

Customer and producer perceptions

The Commission collected data from U.S. producer and U.S. purchaser questionnaires on customer and producer perceptions as to the differences and/or similarities in stainless steel flanges and stainless steel flanges excluded by nominal pipe size in the market. While U.S. producers viewed these size ranges as “somewhat” or “not at all” comparable, most purchasers viewed them as “fully” comparable.

Channels of distribution

Table I-7 presents information on channels of distribution of integrated U.S. producers during 2015-17. Regardless of the size of the flange, virtually all of the commercial U.S. shipments of U.S. integrated producers of stainless steel flanges went to distributors.

Table I-7

Stainless steel flanges: Channels of distribution of integrated U.S. producers, 2015-17

* * * * *

Price

Table I-8 presents information on the average unit values of U.S. producers’ U.S. shipments during 2015-17. Average unit values for both in-scope and excluded stainless steel flanges fluctuated, with in-scope merchandise prices ranging from *** dollars per pound and out-of-scope merchandise ranging from *** dollars per pound. Average unit values for flanges in the two size ranges differed by \$*** per pound in 2017.

Table I-8

Stainless steel flanges: Average unit values of U.S. producers’ U.S. shipments, 2015-17

* * * * *

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

U.S. MARKET CHARACTERISTICS

Stainless steel flanges are used to connect stainless steel pipe and piping components (e.g. pumps, valves, tanks, and gauges) in applications that require protection from corrosion, high or low temperatures, high pressures, or contamination. They are used in the oil and gas sector, as well as in chemical plants, power plants, pulp and paper facilities, water treatment, and agriculture and food processing facilities.¹ Petitioner Maass testified that its products are also used in U.S. military vessels, including Navy ships, submarines, and aviation jet refueling systems.² Stainless steel flanges are produced in various sizes and typically to ASTM, ASME, and/or ANSI standards. The production process begins with the manufacture of the rough forging in the general shape of the flange, which is then machined and/or finished to an industry standard or customers' specifications. In the United States, some firms are integrated producers (i.e. produce both the rough forging and finish the flange) and some firms are exclusively converters/finishers, which use the rough forging as the input and finish or convert the product to specification. Most of the U.S. stainless steel flange market is served by distributors.

Overall, apparent U.S. consumption of stainless steel flanges in 2017 was approximately *** percent higher by quantity but 6 percent lower by value than in 2015.

U.S. PURCHASERS

The Commission received 27 usable questionnaire responses from firms that have purchased stainless steel flanges since January 2015.^{3 4} Twenty-one of these purchasers are distributors, one is an end user in the oil and gas industry, two are end users for other industries, and four identified themselves as "other" types of purchasers, including two OEMs (original equipment manufacturers), one fabricator, and one wholesaler/master distributor. Responding U.S. purchasers were located in all geographic regions of the United States, but

¹ Maass estimates that approximately *** percent of subject flanges are used in oil refining industry, *** percent in petrochemical industry, *** percent in the power generation industry, and the remaining *** percent in pharmaceutical, nuclear energy, defense, and food preparation industries. Petitioners' postconference brief, pp. 32-33.

² Hearing transcript, p. 17 (Maass).

³ Of the 27 responding purchasers, 15 reported purchasing domestic stainless steel flanges, 13 reported purchasing imports of the subject merchandise from China, 17 reported purchasing imports of the subject merchandise from India, and 10 reported purchasing imports from nonsubject sources. Twelve firms reported purchasing both domestic product and product imported from subject sources.

⁴ Four firms reported that they were unable to report purchase volumes, as they do not track purchase quantities, or only track purchases by value.

were concentrated in the Midwest and Central Southwest regions.⁵ The largest responding purchasers of stainless steel flanges during 2015-17 were distributors: ***.

CHANNELS OF DISTRIBUTION

U.S. producers and importers from all sources sold the vast majority of stainless steel flanges during 2015-17 to distributors, as shown in table II-1. *** sold a larger share of their product to finishers/converters than did ***.⁶ Importers of stainless steel flanges from nonsubject countries sold a higher percentage of their product during 2015-17 to end users than did domestic or subject import sources.

Table II-1

Stainless steel flanges: U.S. producers' and importers' U.S. commercial shipments, by sources and channels of distribution, 2015-17

Item	Period		
	Calendar year		
	2015	2016	2017
Share of reported shipments (percent)			
U.S. producers' U.S. commercial shipments of stainless steel flanges:			
Distributors	***	***	***
Finishers / Converters	***	***	***
End users	***	***	***
U.S. importers' U.S. commercial shipments of stainless steel flanges from China:			
Distributors	***	***	***
Finishers / Converters	***	***	***
End users	***	***	***
U.S. importers' U.S. commercial shipments of stainless steel flanges from India:			
Distributors	***	***	***
Finishers / Converters	***	***	***
End users	***	***	***
U.S. importers' U.S. commercial shipments of stainless steel flanges from all subject countries:			
Distributors	***	***	***
Finishers / Converters	***	***	***
End users	***	***	***
U.S. importers' U.S. commercial shipments of stainless steel flanges from all other countries:			
Distributors	***	***	***
Finishers / Converters	***	***	***
End users	***	***	***

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

⁵ The Midwest region consists of Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. The Central Southwest region consists of Arkansas, Louisiana, Oklahoma, and Texas. Six purchasers are located in Texas.

⁶ In addition, several finishers/converters imported unfinished or semi-finished flanges directly.

GEOGRAPHIC DISTRIBUTION

U.S. producers reported selling stainless steel flanges to all regions in the contiguous United States (table II-2). Importers also reported selling stainless steel flanges to all regions, though slightly fewer sell to the Mountain region than other regions.⁷ For integrated U.S. producers and finishers combined, 25.7 percent of their sales were within 100 miles of their production facilities, 42.3 percent were between 101 and 1,000 miles, and 32.0 percent were over 1,000 miles. Importers sold 54.0 percent within 100 miles of their U.S. point of shipment, 40.0 percent between 101 and 1,000 miles, and 6.1 percent over 1,000 miles.

Table II-2
Stainless steel flanges: Geographic market areas in the United States served by U.S. producers and importers

Region	U.S. producers ¹	Subject importers		
		China	India	All subject
Northeast	5	10	7	13
Midwest	5	10	7	13
Southeast	5	10	7	13
Central Southwest	5	10	7	13
Mountain	5	7	6	10
Pacific Coast	5	9	7	12
Other ²	4	4	2	4
All regions (except Other)	5	7	6	10
Reporting firms	5	10	7	13

¹ Three of the five reporting U.S. producers are headquartered in Houston, Texas.

² All other U.S. markets, including AK, HI, PR, and VI.

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

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Table II-3 provides a summary of the supply factors regarding stainless steel flanges from U.S. producers and from subject countries China and India.

⁷ The Mountain region contains the states of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming.

Table II-3

Stainless steel flanges: Supply factors that affect ability to increase shipments to the U.S. market

Country	Capacity (1,000 pounds)		Capacity utilization (percent)		Ratio of inventories to total shipments (percent)		Shipments by market, 2017 (percent)		Able to shift to alternate products
	2015	2017	2015	2017	2015	2017	Home market shipments	Exports to non-U.S. markets	No. of firms reporting "yes"
U.S. (integrated)	***	***	***	***	***	***	***	***	2 of 2
U.S. (finishers)	***	***	***	***	***	***	***	***	3 of 3
China	***	***	***	***	***	***	***	***	1 of 3
India	***	***	***	***	***	***	***	***	6 of 7

Note.-- For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, "Summary Data and Data Sources" and Part III, "U.S. producers' production, shipments, and employment."

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

Domestic production

Based on available information, U.S. producers of stainless steel flanges have the ability to respond to changes in demand with large changes in the quantity of shipments of U.S.-produced stainless steel flanges to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity, the availability of inventories, and the ability to shift production to or from alternate products. A factor mitigating responsiveness of supply is the relative inability to shift shipments from alternate markets.

Between 2015 and 2017, integrated U.S. producers' capacity utilization increased from *** percent to *** percent, driven primarily by a decrease in *** allocated capacity of *** percent. Integrated U.S. producers' overall production decreased by *** percent during this time. For non-integrated domestic finishing, overall capacity decreased by *** percent while production decreased by *** percent, leading to a decrease in capacity utilization of *** percentage points. U.S. integrated producers' inventories as a ratio to total shipments increased by *** percentage points from 2015 to 2017, while domestic finishers' inventories as a ratio to total shipments increased by approximately *** percentage points.^{8 9} Integrated U.S. producers reported being able to produce *** on the same equipment as subject stainless steel flanges. Domestic finishers reported being able to produce non-stainless steel flanges and pipe fittings, smaller and larger diameter (out-of-scope) stainless steel flanges, and flanges produced

⁸ Two domestic finishers reported inventories that exceeded their commercial U.S. shipments: ***. In explaining ***'s reported inventory levels, *** stated that "****." ***, email message to USITC staff, April 25, 2018.

⁹ Maass testified that domestic finishers sometimes opportunistically overstock subject product, but that it may sit in inventory for some time before being sold into the market as a finished product, thereby creating a "lag effect" of six to twenty-four months before the domestic industry feels the effect of any import surges. Hearing transcript, pp. 24-25, 66-68 (Maass); Petitioners' posthearing brief, Exhibit 1, pp. 36-42.

with other types of material or to other specifications on the same equipment as subject stainless steel flanges.

Subject imports from China

Based on available information, producers of stainless steel flanges from China have the ability to respond to changes in demand with large changes in the quantity of shipments of stainless steel flanges to the U.S. market. The main contributing factors to this degree of responsiveness of supply are ***.

Between 2015 and 2017, reported capacity increased ***, while capacity utilization decreased ***. The responding Chinese producer also reported that ***. Other products that the responding Chinese producer reportedly can produce on the same equipment as stainless steel flanges are ***. It reported that its major export market is ***.

Subject imports from India

Based on available information, producers of stainless steel flanges from India have the ability to respond to changes in demand with large changes in the quantity of shipments of stainless steel flanges to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity, the ability to shift shipments from alternate markets, and the ability to shift production to or from alternate products. One factor mitigating responsiveness of supply is limited availability of inventories.

Between 2015 and 2017, reported capacity in India increased by *** percent, while capacity utilization increased by *** percentage points. Other products that the responding Indian producers reportedly can produce on the same equipment as stainless steel flanges are carbon and alloy steel forgings and/or flanges, stainless steel flanges of other sizes or grades, gear forgings, lever plates, machinery parts and rings (including aluminum rings), stainless steel pipe fittings, stub ends, tubesheets, square flanges, and other unspecified forgings and OEM components. Responding Indian producers' major non-U.S. export markets were Australia, Belgium, Canada, Germany, Japan, Korea, the Netherlands, Oman, United Arab Emirates, and other unspecified African, Asian, European, Middle Eastern, and Latin American markets.

Imports from nonsubject sources

Nonsubject imports accounted for 30.5 percent of total U.S. imports in 2017.¹⁰ The largest nonsubject import sources in 2017 were Canada, the Philippines, and Mexico; combined, these countries accounted for 44.2 percent of imports from nonsubject sources in 2017. Canada was the largest nonsubject import source, accounting for 16.0 percent of nonsubject imports and 4.9 percent of all imports in 2017.¹¹ The Philippines accounted for 15.1

¹⁰ See table IV-4.

¹¹ See tables IV-4 and IV-5.

percent of nonsubject imports and 4.6 percent of all imports that year, and Mexico accounted for 13.1 percent of nonsubject imports and 4.0 percent of all imports.

Supply constraints

U.S. producers and importers were asked if they had refused, declined, or been unable to supply stainless steel flanges since January 2015. None of the five responding U.S. producers reported that they had, while 2 of 12 importers reported that they had. *** reported that supply tightened and lead times extended when Viraj was excluded from the market.¹²

Purchasers were also asked if any firm had refused, declined, or been unable to supply them with stainless steel flanges since January 2015. Six of 26 firms reported that they had; *** reported that Maass declined to seek some of their business;¹³ *** reported that importers of Indian product have recently been unable to supply due to the AD/CVD investigations; *** reported that some suppliers have been unable to meet delivery requirements; *** reported that Hilton (India) was unable to meet timely shipment commitments; and *** reported that it has orders in with Bebitz (India) pending the final determination of the antidumping investigation.

New suppliers

Three of 26 purchasers indicated that new suppliers entered the U.S. market since January 2015, while 23 purchasers reported that no new suppliers entered the market. The new entrants identified included Felix Technology (Korea and Vietnam) (listed by 2 firms) and Hertecant Flanges (Belgium) (listed by one firm).

U.S. demand

Based on available information, the overall demand for stainless steel flanges is likely to experience small changes in response to changes in price. The main contributing factors are the lack of substitute products and the small cost share of stainless steel flanges in most of its end-use products.

¹² On May 25, 2016, an exclusion order was issued for an Indian manufacturer of stainless steel products, Viraj, based on the misappropriation of trade secrets. See Limited Exclusion Order and Notice of the Commission's Final Determination Finding a Violation of Section 337; Issuance of a Limited Exclusion Order and Cease and Desist Order; Termination of the Investigation, *Certain Stainless Steel Products, Certain Processes for Manufacturing or Relating to Same, and Certain Products Containing Same*, Inv. No. 337-TA-933, May 25, 2016, available at https://www.usitc.gov/intellectual_property/exclusion_orders/337-ta-933_0.pdf and https://www.usitc.gov/secretary/fed_reg_notices/.../337_933_notice05252016sagl.pdf.

¹³ ***.

End uses and cost share

U.S. demand for stainless steel flanges depends on the demand for U.S.-produced downstream products. Flanges are generally used to join or connect pieces of pipe or tube together to allow for access and/or flow management within the piping or tubing. Stainless steel flanges are used in refineries (chemical or petrochemical), power plants, pulp/paper plants, and other piping or exhaust systems, and account for a relatively small share of the cost (less than 1 percent to 15 percent) of most the end-use products in which they are used. One firm reported a cost share of 20 percent in flow measurement devices, and another reported a cost share of 30 percent in pipe spools.

Business cycles

While 3 of 5 U.S. producers reported that the stainless steel flange market was subject to business cycles or distinct conditions of competition, most importers (10 of 13) and purchasers (20 of 27) indicated that it was not. Most of the firms reporting business cycles cited seasonal maintenance shutdowns (typically during the spring and fall), cyclical stocking and restocking, and general economic conditions and demand in the energy sector. Firms that indicated the market was subject to distinct conditions of competition cited oil and gas prices and projects, and the price of copper. One U.S. producer (***) also noted increased imports as a distinct condition of competition. Regarding changes to the business cycles or conditions of competition since 2015, firms highlighted a decrease in oil and gas prices and the availability of low-priced imports as having affected the market for stainless steel flanges.

U.S. producers, importers, and purchasers were also asked whether the imposition of the exclusion order on Indian producer Viraj had any effect on their firm.¹⁴ Two of 4 responding U.S. producers, 4 of 6 responding importers, and 9 of 17 responding purchasers reported that it had. *** reported that Indian imports have increased despite the exclusion order; *** stated that Viraj simply ships its product through its affiliate Bebitz (India). Importer Bebitz USA reported that its share of business in the United States has *** as a result of the imposition of the exclusion order on Viraj. Among other firms, *** reported that supply has been constrained as a result of the exclusion order on Viraj, while *** reported that they shifted to other suppliers and *** reported restricting its global purchases from Viraj.

Demand trends

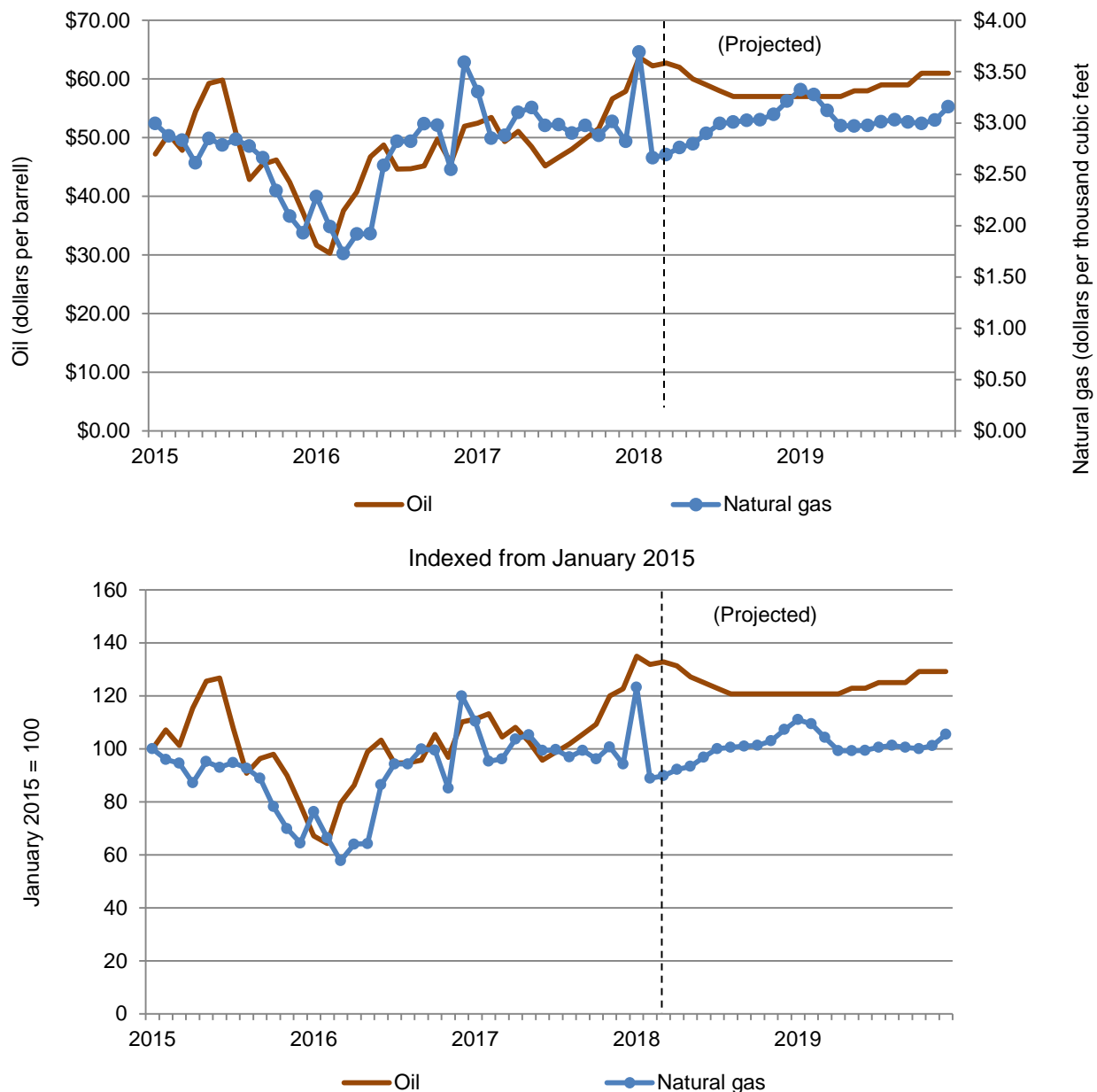
Demand for stainless steel flanges is driven primarily by refining operations in the oil and gas market. Several firms reported that the price, and therefore supply, of oil, in particular, influences the demand for stainless steel flanges. Other markets that reportedly influence demand for stainless steel flanges are chemical, pharmaceutical, marine, water treatment, agriculture (grain processing), pulp and paper, and general construction.

¹⁴ As noted above, the exclusion order was issued for Indian manufacturer Viraj on May 25, 2016.

As shown in figures II-1(a) and (b), the price of crude oil increased by 22.6 percent between January 2015 and December 2017, while the price of natural gas decreased by 5.8 percent. Between December 2017 and March 2018, the price of oil increased by 8.4 percent and the price of natural gas decreased by 4.6 percent. The U.S. Energy Information Administration projects that between March 2018 and December 2019, the price of oil will decrease by 2.7 percent and the price of natural gas will increase by 17.4 percent.

Figure II-1(a) and (b)

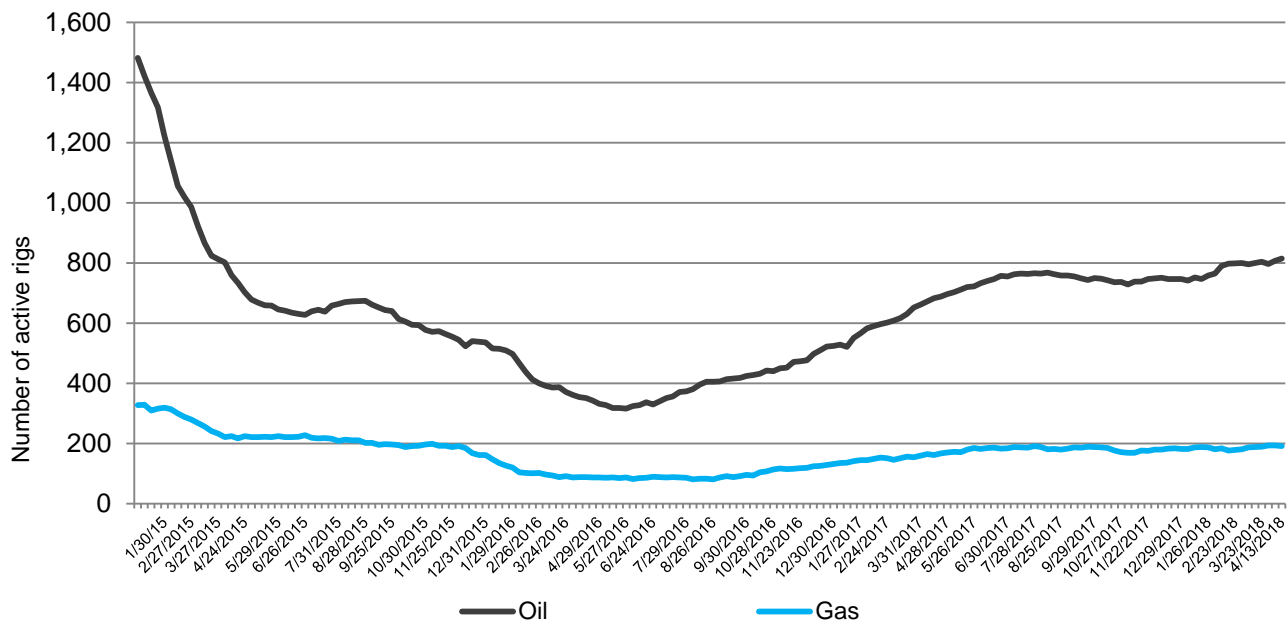
Oil and gas prices: Prices of crude oil (West Texas Intermediate spot price) and natural gas (Henry Hub spot price), monthly, January 2015-March 2018 (actual) and April 2018-December 2019 (projected)



Source: U.S. Energy Information Administration, Short Term Energy Outlook, April 2018, available at <https://www.eia.gov/outlooks/steo/report/prices.php>, retrieved April 18, 2018.

