Finished Carbon Steel Flanges from Spain

Investigation No. 731-TA-1333 (Final)

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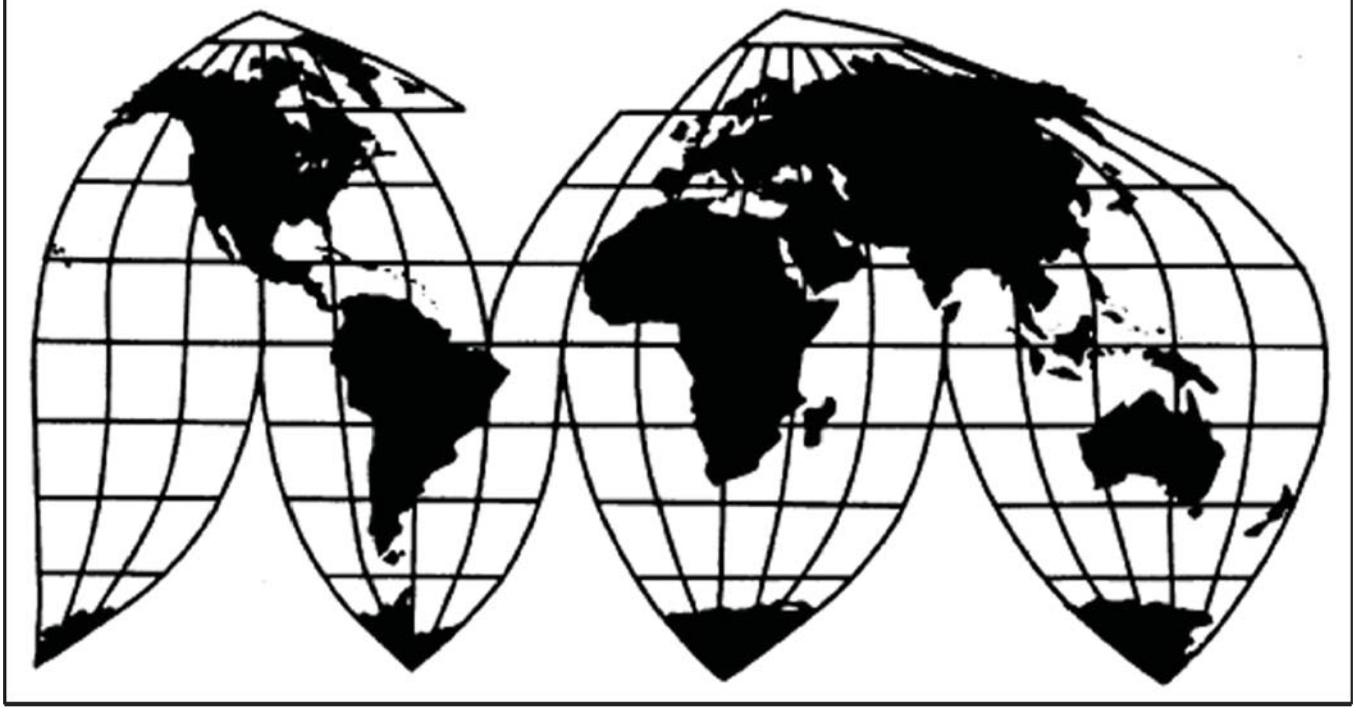
U.S. International Trade Commission



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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-1333 (Final)

Finished Carbon Steel Flanges from Spain

DETERMINATION

On the basis of the record[1] developed in the subject investigation, the United States International Trade Commission ("Commission") determines,[2] pursuant to the Tariff Act of 1930 ("the Act"), that an industry in the United States is materially injured by reason of imports of finished carbon steel flanges from Spain, provided for in subheading 7307.91.50 of the Harmonized Tariff Schedule of the United States, that have been found by the Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV").

BACKGROUND

The Commission, pursuant to section 735(b) of the Act (19 U.S.C. 1673d(b)), instituted this investigation effective June 30, 2016, following receipt of a petition filed with the Commission and Commerce by Weldbend Corporation, Argo, Illinois and Boltex Mfg. Co., L.P., Houston, Texas. The final phase of this investigation was scheduled by the Commission following notification of a preliminary determination by Commerce that imports of finished carbon steel flanges from Spain were sold at LTFV within the meaning of 733(b) of the Act (19 U.S.C. 1673b(b)). Notice of the scheduling of the final phase of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on February 17, 2017 (82 FR 11056). The hearing was held in Washington, DC, on April 25, 2017, and all persons who requested the opportunity were permitted to appear in person or by counsel.