Based on data published by Baker Hughes,¹⁵ the number of oil rigs in the United States decreased overall between January 2015 and December 2017 (figure II-2). In general, the number of active rigs dropped between January 2015 and the first half of 2016, then recovered in the latter half of 2016 and 2017. Between January 2, 2015 and December 30, 2016, the number of active oil rigs decreased by 64.6 percent and the number of active gas rigs decreased by 59.8 percent. Between December 30, 2016 and December 29, 2017, the number of active oil and gas rigs increased by 42.3 percent and 37.9 percent, respectively. Between December 29, 2017 and March 23, 2018, the number of active oil and gas rigs increased by 7.6 percent and 4.4 percent, respectively.

Figure II-2
Rotary rig count: Number of active oil and gas rigs in the United States, weekly, January 2, 2015-April 13, 2018



Source: Baker Hughes, a GE Company, available at <http://phx.corporate-ir.net/phoenix.zhtml?c=79687&p=irol-reportsother>, retrieved April 18, 2018.

Most firms reported that demand for stainless steel flanges in the United States either decreased or did not change during January 2015-December 2016, whereas most producers and purchasers and at least half of the responding importers reported that U.S. demand since January 1, 2017 either increased or did not change (table II-3a).¹⁶

¹⁵ Baker Hughes is a drilling contractor that publishes data on North American and international rig counts. See <http://phx.corporate-ir.net/phoenix.zhtml?c=79687&p=irol-rigcountsoverview>.

¹⁶ Chinese respondents argue that demand for stainless steel flanges is linked, most notably, to demand in the oil and gas sectors. Hearing transcript, p. 146 (Peterson); Chinese respondents' posthearing brief, p. 14. Maass stated that while the decline in oil and gas demand had an effect on the
(continued...)

Table II-3a
Stainless steel flanges: Firms' responses regarding U.S. demand, by number of firms reporting, January 1, 2015-December 31, 2016, and since January 1, 2017

Item	January 1, 2015-December 31, 2016		
	Increase	No change	Decrease
Oil and gas demand in the United States			
U.S. producers	---	1	4
Importers	3	2	6
Purchasers	1	10	10
All other sector demand in the United States			
U.S. producers	---	1	4
Importers	4	4	3
Purchasers	4	11	7
Item	Since January 1, 2017		
	Increase	No change	Decrease
Oil and gas demand in the United States			
U.S. producers	4	---	1
Importers	4	1	5
Purchasers	8	11	3
All other sector demand in the United States			
U.S. producers	3	1	1
Importers	3	3	4
Purchasers	7	14	2

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

Most firms reported that demand outside the United States during January 2015-December 2016 as well as since January 1, 2017 either decreased or did not change (table II-3b).

(...continued)

overall demand for stainless steel flanges, it did not have the same effect as in the upstream oil and gas market (such as drillers and service companies), since stainless steel flanges are used midstream and downstream. Hearing transcript, pp. 117-118 (Maass); Petitioners' posthearing brief, Exhibit 1, pp. 16-19.

Table II-3b

Stainless steel flanges: Firms' responses regarding demand outside the United States, by number of firms reporting, January 1, 2015-December 31, 2016, and since January 1, 2017

Item	January 1, 2015-December 31, 2016		
	Increase	No change	Decrease
Oil and gas demand outside the United States			
U.S. producers	---	2	1
Importers	---	2	5
Purchasers	---	7	4
All other sector demand outside the United States			
U.S. producers	---	2	1
Importers	1	4	3
Purchasers	---	8	2
Item	Since January 1, 2017		
	Increase	No change	Decrease
Oil and gas demand outside the United States			
U.S. producers	1	1	1
Importers	2	1	3
Purchasers	---	9	3
All other sector demand outside the United States			
U.S. producers	1	1	1
Importers	1	3	3
Purchasers	1	10	1

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

When asked if the demand for their final products that incorporate stainless steel flanges had changed since January 2015, most responding purchasers (three firms) reported that it had not changed, while two reported that it had fluctuated, and one reported that it had decreased.

Unfinished flanges

U.S. producers and importers were also asked whether there is a market for unfinished stainless steel flanges, and to describe any efforts to sell unfinished product since January 2015. Most firms (4 of 5 responding U.S. producers and 10 of 13 responding importers) reported that there is no such market. One U.S. producer (***) and three importers (***) reported that there is a market for unfinished flanges. *** reported that such a market exists for converters that machine unfinished forgings into finished flanges. *** reported that while there is no market for unfinished product, it sells a minimal number of forgings to other flange producers when they don't have enough stock. *** reported that while it does not make any special effort to sell unfinished flanges, some of its existing customers buy its unfinished flanges and re-sell them after further processing. When firms were asked to select the reasons that there is no market for unfinished stainless steel flanges, two U.S. producers (***) and four of seven

responding importers reported that they do not want to supply their competitors, while two U.S. producers and seven importers reported that there is no demand for unfinished flanges.¹⁷

Substitute products

The vast majority of responding firms (2 of 3 U.S. producers, all 16 importers, and 25 of 26 purchasers) reported that there are no substitutes for stainless steel flanges. *** reported “other grades of material” as a substitute, and *** reported that machined stainless steel flanges can be used in flow measurement devices.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported stainless steel flanges depends upon such factors as relative prices, quality (e.g., grade standards, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, reliability of supply, product services, etc.). Based on available data, staff believes that there is a high degree of substitutability between most domestically produced stainless steel flanges and stainless steel flanges imported from subject sources, though substitutability between domestic and Chinese product may be affected by impressions of lower Chinese quality or purchaser preferences for non-Chinese origin product.

Lead times

Integrated U.S. producers reported that most of their U.S. commercial shipments of stainless steel flanges in 2017 (*** percent) were produced-to-order, with a weighted average lead time of 26 days. The remaining *** percent were sold from inventory, with an average lead time of 7 days. For domestic finishers, *** percent of their U.S. commercial shipments of stainless steel flanges in 2017 were produced-to-order, with an average lead time of 14 days, while *** percent were sold from inventory, with an average lead time of 3 days. Importers reported that most of their stainless steel flanges (61.2 percent) were sold from foreign inventories, with an average lead time of 126 days. The remaining 29.8 percent of importers’ U.S. commercial shipments in 2017 were sold from U.S. inventories, with an average lead time of 4 days, and 9.0 percent were produced to order, with an average lead time of 111 days.

¹⁷ Chinese respondents argue that domestic finishers are reliant on imports of unfinished subject product because, as reported in their questionnaire responses, the integrated U.S. producers are unwilling to supply unfinished flanges to their competitors. Hearing transcript, pp. 141-142 (Mills), 147 (Peterson). Maass asserted that any lack of a domestic market for unfinished flanges was due low-priced imports from subject countries, and stated that it would be willing to sell unfinished flanges to domestic finishers at higher prices than what is currently being offered by subject importers. Hearing transcript, pp. 23, 83-84 (Maass).

Knowledge of country sources

Twenty purchasers indicated they had marketing/pricing knowledge of domestic product, 18 of product from China, 22 of product from India, and 11 of nonsubject countries.¹⁸

As to whether firms or their customers make purchasing decisions based on producer or country of origin, responses were mixed. As shown in table II-4, a majority of purchasers reported at least sometimes making purchasing decisions based on producer or country of origin. Among these firms, several noted a preference for suppliers that are on their approved manufacturers list (AML). Others stated that they prefer certain vendors or source countries, with several firms stating that they or their customers request either domestic product or specifically do not purchase subject product from China (six firms) or India (one firm).

Table II-4
Stainless steel flanges: Purchasing decisions based on producer and country of origin

Purchaser/customer decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	7	4	6	10
Purchaser's customers make decision based on producer	0	6	10	10
Purchaser makes decision based on country	4	5	7	10
Purchaser's customers make decision based on country	0	2	16	6

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 stainless steel flanges were price (25 firms), quality (23 firms), and availability/lead time (17 firms) (table II-5). Quality was the most frequently cited first-most important factor (cited by 16 firms), followed by price (5 firms); price was the most frequently reported second-most important factor (11 firms); and price and availability/lead time were the most frequently reported third-most important factors (each cited by 9 firms).

Table II-5
Stainless steel flanges: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Price / cost	5	11	9	25
Quality	16	2	5	23
Availability / lead time	2	6	9	17
Other ¹	4	8	5	17

¹ Other factors included delivery (4 firms), AML (approved manufacturers list), customer acceptance, and service (2 firms each), as well as contracts, competitiveness, customer requirements, domestic manufacturing, extension of credit, inventory, rebates given, and supplier history (one firm each).

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

¹⁸ Among the nonsubject countries, 11 firms reported having knowledge of product from the Philippines. Seven firms also reported knowledge of product from Germany; 5 of product from Mexico; 4 of product from Italy and Korea; and 2 of product from Malaysia, Spain, and Vietnam.

The majority of purchasers (16 of 27) reported that they “usually” purchase stainless steel flanges that are offered at the lowest price, with 9 reporting that they “sometimes” do. Two firms (***) reported that they “never” purchase the lowest-priced product,¹⁹ and one firm (***) reported that it “always” does.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 16 factors in their purchasing decisions (table II-6). The factors rated as very important by more than half of responding purchasers were product consistency (26 firms); availability, quality meets industry standards, and reliability of supply (25 firms each); price (24 firms); and delivery time (23 firms).

Table II-6
Stainless steel flanges: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Very important	Somewhat important	Not important
Availability	25	1	1
Delivery terms	11	13	3
Delivery time	23	2	2
Discounts offered	10	11	6
Extension of credit	10	8	9
Minimum quantity requirements	4	11	12
Packaging	7	17	3
Price	24	2	1
Product consistency	26	1	0
Product range	10	15	2
Quality meets industry standards	25	1	0
Quality exceeds industry standards	13	10	3
Reliability of supply	25	2	0
Technical support/service	12	13	2
U.S. transportation costs	7	15	5
Other ¹	0	1	3

¹ The only “other” factor identified was end user acceptance (cited by one firm).

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

Approved manufacturers lists and supplier certification

U.S. producers and importers were asked to estimate the share of their commercial shipments that were to customers requiring the listing of the producer on an AML. All five responding U.S. producers reported that at least some of their shipments required an AML listing, while only 5 of 18 importers provided estimates. U.S. producers’ estimates ranged from

¹⁹ *** reported both “sometimes” and “never” purchasing the lowest-priced product.

5 percent (***) to 80 percent (***), with 3 of the 5 reporting estimates of 60 percent or more. Importers' estimates ranged from 5 percent (***) to 75 percent (***)).

U.S. producers and importers were also asked how frequently stainless steel flanges produced by firms on AMLs and stainless steel flanges produced by firms not on AMLs are interchangeable. Among U.S. producers, two firms (***) reported that they were "always" interchangeable, and three firms (***) reported that they "sometimes" were. In further comments, *** reported that all flanges are made to specific ASME/ASTM dimension and material criteria, and *** reported that imported product can also be on firms' AMLs. Maass also stated that domestic producers and subject country producers can both be on firms' AMLs.²⁰ *** also stated that their product is sometimes accepted by firms that do not have them on their AMLs, with *** stating that firms sometimes make exceptions due to reputation, timing, and quality.

Among importers, responses were more varied: seven firms reported that they were "never" interchangeable, five reported that they "always" were, and two reported that they "usually" were. Among the firms reporting that they were "always" or "usually" interchangeable, *** indicated that flanges made to the same ASTM/ANSI specifications are interchangeable. *** reported that vendors are continually added to and subtracted from its AML based on their ability to provide quality material and services, while producers are added to its AML once they have proven their ability to meet certain commercial and technical requirements.²¹

Most responding purchasers (19 of 26) require their suppliers to become certified or qualified to sell stainless steel flanges to their firm, while seven do not. Purchasers reported that the time to qualify a new supplier ranged from 2 to 180 days. In their explanations of the processes and factors involved in becoming certified or qualified, only one firm (***) specifically mentioned AMLs, stating that its suppliers must be approved, but no certification was required. It added that a customer may require country-of-origin documentation, but such requests are on an as-needed basis. In response to a question about the significance of differences other than price between stainless steel flanges produced in the United States and in other countries, *** stated that end-user approvals of Indian mills can frequently be a factor. Most other purchasers reported processes and factors that included sample tests, material test reports, plant/supplier audits (including raw material and production traceability evaluations), and ISO certification requirements. *** also reported using third parties to qualify new suppliers. Most purchasers (23 of 26) reported that no domestic or foreign supplier had failed in its attempt to qualify stainless steel flanges, or had lost its approved status since 2015. Three firms reported that they had: *** reported that Core Pipe was disqualified in 2017 for failing to implement adequate traceability in its raw material, forging and finishing process; *** reported

²⁰ Conference transcript, p. 12 (Maass).

²¹ Among the firms reporting that they were "never" interchangeable, only two firms elaborated: *** reported that it had "never had this question raised," and *** reported that it had no commercial shipments.

that Dae Heung Industrial (Korea) failed to meet its specifications; and *** reported that suppliers of material from China, Korea, India, and Ukraine had failed for various reasons.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2015 (table II-7). Most firms reported constant purchases from U.S. producers, while a plurality of firms reported decreasing purchases of Chinese product and increasing purchases of Indian product. Most purchasers reporting an increase in purchases of domestic product reported an increase in overall demand. Firms that reported increasing purchases of subject product cited including availability, supplier shifts, increased sales, end-user approval, and customer demand for cost savings. For the firms that reported decreasing purchases of subject product, reasons cited were a lack of availability and supplier shifts.

Eight of 26 responding purchasers reported that they had changed suppliers since January 1, 2015. Specifically, *** reported dropping purchases from Viraj, and *** reported that ***. *** reported adding Bebitz (India) and Maass (Mexico) to replace Viraj; *** reported adding Maass (Mexico); *** reported adding Felix (Vietnam); *** reported adding Felix and ST&H (Korea); and *** reported adding Pradeep Metals USA.

Table II-7
Stainless steel flanges: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	6	---	6	11	1
China	7	6	5	4	---
India	2	5	8	4	2
Philippines	10	3	3	2	2
All other sources	6	---	5	4	4
Sources unknown	12	---	---	3	2

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

Importance of purchasing domestic product

All 25 responding purchasers reported that the majority of their purchases had no domestic requirement (for approximately 87 percent of all reported purchases in 2017).²² Eleven purchasers reported that at least some of their product required domestic content by law (for between less than 1 percent and 40 percent of their purchases, or approximately 7 percent of all reported purchases in 2017). Eleven purchasers reported that at least some of

²² Seven of these purchasers reported that 100 percent of their purchases had no domestic requirement; 15 reported that between 75 percent and 99 percent of their purchases had no domestic requirement; and one firm reported that 60 percent of its purchases had no domestic requirement.

their product required domestic content by their customers (for between 1 percent and 15 percent of their purchases, or approximately 6 percent of all reported purchases).

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing stainless steel flanges produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 16 factors (tables II-8a and II-8b) for which they were asked to rate the importance in their purchasing decisions.

When comparing domestic product to subject country product, most purchasers reported that U.S. and subject stainless steel flanges were comparable on most factors. With respect to delivery time (a factor rated as “very important” by 23 of 27 purchasers), a plurality of purchasers rated the United States as superior to China and half rated the United States as superior to India. With respect to price (a factor rated as “very important” by 24 of 27 purchasers), the majority rated the United States as inferior to both China and India. When comparing Chinese product to Indian product, the vast majority of purchasers rated the two as comparable on all factors.

Table II-8a
Stainless steel flanges: Purchasers’ comparisons between U.S.-produced and subject imported product

Factor	U.S. vs. China			U.S. vs. India			China vs. India		
	S	C	I	S	C	I	S	C	I
Availability	7	11	2	9	11	2	0	15	0
Delivery terms	7	11	1	10	10	2	0	15	0
Delivery time	9	8	2	11	9	2	0	15	0
Discounts offered	1	12	5	1	13	7	1	14	0
Extension of credit	2	16	0	3	18	0	1	14	0
Minimum quantity requirements	0	18	1	1	20	0	0	15	0
Packaging	3	14	1	3	17	1	0	15	0
Price ¹	0	8	12	2	7	13	2	10	3
Product consistency	3	17	0	2	20	0	1	12	2
Product range	1	18	0	1	19	1	0	15	0
Quality meets industry standards	5	15	0	3	19	0	1	13	1
Quality exceeds industry standards	6	13	0	6	14	0	1	11	2
Reliability of supply	5	13	2	6	14	2	0	15	0
Technical support/service	6	12	0	8	13	0	0	13	2
U.S. transportation costs ¹	4	14	1	7	14	1	0	14	1
Other	1	3	0	1	3	0	0	2	1

¹ A rating of superior means that price/U.S. transportation cost is generally lower. For example, 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.

When comparing stainless steel flanges from the United States, China, and India with that from nonsubject countries, a majority of purchasers reported them as comparable on most factors. Most purchasers rated the United States as superior to nonsubject product on delivery time, while an equal number rated the United States and nonsubject countries as superior and comparable on availability. Regarding price, an equal number rated the United States and nonsubject countries as comparable and inferior, while most rated China and India as superior to nonsubject countries.

Table II-8b
Stainless steel flanges: Purchasers' comparisons between U.S.-produced, Chinese, and Indian product vs. nonsubject product

Factor	U.S. vs. nonsubject			China vs. nonsubject			India vs. nonsubject		
	S	C	I	S	C	I	S	C	I
Availability	6	6	1	0	5	2	1	8	2
Delivery terms	4	8	1	0	6	1	1	9	1
Delivery time	7	6	0	0	6	1	1	8	2
Discounts offered	0	8	4	3	4	0	5	6	0
Extension of credit	0	12	0	0	6	1	0	10	1
Minimum quantity requirements	2	10	0	0	6	1	1	9	1
Packaging	1	10	1	0	7	0	2	9	0
Price ¹	1	6	6	4	3	0	6	5	0
Product consistency	2	11	0	0	7	0	1	10	0
Product range	3	8	1	1	6	0	3	8	0
Quality meets industry standards	2	11	0	0	7	0	1	10	0
Quality exceeds industry standards	3	10	0	0	6	1	1	9	1
Reliability of supply	2	10	1	0	6	1	1	9	1
Technical support/service	3	9	0	0	5	2	1	6	4
U.S. transportation costs ¹	4	8	1	0	7	0	1	9	1
Other	0	3	0	0	2	1	0	3	0

¹ A rating of superior means that price/U.S. transportation cost is generally lower. For example, 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.

Comparison of U.S.-produced and imported stainless steel flanges

In order to determine whether U.S.-produced stainless steel flanges can generally be used in the same applications as imports from China and India, 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-9, U.S. producers rated U.S. and Chinese product as more frequently interchangeable than U.S. and Indian product, for which firms were evenly split between "always," and "sometimes." Among importers, the majority of firms rated U.S. and Chinese product as "always" interchangeable, while a plurality of firms rated U.S. and Indian product as "always" interchangeable. Among purchasers, the large majority of firms rated all stainless steel flanges as "always" interchangeable, regardless of source. No U.S.

producer or importer rated any country comparisons as “never” interchangeable, and only two purchasers did.

Table II-9
Stainless steel flanges: Interchangeability between stainless steel flanges produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. China	1	2	1	---	8	3	3	---	16	2	3	1
U.S. vs. India	2	1	2	---	5	2	3	---	16	2	4	2
Subject country comparisons:												
China vs. India	1	2	---	---	5	2	3	---	12	2	2	---
Nonsubject countries comparisons:												
U.S. vs. Philippines	1	1	1	---	5	2	2	---	9	1	1	2
U.S. vs. other nonsubject	1	2	2	---	5	3	3	---	12	1	4	1
China vs. Philippines	1	1	---	---	5	2	2	---	8	1	1	---
China vs. other nonsubject	1	2	---	---	5	3	3	---	9	---	2	---
India vs. Philippines	1	1	---	---	5	2	2	---	9	3	2	---
India vs. other nonsubject	1	2	1	---	5	2	3	---	11	1	2	---
Philippines vs. other nonsubject	1	2	---	---	5	2	2	---	8	1	2	---

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

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

In additional comments, *** remarked that interchangeability depends on whether an end user or a finisher is willing to accept foreign-produced flanges, and that such decisions were often made on a case-by-case basis. *** stated that U.S., Chinese, and Indian product are all made to the same specifications, while *** stated that products made to the same specification are interchangeable. *** reported that while flanges can be dimensionally the same, there can be AML restrictions that limit interchangeability. *** reported that only product from companies that are on its AML are fully interchangeable, but that there are companies which produce in multiple countries on its AML.

As can be seen in table II-10, almost all responding purchasers reported that stainless steel flanges either “always” or “usually” meet minimum quality specifications. One firm, ***, stated that product from China “rarely or never” met minimum quality specifications, stating that it stopped buying product from China since experiencing quality issues.

Table II-10
Stainless steel flanges: Ability to meet minimum quality specifications, by source¹

Source	Always	Usually	Sometimes	Rarely or never
United States	12	9	---	---
China	8	10	---	1
India	8	13	---	---
Philippines	5	7	---	---
Other	4	8	---	---

¹ Purchasers were asked how often domestically produced or imported stainless steel flanges 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 stainless steel flanges from the United States, subject, or nonsubject countries. As seen in table II-11, a plurality of U.S. producers rated differences other than price "sometimes" significant when comparing U.S. to Chinese product, and two firms each reported differences as "sometimes" and "never" significant when comparing U.S. to Indian product. Among importers, at least a plurality rated differences other than price as "never" significant" when comparing U.S. to subject country product. At least a plurality of purchasers rated differences other than price "sometimes" significant when comparing U.S. to subject country product.

Table II-11
Stainless steel flanges: Significance of differences other than price between stainless steel flanges produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. China	---	1	2	1	---	2	4	5	3	3	9	4
U.S. vs. India	---	1	2	2	---	1	2	3	1	6	12	3
Subject country comparisons:												
China vs. India	---	---	2	1	---	---	3	3	1	1	10	3
Nonsubject countries comparisons:												
U.S. vs. Philippines	---	1	1	1	---	1	2	3	1	2	5	4
U.S. vs. other nonsubject	---	1	2	2	---	1	4	3	1	1	9	4
China vs. Philippines	---	---	1	1	---	---	3	3	1	---	6	2
China vs. other nonsubject	---	---	2	1	---	1	3	3	1	---	7	2
India vs. Philippines	---	---	1	1	---	---	2	5	1	---	4	6
India vs. other nonsubject	---	---	2	1	---	---	3	3	1	---	8	4
Philippines vs. other nonsubject	---	---	2	1	---	---	3	3	1	---	5	4

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

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

Several firms provided additional comments. *** stated that price is the primary competitive factor in the market for products made to the same standard, with *** identifying ASTM specifications as a determining factor. *** reported that country of origin can sometimes be an important factor, with *** stating that Chinese quality and end user approvals of Indian mills can frequently be a factor. *** stated that it sometimes sees customer restrictions on product from China and/or India, and *** stated that flanges from approved countries are sometimes viewed as higher quality. *** indicated that it generally considers Chinese and Indian material to be of inferior quality to domestic product. *** reported that availability and product range are important non-price factors, with *** elaborating that domestic producers offer a wider available range of products while many item types are not available for immediate import. *** stated that domestic producers have a low level of production available.

ELASTICITY ESTIMATES

U.S. supply elasticity

The domestic supply elasticity²³ for stainless steel flanges measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of stainless steel flanges. 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 stainless steel flanges. Analysis of these factors above indicates that the U.S. industry has a great ability to increase or decrease shipments to the U.S. market; an estimate in the range of 5 to 8 is suggested.²⁴

U.S. demand elasticity

The U.S. demand elasticity for stainless steel flanges measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of stainless steel flanges. This estimate depends on factors discussed above such as the existence, availability, and commercial viability of substitute products, as well as the component share of the stainless steel flanges in the production of any downstream products. Based on the available

²³ A supply function is not defined in the case of a non-competitive market.

²⁴ Petitioners agree that the domestic supply elasticity is elastic locally but argue that it is inelastic globally, estimating a domestic supply elasticity of 4. Petitioners' prehearing brief, Exh. 2, p. 20. Petitioners also estimate an import supply elasticity of 10, citing foreign producers' excess and divertible capacity, their potential to shift imports between countries, and the infrequency with which subject product is sold via long-term contract. Petitioners' prehearing brief, Exh. 2, p. 18.

information, the aggregate demand for stainless steel flanges is likely to be inelastic; a range of -0.1 to -0.4 is suggested.²⁵

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.²⁶ 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 stainless steel flanges and imported stainless steel flanges is likely to be in the range of 4 to 7.²⁷

²⁵ Petitioners argue that a demand elasticity estimate of -0.1 to -0.2 is appropriate, given the lack of substitutes for stainless steel flanges and the small cost share of stainless steel flanges in their final end uses. Petitioners' prehearing brief, Exh. 2, pp. 16-17.

²⁶ 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.

²⁷ Petitioners argue that a substitution elasticity estimate of 5 to 8 is appropriate, citing purchaser statements regarding interchangeability, the production of both domestic and subject imported product made to the same ASTM 182/182M specifications, evidence of purchasing shifts based on price, and the lack of importance of AMLs. Petitioners' prehearing brief, Exh. 2, pp. 16-17.

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 five firms that accounted for more than 80.0 percent of integrated U.S. production and independent finishing of stainless steel flanges in 2017.¹

U.S. PRODUCERS

The Commission issued U.S. producer questionnaires to 29 firms based on information contained in the petition and other sources, and five firms provided usable data on their productive operations. Staff believes that these responses represent the large majority (more than 80.0 percent) of U.S. production of stainless steel flanges, although at least five additional firms are believed to produce smaller volumes.²

Table III-1 lists the responding U.S. producers of stainless steel flanges, their production locations, positions on the petition, and shares of total production.

¹ Petition, p. 3 and exhs. 1-3. Data in this report are based on fully or partially usable responses received from petitioners Maass and Core Pipe; from Kerkau, the only other converter/finisher identified in the petition; from Ameriforge (AF Global Corp.), one of the four non-petitioning integrated producers identified in the petition; and from Gibson, an integrated producer not identified in the petition.

² Galperti, Inc. is principally a producer of carbon steel flanges and rings, but does forge and finish a limited volume of stainless steel flanges, reportedly producing *** pounds in 2017. Newman Flange & Fitting Co. is an integrated producer that produces nickel based and corrosion resistant alloy forged products, and reportedly produced *** pounds of stainless steel flanges in 2017. Western Forge & Flange “provides world-class forging, heat treating, machining and metallurgical testing of pipe flanges and forgings,” according to its web site, and reportedly produced *** pounds of stainless steel flanges in 2017. Buffalo Flange, Inc. “provides a full line of quality forged steel pressure flanges” according to its web site, and reportedly produced *** pounds of stainless steel flanges in 2017. Western of Texas Forge & Flange Co. “is a flange manufacturer of a complete line of quality pipe flanges and custom forgings” according to its web site. Despite confirming that Western of Texas received the Commission’s U.S. producers’ questionnaire, several attempts to retrieve complete questionnaire responses from the firm were unsuccessful.

Table III-1

Stainless steel flanges: U.S. producers, their position on the petition, location of production, and share of reported production, 2017

Firm	Position on petition	Production location(s)	Share of production integrated (percent)	Share of production finishing operations (percent)
Ameriforge ¹	***	Houston, TX Woodville, TX	***	***
Core Pipe	***	Carol Stream, IL	***	***
Gibson	***	Houston, TX	***	***
Kerkau	***	Bay City, MI	***	***
Maass	***	Sealy, TX Houston, TX	***	***
Total			***	***

¹ Ameriforge Group Inc. began in 1996 as a forged products manufacturer and in 2013 changed its name to AFGlobal Corporation.

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

Table III-2 presents information on U.S. producers' ownership, related and/or affiliated firms of stainless steel flanges.

Table III-2

Stainless steel flanges: U.S. producers' ownership, related and/or affiliated firms

* * * * *

As indicated in table III-2, two U.S. producers are related to foreign producers of the subject merchandise and to importers/exporters of the subject merchandise. In addition, as discussed in greater detail below, both integrated U.S. producers directly imported stainless steel flanges, as did two non-integrated finishers. *** reported purchasing the subject merchandise from U.S. importers.

Table III-3 presents U.S. producers' reported changes in operations since January 1, 2015. Ameriforge reported ***. In 2015 and 2016, Ameriforge ***. Core Pipe and Kerkau also reported ***, while Core Pipe also reported ***. On April 30, 2017, Ameriforge filed for Chapter 11 bankruptcy protection to reduce its debt service obligations. The debt restructuring process concluded on June 8, 2017, shortly before the expected 45-day period.³

³ *AFGlobal Corporation Enters Restructuring Support Agreement with its Lenders*: <http://www.afglobalcorp.com/about-us/news-and-events/news/afglobal-corporation-enters-restructuring-support-agreement-with-lenders>, retrieved April 17, 2018.

Table III-3
Stainless steel flanges: U.S. producers' reported changes in operations, since January 1, 2015

* * * * *

In addition, in 2014, Maass founded Maass Ring & Forge⁴ of Houston, Texas, which is equipped with a 5,000 ton Open-Die Forge Press for seamless rolled rings, rolled discs, and custom forgings available in a range of materials and sizes, including a variety of carbon, alloy, and stainless steel grades.⁵ Maass reported that this facility primarily ***.⁶

Production-related activities

In the preliminary phase of these investigations, the Commission defined the domestic industry to be all producers of stainless steel flanges, including integrated domestic producers as well as non-integrated domestic producers that engage in finishing operations only.⁷ In making such an assessment, the Commission generally considers six factors: (1) source and extent of the firm's capital investment; (2) technical expertise involved in U.S. production activities; (3) value added to the product in the United States; (4) employment levels; (5) quantity and type of parts sourced in the United States; and (6) any other costs and activities in the United States directly leading to production of the like product. Table III-4a compares integrated operations and finishing operations. Table III-4b provides information regarding the complexity and importance of finishing operations.

⁴ Maass estimated that for integrated U.S. operations that also incorporate a seamless ring mill, forging operations would necessitate a total investment of ***. A seamless ring mill alone costs over ***, with land and building costing about ***, equipment consisting of a press, ring rolling machine, furnaces, manipulators, heat treatment equipment, and miscellaneous support equipment, costing almost ***. Petitioners' prehearing brief, exh. 4.

⁵ Maass' website, http://www.maassrf.com/sites/site_20.html, retrieved March 21, 2018.

⁶ Petitioners' postconference brief, exh. 1, p. 47.

⁷ *Stainless Steel Flanges from China and India, Investigation Nos. 701-TA-585-586 and 731-TA-1383-1384 (Preliminary)*, USITC Publication 4734, October 2017, pp. 11-12 and n. 50 (noting that the data in the preliminary phase of the investigations reflected the operations of one integrated producer and two non-integrated producers, and stating the intent to seek to obtain additional questionnaire responses from other U.S. producers in any final-phase investigation).

Table III-4a

Stainless steel flanges: Comparison of U.S. producers' integrated and finishing operations

Factor	Integrated operations	Finishing operations
Source and extent of the firm's capital investment	<u>Forging machinery</u> : \$*** (Maass estimate) <u>Capital expenditures</u> : \$*** for Maass in 2017	<u>Finishing-only machinery</u> : \$*** (Maass estimate); \$*** (***) estimate) <u>Capital expenditures</u> : \$*** per finisher in 2017
Technical expertise involved in U.S. production activities	<u>R&D expenses</u> : \$*** in 2017	<u>R&D expenses</u> : \$*** in 2017
Value added to the product in the United States	*** during 2015-17	*** during 2015-17
Employment levels	*** PRWs in 2017	*** PRWs in 2017
Quantity and type of parts sourced in the United States	*** of domestically produced forgings in 2017	*** of domestically produced forgings in 2017
Any other costs and activities	***	***

Source: Compiled from data submitted in response to Commission questionnaires; Staff correspondence with ***, April 24-26, 2018 (based on total range of equipment and, alternatively, CNC lathes, with *** units allocated to the production of stainless steel flanges); Petitioners' prehearing brief, exh. 4.

Table III-4b

Stainless steel flanges: U.S. producers' finishing only processing operations' complexity and importance

* * * * *

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-5 and figure III-1 present U.S. integrated producers' production, capacity, and capacity utilization. As discussed above, Ameriforge and Maass were the only U.S. producers with integrated (forging and finishing) capabilities to provide usable complete questionnaire responses; accordingly, they account for all data presented for "integrated" production in table III-5 and figure III-1. Maass reported *** production between 2015 and 2016 from *** pounds to *** pounds. In 2017, however, the company's production of stainless steel flanges *** by *** percent to *** from the previous year. Ameriforge's production levels *** between 2015 and 2017, *** in 2016 and subsequently *** in 2017.

Maass reported operating at capacity utilization levels below *** percent during 2015-17, while Ameriforge's allocated capacity levels were below *** percent during 2015-16. However, in 2017, Ameriforge's allocated capacity utilization levels ***, reflecting ***.⁸

⁸ Ameriforge's data reflect ***. Staff telephone interview with *** on April 11, 2018, and U.S. producer questionnaire responses.

Table III-5
Stainless steel flanges: Integrated U.S. producers' production, capacity, and capacity utilization, 2015-17

* * * * *

Figure III-1
Stainless steel flanges: Integrated U.S. producers' production, capacity, and capacity utilization, 2015-17

* * * * *

Table III-6 and figure III-2 present U.S. non-integrated finishing capacity, production, and capacity utilization. Non-integrated finishing operations involve further processing of unfinished stainless steel flanges. As discussed in Part I of this report, finishing operations include but are not limited to, boring, facing, spot facing, drilling, tapering, threading, beveling, heading, or compressing. Total non-integrated production for finishing stainless steel flanges decreased by *** percent from 2015 to 2016 and then slightly increased by *** percent from 2016 to 2017. Capacity utilization rates decreased by *** percentage points, from *** to *** percent, between 2015 and 2017.

Table III-6
Stainless steel flanges: U.S. producers' non-integrated finishing capacity, production, and capacity utilization, 2015-17

* * * * *

Figure III-2
Stainless steel flanges: U.S. producers' non-integrated finishing, capacity, production, and capacity utilization, 2015-17

* * * * *

Table III-7 presents U.S. producers' non-integrated finishing operations' production and shipments by origin of forgings. Throughout 2015-17, the large majority of reported production was from imports of unfinished flanges from subject sources. While *** and *** finished almost exclusively domestic flanges, *** reported using flanges from subject imports, and *** and *** reported that a substantial majority of their flanges were finished from forgings imported from subject sources.

Table III-7
Stainless steel flanges: U.S. producers' non-integrated finishing operations by origin of forgings, 2015-17

* * * * *

Alternative products

As shown in tables III-8 and III-9, stainless steel flanges accounted for *** percent of production on forging machinery and *** of production on finishing equipment in 2017. Ameriforge reported producing *** and other ***. Core Pipe reported being able to ***. Gibson reported production between ***. Kerkau reported being able to manufacture ***. Maass reported producing *** on the same machinery as stainless steel flanges.

Table III-8
Stainless steel flanges: U.S. producers' overall forging capacity and production on forging machinery, 2015-17

* * * * *

Table III-9
Stainless steel flanges: U.S. producers' overall capacity and production on finishing machinery, 2015-17

* * * * *

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

Table III-10 presents integrated U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. shipment quantities, values, and average unit values declined from 2015 to 2016, and then partially recovered in 2017, resulting in overall net declines. U.S. producers also reported exports equivalent to less than *** percent of total sales, primarily destined for *** markets in ***.

Table III-10

Stainless steel flanges: Integrated U.S. producers' U.S. shipments, export shipments, and total shipments, 2015-17

* * * * *

Table III-11 presents information on integrated U.S. producers' U.S. shipments by type. During 2015-17, the share of U.S. producers' U.S. shipments of unfinished stainless steel flanges accounted for *** percent of all levels of stainless steel flange processing, while semi-finished stainless steel flanges accounted for *** percent during the same period. The share of U.S. producers' U.S. shipments of finished stainless steel flanges remained above *** percent during the three-year period. Table III-12 presents information on non-integrated U.S. producers' U.S. shipments and table III-13 presents information on consolidated U.S. producers' U.S. shipments for apparent U.S. consumption.

Table III-11

Stainless steel flanges: Integrated U.S. producers' commercial U.S. shipments by type, 2015-17

* * * * *

Table III-12

Stainless steel flanges: U.S. producers' non-integrated U.S. shipments, export shipments and total shipments, 2015-17

* * * * *

Table III-13

Stainless steel flanges: Consolidated U.S. producers' U.S. shipments for apparent consumption, 2015-17

* * * * *

U.S. PRODUCERS' INVENTORIES

Table III-14 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.

Table III-14

Stainless steel flanges: U.S. producers' inventories, 2015-17

* * * * *

U.S. PRODUCERS' IMPORTS AND PURCHASES⁹

U.S. producers' imports and purchases of stainless steel flanges are presented in tables III-15 and III-16. Ameriforge did not provide a U.S. importer questionnaire response, but ***. Ameriforge *** during 2015-17.¹⁰ Core Pipe reported *** depending on the customers' requirements, which are typically related to ***. Core Pipe reported imports *** during 2015-17 at ***, ending in *** pounds in 2017. Core Pipe also reported importing *** pounds from *** in 2017 and *** in 2015 from ***. Gibson reported in its U.S. producer questionnaire that the company ***. The firm stated in its U.S. producer questionnaire that it ***. Kerkau, a finisher-only operation which imports ***, reported imports from *** throughout 2015-17. Kerkau's import volumes ranged from *** pounds during 2015-17. Kerkau reported that since the weight of imported flanges in raw form is higher than in finished form, this results in ***.

Maass reported importing from *** a combined *** pounds in 2017. Maass reported that the reason it imports is ***. Maass also reported *** of imports of finished stainless steel flanges from *** in 2017. The company stated ***.

Table III-15
Stainless steel flanges: U.S. producers' integrated direct imports, 2015-17

* * * * *

Table III-16
Stainless steel flanges: U.S. producers' non-integrated finishers' direct imports, 2015-17

* * * * *

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Tables III-17, III-18, and III-19 present U.S. producers' employment-related data.

⁹ U.S. producers' and U.S. importers' questionnaire responses, II-4.

¹⁰ Questionnaire response of Ameriforge; staff telephone interview, March 19, 2018.

Table III-17

Stainless steel flanges: Integrated U.S. producers' employment related data, 2015-17

* * * * *

Table III-18

Stainless steel flanges: U.S. producers' non-integrated finishing employment related data, 2015-17

* * * * *

Table III-19

Stainless steel flanges: U.S. producers' employment related data for all U.S. producers combined 2015-17

Item	Calendar year		
	2015	2016	2017
Production and related workers (PRWs) (number)	213	198	218
Total hours worked (1,000 hours)	436	386	424
Hours worked per PRW (hours)	2,047	1,949	1,945
Wages paid (\$1,000)	7,410	6,528	7,381
Hourly wages (dollars per hour)	\$17.00	\$16.91	\$17.41

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 37 firms believed to be importers of stainless steel flanges, as well as to all firms believed to produce stainless steel flanges.¹ Usable questionnaire responses were received from 18 companies, representing *** percent of U.S. imports from China, *** percent from India, and *** percent from nonsubject countries² under HTS subheadings 7307.21.10.00 and 7307.21.50.00 during 2017. In light of this coverage, official import statistics are presented for import data.^{3 4}

Table IV-1 lists all responding U.S. importers of stainless steel flanges from China, India, the Philippines (a nonsubject source), and other sources, their locations, and their shares of U.S. imports in 2017.⁵

¹ The Commission issued questionnaires to firms that, based on a review of data provided by U.S. Customs and Border Protection (“Customs”), may have accounted for more than one percent of imports under HTS subheadings 7307.21.10 and 7307.21.50 in 2017.

² *** were importers of record for more than *** of U.S. imports from the Philippines in 2016, though ***. Staff made numerous attempts to contact ***. ***.

³ In questionnaire responses, U.S. importers reported small amounts of imports of stainless steel flanges of less than 0.5 inches or greater than 24 inches in diameter (approximately *** pounds in 2017). Thus, official import statistics overstate imports of in-scope stainless steel flanges by including flanges of diameters outside the scope of investigations, but such overstatement is small.

⁴ As noted in Part I of this report, the scope provides a description of subject stainless steel flanges. The scope also includes the statement “The country of origin for certain forged stainless steel flanges, whether unfinished, semifinished, or finished is the country where the flange was forged.” In some instances, this may lead to differences with data collected by national reporting bodies that identify country of origin on the basis of substantial transformation.

⁵ *** submitted unusable U.S. importers’ questionnaire responses that are not included in this report. *** in 2016, but did not have a figure for 2017.

The following firms certified that they have not imported stainless steel flanges since January 1, 2015: ***.

Table IV-1
Stainless steel flanges: U.S. importers, their headquarters, and share of total imports by source, 2017

Firm	Headquarters	Share of imports by source (percent)						
		China	India	Subject	Philippines	All other sources	Non-subject sources	All import sources
Alliance	Omro, WI	***	***	***	***	***	***	***
Anchor	Cincinnati, OH	***	***	***	***	***	***	***
Bebitz USA	Garden City, NY	***	***	***	***	***	***	***
Core Pipe	Carol Stream, IL	***	***	***	***	***	***	***
Endress	Greenwood, IN	***	***	***	***	***	***	***
Global	Houston, TX	***	***	***	***	***	***	***
Grainger	Lake Forest, IL	***	***	***	***	***	***	***
Kerkau	Bay City, MI	***	***	***	***	***	***	***
Maass	Houston, TX	***	***	***	***	***	***	***
Merit Brass	Cleveland, OH	***	***	***	***	***	***	***
Sasol	Houston, TX	***	***	***	***	***	***	***
Silbo	Montvale, NJ	***	***	***	***	***	***	***
Smith Cooper	Commerce, CA	***	***	***	***	***	***	***
Southwest Stainless	Pasadena, TX	***	***	***	***	***	***	***
Tenneco	Lake Forest, IL	***	***	***	***	***	***	***
Viraj USA ¹	New York, NY	***	***	***	***	***	***	***
W&O Supply	Jacksonville, FL	***	***	***	***	***	***	***
WWM	Branchburg, NJ	***	***	***	***	***	***	***
Total		***	***	***	***	***	***	***

¹ Although *** reported *** U.S. imports in 2017, the company's imports were equivalent to *** percent of the total quantity of reported imports from *** in 2015 and 2016, and *** percent of the value of such imports in 2015 and 2016.

U.S. IMPORTS

Table IV-2 presents data for U.S. imports of stainless steel flanges from China, India, and all other sources. U.S. imports of stainless steel flanges from India and from nonsubject sources exhibited a net increase in terms of quantity and a net decrease in average unit values, while U.S. imports of stainless steel flanges from China exhibited the opposite trend from 2015 to 2017.

The quantity of imports of stainless steel flanges from China decreased by 24.7 percent (from 7.2 million pounds to 5.4 million pounds) from 2015 to 2016, but was 20.8 percent higher in 2017 than 2016 (6.5 million pounds in 2017).