The Commission made this determination pursuant to section 735(b) of the Act (19 U.S.C. 1673d(b)). It completed and filed its determination in this investigation on June 7, 2017. The views of the Commission are contained in USITC Publication 4696 (June 2017), entitled *Finished Carbon Steel Flanges from Spain: Investigation No. 731-TA-1333 (Final)*.

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[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] Commissioner F. Scott Kieff did not participate in the vote.

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 finished carbon steel flanges ("flanges") from Spain found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value.[1]

I. Background

On June 30, 2016, Weldbend Corporation ("Weldbend") and Boltex Mfg. Co. L.P. ("Boltex") (collectively "Petitioners"), domestic producers of flanges, filed the petitions in these investigations.[2] Petitioners appeared at the hearing and submitted prehearing and posthearing briefs.

One respondent group participated actively in the final phase of these investigations. Representatives and counsel for Forgital USA, Inc., an importer of subject merchandise, and Forgital S.p.A., a producer of subject merchandise from Italy (collectively "Forgital"), appeared at the hearing and submitted prehearing and posthearing briefs.

U.S. industry data are based on the questionnaire responses from ten domestic producers that accounted for approximately *** percent of domestic production of flanges in 2016. U.S. import data are based on official Commerce import statistics and from questionnaire responses of 26 U.S. importers of flanges from India, Italy, and Spain over the 2014-2016 period of investigation ("POI"), which accounted for 69.6 percent of subject imports from India in 2016, 24.1 percent of subject imports from Italy in 2016, and 39.5 percent of subject imports from Spain in 2016. Foreign industry data are based on questionnaire responses from twelve Indian firms, five Italian firms, and one Spanish firm. These firms' 2016 exports to the United States were equivalent to 64.3 percent of subject imports from India, *** percent of subject imports from Italy, and *** percent of subject imports from Spain.[3]

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."[4] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the

[1] Commissioner Kieff did not participate in the vote in this investigation.

[2] The petitions concerned flanges from India, Italy, and Spain. Commerce has not yet issued its final determinations in its investigations of flanges from India and Italy. The briefing and hearing described below concerned the Commission's final phase investigations with respect to flanges from all three subject countries.

[3] Confidential Report (CR) at I-6 – I-7; Public Report (PR) at I-5.

[4] 19 U.S.C. § 1677(4)(A).

"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."[5] 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."[6]

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.[7] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[8] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[9] Although the Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized or sold at less than fair value,[10] the Commission determines what domestic product is like the imported articles Commerce has identified.[11]

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[5] 19 U.S.C. § 1677(4)(A).

[6] 19 U.S.C. § 1677(10).

[7] *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).

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

[9] *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.").

[10] *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).

[11] *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).

B. Product Description

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

> The scope of this investigation covers finished carbon steel flanges. Finished carbon steel flanges differ from unfinished carbon steel flanges (also known as carbon steel flange forgings) in that they have undergone further processing after forging, including, but not limited to, beveling, bore threading, center or step boring, face machining, taper boring, machining ends or surfaces, drilling bolt holes, and/or de-burring or shot blasting. Any one of these post-forging processes suffices to render the forging into a finished carbon steel flange for purposes of these investigations. However, mere heat treatment of a carbon steel flange forging (without any other further processing after forging) does not render the forging into a finished carbon steel flange for purposes of this investigation.
>
> While these finished carbon steel flanges are generally manufactured to specification ASME B16.5 or ASME B16.47 series A or series 8, the scope is not limited to flanges produced under those specifications. All types of finished carbon steel flanges are included in the scope regardless of pipe size (which may or may not be expressed in inches of nominal pipe size), pressure class (usually, but not necessarily, expressed in pounds of pressure, e.g., 150, 300, 400, 600, 900, 1500, 2500, etc.), type of face (e.g., flat face, full face, raised face, etc.), configuration (e.g., weld neck, slip on, socket weld, lap joint, threaded, etc.), wall thickness (usually, but not necessarily, expressed in inches), normalization, or whether or not heat treated. These carbon steel flanges either meet or exceed the requirements of the ASTM A105, ASTM A694, ASTM A181, ASTM A350 and ASTM A707 standards (or comparable foreign specifications). The scope includes any flanges produced to the above-referenced ASTM standards as currently stated or as may be amended. The term "carbon steel" under this scope is steel in which:
>
> (a) Iron predominates, by weight, over each of the other contained elements:
>
> (b) The carbon content is 2 percent or less, by weight; and
>
> (c) none of the elements listed below exceeds the quantity, by weight, as indicated:

(i) 0.87 percent of aluminum;
(ii) 0.0105 percent of boron;
(iii) 10.10 percent of chromium;
(iv) 1.55 percent of columbium;
(v) 3.10 percent of copper;
(vi) 0.38 percent of lead;
(vii) 3.04 percent of manganese;
(viii) 2.05 percent of molybdenum;
(ix) 20.15 percent of nickel;
(x) 1.55 percent of niobium;
(xi) 0.20 percent of nitrogen;
(xii) 0.21 percent of phosphorus;
(xiii) 3.10 percent of silicon;
(xiv) 0.21 percent of sulfur;
(xv) 1.05 percent of titanium;
(xvi) 4.06 percent of tungsten;
(xvii) 0.53 percent of vanadium; or
(xviii) 0.015 percent of zirconium.

Finished carbon steel flanges are currently classified under subheadings 7307.91.5010 and 7307.91.5050 of the Harmonized Tariff Schedule of the United States (HTSUS). They may also be entered under HTSUS subheadings 7307.91.5030 and 7307.91.5070. The HTSUS subheadings are provided for convenience and customs purposes; the written description of the scope is dispositive.[12]

Finished carbon steel flanges are used for connecting pipes, valves, pumps, and other equipment to form a piping system. They provide easy access for cleaning, inspection, or modification.[13]

C. Arguments of the Parties

Forgital argues that the Commission should define two separate domestic like products consisting of "standard" flanges and "specialized and custom" flanges.[14] Forgital contends that there is a clear dividing line between the flanges Petitioners produce and the flanges that

[12] *Finished Carbon Steel Flanges from Spain: Final Determination of Sales at Less Than Fair Value*, 82 Fed. Reg. 18108, 18109-10 (April 17, 2017).

[13] CR at I-14; PR at I-11.

[14] *See generally* Forgital's Posthearing Br. and Forgital's Prehearing Br.

Forgital imports. Specifically, Forgital contends that the flanges it imports include the following technical specifications and limitations:

1. They are not manufactured from any of the following materials: ASTM A105, ASTM A694, ASTM A181, or ASTM A350.
2. They have a metallurgy that must meet the weight percentage limitations defined for the following elements:
    a. Arsenic (As) – 0.010 maximum
    b. Antimony (Sb) – 0.010 maximum
    c. Tin (Sn) – 0.010 maximum
3. They are Ultrasonic Tested on all surfaces and conform to SAE-AMS-STD-2154 Class A.[15]

Forgital contends that U.S. producer *** is the only known domestic producer that produces specialized and custom flanges that are like or most similar to Forgital's specialized and custom flanges.[16]

Petitioners argue that the Commission should continue to define the domestic like product as it did in the preliminary determinations, finished carbon steel flanges.[17] Moreover, Petitioners challenge the timeliness of Forgital's request for a separate domestic like product consisting of specialized and custom flanges. They claim that the issue is being raised too late in these investigations and argue that there is insufficient record evidence to show that there is a domestically produced product meeting the specifications described in Forgital's definition. Moreover, Petitioners observe that interested parties did not have sufficient opportunity to comment on the domestic like product issues raised by Forgital and market participants were not given the opportunity to submit questionnaire responses on any specialized and custom flanges operations that they may perform.[18]

D. Domestic Like Product Analysis

Based on the record, we define a single domestic like product consisting of flanges, coextensive with the scope of these investigations.

As a threshold matter, Forgital's argument is untimely because Forgital failed to raise it during the Commission's designated comment period on the draft questionnaires. Commission rules state that, unless a request for collection of additional information is submitted in a draft questionnaire, the Commission will "disregard subsequent requests for collection of new information absent a showing that there is a compelling need for the information and that the information could not have been requested in the comments on the draft questionnaires."[19]

[15] Forgital's Posthearing Br. at 2.
[16] Forgital's Posthearing Br. at 14-15; Forgital's Prehearing Br. at 7.
[17] *See generally* Petitioners' Posthearing Br.; Petitioners' Prehearing Br. at 3.
[18] Petitioners' Posthearing Br. at 6-7.
[19] 19 C.F.R. § 207.20(b).

Even if Forgital could demonstrate that there was good cause for its not submitting comments on the draft questionnaires, it still did not make a request for data collection in an expeditious manner. Although Forgital initially indicated it would argue for a separate domestic like product definition in its prehearing brief, it did not proffer a proposed definition that could serve as a basis for data collection until its posthearing brief. As a result, the Commission was deprived of an opportunity to collect information in a timely manner, and the parties and other participants in these proceedings were deprived of any meaningful opportunity to address this issue. Consequently, we reject Forgital's argument on the basis of untimeliness.