The quantity of imports of stainless steel flanges from India decreased by 24.1 percent (from 23.3 million pounds to 17.7 million pounds) from 2015 to 2016, but was 60.6 percent higher at (28.4 million pounds) in 2017.⁶ The quantity of imports of stainless steel flanges from nonsubject sources increased by 12.3 percent (from 14.3 to 16.1 million pounds) from 2015 to 2016, but was 4.6 percent lower (from 16.1 to 15.4 million pounds) in 2017 compared to 2016. The overall level of imports from all sources declined in 2016 from the previous year and then increased by 28.3 percent in 2017.

Table IV-2
Stainless steel flanges: U.S. imports, by source, 2015-17

Item	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
U.S. imports from.--			
China	7,186	5,409	6,534
India	23,333	17,705	28,440
Subject sources	30,519	23,114	34,974
Nonsubject sources	14,349	16,109	15,365
All import sources	44,868	39,223	50,339
	Value (1,000 dollars)		
U.S. imports from.--			
China	22,869	18,066	23,931
India	57,066	33,431	53,895
Subject sources	79,936	51,497	77,826
Nonsubject sources	64,068	58,776	61,738
All import sources	144,004	110,274	139,565
	Unit value (dollars per pound)		
U.S. imports from.--			
China	3.18	3.34	3.66
India	2.45	1.89	1.90
Subject sources	2.62	2.23	2.23
Nonsubject sources	4.46	3.65	4.02
All import sources	3.21	2.81	2.77
	Share of quantity (percent)		
U.S. imports from.--			
China	16.0	13.8	13.0
India	52.0	45.1	56.5
Subject sources	68.0	58.9	69.5
Nonsubject sources	32.0	41.1	30.5
All import sources	100.0	100.0	100.0

Table continued on next page.

⁶ As presented in greater detail later in this chapter, U.S. imports of stainless steel flanges from India in the fourth quarter of 2017 surpassed 11 million pounds.

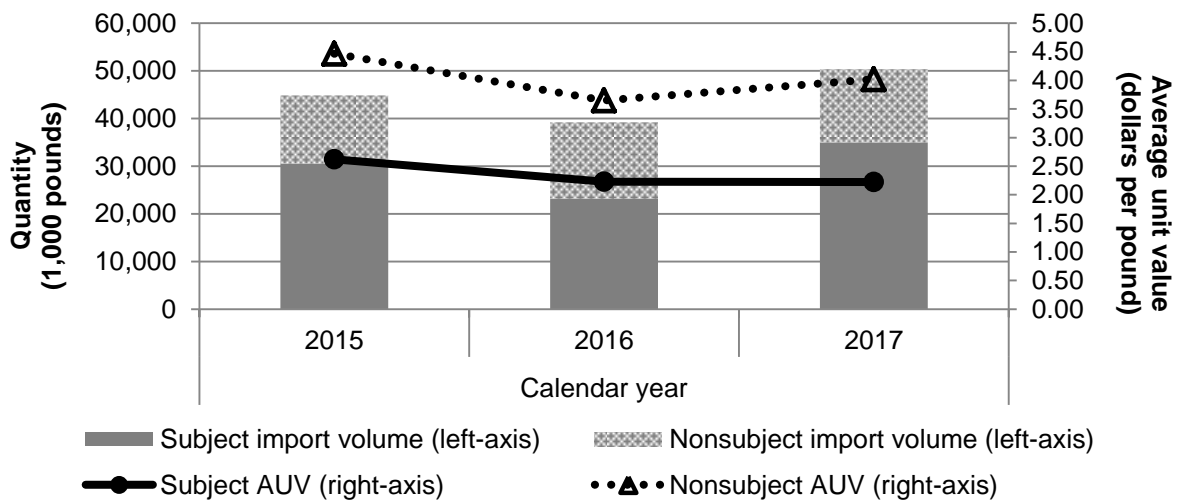
Table IV-2—Continued
Stainless steel flanges: U.S. Imports, by source 2015-17

Item	Calendar year		
	2015	2016	2017
	Share of value (percent)		
U.S. imports from.-- China	15.9	16.4	17.1
India	39.6	30.3	38.6
Subject sources	55.5	46.7	55.8
Nonsubject sources	44.5	53.3	44.2
All import sources	100.0	100.0	100.0
	Ratio to integrated U.S. producers' U.S. production		
U.S. imports from.-- China	***	***	***
India	***	***	***
Subject sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***
	Ratio to non-integrated and integrated U.S. producers' U.S. production		
U.S. imports from.-- China	***	***	***
India	***	***	***
Subject sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018.

Figure IV-1
Stainless steel flanges: U.S. import quantity and average unit value, 2015-17



Source: Official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018

Table IV-3 presents information on U.S. imports controlled by U.S. producers, by source, 2015-17.

Table IV-3
Stainless steel flanges: U.S. Imports controlled by U.S. producers, by source 2015-17

* * * * *

Table IV-4
Stainless steel flanges: Nonsubject U.S. imports, 2015-17

Item	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
U.S. imports from.--			
Canada	2,794	4,262	2,455
Philippines	3,501	3,654	2,322
Mexico	1,376	1,797	2,011
Germany	1,766	984	1,533
Spain	124	370	1,291
Vietnam	144	699	1,271
Korea	821	579	1,151
Italy	1,036	1,336	1,112
Japan	1,215	1,015	1,039
Taiwan	464	557	520
South Africa	4	219	190
United Kingdom	282	213	172
All other sources	824	423	299
Nonsubject sources	14,349	16,109	15,365
	Share of total U.S. imports (percent)		
U.S. imports from.--			
Canada	6.2	10.9	4.9
Philippines	7.8	9.3	4.6
Mexico	3.1	4.6	4.0
Germany	3.9	2.5	3.0
Spain	0.3	0.9	2.6
Vietnam	0.3	1.8	2.5
Korea	1.8	1.5	2.3
Italy	2.3	3.4	2.2
Japan	2.7	2.6	2.1
Taiwan	1.0	1.4	1.0
South Africa	0.0	0.6	0.4
United Kingdom	0.6	0.5	0.3
All other sources	1.8	1.1	0.6
Nonsubject sources	32.0	41.1	30.5

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018.

Table IV-5 presents data for U.S. imports of stainless steel flanges from China, India, and all other sources since 1996. As noted in Part I of this report, stainless steel flanges from India were subject to antidumping duties from February 1994 through January 2011.⁷

Table IV-5
Stainless steel flanges: U.S. imports, since 1996

Years	China	India	Subject sources	Nonsubject sources	All sources
	Quantity (1,000 pounds)				
1996	441	608	1,048	17,153	18,201
1997	684	1,362	2,045	20,291	22,336
1998	931	2,264	3,195	21,083	24,278
1999	478	1,590	2,068	17,846	19,914
2000	614	2,324	2,937	25,246	28,184
2001	886	2,187	3,073	17,157	20,231
2002	915	2,886	3,801	20,599	24,400
2003	1,293	3,299	4,593	15,545	20,138
2004	1,894	5,688	7,582	15,743	23,325
2005	3,465	8,464	11,929	15,112	27,041
2006	5,764	11,847	17,611	16,251	33,862
2007	9,983	12,322	22,305	17,463	39,768
2008	9,814	10,960	20,774	13,836	34,611
2009	5,555	10,916	16,471	10,710	27,181
2010	7,032	10,947	17,979	10,287	28,266
2011	9,988	14,550	24,538	16,643	41,182
2012	13,973	27,201	41,174	18,627	59,801
2013	6,823	18,440	25,264	15,147	40,410
2014	7,928	26,114	34,042	15,511	49,553
2015	7,186	23,333	30,519	14,349	44,868
2016	5,409	17,705	23,114	16,109	39,223
2017	6,534	28,440	34,974	15,365	50,339

Table continued on next page.

⁷ *Antidumping Duty Order: Forged Stainless Steel Flanges From India and Taiwan*, 59 FR 5994, February 9, 1994 and *Forged Stainless Steel Flanges From India and Taiwan: Final Results of Sunset Reviews and Revocation of Antidumping Duty Orders*, 76 FR 5331, January 31, 2011.

Table IV-5--Continued
Stainless steel flanges: U.S. imports, since 1996

Years	China	India	Subject sources	Nonsubject sources	All sources
	Value (1,000 dollars)				
1996	833	1,042	1,875	44,223	46,098
1997	1,182	2,168	3,350	50,772	54,122
1998	1,299	3,087	4,386	47,448	51,834
1999	855	2,360	3,215	36,033	39,248
2000	905	2,876	3,781	49,724	53,505
2001	790	2,303	3,093	31,995	35,088
2002	1,497	3,168	4,665	36,773	41,438
2003	2,150	5,226	7,376	33,788	41,164
2004	3,129	12,796	15,925	43,563	59,488
2005	7,426	23,945	31,371	52,755	84,126
2006	14,775	32,677	47,452	55,799	103,251
2007	38,626	48,493	87,119	76,147	163,266
2008	36,532	40,936	77,468	66,958	144,426
2009	14,423	26,837	41,260	45,546	86,806
2010	18,128	26,030	44,158	41,501	85,659
2011	35,970	44,416	80,386	69,273	149,659
2012	46,374	94,183	140,557	81,267	221,824
2013	23,431	52,905	76,336	67,224	143,560
2014	27,478	66,842	94,320	70,968	165,288
2015	22,870	57,066	79,936	64,068	144,004
2016	18,066	33,431	51,497	58,777	110,274
2017	23,931	53,895	77,826	61,738	139,565

Source: Compiled from official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed September 14, 2017.

CRITICAL CIRCUMSTANCES

On January 23, 2018, Commerce issued its preliminary determination that critical circumstances exist for Chandan Steel, the Bebitz/Viraj single entity, and the Echjay single entity, and all other producers and exporters not individually examined.⁸

⁸ *Stainless Steel Flanges From India: Preliminary Affirmative Countervailing Duty Determination, Preliminary Affirmative and Alignment of Final Determination With Final Antidumping Duty Determination*, 83 FR 3118, January 23, 2018, referenced in app. A. When petitioners file timely allegations of critical circumstances, Commerce examines whether there is a reasonable basis to believe or suspect that (1) either there is a history of dumping and material injury by reason of dumped imports in the United States or elsewhere of the subject merchandise, or the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at LTFV and that there was likely to be material injury by reason of such sales; and (2) there have been massive imports of the subject merchandise over a relatively short period.

In this proceeding, if both Commerce and the Commission make affirmative final critical circumstances determinations, certain subject imports may be subject to antidumping duties retroactive by 90 days from January 23, 2018, the effective date of Commerce's preliminary affirmative determination. Table IV-6 presents information on U.S. imports from India subject to Commerce's affirmative findings.

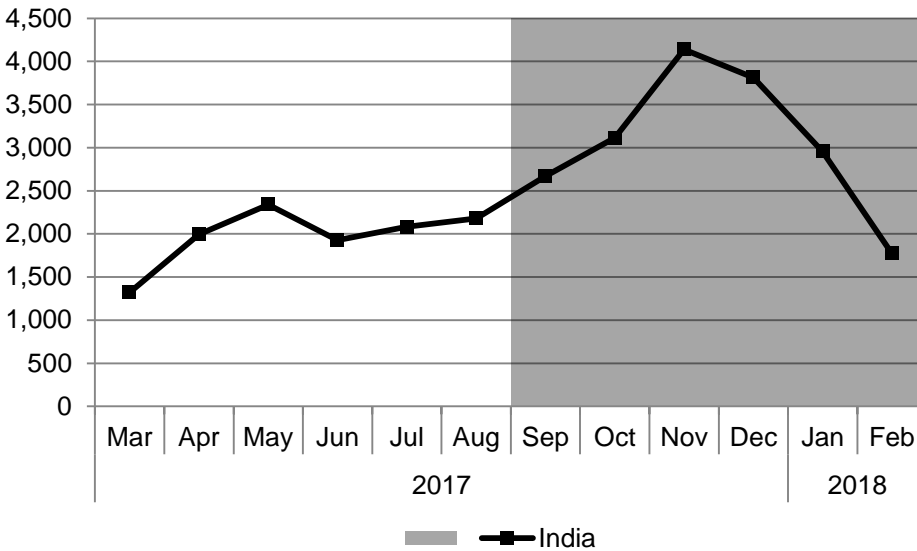
Table IV-6
Stainless steel flanges: U.S. Imports from India subject to Commerce's preliminary affirmative AD critical circumstance determination, March 2017 through February 2018

Period	Monthly U.S. imports (1,000 pounds)	Outwardly cumulative quantity (1,000 pounds)	Percentage change from comparable period (percent)
2017.--			
March	1,322	11,842	
April	1,992	10,520	
May	2,340	8,528	
June	1,928	6,188	
July	2,082	4,260	
August	2,178	2,178	
Petition file date: August 16, 2017			
September	2,667	2,667	22.5
October	3,113	5,781	49.5
November	4,141	9,921	114.7
December	3,814	13,735	63.0
2018.--			
January	2,955	16,690	48.3
February	1,773	18,463	34.1

Source: Official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018.

Figure IV-2

Stainless steel flanges: U.S. Imports from India subject to Commerce's preliminary affirmative AD critical circumstance determination, March 2017 through February 2018



Source: Official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018.

NEGLIGENCE

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.⁹ Negligible imports are generally defined in the Act, 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 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.¹⁰

⁹ 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)).

¹⁰ Section 771 (24) of the Act (19 U.S.C § 1677(24)).

Imports from China and India accounted for 14.9 percent and 45.9 percent, respectively, of total imports of stainless steel flanges by quantity during the 12-month period preceding the filing of the petition (table IV-7).¹¹

Table IV-7
Stainless steel flanges: U.S. imports in the twelve months preceding the filing of the petition, August 2016 to July 2017

Item	August 2016 to July 2017	
	Quantity (1,000 pounds)	Share of quantity (percent)
U.S. imports from.--		
China	5,815	14.9
India	17,902	45.9
Subject sources	23,717	60.8
Nonsubject sources	15,310	39.2
All import sources	39,027	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018.

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. Information regarding channels of distribution, market areas, and interchangeability appear in Part II. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

Fungibility

Table IV-8 and figure IV-3 present U.S. producers' and U.S. importers' commercial U.S. shipments by level of processing, as reported in 2017 from Commission questionnaire responses. The large majority of commercial shipments, from all sources, are finished.

Table IV-9 and figure IV-4 present U.S. producers' and U.S. importers' commercial U.S. shipments by type.

¹¹ As noted above, while official import statistics include stainless steel flanges of diameters outside the scope of these investigations, record data indicate that such imports are a small portion of total imports.

For U.S. producers and U.S. importers of stainless steel flanges from nonsubject sources, weld neck flanges represented the largest volume of sales, while for U.S. importers of stainless steel flanges from subject sources, slip-on flanges represented the largest volume of sales.

Table IV-10 and figure IV-5 present U.S. producers' and U.S. importers' commercial U.S. shipments by size. For U.S. producers and U.S. importers of stainless steel flanges from nonsubject sources, flanges in sizes greater than 4 NPS represented the largest volume of sales, while for U.S. importers of stainless steel flanges from subject sources, flanges in sizes of 4 NPS or less represented the largest volume of sales.

Table IV-8

Stainless steel flanges: U.S. producers' and U.S. importers' commercial U.S. shipments by level of processing, 2017

* * * * *

Figure IV-3

Stainless steel flanges: U.S. shipments, by finished and unfinished source, 2017

* * * * *

Table IV-9

Stainless steel flanges: U.S. producers' and U.S. importers' commercial U.S. shipments by product type, 2017

* * * * *

Figure IV-4

Stainless steel flanges: U.S. producers' and U.S. importers' commercial U.S. shipments by product type, 2017

* * * * *

Table IV-10

Stainless steel flanges: U.S. producers' and U.S. importers' commercial U.S. shipments by nominal pipe size, 2017

* * * * *

Figure IV-5

Stainless steel flanges: U.S. producers' and U.S. importers' commercial U.S. shipments by nominal pipe size, 2017

* * * * *

Geographical markets

As illustrated in table IV-11, U.S. Customs districts located in the North and South accounted for the majority of the imports of stainless steel flanges during 2017 with a combined share of 69.7 percent of total stainless steel imports from subject sources. Most of stainless steel flanges from nonsubject sources was imported through the South border region in 2017.

Table IV-11
Stainless steel flanges: U.S. imports by border of entry, 2017

Item	Border of entry				
	East	North	South	West	Total
	Quantity (1,000 pounds)				
U.S. imports from.-- China	937	2,107	1,893	1,598	6,534
India	5,989	9,599	10,778	2,074	28,440
Subject sources	6,926	11,705	12,670	3,672	34,974
Nonsubject sources	1,348	5,414	7,376	1,227	15,365
All import sources	8,274	17,119	20,046	4,899	50,339
	Share across (percent)				
U.S. imports from.-- China	14.3	32.2	29.0	24.5	100.0
India	21.1	33.8	37.9	7.3	100.0
Subject sources	19.8	33.5	36.2	10.5	100.0
Nonsubject sources	8.8	35.2	48.0	8.0	100.0
All import sources	16.4	34.0	39.8	9.7	100.0
	Share down (percent)				
U.S. imports from.-- China	11.3	12.3	9.4	32.6	13.0
India	72.4	56.1	53.8	42.3	56.5
Subject sources	83.7	68.4	63.2	75.0	69.5
Nonsubject sources	16.3	31.6	36.8	25.0	30.5
All import sources	100.0	100.0	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018.

Presence in the market

Table IV-12 presents U.S. imports of stainless steel flanges by source and month of entry. Subject imports from China and India entered the United States in every month from January 2015 through December 2017, as did imports from nonsubject sources.

Table IV-12

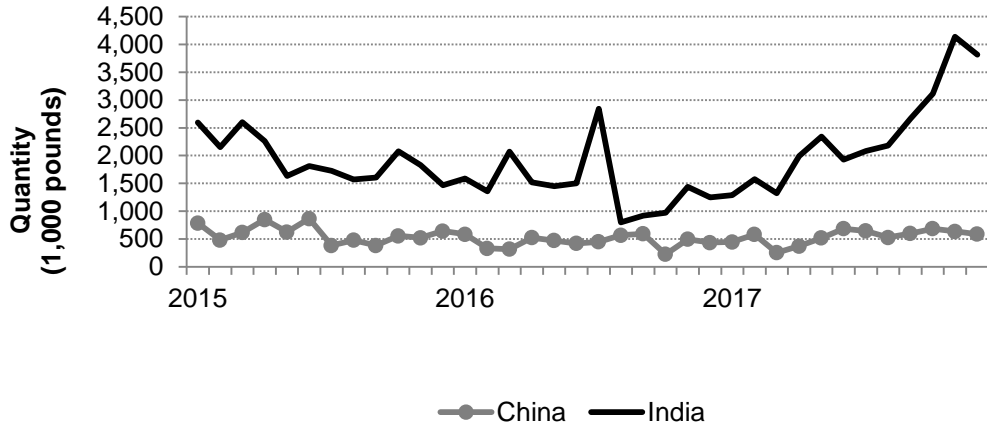
Stainless steel flanges: Monthly U.S. imports, January 2015 through December 2017

Item	U.S. imports from				
	China	India	Subject sources	Nonsubject sources	All import sources
Quantity (1,000 pounds)					
2015.--					
January	787	2,597	3,385	1,418	4,803
February	482	2,151	2,633	1,170	3,803
March	617	2,600	3,216	1,158	4,374
April	848	2,262	3,110	1,211	4,321
May	625	1,631	2,256	1,035	3,292
June	867	1,814	2,681	1,689	4,370
July	384	1,725	2,109	1,141	3,250
August	477	1,570	2,046	1,017	3,064
September	382	1,606	1,988	1,222	3,210
October	556	2,078	2,633	1,108	3,741
November	521	1,832	2,353	985	3,338
December	642	1,466	2,108	1,195	3,303
2016.--					
January	583	1,586	2,169	938	3,108
February	330	1,359	1,689	1,512	3,201
March	317	2,073	2,390	1,496	3,886
April	525	1,517	2,042	1,594	3,636
May	471	1,447	1,918	1,216	3,135
June	420	1,502	1,921	1,352	3,273
July	449	2,846	3,295	1,251	4,546
August	567	798	1,365	1,423	2,788
September	593	919	1,512	1,313	2,825
October	223	972	1,195	1,432	2,628
November	496	1,439	1,935	1,141	3,076
December	434	1,247	1,681	1,442	3,123
2017.--					
January	447	1,288	1,735	1,596	3,331
February	583	1,575	2,157	1,042	3,199
March	253	1,322	1,574	1,331	2,906
April	370	1,992	2,363	1,142	3,505
May	518	2,340	2,857	1,494	4,352
June	684	1,928	2,613	921	3,533
July	646	2,082	2,728	1,033	3,761
August	526	2,178	2,704	1,471	4,175
September	599	2,667	3,267	1,376	4,643
October	686	3,113	3,799	1,351	5,150
November	635	4,141	4,776	995	5,770
December	587	3,814	4,401	1,613	6,014

Source: Official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018.

Figure IV-6

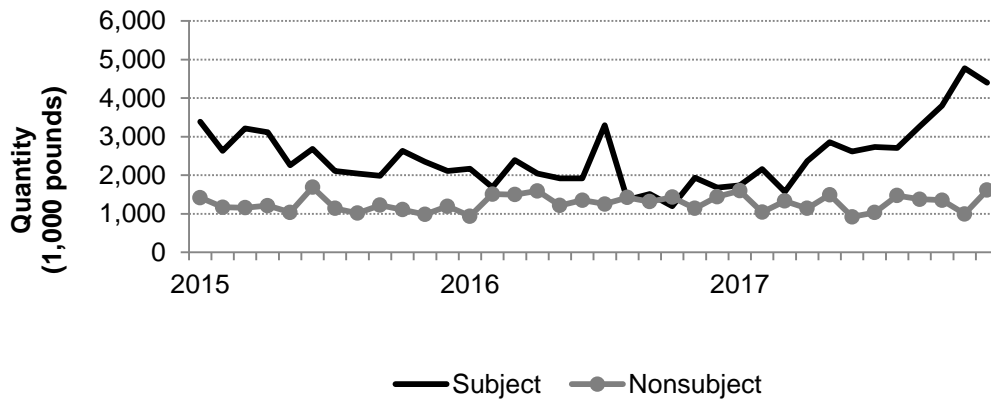
Stainless steel flanges: Monthly U.S. imports by individual subject sources, January 2015 to December 2017



Source: Official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018.

Figure IV-7

Stainless steel flanges: Monthly U.S. imports, subject and nonsubject sources, January 2015 to December 2017



Source: Official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018.

APPARENT U.S. CONSUMPTION AND MARKET SHARES

Table IV-13 and figure IV-8 present data on apparent U.S. consumption and U.S. market shares for stainless steel flanges based on the operations of integrated producers.

Table IV-13

Stainless steel flanges: Apparent U.S. consumption based on integrated U.S. producers' operations, 2015-17

* * * * *

Figure IV-8

Stainless steel flanges: Apparent U.S. consumption based on integrated U.S. producers' operations, 2015-17

* * * * *

Table IV-14 presents data on apparent U.S. consumption and U.S. market shares for U.S. producers' combined integrated and non-integrated operations. Table IV-15 presents details on integrated and non-integrated finishers' shipments and U.S. imports minus finisher shipments.

Table IV-14

Stainless steel flanges: Apparent U.S. consumption based on integrated U.S. producers' and non-integrated U.S. finishers' operations combined, 2015-17

Item	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
U.S. producers' U.S. shipments	***	***	***
U.S. imports from.-- China	7,186	5,409	6,534
India	23,333	17,705	28,440
Subject sources	30,519	23,114	34,974
Nonsubject sources	14,349	16,109	15,365
All import sources	44,868	39,223	50,339
Apparent U.S. consumption	***	***	***
	Value (1,000 dollars)		
U.S. producers' U.S. shipments.-- Value of domestic origin forgings	***	***	***
Value added to imported forgings	***	***	***
Combined value	42,268	34,283	40,307
U.S. imports from.-- China	22,869	18,066	23,931
India	57,066	33,431	53,895
Subject sources	79,936	51,497	77,826
Nonsubject sources	64,068	58,776	61,738
All import sources	144,004	110,274	139,565
Apparent U.S. consumption	186,271	144,557	179,871
	Share of quantity (percent)		
U.S. producers' U.S. shipments	***	***	***
U.S. imports from.-- China	***	***	***
India	***	***	***
Subject sources	***	***	***
Nonsubject sources	***	***	***
All import sources	***	***	***
	Share of value (percent)		
U.S. producers' U.S. shipments.-- Value of domestic origin forgings	***	***	***
Value added to imported forgings	***	***	***
Combined value	22.7	23.7	22.4
U.S. imports from.-- China	12.3	12.5	13.3
India	30.6	23.1	30.0
Subject sources	42.9	35.6	43.3
Nonsubject sources	34.4	40.7	34.3
All import sources	77.3	76.3	77.6

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. imports statistics using HTS statistical reporting numbers 7307.21.1000 and 7307.21.5000, accessed February 2, 2018.

Table IV-15

Stainless steel flanges: Integrated U.S. producers' shipments; imports and purchases of imports by finishers, 2015-17

* * * * *

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Input costs

The primary input in the production of stainless steel flanges are forgings made from stainless steel billet or bar. The billets or bars are heated and forged into the general shape of a flange, which is then finished by various combinations of lathing, drilling, deburring, and engraving and/or stamping.¹ While integrated producers of stainless steel flanges make forgings from stainless steel billets or bars (made from stainless steel scrap, iron scrap, and alloys such as nickel and chromium), finishers use the unfinished forgings or semi-finished flanges as their primary raw material input.² For integrated U.S. producers, raw materials as a share of the cost of goods sold (“COGS”) declined from *** percent in 2015 to *** percent in 2017. For all reporting U.S. producers’ finishing operations, raw materials as a share of COGS declined from *** percent in 2015 to *** percent in 2017.

Petitioners stated that most stainless steel flanges sold in the United States were “300 series” grades.^{3 4} As shown in figure V-1, the prices of stainless steel bar types 304 and 316 both decreased from January 2015 to December 2017.⁵ The price of type 304 stainless steel

¹ For a detailed description of the production process, see Part I, “Manufacturing processes.”

² Among the responding U.S. producers, the vast majority of reported production was from unfinished forgings imported from subject sources. See table III-7.

³ Conference transcript, p. 74 (Maass).

⁴ On March 8, 2018, the Presidential Proclamation on Adjusting Imports of Steel into the United States announced that an additional 25 percent ad valorem rate of duty with respect to steel articles defined at the Harmonized Tariff Schedule 6–digit level as 7206.10 through 7216.50, 7216.99 through 7301.10, 7302.10, 7302.40 through 7302.90, and 7304.10 through 7306.90, including any subsequent revisions to these HTS classifications, would apply to imports of steel articles from all countries except Canada and Mexico. On March 22, 2018, the President authorized the suspension of these tariffs on steel imports from the following additional countries: Argentina, Australia, Brazil, member countries of the European Union, and South Korea. See *Presidential Proclamation on Adjusting Imports of Steel into the United States*, available at <https://www.whitehouse.gov/presidential-actions/presidential-proclamation-adjusting-imports-steel-united-states/>, and *President Trump Approves Section 232 Tariff Modifications*, available at <https://www.whitehouse.gov/briefings-statements/president-trump-approves-section-232-tariff-modifications/>, retrieved April 23, 2018. According to Maass, imports of the primary input into the production of its stainless steel forgings, stainless steel billets, are covered under the Proclamation, while finished stainless steel flanges are not. Maass contends that this could further threaten the domestic industry with increased raw material input prices. Hearing transcript, pp. 92-93 (Maass).

⁵ On an annual basis, the prices of types 304 and 316 both decreased from January to December 2015 (by ***); the prices of types 304 and 316 both increased from January to December 2016 (by ***);
(continued...)

decreased by *** percent during this time, and the price of type 316 decreased by *** percent. Between December 2017 and March 2018, the prices of stainless steel bar types 304 and 316 both increased ***.

Figure V-1
Stainless steel bar: Prices for stainless steel types 304 and 316 bar, dollars per short ton, f.o.b. mill, by month, January 2015-March 2018

* * * * *

As shown in figure V-2, the price of nickel decreased by *** percent and the price of chromium increased by *** percent between January 2015 and December 2017, with most of the increase in chromium occurring in late 2016.⁶ Between December 2017 and March 2018, the price of nickel ***, and the price of chromium ***.

Figure V-2
Alloying elements: Indexed prices for nickel (melting material 99.8% purity free market delivered domestic US cents/lb) and chromium (high carbon 6-8% C basis 60-65% Cr max 2% Si in warehouse Pittsburgh cents/lb), by month, January 2015-March 2018

* * * * *

According to the U.S. Geological Survey, declining nickel prices in 2015 were attributed to “declining growth rates for global production of austenitic stainless steel, as well as the commissioning of nickel refineries in Madagascar and Canada and the ramp-up of production at new ferronickel smelters in Brazil and New Caledonia.”⁷ The increase in chromium prices in the latter part of 2016 was attributed to “an increase in the demand for stainless steel, particularly in China, and a lack of chromium inventory.”⁸

Most responding U.S. producers reported that raw material prices decreased, while importer responses were mixed. Four of five U.S. producers reported that raw material prices decreased, while one firm reported that raw material prices increased. *** stated that the rise in the price of nickel increased the price of its stainless steel flanges. Among importers, four

(...continued)

and from January to December 2017 the price of type 304 decreased (by ***) while the price of type 316 increased (by ***) .

⁶ On an annual basis, the prices of nickel and chrome both decreased from January to December 2015 (by ***) ; the prices of nickel and chrome both increased from January to December 2016 (by ***) ; and from January to December 2017 the price of nickel increased (by ***) while the price of chrome decreased (by ***) .

⁷ U.S. Geological Survey, Mineral Commodity Summaries, *Nickel*, January 2016 and January 2018, available at <https://minerals.usgs.gov/minerals/pubs/commodity/nickel/mcs-2016-nicke.pdf> and <https://minerals.usgs.gov/minerals/pubs/commodity/nickel/mcs-2018-nicke.pdf>.

⁸ U.S. Geological Survey, Mineral Commodity Summaries, *Chromium*, January 2018, available at <https://minerals.usgs.gov/minerals/pubs/commodity/chromium/mcs-2018-chrom.pdf>.

firms reported that raw material prices decreased, four reported that they fluctuated, three reported that they increased, and one reported that they had not changed. Among the importers reporting a decrease in raw material prices, *** stated that while raw material prices have decreased, subject imports have put downward pressure on their sales prices of stainless steel flanges. *** stated that raw material prices contributed to lower selling prices of stainless steel flanges in 2016, but “***.” Only one importer that reported an increase in raw material prices elaborated: *** reported that an increase in raw material prices has caused an overall price increase in the stainless steel flange market.⁹

Transportation costs to the U.S. market

Transportation costs for stainless steel flanges shipped from subject countries to the United States averaged 5.5 percent for China and 3.8 percent for India during 2017. Transportation costs for stainless steel flanges from nonsubject sources averaged 3.4 percent. These estimates were derived from official import data and represent the transportation and other charges on imports.¹⁰

U.S. inland transportation costs

Three of five U.S. producers and 12 of 13 responding importers reported that they typically arrange transportation to their customers. U.S. producers reported U.S. inland transportation costs ranging from 2.0 to 4.0 percent, and importers reported costs ranging from 0.4 to 5.0 percent.

PRICING PRACTICES

Pricing methods

While U.S. producers and importers generally reported using all pricing setting methods, most firms reported selling stainless steel flanges on a transaction-by-transaction basis (table V-1).

⁹ Maass argues that since nickel is a global commodity, any changes in the price of nickel affect the United States as well as subject countries, and that Maass’ price fluctuations are the result of fluctuations in supply and demand. Hearing transcript, p. 22 (Maass). Petitioners also state that nickel also accounts for a very small percentage of the final cost of the finished product. Hearing transcript, pp. 49-50 (Sherman); Petitioners’ posthearing brief, Exhibit 1, p. 27.

Chinese respondents argue that stainless steel flanges do not have a consistent price per pound and that raw material prices (primarily the type of steel being used, such as 304/304L and 316/316L) affect the prices of finished stainless steel flanges. Chinese respondents’ posthearing brief, pp. 44-46.

¹⁰ The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2017 and then dividing by the customs value based on the HTS subheadings 7307.21.1000 and 7307.21.5000.

Table V-1**Stainless steel flanges: U.S. producers' and importers' reported price setting methods, by number of responding firms¹**

Method	U.S. producers	Importers
Transaction-by-transaction	4	11
Contract	2	4
Set price list	2	5
Other	---	1
Number of responding firms	5	14

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 selling most of their product in the spot market, while responding importers reported selling most of their product through short-term contracts. As shown in table V-2, integrated U.S. producers reported selling *** of their stainless steel flanges in 2017 in the spot market, while finishers reported selling *** in the spot market, and ***. Importers reported selling most of their product via short-term contract *** and *** in the spot market.

Table V-2**Stainless steel flanges: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2017**

Type of sale	U.S. producers (integrated)	U.S. producers (finishers)	U.S. producers (combined)	Importers
Long-term contracts	***	***	***	***
Annual contracts	***	***	***	***
Short-term contracts	***	***	***	***
Spot sales	***	***	***	***
Total	100.0	100.0	100.0	100.0

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

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

The sole responding U.S. producer that reported its contract provisions, ***, reported that its short-term and annual contracts do not allow for price renegotiations but its long-term contracts do, and that none of its contracts contain meet-or-release provisions. It reported an average short-term contract duration of 90 days, and an average long-term contract duration of three years. Among importers, all three responding firms reported that their short-term contracts do not allow for price renegotiations; two reported that they fix both price and quantity, while one reported that they only fix price; and all three reported that they do not contain meet-or-release provisions. One responding importer reported an average short-term contract duration of 60 days, another reported 82 days, and the third 126 days.

Regarding purchase frequency, five purchasers reported that they purchase product daily, five purchase weekly, six purchase monthly, and seven purchase quarterly. No purchasers buy on an annual basis. Most responding purchasers (22 of 26) reported that their purchasing frequency had not changed since 2015. Although one firm reported contacting only one

supplier and three firms reported contacting more than five suppliers, most firms reported contacting between two and five suppliers before making a purchase.

Sales terms and discounts

Most U.S. producers (4 of 5) typically quote prices on an f.o.b. basis, while most importers (8 of 13) typically quote prices on a delivered basis. Two U.S. producers reported offering quantity discounts, two reported offering total volume discounts, and one firm (***) reported offering discounts of 2 percent for certain customers if invoices are paid within 10 days. Two U.S. producers also reported having no specific discount policy. Among importers, a plurality of responding firms (6 of 13) reported no specific discount policy, while five reported offering quantity discounts, two reported offering total volume discounts, two reported offering early payment discounts, and one firm reported offering annual total sales volume rebates.

All five producers reported sales terms of net 30 days; one firm (***) also reported sales terms of 2/10 net 30 days for certain customers. Among importers, 9 of 13 responding firms reported sales terms of net 30 days, three reported sales terms of net 60 days, one reported sales terms of net 45 days, one reported sales terms of net 25 days with a cutoff of the 31st, one reported sales terms of 90 days, 10 days, and net 45 days from the bill of lading date, and one reported sales terms of “2 percent / 10th prox net 45 days.”

Price leadership

Eleven purchasers named specific price leaders in the stainless steel flange market. Reported price leaders were Allied and Ta Chen (named by three firms each); Core Pipe, Maass, and Merit Brass (two firms each); and Bebitz, Chandan (India), Hilton (India), Multalloy, Smith Cooper, and Viraj (India) (one firm each). Regarding how these firms exhibit price leadership, Core Pipe and Maass were cited as setting market prices for customers utilizing AMLs, while Viraj and Bebitz were cited as being leaders for customers not using AMLs. Allied and Merit Brass were also cited as being leaders in supply and pricing, while Ta Chen was cited as being the company that often offers the most competitive prices. Chandan and Hilton (Indian producers) were also cited as firms that initiate downward price trends.

Pricing factors

Purchasers were asked to rate on a scale of 1 to 5 (with 1 being minimal and 5 being substantial) the effect of certain specified factors on the prices they pay for stainless steel flanges (table V-3). The responding purchasers generally rated raw material costs for the production of stainless steel flanges as having a more substantial effect on the prices they pay than demand in the oil and gas sector and/or other sectors.

Table V-3**Stainless steel flanges: Purchaser ratings of the effect of certain factors on the prices they pay**

Factor	Rating of the factor					
	Minimal effect		← →	Substantial effect		No role / N/A
	1	2	3	4	5	
Demand in oil and gas sector ¹	3	0	8	2	3	9
Demand in other sectors ²	1	0	10	3	2	8
Raw material costs for the production of stainless steel flanges	1	2	1	8	8	5
Other ³	1	0	0	1	0	8

¹ Only one firm reported being an end user in the oil & gas sector, while two reported being end users in other sector and 19 reported being distributors. See Part II, "U.S. purchasers."

² Other sectors identified were chemical, refining, wastewater, grain processing, and pulp and paper.

³ Only one of the two responding firm elaborated on 'other' factors, rating "available mill capacity" as a four out of five.

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

Some purchasers elaborated further. *** stated that stainless steel flange prices are based on the level of activity in copper mining, and *** stated that increases in demand in the oil and gas sectors and increases in raw material prices both tend to increase the price of stainless steel flanges. *** stated that prices are based on various sourcing factors, none of which are based on demand in any particular market sector. *** stated that the price of nickel is the primary raw material that affects the price of stainless steel flanges, and *** stated that while raw material prices effect the prices it pays, the supply of finished inventory already in distributor warehouses, available inventories of raw material and billet, and the available capacity of the mills have more of an effect on the mills' prices.

When asked whether changes in raw material costs have affected their price negotiations and/or purchasing prices (including surcharges) for stainless steel flanges since January 2015, 15 of 26 purchasers reported that they have (11 reported that they have not). Several firms stated that raw material prices are tied to the LME (London Metal Exchange) prices, primarily for nickel, but also for chromium, molybdenum, and scrap metal. *** stated that it occasionally adjusts metals content pricing with its suppliers based on publicly available metals indices (such as LME and MEPS) using formulas defined in its supply agreements. *** reported that producers stated that raw material increases and nickel surcharge increases result in higher purchase prices. A number of firms stated that raw material price increases have increased their purchase prices. *** pointed to a general increase, while *** stated that prices for finished product has surged 40-50 percent in the previous 12 months. Only one firm, ***, specifically stated that prices have dropped, citing an increase in inventory.

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 stainless steel flange products shipped to unrelated U.S. customers during January 2015-December 2017.¹¹

Product 1--Weld-Neck stainless steel flanges, finished, 2-inch nominal pipe size, class 150, of 316/316L alloy steel meeting ASME/ANSI B16.5 specifications.

Product 2--Weld-Neck stainless steel flanges, finished, 2-inch nominal pipe size, class 150, of 304/304L alloy steel meeting ASME/ANSI B16.5 specifications.

Product 3--Slip-On stainless steel flanges, finished, 2-inch nominal pipe size, class 150, of 316/316L alloy steel meeting ASME/ANSI B16.5 specifications.

Product 4--Slip-On stainless steel flanges, finished, 4-inch nominal pipe size, class 150, of 304/304L alloy steel meeting ASME/ANSI B16.5 specifications.

Product 5--Slip-On stainless steel flanges, finished, 6-inch nominal pipe size, class 150, of 304/304L alloy steel meeting ASME/ANSI B16.5 specifications.

All five U.S. producers (***) and nine importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.^{12 13} Pricing data reported by these firms accounted for approximately *** percent of integrated U.S. producers' shipments of stainless steel flanges in 2017, *** percent of finishers' shipments, *** percent of U.S. shipments of subject imports from China, and *** percent of U.S. shipments of subject imports from India in 2017.

Price data for products 1-5 are presented in tables V-4 to V-8 and figures V-3 to V-7. Nonsubject country prices for the Philippines are presented in Appendix E.

¹¹ Importer *** reported imports ***, and stated that ***. Its data are included in the analysis below.

¹² 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.

¹³ ***.

Table V-4

Stainless steel flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter, January 2015-December 2017

* * * * *

Table V-5

Stainless steel flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, January 2015-December 2017

* * * * *

Table V-6

Stainless steel flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, January 2015-December 2017

* * * * *

Table V-7

Stainless steel flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarter, January 2015-December 2017

* * * * *

Table V-8

Stainless steel flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), by quarter, January 2015-December 2017

* * * * *

Figure V-3

Stainless steel flanges: Weighted-average prices and quantities of domestic and imported product 1, by quarter, January 2015-December 2017

* * * * *

Figure V-4

Stainless steel flanges: Weighted-average prices and quantities of domestic and imported product 2, by quarter, January 2015-December 2017

* * * * *

Figure V-5

Stainless steel flanges: Weighted-average prices and quantities of domestic and imported product 3, by quarter, January 2015-December 2017

* * * * *

Figure V-6
Stainless steel flanges: Weighted-average prices and quantities of domestic and imported product 4, by quarter, January 2015-December 2017

* * * * *

Figure V-7
Stainless steel flanges: Weighted-average prices and quantities of domestic and imported product 5, by quarter, January 2015-December 2017

* * * * *

Price trends

Table V-9 summarizes the price trends, by country and by product. In general, prices for domestic integrated producers increased during 2015-17, while prices for domestic finishers decreased, leading to an overall decrease for all domestic producers combined. As shown in the table, integrated U.S. producers' prices increased for products *** in amounts ranging from *** percent (for product ***) to *** percent (for product ***), while prices for product *** decreased by *** percent. Prices for both integrated and non-integrated producers combined declined for products 1-5 in amounts ranging from *** percent (for product 4) to *** percent (for product 1).¹⁴

For product from China, prices increased for products 1, 2, 4, and 5 by between *** percent (for ***) and *** percent (for ***), while prices decreased for *** by *** percent. For product from India, prices decreased for all five pricing products, in amounts ranging from *** percent (for product ***) to *** percent (for product ***)).

¹⁴ Maass testified that the increase in domestic prices after the filing of the petition was led by one of its domestic distributors, ***, which increased prices by 40 percent, and that Maass adjusted its prices upward *** following this distributor's price increase. Hearing transcript, p. 26 (Maass); Petitioners' posthearing brief, Exhibit 1, pp. 50-51, Exhibit 4 (***). ***.

Table V-9
Stainless steel flanges: Summary of weighted-average f.o.b. prices for products 1-5 from the United States, China, and India

Item	Number of quarters	Low price (dollars per piece)	High price (dollars per piece)	Change in price ¹ (percent)
Product 1				
United States (Integrated)	12	***	***	***
United States (Combined)	12	***	***	***
China	12	***	***	***
India	12	***	***	***
Product 2				
United States (Integrated)	12	***	***	***
United States (Combined)	12	***	***	***
China	12	***	***	***
India	12	***	***	***
Product 3				
United States (Integrated)	12	***	***	***
United States (Combined)	12	***	***	***
China	12	***	***	***
India	12	***	***	***
Product 4				
United States (Integrated)	10	***	***	***
United States (Combined)	12	***	***	***
China	12	***	***	***
India	12	***	***	***
Product 5				
United States (Integrated)	11	***	***	***
United States (Combined)	12	***	***	***
China	12	***	***	***
India	12	***	***	***

¹ Percentage change from the first quarter of 2015 to the last quarter of 2017.

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

Price comparisons

As shown in tables V-10a and V-10b, prices for stainless steel flanges imported from both China and India were below those for integrated U.S. producers' product in all 114 instances (386,002 pieces) and below those for integrated producers' and finishers' product (combined) in all 120 instances (409,724 pieces); margins of underselling ranged from 30.3 to 74.8 percent when compared to U.S. integrated producers' price data and 7.6 to 64.1 percent when compared to U.S. finishers' data. There were no instances of overselling for either subject country or for any of the five pricing products.

Table V-10a

Stainless steel flanges: Instances of underselling and the range and average of margins to integrated U.S. producers, by country and by pricing product, January 2015-December 2017

Source	Underselling				
	Number of quarters	Quantity ¹ (pieces)	Average margin (percent)	Margin range (percent)	
				Min	Max
China	57	***	55.9	***	***
India	57	***	62.8	***	***
Total, underselling (country)	114	386,002	59.4	30.3	74.8
Product 1	24	***	***	***	***
Product 2	24	***	***	***	***
Product 3	24	***	***	***	***
Product 4	20	***	***	***	***
Product 5	22	***	***	***	***
Total, underselling (product)	114	386,002	59.4	30.3	74.8

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-10b

Stainless steel flanges: Instances of underselling and the range and average of margins to combined U.S. price data (integrated + finishers), by country and by pricing product, January 2015-December 2017

Source	Underselling				
	Number of quarters	Quantity ¹ (pieces)	Average margin (percent)	Margin range (percent)	
				Min	Max
China	60	***	44.2	***	***
India	60	***	53.3	***	***
Total, underselling (country)	120	409,724	48.7	7.6	64.1
Product 1	24	***	***	***	***
Product 2	24	***	***	***	***
Product 3	24	***	***	***	***
Product 4	24	***	***	***	***
Product 5	24	***	***	***	***
Total, underselling (product)	120	409,724	48.7	7.6	64.1

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.

LOST SALES AND LOST REVENUE

In the preliminary phase of these investigations, the Commission requested that U.S. producers of stainless steel flanges report purchasers where they experienced instances of lost sales or revenue due to competition from imports of stainless steel flanges from China and/or India during January 2014-June 2017. Two U.S. producers, ***, submitted lost sales and lost revenue allegations. The two responding U.S. producers identified *** firms where they lost sales; ***. *** reported that the time period of its alleged lost sales were ***.¹⁵

In the final phase of these investigations, three of the five responding U.S. producers (***) reported that they had to reduce prices as well as roll back announced price increases, and that they had lost sales. Staff issued questionnaires to 63 purchasers and received questionnaire responses from 27 purchasers. Responding purchasers reported purchasing and/or importing for internal use 35.7 million pounds of stainless steel flanges during January 2015-December 2017 (table V-11). Of the 27 responding purchasers, 15 reported that they had purchased imported stainless steel flanges from China instead of U.S.-produced product, and 21 reported that they had purchased imported stainless steel flanges from India instead of U.S.-produced product since January 2015. Twelve of these purchasers reported that prices for subject imports from China were lower than U.S.-produced product, and 18 reported that prices for subject imports from India were lower than U.S.-produced product. Nine purchasers reported that price was a primary reason for the decision to purchase imported product from China rather than U.S.-produced product, and 16 reported that price was a primary reason for the decision to purchase imported product from India. Seven purchasers estimated the quantity of stainless steel flanges purchased from China instead of domestic product, and 12 purchasers estimated the quantity of stainless steel flanges purchased from India instead of domestic product; total quantities from both subject sources combined ranged from *** pounds to *** pounds, for a total of 22.3 million pounds (table V-12). Purchasers identified availability, lead time, customer requirements, and corporate strategic vision as non-price reasons for purchasing imported rather than U.S.-produced product.

None of the 27 responding purchasers reported that U.S. producers had reduced prices in order to compete with lower-priced imports from China or India. Nine purchasers specifically reported that U.S. producers had not reduced prices in order to compete with lower-priced imports from China, and 14 specifically reported that U.S. producers had not reduced prices in order to compete with lower-priced imports from India (17 firms reported that they did not know in response to China, and 13 reported that they did not know in response to India) (table V-13).

¹⁵ ***.

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

BACKGROUND

Four U.S. firms reported usable financial results on their stainless steel flange operations.¹ Maass reported financial results on integrated operations and finishing operations. Core Pipe, Gibson, and Kerkau reported financial results on finishing operations only.² For the period as a whole, large quantity U.S. producers accounted for similar shares of total consolidated sales quantity: *** (***) and *** (***) percent. Smaller quantity producers *** and *** accounted for *** percent and *** percent of total consolidated sales quantity, respectively.³

OPERATIONS ON STAINLESS STEEL FLANGES

Income-and-loss data for U.S. producers' integrated operations are presented in table VI-1. Table VI-2 presents corresponding changes in average per pound values. Income-and-loss data for U.S. producers' stainless steel flange finishing operations are presented in table VI-3. Table VI-4 presents corresponding changes in average per pound values. Income-and-loss data for U.S. producers' consolidated operations are presented in table VI-5. Table VI-6 presents corresponding changes in average per pound values. Table VI-7 presents company-specific financial information.⁴

Table VI-1
Stainless steel flanges: Results of the U.S. producer's integrated operations, 2015-17

* * * * *

¹ ***. USITC auditor notes (final phase). Ameriforge, an integrated producer whose financial results were included in the Commission's prehearing report, has been removed from the U.S. industry's financial results due to concerns regarding the ***. Ibid.

² U.S. producers, whose financial results are presented in this section, reported on a GAAP basis and for calendar-year periods. In addition to primary differences, such as integrated versus finisher-only operations, the operations of U.S. producers also reflect differences in product focus and scope of operations. Among the larger quantity producers, ***. These differences in operational focus/structure, in addition to variations in company-specific cost classification, as noted below, should be considered when directly comparing the average cost information reported by U.S. producers and finishers.

Staff conducted a verification of Maass' U.S. producer questionnaire on April 5-6, 2018. Data changes pursuant to verification are reflected in this and other relevant sections of the staff report. Verification report, p. 2.

³ The term "consolidated" refers to the U.S. industry's combined integrated and finishing operations.

⁴ Due to the relatively wide range of company-specific average per pound sales values for integrated and finisher only operations, a variance analysis is not presented in this section of the report.

Table VI-2
Stainless steel flanges: Changes in U.S. producers' integrated operations average per pound values, 2015-17

* * * * *

Table VI-3
Stainless steel flanges: Results of U.S. producers' finishing operations, 2015-17

* * * * *

Table VI-4
Stainless steel flanges: Changes in U.S. producers' finishing operations average per pound, 2015-17

* * * * *

Table VI-5
Stainless steel flanges: Results of U.S. producers' consolidated operations, 2015-17

* * * * *

Table VI-6
Stainless steel flanges: Changes in U.S. producers' consolidated average per pound values, 2015-17

* * * * *

Table VI-7
Stainless steel flanges: Results of U.S. producers' operations, by firm, 2015-17

* * * * *

Net sales

Quantity

Table VI-7 shows that on a company-specific basis the directional pattern of changes in sales quantity was mixed. *** reported a *** increase in its *** sales quantities in 2016 followed by a decline in 2017.⁵ ***, also reported a decline in its sales quantities in 2016 and an increase in 2017.

Value

On a company-specific basis (see table VI-7), average sales values for integrated and finishing operations reflect a relatively wide range, which appears to be generally consistent with differences in underlying product mix. As a group, finishing operations reported higher average sales values compared to integrated operations throughout 2015-17.

⁵ ***. September 11, 2017 e-mail from counsel on behalf of *** to USITC auditor.

In addition to a relatively wide range of average per pound sales values, the directional pattern of average sales value was not uniform. With respect to its integrated operations, *** average sales value *** in 2016 and then *** in 2017 by a *** amount. *** average sales value, reflecting finishing operations, *** throughout the period. In general, U.S. producers indicated that period-to-period changes in average sales values do not reflect variations in product mix.⁶

Cost of goods sold and gross profit or loss

Raw materials

With respect to integrated operations, raw material cost as a share of total COGS declined irregularly from *** percent in 2015 to *** percent in 2017 (see table VI-1). For finishing operations, raw material costs as a share of total COGS also declined irregularly from *** percent of total COGS in 2015 to *** percent in 2017 (see table VI-3). In general, the higher share of raw material costs for finishing operations, as compared to integrated operations, is consistent with the consumption of a more finished raw material input.

Most U.S. producers reported lower average raw material costs in 2016 and somewhat higher average raw material costs in 2017 (see table VI-7). An exception to this pattern was ***, which reported increases in average raw material costs in both 2016 and 2017.⁷ While the same directional pattern of average raw material cost (declining notably in 2016 followed by a modest increase in 2017) was reported by most U.S. producers, the magnitude of company-specific change varied. In general, U.S. producers attributed lower raw material costs to declines in material inputs during the period.⁸

With respect to integrated operations, the decline in average COGS in 2016 reflects lower average raw material costs and lower conversion costs (see table VI-2) with the subsequent increase in average COGS in 2017 reflecting a moderate reversal of this pattern. Table VI-4 shows that the 2016 decline in average COGS for finishing operations reflects a notable decline in the average cost of purchased unfinished flanges, in particular subject imports. In 2017, the increase in average COGS for finishing operations primarily reflects the increase in the cost of purchased unfinished flanges, domestic and subject imports.

⁶ Conference transcript, p. 63 (Maass). September 18, 2017 e-mail with attachment from *** to USITC auditor. September 11, 2017 e-mail with attachment from counsel on behalf of *** to USITC auditor. ***. March 8, 2018 e-mail with attachments from *** to USITC auditor.

⁷ ***. *** U.S. producer questionnaire response to III-7. ***. March 14, 2018 e-mail with attachments from *** to staff.

⁸ September 11, 2017 e-mail from counsel on behalf of *** to USITC auditor. September 18, 2017 e-mail with attachment from *** to USITC auditor. ***. March 13, 2018 e-mail from *** to USITC auditor. ***. Verification report, p. 5.

Conversion costs

Consistent with the greater degree of conversion from stainless steel billet or bar to finished stainless steel flange, other factory costs was the second largest share of COGS for integrated operations, ranging from *** percent in 2015 to *** percent in 2016 (see table VI-1).⁹ In contrast and with respect to finishing operations, direct labor was the second largest share of COGS, ranging from *** percent in 2015 to *** percent in 2016 (see table VI-3).¹⁰

In general, the range of company-specific average other factory costs and average direct labor shown in table VI-7 is consistent with different underlying product mix, but also reflects differences in company-specific cost classification.¹¹ ***.¹²

Gross profit or loss

While integrated and finishing operations both generated gross profit throughout the period (see table VI-1 and table VI-3), integrated financial results reflect lower gross profit ratios (total gross profit divided by total revenue) compared to finishing operations. On a company-specific basis and with some exceptions, finishing operations generated higher gross profit ratios compared to integrated operations (see table VI-7).

SG&A expenses and operating income or loss

Table VI-7 shows that most U.S. producers, for both integrated and finishing operations, reported irregular declines in the level of total selling, general and administrative (SG&A) expenses. As such, variations in SG&A expense ratios (total SG&A expenses divided by total revenue) reflect corresponding changes in revenue (declining in 2016 and increasing in 2017), as well as changes in the absolute level of SG&A expenses. While important in terms of determining the absolute level of operating income during the period, SG&A expense ratios for integrated and finishing operations remained within a relatively narrow range and therefore had a limited effect on the pattern of reported operating results.

As shown in table VI-7, *** integrated operations generated *** operating profit throughout the period. For the most part, U.S. producers with finishing only operations

⁹ ***. *** U.S. producer questionnaire, response to III-7. ***. March 13, 2018 e-mail from *** to USITC auditor.

¹⁰ Estimated value added (total conversion costs (direct labor and other factory costs) as a share of total COGS) for finishing operations ranged from a low of *** percent in 2015 to a high of *** percent in 2016. Estimated value added for integrated operations ranged from a low of *** percent in 2015 to a high of *** percent in 2016. USITC auditor notes (final phase).

¹¹ ***. March 8, 2018 e-mail with attachments from *** to USITC auditor.

¹² ***. September 11, 2017 e-mail from counsel on behalf of *** to USITC auditor.

generated operating profit throughout the period (see table VI-7).¹³ The exception was ***, which reported an operating loss in 2016.¹⁴

Interest expense, other expenses, and net income or loss

While interest expense was reported for integrated and finishing operations, the levels were small for both groups. In contrast, other expenses and other income were more pronounced for integrated operations compared to finishing operations.¹⁵ As a result, operating results for integrated operations diverged somewhat compared to corresponding net results, while for finishing operations net results and operating results were about the same.

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

Table VI-8 presents the U.S. producers' capital expenditures and research and development (R&D) expenses related to stainless steel flanges operations. As shown in table VI-8, *** U.S. producer to report R&D expenses during the period examined.¹⁶

Table VI-8
Stainless steel flanges: U.S. producers' capital expenditures and research and development (R&D) expenses, by firm, 2015-17

* * * * *

***, reported its highest level of capital expenditures in 2015, ***, and accounted for *** percent of total consolidated capital expenditures.¹⁷ ***, also reported its highest level of capital expenditures in 2015, ***, and accounted for *** percent of total consolidated capital expenditures.¹⁸ The remaining U.S. producers, *** reported *** capital expenditures during the period.

¹³ ***. March 8, 2018 e-mail with attachments from *** to USITC auditor.

¹⁴ With regard to the pattern of its financial results reported for the preliminary phase (2014 through the first half of 2017), ***. September 11, 2017 e-mail with attachment from *** to USITC auditor.

With regard to the second-half of 2017 specifically, ***. March 14, 2018 e-mail with attachments from *** to staff.

¹⁵ This pattern reflects *** in 2015 (see footnote 8), included in other expenses, and corresponding ***, included in other income. ***. March 13, 2018 e-mail from *** to USITC auditor.

***. Verification report, p. 5. ***. USITC auditor notes (final phase).

¹⁶ ***. Verification report, pp. 5-6.

¹⁷ ***. March 8, 2018 e-mail with attachment from *** to USITC auditor.

¹⁸ ***. *** U.S. producer questionnaire, response to III-13a (note 1).

ASSETS AND RETURN ON ASSETS

Table VI-9 presents the U.S. producers' stainless steel flange-related total net assets and operating return on assets.

Table VI-9
Stainless steel flanges: U.S. producers' total assets¹ and return on net assets, by firm, 2015-17

* * * * *

CAPITAL AND INVESTMENT

The Commission requested the U.S. producers of stainless steel flanges to describe any actual or potential negative effects on their return on investment or their growth, investment, 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 stainless steel flanges from China or India. Table VI-10 tabulates the U.S. producers' responses regarding actual negative effects on investment, growth and development, as well as anticipated negative effects. Table VI-11 presents U.S. producers' narrative responses regarding actual and anticipated negative effects on investment, growth and development.¹⁹

Table VI-10
Stainless steel flanges: Negative effects of imports from subject sources on investment, growth, and development since January 1, 2015

* * * * *

Table VI-11
Stainless steel flanges: Narrative responses of U.S. producers regarding actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2015

* * * * *

¹⁹ ***.

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 factors¹--

- (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.

THE INDUSTRY IN CHINA

Since 1990, China's steel industry has expanded to become the largest in the world. China's total domestic crude steel capacity reached 1.1 billion metric tons by 2016, with an

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."

estimated 350 million tons in excess or surplus capacity.³ China is also the leading producer of stainless steel in the world. In 2017, China produced 25.8 million metric tons of stainless steel, about 3.4 percent more than that in 2016, and accounted for more than half of total world production.⁴

The Commission issued foreign producers' or exporters' questionnaires to 58 firms believed to produce and/or export stainless steel flanges from China.⁵ Usable responses to the Commission's questionnaire were received from three firms: SBK Flange,⁶ Jiangsu Wujin Stainless,⁷ and Wuxi Jingxin Precision Machinery Co. Ltd.⁸

These firms' exports to the United States were equivalent to *** percent of U.S. imports of stainless steel flanges from China in 2017. According to estimates requested of the responding Chinese producers, the production of stainless steel flanges reported in questionnaires accounted for *** percent of overall production of stainless steel flanges in China in 2017. Table VII-1 presents information on the stainless steel operations of the responding producers and exporters in China.

Table VII-1
Stainless steel flanges: Summary data for producers in China, 2017

Firm	Production (1,000 pounds)	Share of reported production (percent)	Exports to the United States (1,000 pounds)	Share of reported exports to the United States (percent)	Total shipments (1,000 pounds)	Share of firm's total shipments exported to the United States (percent)
SBK Flange	***	***	***	***	***	***
Jiangsu Wujin Stainless	***	***	***	***	***	***
Wuxi Jingxin Precision Machinery Co.,Ltd.	***	***	***	***	***	***
Total	***	***	***	***	***	***

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

³ Petition, Volume III, p. 2.

⁴ *International Stainless Steel Forum website*,
http://worldstainless.org/statistics/crude_steel_production, retrieved March 19, 2018.

⁵ These firms were identified through a review of information submitted in the petition and contained in *** records.

⁶ SBK Flange reported that ***.

⁷ Jiangsu Wujin Stainless was established in 1970 and opened its fitting and flange workshop in 2008. The firm reported ***.

⁸ On March 27, 2018, the Commission received a foreign producer questionnaire response from Wuxi Jingxin Precision Machinery Co., Ltd. The company reported commencing operations in 2016 with *** and exporting *** to the United States.

Changes in operations

As presented in table VII-2, producers in China reported limited operational and organizational changes since January 1, 2015.

Table VII-2
Stainless steel flanges: Chinese producers' reported changes in operations, since January 1, 2015

* * * * *

Operations on stainless steel flanges

Table VII-3 presents information on the stainless steel operations of the responding producers and exporters in China. Production decreased by *** pounds between 2015 and 2016 (from *** to *** pounds), but increased in 2017 to *** pounds. Production levels in 2018 are expected to decrease compared to the previous year to *** pounds, and then remain steady through 2019. Reported capacity utilization remained well below *** during 2015-17, with the highest level at *** percent and the lowest at *** percent. Projected rates for 2018-19 are expected to be *** percent.

During 2015-17, exports to the United States as a share of total shipments decreased by *** percentage points, from *** percent to *** percent, and are projected to decrease further in 2018 and 2019.

Table VII-3
Stainless steel flanges: Data for producers in China, 2015-17 and projection calendar years 2018 and 2019

* * * * *

Alternative products

As shown in table VII-4, responding Chinese firms produced other products on the same equipment and machinery used to produce stainless steel flanges. *** reported producing stainless steel flanges *** on the same equipment and stated that product shifting is driven by ***. *** reported no product shifting and machining operations only for stainless steel flanges. *** reported no switch in production between stainless steel flanges and other products in the same line.

Table VII-4
Stainless steel flanges: Overall capacity and production on the same equipment as in-scope production by producers in China, 2015-17

* * * * *

Exports

According to Global Trade Atlas (“GTA”) data, the leading export markets for stainless steel flanges from China are Japan, Korea and Germany, respectively by quantity (table VII-5).⁹ During 2017, the United States was the fourth largest export market for stainless steel flanges from China, accounting for 4.6 percent of China’s exports that year. In 2017, Japan was the largest export destination for stainless steel flanges from China, accounting for 24.3 percent of stainless steel flange exports from China, followed by Korea, which accounted for 17.0 percent of exports of stainless steel flanges from China. Germany was China’s third largest market, accounting for 10.4 percent from China in 2017. Table VII-5 presents exports reported by Chinese Customs (heading 7307.21) though these data may be overstated to include out-of-scope merchandise such as stainless steel flanges less than 0.5 inches and/or greater than 24 inches in nominal outside diameter.

⁹ These data may be overstated as HS 7307.21 may contain products outside the scope of the petition.

Table VII-5
Stainless steel flanges: Exports from China by destination market, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
Exports from China to the United States	5,621	5,346	5,712
Exports from China to other major destination markets.--			
Japan	26,955	29,825	29,882
Korea	24,837	23,648	20,962
Germany	13,877	12,966	12,778
Taiwan	5,191	5,110	5,197
Italy	4,336	4,237	4,462
Australia	2,579	2,875	3,669
Malaysia	2,077	2,104	3,018
Russia	1,553	2,713	2,682
All other destination markets	37,815	36,174	34,711
Total exports from China	124,842	124,996	123,073
	Value (1,000 dollars)		
Exports from China to the United States	17,095	13,865	18,184
Exports from China to other major destination markets.--			
Japan	61,685	55,948	61,285
Korea	55,376	43,319	42,115
Germany	36,238	29,979	32,663
Taiwan	10,561	8,724	9,816
Italy	9,540	8,080	9,452
Australia	6,661	6,962	9,095
Malaysia	5,270	4,296	6,434
Russia	4,938	7,005	5,909
All other destination markets	105,648	83,678	87,163
Total exports from China	313,012	261,855	282,117

Table continued on next page.

Table VII-5-Continued
Stainless steel flanges: Exports from China by destination market, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Unit value (dollars per pound)		
Exports from China to the United States	3.04	2.59	3.18
Exports from China to other major destination markets.--			
Japan	2.29	1.88	2.05
Korea	2.23	1.83	2.01
Germany	2.61	2.31	2.56
Taiwan	2.03	1.71	1.89
Italy	2.20	1.91	2.12
Australia	2.58	2.42	2.48
Malaysia	2.54	2.04	2.13
Russia	3.18	2.58	2.20
All other destination markets	2.79	2.31	2.51
Total exports from China	2.51	2.09	2.29
	Share of quantity (percent)		
Exports from China to the United States	4.5	4.3	4.6
Exports from China to other major destination markets.--			
Japan	21.6	23.9	24.3
Korea	19.9	18.9	17.0
Germany	11.1	10.4	10.4
Taiwan	4.2	4.1	4.2
Italy	3.5	3.4	3.6
Australia	2.1	2.3	3.0
Malaysia	1.7	1.7	2.5
Russia	1.2	2.2	2.2
All other destination markets	30.3	28.9	28.2
Total exports from China	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official exports statistics under HS subheading 7307.21, as reported by Chinese Customs in the IHS/GTA database, accessed March 15, 2018. These data may be overstated as HS 7307.21 may contain products outside the scope of the petition.

THE INDUSTRY IN INDIA

In 2016, India passed Japan to become the second largest stainless steel producer in the world after China. In 2016, India produced 3.3 million metric tons of stainless steel, an 8.6 percent increase from 2015 and 64.4 percent more than in 2010.¹⁰

¹⁰ International Stainless Steel Forum, "ISSF Stainless Steel in Figures 2017", p. 8, [http://www.worldstainless.org/Files/issf/non-image-files/PDF/ISSF Stainless Steel in Figures 2017 English Public.pdf](http://www.worldstainless.org/Files/issf/non-image-files/PDF/ISSF%20Stainless%20Steel%20in%20Figures%202017%20English%20Public.pdf), retrieved March 19, 2018.

The Commission issued foreign producers' or exporters' questionnaires to 44 firms believed to produce and/or export stainless steel flanges from India.¹¹ Usable responses to the Commission's questionnaire were received from seven firms: Bebitz, Chandan Steel LTD ("Chandan Steel")¹², CHW Forge Pvt. Ltd. ("CHW Forge"), Echjay Forgings Pvt. Ltd. ("Echjay Forgings"), Hilton Metal Forging Limited ("Hilton Metal Forging"), Maas Flange India Private Limited ("Maass Flange India"), and Viraj.^{13 14}

One Indian firm reported an affiliation with a domestic producer of stainless steel flanges: Maass Flange India (related to Maass Flange Corporation).¹⁵

Four Indian firms reported affiliations with U.S. importers: ***, ***, ***,¹⁶ and ***.

Exports from the seven responding Indian producers and exporters to the United States accounted for virtually all U.S. imports of stainless steel flanges from India in 2017. Table VII-6 presents information on the stainless steel flange operations of the responding producers and exporters in India.

¹¹ These firms were identified through a review of information submitted in the petition and contained in *** records.

¹² On April 23, 2018, the Commission received a foreign producer questionnaire response from Chandan Steel Ltd. The company reported exporting *** to the United States and ***.

¹³ Two companies, CHW Forge, and Hilton Metal Forging provided responses during the preliminary phase of the investigations. Staff attempted numerous times to obtain responses from these firms during the final phase of the investigations, but the firms did not respond. Staff utilized these companies' responses for 2015-18 data and estimated 2019 projections as being unchanged from 2018 companies' own estimates.

¹⁴ While most companies did not provide data estimating firm's percentage of India's total production of stainless steel flanges, Bebitz, Maass Flange India, and Chandan Steel reported that their companies accounted for ***, respectively of India's production.

¹⁵ Maass Global Group acquired Nakshatra Pvt Ltd in 2005, and changed its name to Maass Flange India Pvt. Ltd. See <http://www.maassflange.in/>, retrieved April 17, 2018.

¹⁶ ***.

Table VII-6
Stainless steel flanges: Summary data for producers in India, 2017

Firm	Production (1,000 pounds)	Share of reported production (percent)	Exports to the United States (1,000 pounds)	Share of reported exports to the United States (percent)	Total shipments (1,000 pounds)	Share of firm's total shipments exported to the United States (percent)
Bebitz	***	***	***	***	***	***
Chandan Steel	***	***	***	***	***	***
CHW Forge	***	***	***	***	***	***
Echjay Forgings	***	***	***	***	***	***
Hilton Metal Forging	***	***	***	***	***	***
Maass Flange India	***	***	***	***	***	***
Viraj	***	***	***	***	***	***
Total	***	***	***	***	***	***

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

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

Changes in operations

As presented in table VII-7, producers in India reported several operational and organizational changes since January 1, 2015.

Table VII-7
Stainless steel flanges: India's producers' reported changes in operations, since January 1, 2015

* * * * *

Operations on stainless steel flanges

Table VII-8 presents information on the stainless steel flange operations of the responding producers and exporters in India. Overall capacity steadily increased from 2015 to 2017, rising from *** pounds to *** pounds. Projected 2018 and 2019 capacity levels are estimated to *** from 2017. Capacity utilization rates between 2015 and 2017 remained slightly above *** percent, except in 2016, when it decreased to *** percent. Production reached *** pounds in 2017 and is expected to steadily grow to *** pounds in 2019. From 2015 to 2017, exports to the United States as a share of total shipments fluctuated, decreasing from *** percent in 2015 to *** percent in 2016, before increasing to *** percent in 2017.

Export shipments to the United States are expected to decrease by *** percent between 2017 and 2018, and then to increase by *** percent in 2019. Exports to all other export markets are projected to increase by *** percent between 2017 and 2018 and then by *** percent in 2019 from the previous year.¹⁷

Table VII-8
Stainless steel flanges: Data on industry in India, 2015-17 and projection calendar years 2018 and 2019

* * * * *

Alternative products

As shown in table VII-9, responding India firms produced other products on the same equipment and machinery used to produce stainless steel flanges.

Some companies reported the ability to switch production between stainless steel flanges and other production using the same equipment. *** reported producing carbon steel/alloy steel flanges and steel pipe fittings on the same machinery. *** reported being able to shift production from subject product to several other types and grades of stainless steel flanges, and also other products such as stub ends, tubesheets, and square flanges, among others.

*** reported being able to shift between stainless steel flanges and machinery parts and rings. *** reported being able to produce carbon and alloy steel flanges, gear forgings, lever plates, OEM components, and other forgings on the same equipment. *** reported producing stainless steel flanges and carbon steel flanges using the same machinery, and *** also reported being able to shift from subject product and forgings using the same equipment.

Table VII-9
Stainless steel flanges: Overall capacity and production on the same equipment as in-scope production by producers in India, 2015-17

* * * * *

Exports

Table VII-10 presents information on stainless steel flange exports of India by destination market.¹⁸ According to GTA, the United States was the leading export market for stainless steel flanges from India by quantity during 2017, accounting for 34.7 percent of India’s exports of stainless steel flanges that year, followed by the Netherlands at 10.5 percent and Germany at 8.3 percent (table VII-10).

¹⁷ In response to questionnaires, foreign producers indicated that the shift in exports reflects ***.

¹⁸ These data may be overstated as HS 7307.21 may contain products outside the scope of the petition.

**Table VII-10:
Stainless steel flanges: Exports from India by destination market, 2015-17**

Destination market	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
Exports from India to the United States	20,294	17,342	28,813
Exports from India to other major destination markets.--			
Netherlands	9,308	10,331	8,706
Germany	7,094	7,847	6,888
Belgium	4,817	6,809	6,257
Canada	3,505	2,723	4,352
Italy	2,689	4,333	3,130
United Kingdom	2,987	3,043	2,746
France	1,420	1,872	2,572
Spain	1,572	1,661	2,259
All other destination markets	12,789	19,469	17,257
Total exports from India	66,474	75,430	82,980
	Value (1,000 dollars)		
Exports from India to the United States	46,513	31,643	54,050
Exports from India to other major destination markets.--			
Netherlands	19,618	18,569	16,944
Germany	16,685	16,359	15,775
Belgium	10,036	12,452	13,487
Canada	7,492	4,771	7,906
Italy	5,861	8,261	5,741
United Kingdom	6,310	5,234	5,523
France	3,189	3,120	4,568
Spain	3,016	2,636	4,071
All other destination markets	31,773	40,616	38,506
Total exports from India	150,494	143,662	166,574
	Unit value (dollars per pound)		
Exports from India to the United States	2.29	1.82	1.88
Exports from India to other major destination markets.--			
Netherlands	2.11	1.80	1.95
Germany	2.35	2.08	2.29
Belgium	2.08	1.83	2.16
Canada	2.14	1.75	1.82
Italy	2.18	1.91	1.83
United Kingdom	2.11	1.72	2.01
France	2.25	1.67	1.78
Spain	1.92	1.59	1.80
All other destination markets	2.48	2.09	2.23
Total exports from India	2.26	1.90	2.01

Table continued on next page.

Table VII-10--Continued
Stainless steel flanges: Exports from India by destination market, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Share of quantity (percent)		
Exports from India to the United States	30.5	23.0	34.7
Exports from India to other major destination markets.--			
Netherlands	14.0	13.7	10.5
Germany	10.7	10.4	8.3
Belgium	7.2	9.0	7.5
Canada	5.3	3.6	5.2
Italy	4.0	5.7	3.8
United Kingdom	4.5	4.0	3.3
France	2.1	2.5	3.1
Spain	2.4	2.2	2.7
All other destination markets	19.2	25.8	20.8
Total exports from India	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official exports statistics under HS subheading 7307.21, as reported by India's Ministry of Commerce in the IHS/GTA database, accessed March 15, 2018. These data may be overstated as HS 7307.21 may contain products outside the scope of the petition.

During 2015-17, India's exports of stainless steel flanges to the United States declined by 14.5 percent between 2015 and 2016 and then increased by 66.2 percent between 2016 and 2017. Trends in total exports from India showed an increase during 2015-17. Total exports of stainless steel flanges from India increased by 13.5 percent between 2015 and 2016 and again by 10.0 percent between 2016 and 2017.

THE INDUSTRIES IN SUBJECT COUNTRIES (COMBINED)

Table VII-11 presents information on the stainless steel flange operations of the responding producers and exporters in China and India combined.

Table VII-11
Stainless steel flanges: Data on industry in subject countries, 2015-17 and projection calendar years 2018 and 2019

* * * * *

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-12 presents data on U.S. importers' reported inventories of stainless steel flanges. Inventories of U.S. imports from subject sources decreased during 2015-17 and accounted for *** percent of total shipments of imports in 2017.

Table VII-12

Stainless steel flanges: U.S. importers' end-of-period inventories of imports by source, 2015-17

* * * * *

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they imported or arranged for the importation of stainless steel flanges from China and India between January 2018 and December 2018. As shown in table VII-13, arranged imports of subject product from India during 2018 represent *** percent of the total arranged from subject sources and *** of all sources, while subject product from China accounts for *** of total subject sources and *** percent of all import sources.

Table VII-13

Stainless steel flanges: Arranged imports, January 2018 through December 2018

* * * * *

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

There are no known trade remedy actions on stainless steel flanges in third-country markets.

INFORMATION ON NONSUBJECT COUNTRIES

Global exports

Table VII-14 presents the leading exporters of stainless steel flanges from 2015 to 2017 by country.¹⁹ Trade data were not available for all stainless steel flange-producing countries for 2017. Total world exports increased by 1.2 percent by quantity but declined by 2.7 percent by value from 2015 to 2017. China accounted for the largest share of global exports by quantity in 2017 (29.7 percent), followed by India (20.0 percent), Italy (11.0 percent), Spain (8.0 percent), Singapore (5.2 percent), and Germany (3.9 percent).

¹⁹ These data may be overstated as HS 7307.21 may contain products outside the scope of the petition.

Table VII-14**Stainless steel flanges: Global exports by exporter, 2015-17**

Exporter	Calendar year		
	2015	2016	2017
	Quantity (1,000 pounds)		
United States	14,661	9,807	10,678
China	124,842	124,996	123,073
India	66,474	75,430	82,998
All other major reporting exporters.--			
Italy	35,241	42,737	45,485
Spain	29,494	36,214	33,262
Singapore	13,421	22,703	21,461
Germany	16,623	15,819	16,137
Netherlands	13,267	8,735	13,044
South Korea	9,836	11,146	12,710
Malaysia	6,719	8,777	10,190
Belgium	8,061	9,027	8,284
Denmark	5,417	5,187	3,452
All other exporters	62,181	62,991	34,000
Total global exports	406,237	433,569	414,774
	Value (1,000 dollars)		
United States	76,964	70,062	74,295
China	313,012	261,855	282,117
India	150,494	143,662	166,590
All other major reporting exporters.--			
Italy	109,819	122,972	127,204
Spain	98,352	164,514	196,906
Singapore	12,029	10,203	8,306
Germany	102,821	92,685	97,945
Netherlands	51,774	32,977	44,382
South Korea	41,470	39,979	35,029
Malaysia	15,831	9,925	10,473
Belgium	28,207	25,825	27,664
Denmark	11,837	11,133	8,602
All other exporters	269,266	248,462	171,984
Total global exports	1,281,875	1,234,255	1,251,498

Table continued on next page.

Table VII-14--Continued
Stainless steel flanges: Global exports by exporter, 2015-17

Exporter	Calendar year		
	2015	2016	2017
	Unit value (dollars per pound)		
United States	5.25	7.14	6.96
China	2.51	2.09	2.29
India	2.26	1.90	2.01
All other major reporting exporters.--			
Italy	3.12	2.88	2.80
Spain	3.33	4.54	5.92
Singapore	0.90	0.45	0.39
Germany	6.19	5.86	6.07
Netherlands	3.90	3.78	3.40
South Korea	4.22	3.59	2.76
Malaysia	2.36	1.13	1.03
Belgium	3.50	2.86	3.34
Denmark	2.19	2.15	2.49
All other exporters	4.33	3.94	5.06
Total global exports	3.16	2.85	3.02
	Share of quantity (percent)		
United States	3.6	2.3	2.6
China	30.7	28.8	29.7
India	16.4	17.4	20.0
All other major reporting exporters.--			
Italy	8.7	9.9	11.0
Spain	7.3	8.4	8.0
Singapore	3.3	5.2	5.2
Germany	4.1	3.6	3.9
Netherlands	3.3	2.0	3.1
South Korea	2.4	2.6	3.1
Malaysia	1.7	2.0	2.5
Belgium	2.0	2.1	2.0
Denmark	1.3	1.2	0.8
All other exporters	15.3	14.5	8.2
Total global exports	100.0	100.0	100.0

Note.--Top countries based on 2016 data. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent.

Source: Official exports statistics under HS subheading 7307.21 as reported by various national statistical authorities in the IHS/GTA database, accessed April 27, 2018. These data may be overstated as some of under HS 7302.21 may contain products outside the scope of the petition.

World production

Table VII-15 presents information on certain known stainless steel flange producers in nonsubject countries that exported stainless steel flanges to the United States during 2015–17 (see table IV-2 for nonsubject U.S. imports).

Table VII-15
Stainless steel flanges: Producers in nonsubject countries

Country	Company/location	Description of capacity and products (from company websites)
Germany	The Farina Group– Friedrich Geldbach GmbH. (Bergmannstrasse).	Produces forged and finished carbon, alloy, and stainless steel flanges and fittings. ¹
Germany	Flanschenwerk Bebitz GmbH (Saxony-Anhalt). Company has production facilities in Germany and India.	Produces forged and finished carbon, alloy, and stainless steel flanges, fittings, and rings. Plant has the capacity to produce about 24,000 metric tons of forged products. ²
Germany	Wilhelm Maass GmbH (Essen).	Produces forged and finished stainless and alloy steel flanges and range from one-half to 60-inches in nominal diameter. ³
Italy	METALFAR Prodotti Industriali S.p.A (Cesana Brianza).	Produces forged and finished carbon, alloy, and stainless steel flanges. The plant has the capacity to manufacture 60,000 metric tons of flanges. ⁴
Italy	Officine Ambrogio Melesi (Corteno).	Produces forged and finished flanges and components, principally for oil and gas projects. The plant has the capacity to forge 100,000 tons of products. ⁵
Malaysia	Shinsei Industry Sdn Bhd (Penang).	Produces standard and custom forged and finished flanges in a range from 3/8 to 24 inches in nominal diameter. Flanges are sold under the Japanese brand name “Shinsei”. Plant has capacity to produce 5,400 metric tons of stainless and carbon steel forged flanges per year. ⁶
Mexico	Wilhelm Maass Internacional, S. de R.L. de C.V.; (Manufacturing facility in Cd. Acuna Coahuila).	Produces forged and finished stainless steel flanges in a range from one-half to 12-inches in nominal diameter. ⁷
Romania	Vilmar (Valcea), owned by the Genoyer Group.	Produces forged and finished carbon, alloy, and stainless steel flanges and fittings. ⁸

Table continued on next page.

Table VII-15--Continued
Stainless steel flanges: Producers in nonsubject countries

Country	Company/location	Description of capacity and products (from company websites)
Korea	Korea Flange Co., Ltd. (Headquarters and factory in Ulsan; operates three other factories in Ulsan).	Produces forged and finished carbon, alloy, and stainless steel flanges. Company website states that it is one of the world's three leading manufacturers of flanges. ⁹
Korea	Seyu Flange Co. Ltd. (Busan).	Produces flanges for use in shipbuilding, heat exchangers, oil refineries, petrochemical and power plants. Produces some flanges that meet ANSI-B16.5 standards. ¹⁰
Korea	Shinwoo Metal Co., Ltd. (headquarters in Busan; forging plant in Gyeongsangnam-do).	Produces forged and finished stainless steel flanges. ¹¹
Korea	ST&H Corp. (Headquarters in Busan; operates two plants).	Produces forged and finished carbon, alloy, and stainless steel flanges and valves. ¹²
Spain	ULMA Forja, S.Coop. (Oñati).	Produces forged and finished carbon, alloy, and stainless steel flanges and fittings. Flanges range from one-half to 102-inches in nominal diameter. ¹³
Vietnam	Felix Technology Co., Ltd. (headquarters in Busan, South Korea; operates a forging factory in Vietnam).	Produces forged and finished carbon and stainless steel flanges and fittings. ¹⁴

¹ Farina Group website, <http://farinagroup.com/index.php?go=Friedrich-Geldbach-GmbH#>, retrieved March 15, 2018.

² Flanschenwerk Bebitz GmbH website, <http://www.bebitz.de/en/about-us.html>, retrieved March 15, 2018.

³ Wilhelm Maass GmbH website, <http://www.wmaass.de/index.html>, retrieved March 15, 2018.

⁴ METALFAR Prodotti Industriali S.p.A website, <http://www.metalfar.com/en/>, retrieved March 15, 2018.

⁵ Officine Ambrogio Melesi website, <http://www.melesi.it/en/contents/about-us/index>, retrieved March 15, 2018.

⁶ Wilhelm Maass Internacional, S. de R.L. de C.V website, <http://www.maassmexico.com/>, retrieved March 15, 2018.

⁷ Shinsei Industry Sdn Bhd website, <http://www.ssflanges.com.my/>, retrieved March 16, 2018.

⁸ Vilmar website, <http://www.vilmar.ro/vilmar-groupe-genoyer---fr.html>, retrieved March 16, 2018.

⁹ Korea Flange Co., Ltd. website, <https://www.kofco.com/english/company/overview.html>, retrieved March 16, 2018.

¹⁰ Seyu Flange Co. Ltd. website, <https://seyuflange.en.ec21.com/>, retrieved March 16, 2018.

¹¹ Shinwoo Metal Co., Ltd. website, <http://www.shinwoometal.co.kr/?folder=company&page=01>, retrieved March 17, 2018.

¹² ST&H Corp. website, <http://www.stnhcorp.com/eng/main.html>, retrieved March 16, 2018.

¹³ ULMA Forja, S.Coop. website, <http://www.ulmapiping.com/en/about-ulma/>, retrieved March 16, 2018.

¹⁴ Korea International Trade Association "tradeKorea.com" website, <http://felix.tradeKorea.com/company.do>, retrieved March 16, 2018.

Note: This is not a comprehensive list of all producers in nonsubject countries that exported stainless steel flanges as some producers are difficult to identify and confirm. It is possible that some exports from nonsubject countries were products that were manufactured in other countries.

APPENDIX A

***FEDERAL REGISTER* NOTICES**

The Commission makes available notices relevant to its investigations and reviews 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
82 FR 39914, August 22, 2017	<i>Stainless Steel Flanges From China and India; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations</i>	https://www.gpo.gov/fdsys/pkg/FR-2017-08-22/pdf/2017-17743.pdf
82 FR 42649, September 11, 2017	<i>Stainless Steel Flanges From India and the People's Republic of China; Initiation of Less-Than-Fair-Value investigations</i>	https://www.gpo.gov/fdsys/pkg/FR-2017-09-11/pdf/2017-19294.pdf
82 FR 42654, September 11, 2017	<i>Stainless Steel Flanges From India and the People's Republic of China; Initiation of Countervailing Duty Investigations</i>	https://www.gpo.gov/fdsys/pkg/FR-2017-09-11/pdf/2017-19293.pdf
82 FR 46831, October 6, 2017	<i>Stainless Steel Flanges From China and India: Determinations</i>	https://www.gpo.gov/fdsys/pkg/FR-2017-10-06/pdf/2017-21547.pdf
83 FR 1025 January 9, 2018	<i>Stainless Steel Flanges From India and the People's Republic of China: Postponement of Preliminary Determinations in the Less-Than-Fair-Value Investigations</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-01-09/pdf/2018-00189.pdf
83 FR 3124 January 23, 2018	<i>Countervailing Duty Investigation of Stainless Steel Flanges From the People's Republic of China: Preliminary Affirmative Determination</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-01-23/pdf/2018-01145.pdf
83 FR 3118 January 23, 2018	<i>Stainless Steel Flanges From India: Preliminary Affirmative Countervailing Duty Determination, Preliminary Affirmative and Alignment of Final Determination With Final Antidumping Duty Determination</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-01-23/pdf/2018-01146.pdf
83 FR 5459 February 7, 2018	<i>Stainless Steel Flanges From China and India Scheduling of the Final Phase of Countervailing Duty and Antidumping Duty Investigations</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-02-07/pdf/2018-02438.pdf

Citation	Title	Link
83 FR 13246 March 28, 2018	<i>Stainless Steel Flanges From India: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Preliminary Affirmative Determination of Critical Circumstances, Postponement of Final Determination, and Extension of Provisional Measures</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-03-28/pdf/2018-06152.pdf
83 FR 13244 March 28, 2018	<i>Stainless Steel Flanges From People's Republic of China: Preliminary Affirmative Determination of Sales at Less Than Fair Value</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-03-28/pdf/2018-06153.pdf
83 FR 15790 April 12, 2018	<i>Countervailing Duty Investigation of Stainless Steel Flanges From the People's Republic of China: Final Affirmative Determination</i>	https://www.gpo.gov/fdsys/pkg/FR-2018-04-12/pdf/2018-07587.pdf

APPENDIX B
HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject: Stainless Steel Flanges from China and India
Inv. Nos.: 701-TA-585-586 and 731-TA-1383-1384 (Final)
Date and Time: April 10, 2018 - 9:30 a.m.

Sessions were held in connection with these investigations in the Main Hearing Room (Room 101), 500 E Street, SW., Washington, DC.

OPENING REMARKS:

Petitioners (**Daniel B. Pickard**, Wiley Rein, LLP)

Respondents (**Brady W. Mills**, Morris, Manning & Martin, LLP)

In Support of the Imposition of Antidumping and Countervailing Duty Orders:

Wiley Rein LLC
Washington, DC
on behalf of

Coalition of American Flange Producers

Alexander Maass, President, Maass Flange Corporation

David Cook, Vice President, Maass Flange Corporation

Sharon Frank, Accounts Payable Manager, Maass Flange Corporation

Amy Sherman, International Trade Analyst, Wiley Rein, LLP

Daniel B. Pickard) – OF COUNSEL

**In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders:**

Morris, Manning & Martin, LLP
Washington, DC
on behalf

Wuxi Jingxin Precision Machinery Co., Ltd. (“Wuxi Jingxin”)
The China Chamber of International Commerce (“CCOIC”)
The Confederation of Chinese Metalforming Industry (“CCMI”)

Chen Huaisheng, Director of Industry Services, CCPIT/CCOIC

Jiang Yiwei, Staff, CCPIT/CCOIC

Emma K. Peterson, Trade Analyst, Morris, Manning and Martin, LLP

Jason Sun, Attorney, Beijing Dentons Law Office, LLP

Brady W. Mills) – OF COUNSEL

REBUTTAL/CLOSING REMARKS:

Petitioners (**Daniel B. Pickard**, Wiley Rein, LLP)
Respondents (**Brady W. Mills**, Morris, Manning & Martin, LLP)

-END-

APPENDIX C
SUMMARY DATA

Table C-1: Stainless Steel Flanges: Summary data concerning all integrated producers and finishers' operations of the U.S. market..... C-3

Table C-2: Stainless Steel Flanges: Summary data concerning forging operations..... C-5

Table C-3: Stainless Steel Flanges: Summary data concerning conversion operations..... C-7

Table C-4: Stainless Steel Flanges: Summary data concerning expanded like product..... C-8

Combined (Integrated + Finishers)

Table C-1

Stainless steel flanges: Summary data concerning the U.S. market combining integrated U.S. producers and non-integrated U.S. finishers, 2015-17
 (Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent—exceptions noted)

	Reported data			Period changes		
	2015	2016	2017	2015-17	2015-16	2016-17
U.S. consumption quantity:						
Amount.....	***	***	***	***	***	***
Producers' share (fn1).....	***	***	***	***	***	***
Importers' share (fn1) (fn3):						
China.....	***	***	***	***	***	***
India.....	***	***	***	***	***	***
Subject sources.....	***	***	***	***	***	***
Nonsubject sources.....	***	***	***	***	***	***
All import sources.....	***	***	***	***	***	***
U.S. consumption value:						
Amount.....	186,264	144,538	179,759	(3.5)	(22.4)	24.4
Producers' share (fn1) (fn3):						
Value of domestic origin forgings.....	***	***	***	***	***	***
Incremental value added to imported forgings.....	***	***	***	***	***	***
Combined value.....	22.7	23.7	22.4	(0.3)	1.0	(1.3)
Importers' share (fn1):						
China.....	12.3	12.5	13.3	1.0	0.2	0.8
India.....	30.6	23.1	30.0	(0.7)	(7.5)	6.9
Subject sources.....	42.9	35.6	43.3	0.4	(7.3)	7.7
Nonsubject sources.....	34.4	40.7	34.3	(0.1)	6.3	(6.3)
All import sources.....	77.3	76.3	77.6	0.3	(1.0)	1.3
U.S. imports from:						
China:						
Quantity.....	7,186	5,409	6,534	(9.1)	(24.7)	20.8
Value.....	22,869	18,066	23,931	4.6	(21.0)	32.5
Unit value.....	\$3.18	\$3.34	\$3.66	15.1	5.0	9.7
Ending inventory quantity.....	***	***	***	***	***	***
India:						
Quantity.....	23,333	17,705	28,440	21.9	(24.1)	60.6
Value.....	57,066	33,431	53,895	(5.6)	(41.4)	61.2
Unit value.....	\$2.45	\$1.89	\$1.90	(22.5)	(22.8)	0.4
Ending inventory quantity.....	***	***	***	***	***	***
Subject sources:						
Quantity.....	30,519	23,114	34,974	14.6	(24.3)	51.3
Value.....	79,936	51,497	77,826	(2.6)	(35.6)	51.1
Unit value.....	\$2.62	\$2.23	\$2.23	(15.0)	(14.9)	(0.1)
Ending inventory quantity.....	***	***	***	***	***	***
Nonsubject sources:						
Quantity.....	14,349	16,109	15,365	7.1	12.3	(4.6)
Value.....	64,068	58,776	61,738	(3.6)	(8.3)	5.0
Unit value.....	\$4.46	\$3.65	\$4.02	(10.0)	(18.3)	10.1
Ending inventory quantity.....	***	***	***	***	***	***
All import sources:						
Quantity.....	44,868	39,223	50,339	12.2	(12.6)	28.3
Value.....	144,004	110,274	139,565	(3.1)	(23.4)	26.6
Unit value.....	\$3.21	\$2.81	\$2.77	(13.6)	(12.4)	(1.4)
Ending inventory quantity.....	***	***	***	***	***	***
Integrated U.S. producers':						
Average capacity quantity.....	***	***	***	***	***	***
Production quantity.....	***	***	***	***	***	***
Capacity utilization (fn1).....	***	***	***	***	***	***
Non-integrated U.S. finishers':						
Average capacity quantity.....	***	***	***	***	***	***
Production quantity.....	***	***	***	***	***	***
Capacity utilization (fn1).....	***	***	***	***	***	***

Table continued on next page.

Table C-1--Continued

Stainless steel flanges: Summary data concerning the U.S. market combining integrated U.S. producers and non-integrated U.S. finishers, 2015-17
 (Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2015	2016	2017	2015-17	2015-16	2016-17
Combined U.S. producers' and finishers' (fn3):						
U.S. shipments:						
Quantity.....	***	***	***	***	***	***
Value:						
Value of domestic origin forgings.....	***	***	***	***	***	***
Incremental value added to imported forgings...	***	***	***	***	***	***
Combined value.....	42,260	34,264	40,194	(4.9)	(18.9)	17.3
Unit value.....	***	***	***	***	***	***
Export shipments:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Ending inventory quantity.....	***	***	***	***	***	***
Inventories/total shipments (fn1).....	***	***	***	***	***	***
Production workers.....	213	198	218	2.3	(7.0)	10.1
Hours worked (1,000s).....	436	386	424	(2.8)	(11.5)	9.8
Wages paid (\$1,000).....	7,410	6,528	7,381	(0.4)	(11.9)	13.1
Hourly wages (dollars per hour).....	\$17.00	\$16.91	\$17.41	2.4	(0.5)	2.9
Net sales:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Cost of goods sold (COGS).....	***	***	***	***	***	***
Gross profit or (loss).....	***	***	***	***	***	***
SG&A expenses.....	***	***	***	***	***	***
Operating income or (loss).....	***	***	***	***	***	***
Net income or (loss).....	***	***	***	***	***	***
Capital expenditures.....	***	***	***	***	***	***
Unit COGS.....	***	***	***	***	***	***
Unit SG&A expenses.....	***	***	***	***	***	***
Unit operating income or (loss).....	***	***	***	***	***	***
Unit net income or (loss).....	***	***	***	***	***	***
COGS/sales (fn1).....	***	***	***	***	***	***
Operating income or (loss)/sales (fn1).....	***	***	***	***	***	***
Net income or (loss)/sales (fn1).....	***	***	***	***	***	***

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.

fn2.--Undefined.

fn3.--The quantity for U.S. producers' U.S. shipments reflects the quantity of forgings produced in the United States; The value for U.S. producers' U.S.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. imports statistics using HTS statistical reporting numbers

Integrated Producers

Table C-2

Stainless steel flanges: Summary data concerning the U.S. market based on integrated U.S. production operations, 2015-17

(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2015	2016	2017	2015-17	2015-16	2016-17
U.S. consumption quantity:						
Amount.....	***	***	***	***	***	***
Producers' share (fn1).....	***	***	***	***	***	***
Importers' share (fn1):						
China.....	***	***	***	***	***	***
India.....	***	***	***	***	***	***
Subject sources.....	***	***	***	***	***	***
Nonsubject sources.....	***	***	***	***	***	***
All import sources.....	***	***	***	***	***	***
U.S. consumption value:						
Amount.....	***	***	***	***	***	***
Producers' share (fn1).....	***	***	***	***	***	***
Importers' share (fn1):						
China.....	***	***	***	***	***	***
India.....	***	***	***	***	***	***
Subject sources.....	***	***	***	***	***	***
Nonsubject sources.....	***	***	***	***	***	***
All import sources.....	***	***	***	***	***	***
U.S. imports from:						
China:						
Quantity.....	7,186	5,409	6,534	(9.1)	(24.7)	20.8
Value.....	22,869	18,066	23,931	4.6	(21.0)	32.5
Unit value.....	\$3.18	\$3.34	\$3.66	15.1	5.0	9.7
Ending inventory quantity.....	***	***	***	***	***	***
India:						
Quantity.....	23,333	17,705	28,440	21.9	(24.1)	60.6
Value.....	57,066	33,431	53,895	(5.6)	(41.4)	61.2
Unit value.....	\$2.45	\$1.89	\$1.90	(22.5)	(22.8)	0.4
Ending inventory quantity.....	***	***	***	***	***	***
Subject sources:						
Quantity.....	30,519	23,114	34,974	14.6	(24.3)	51.3
Value.....	79,936	51,497	77,826	(2.6)	(35.6)	51.1
Unit value.....	\$2.62	\$2.23	\$2.23	(15.0)	(14.9)	(0.1)
Ending inventory quantity.....	***	***	***	***	***	***
Nonsubject sources:						
Quantity.....	14,349	16,109	15,365	7.1	12.3	(4.6)
Value.....	64,068	58,776	61,738	(3.6)	(8.3)	5.0
Unit value.....	\$4.46	\$3.65	\$4.02	(10.0)	(18.3)	10.1
Ending inventory quantity.....	***	***	***	***	***	***
All import sources:						
Quantity.....	44,868	39,223	50,339	12.2	(12.6)	28.3
Value.....	144,004	110,274	139,565	(3.1)	(23.4)	26.6
Unit value.....	\$3.21	\$2.81	\$2.77	(13.6)	(12.4)	(1.4)
Ending inventory quantity.....	***	***	***	***	***	***
Integrated U.S. producers:						
Average capacity quantity.....	***	***	***	***	***	***
Production quantity.....	***	***	***	***	***	***
Capacity utilization (fn1).....	***	***	***	***	***	***
U.S. shipments:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Export shipments:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***

Table continued on next page.

Table C-2--Continued

Stainless steel flanges: Summary data concerning the U.S. market based on integrated U.S. production operations, 2015-17

(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2015	2016	2017	2015-17	2015-16	2016-17
Integrated U.S. producers':						
Ending inventory quantity.....	***	***	***	***	***	***
Inventories/total shipments (fn1).....	***	***	***	***	***	***
Production workers.....	***	***	***	***	***	***
Hours worked (1,000s).....	***	***	***	***	***	***
Wages paid (\$1,000).....	***	***	***	***	***	***
Hourly wages (dollars per hour).....	***	***	***	***	***	***
Productivity (pounds per hour).....	***	***	***	***	***	***
Unit labor costs.....	***	***	***	***	***	***
Net sales:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Cost of goods sold (COGS).....	***	***	***	***	***	***
Gross profit or (loss).....	***	***	***	***	***	***
SG&A expenses.....	***	***	***	***	***	***
Operating income or (loss).....	***	***	***	***	***	***
Net income or (loss).....	***	***	***	***	***	***
Capital expenditures.....	***	***	***	***	***	***
Unit COGS.....	***	***	***	***	***	***
Unit SG&A expenses.....	***	***	***	***	***	***
Unit operating income or (loss).....	***	***	***	***	***	***
Unit net income or (loss).....	***	***	***	***	***	***
COGS/sales (fn1).....	***	***	***	***	***	***
Operating income or (loss)/sales (fn1).....	***	***	***	***	***	***
Net income or (loss)/sales (fn1).....	***	***	***	***	***	***

Note.--Integrated U.S. producers' operations relate to production of SS flanges that are both forged in the United States and finished in the United States.

fn1.--Reported data are in percent and period changes are in percentage points.

fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. imports statistics using HTS statistical reporting numbers

Non-integrated finishers

Table C-3

Stainless steel flanges: Summary data concerning the operations of non-integrated U.S. finishers, 2015-17

(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2015	2016	2017	2015-17	2015-16	2016-17
Non-integrated U.S. finishers':						
Average capacity quantity.....	***	***	***	***	***	***
Production quantity.....	***	***	***	***	***	***
Capacity utilization (fn1).....	***	***	***	***	***	***
U.S. shipments:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Export shipments:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Ending inventory quantity.....	***	***	***	***	***	***
Inventories/total shipments (fn1).....	***	***	***	***	***	***
Production workers.....	***	***	***	***	***	***
Hours worked (1,000s).....	***	***	***	***	***	***
Wages paid (\$1,000).....	***	***	***	***	***	***
Hourly wages (dollars per hour).....	***	***	***	***	***	***
Productivity (pounds per hour).....	***	***	***	***	***	***
Unit labor costs.....	***	***	***	***	***	***
Net sales:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Cost of goods sold (COGS).....	***	***	***	***	***	***
Gross profit or (loss).....	***	***	***	***	***	***
SG&A expenses.....	***	***	***	***	***	***
Operating income or (loss).....	***	***	***	***	***	***
Net income or (loss).....	***	***	***	***	***	***
Capital expenditures.....	***	***	***	***	***	***
Unit COGS.....	***	***	***	***	***	***
Unit SG&A expenses.....	***	***	***	***	***	***
Unit operating income or (loss).....	***	***	***	***	***	***
Unit net income or (loss).....	***	***	***	***	***	***
COGS/sales (fn1).....	***	***	***	***	***	***
Operating income or (loss)/sales (fn1).....	***	***	***	***	***	***
Net income or (loss)/sales (fn1).....	***	***	***	***	***	***

Note.--Non-integrated U.S. finishers' operations relate to SS flanges that are finished in the United States, but were not forged by the entity conducting the

fn1.--Reported data are in percent and period changes are in percentage points.

fn2.--Undefined.

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

Expansion of the like product

Table C-4

Stainless steel flanges: Summary data concerning the U.S. market based on integrated U.S. production operations including SS flanges excluded
 (Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	2015	2016	2017	2015-17	2015-16	2016-17
U.S. consumption quantity:						
Amount.....	***	***	***	***	***	***
Producers' share (fn1).....	***	***	***	***	***	***
Importers' share (fn1):						
China.....	***	***	***	***	***	***
India.....	***	***	***	***	***	***
Subject sources.....	***	***	***	***	***	***
Nonsubject sources (scope).....	***	***	***	***	***	***
Nonsubject sources (excluded by NPS) (fn3)....	***	***	***	***	***	***
All import sources.....	***	***	***	***	***	***
U.S. consumption value:						
Amount.....	***	***	***	***	***	***
Producers' share (fn1).....	***	***	***	***	***	***
Importers' share (fn1):						
China.....	***	***	***	***	***	***
India.....	***	***	***	***	***	***
Subject sources.....	***	***	***	***	***	***
Nonsubject sources (scope).....	***	***	***	***	***	***
Nonsubject sources (excluded by NPS) (fn3)....	***	***	***	***	***	***
All import sources.....	***	***	***	***	***	***
U.S. imports from:						
China:						
Quantity.....	7,186	5,409	6,534	(9.1)	(24.7)	20.8
Value.....	22,869	18,066	23,931	4.6	(21.0)	32.5
Unit value.....	\$3.18	\$3.34	\$3.66	15.1	5.0	9.7
Ending inventory quantity.....	***	***	***	***	***	***
India:						
Quantity.....	23,333	17,705	28,440	21.9	(24.1)	60.6
Value.....	57,066	33,431	53,895	(5.6)	(41.4)	61.2
Unit value.....	\$2.45	\$1.89	\$1.90	(22.5)	(22.8)	0.4
Ending inventory quantity.....	***	***	***	***	***	***
Subject sources:						
Quantity.....	30,519	23,114	34,974	14.6	(24.3)	51.3
Value.....	79,936	51,497	77,826	(2.6)	(35.6)	51.1
Unit value.....	\$2.62	\$2.23	\$2.23	(15.0)	(14.9)	(0.1)
Ending inventory quantity.....	***	***	***	***	***	***
Nonsubject sources (scope):						
Quantity.....	14,349	16,109	15,365	7.1	12.3	(4.6)
Value.....	64,068	58,776	61,738	(3.6)	(8.3)	5.0
Unit value.....	\$4.46	\$3.65	\$4.02	(10.0)	(18.3)	10.1
Ending inventory quantity.....	***	***	***	***	***	***
Nonsubject sources (excluded by NPS) (fn3):						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Ending inventory quantity.....	***	***	***	***	***	***
All import sources:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Ending inventory quantity.....	***	***	***	***	***	***

Table continued on next page.

Table C-4--Continued

Stainless steel flanges: Summary data concerning the U.S. market based on integrated U.S. production operations including SS flanges excluded
 (Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per pound; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2015	2016	2017	2015-17	2015-16	2016-17
Integrated U.S. producers':						
Average capacity quantity.....	***	***	***	***	***	***
Production quantity.....	***	***	***	***	***	***
Capacity utilization (fn1).....	***	***	***	***	***	***
U.S. shipments:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Export shipments:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Ending inventory quantity.....	***	***	***	***	***	***
Inventories/total shipments (fn1).....	***	***	***	***	***	***
Production workers.....	***	***	***	***	***	***
Hours worked (1,000s).....	***	***	***	***	***	***
Wages paid (\$1,000).....	***	***	***	***	***	***
Hourly wages (dollars per hour).....	***	***	***	***	***	***
Productivity (pounds per hour).....	***	***	***	***	***	***
Unit labor costs.....	***	***	***	***	***	***
Net sales:						
Quantity.....	***	***	***	***	***	***
Value.....	***	***	***	***	***	***
Unit value.....	***	***	***	***	***	***
Cost of goods sold (COGS).....	***	***	***	***	***	***
Gross profit or (loss).....	***	***	***	***	***	***
SG&A expenses.....	***	***	***	***	***	***
Operating income or (loss).....	***	***	***	***	***	***
Net income or (loss).....	***	***	***	***	***	***
Capital expenditures.....	***	***	***	***	***	***
Unit COGS.....	***	***	***	***	***	***
Unit SG&A expenses.....	***	***	***	***	***	***
Unit operating income or (loss).....	***	***	***	***	***	***
Unit net income or (loss).....	***	***	***	***	***	***
COGS/sales (fn1).....	***	***	***	***	***	***
Operating income or (loss)/sales (fn1).....	***	***	***	***	***	***
Net income or (loss)/sales (fn1).....	***	***	***	***	***	***

Note.--Integrated U.S. producers' operations relate to production of SS flanges that are both forged in the United States and finished in the United States.

fn1.--Reported data are in percent and period changes are in percentage points.

fn2.--Undefined.

fn3.--Nonsubject imports of a NPS greater than 24 reflects imports from all sources including from China and India. The data collection covered NPS greater

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. imports statistics using HTS statistical reporting numbers

APPENDIX D

**DETAILED U.S. PRODUCERS' AND U.S. IMPORTERS'
U.S. SHIPMENTS BY PRODUCT TYPE**

Appendix D-1

Stainless steel flanges: Integrated U.S. producers' commercial U.S. shipments by pipe sizes, 2017

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Appendix D-2

Stainless steel flanges: U.S. producers' non-integrated finishing only commercial U.S. shipments by pipe sizes, 2017

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Appendix D-3

Stainless steel flanges: U.S. importers' commercial U.S. shipments by level of processing, 2015-17

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Appendix D-4

Stainless steel flanges: U.S. importers' commercial U.S. shipments by product type and NPS, 2017

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APPENDIX E
NONSUBJECT COUNTRY PRICE DATA

Two importers reported price data for nonsubject country the Philippines for products 1-5. Price data reported by these firms accounted for *** percent of U.S. commercial shipments from the Philippines in 2017. These price items and accompanying data are comparable to those presented in tables V-4 to V-8 and figures V-3 to V-7. Price and quantity data for the Philippines are shown in tables E-1 to E-5 and in figures E-1 to E-5 (with domestic and subject sources).

In comparing nonsubject country pricing data with U.S. producer pricing data, prices for stainless steel flanges imported from the Philippines were lower than prices for U.S.-produced product in all 57 comparisons with U.S. integrated producers and all 60 comparisons with integrated producers and finishers combined. There were no instances in which stainless steel flanges imported from the Philippines were higher than U.S. integrated producers or finishers. Prices for stainless steel flanges imported from the Philippines were lower than prices for product imported from China in 55 instances and higher in 5 instances. Prices for product imported from the Philippines were lower than prices for product imported from India in 18 instances and higher in 42 instances. A summary of price differentials is presented in table E-6.

Table E-1
Stainless steel flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter, January 2015-December 2017

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Table E-2
Stainless steel flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, January 2015-December 2017

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Table E-3
Stainless steel flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, January 2015-December 2017

* * * * *

Table E-4
Stainless steel flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarter, January 2015-December 2017

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Table E-5
Stainless steel flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), by quarter, January 2015-December 2017

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Figure E-1
Stainless steel flanges: Weighted-average prices and quantities of domestic and imported product 1, by quarter, January 2015-December 2017

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Figure E-2
Stainless steel flanges: Weighted-average prices and quantities of domestic and imported product 2, by quarter, January 2015-December 2017

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Figure E-3
Stainless steel flanges: Weighted-average prices and quantities of domestic and imported product 3, by quarter, January 2015-December 2017

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Figure E-4
Stainless steel flanges: Weighted-average prices and quantities of domestic and imported product 4, by quarter, January 2015-December 2017

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Figure E-5
Stainless steel flanges: Weighted-average prices and quantities of domestic and imported product 5, by quarter, January 2015-December 2017

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Table E-6
Stainless steel flanges: Summary of underselling/(overselling), by country, January 2015-December 2017

Comparison	Total number of comparisons	Nonsubject lower than the comparison source		Nonsubject higher than the comparison source	
		Number of quarters	Quantity (pieces)	Number of quarters	Quantity (pieces)
Nonsubject vs United States:					
Philippines vs. United States (Integrated only)	57	57	***	---	---
Philippines vs. United States (Integrated + Finishers)	60	60	***	---	---
Nonsubject vs subject countries:					
Philippines vs. China	60	55	***	5	***
Philippines vs. India	60	18	***	42	***
Philippines vs. Subject (total)	60	23	***	37	***

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