Moreover, Forgital's proposed definition of a separate domestic like product was not amenable to data collection that would allow the Commission to determine if there was domestic production of its proposed like product. According to Forgital, it developed the criteria for its proposed separate like product definition based on the product that it imports from Italy, with an eye towards enforcement by U.S. Customs and Border Protection.[20] As such, Forgital's definition was not based on a domestically produced product, and it is unclear whether any U.S. producer manufactures the type of flanges identified by Forgital's criteria.[21] The fact that there is no indication that attempting to collect data on domestic production under Forgital's proposed definition of a separate domestic like product would have yielded meaningful information provides a further basis for rejecting Forgital's position and declining to reach the merits of its like product argument.[22]

We consequently define a single domestic like product coextensive with the scope of these investigations.

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."[23] In defining the domestic

[20] Forgital's Posthearing Br. at 3. This is more akin to a scope exclusion or a request for a scope ruling. As discussed above, the Commission may not modify the scope definition; as such, any request regarding a scope exclusion or a ruling is appropriately directed to Commerce. *Cf.* Hearing Tr. at 119-21 (Hanson).

[21] Forgital contends that *** is the sole known U.S. producer that produces flanges that are most similar to those that Forgital makes. Forgital's Final Comments at 2. ***, however, only indicated that ***. ***, email message to USITC Staff, EDIS No. ***; CR at I-24; PR at I-18 Thus, the record does not support that there is domestic production of flanges meeting Forgital's criteria. We also do not find the fact that *** to be probative of whether *** produces flanges that are uniquely similar to those that Forgital produces. Moreover, there is evidence on the record that other domestic producers produce flanges that deviate from basic ASTM standards in accordance with end user specifications. *See* Staff Field Notes, EDIS Doc. 606175.

[22] Indeed, any analysis of Forgital's arguments would necessarily require accepting its assumption that *** is the sole producer of a product similar to that which Forgital imports, which, as described above, is not supported in the record in these investigations.

[23] 19 U.S.C. § 1677(4)(A).

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

The only issue that arises in these investigations with respect to the definition of the domestic industry is whether any producers should be excluded under the related parties provision, 19 U.S.C. § 1677(4)(B). 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.[24] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[25] No party advocated the exclusion of any domestic producer as a related party, although Petitioners do not oppose the exclusion of ***.[26]

One domestic producer, ***, meets the statutory definition of a related party, because it imported subject merchandise during the POI.[27] *** was the *** largest of the ten domestic producers that responded to the Commission's questionnaires in the final phase of the investigations, accounting for *** percent of the total domestic production of flanges in 2016.[28]

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[24] *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).

[25] 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.

[26] Petitioners acknowledge that ***; however, they argue that the Commission's injury analysis would not change regardless of whether *** is considered part of the domestic industry. Petitioners' Prehearing Br. at 3-4.

[27] CR/PR at Table III-8. The record indicates that two other domestic producers may be related parties by virtue of their affiliations with exporters and importers of the subject merchandise. *** is affiliated with ***, an exporter of the subject merchandise in Italy. *** is affiliated with ***, an exporter of the subject merchandise in Italy and a U.S. importer. CR/PR at Table III-2. The record does not show whether the requisite control relationship exists to qualify these U.S. producers as related parties. Assuming *arguendo* that the requisite control relationships exist, appropriate circumstances would not exist to exclude these producers from the domestic industry. In the case of each company, the *** levels of the exports from Italy by the affiliated export/importer indicate that each producer's primary interest is in domestic production. *See* EDIS Doc. No. 611612.

[28] CR/PR at Table III-1.

It imported the following quantities of subject merchandise *** during the POI: ***.[29] *** explained that it imported subject merchandise ***.[30] *** the petitions.[31]

We find appropriate circumstances exist to exclude *** from the domestic industry as a related party. In 2015 and 2016, the ***. *** acknowledged that it ***.[32] ***'s production capacity ***.[33] Consequently, we find that appropriate circumstances exist to exclude *** from the domestic industry as a related party. Moreover, because ***, its exclusion from the domestic industry does not significantly alter our analysis.

In light of our definition of the domestic like product, we define one domestic industry consisting of all domestic producers of flanges, except ***, which we exclude as a related party.

IV. Cumulation[34]

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:

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

[30] CR at III-13; PR at III-8.

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

[32] CR at III-13; PR at III-8. *** also indicated that it imported subject merchandise due to ***. *Id.*

[33] CR/PR at Table III-4.

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

Subject imports from Spain accounted for 11.3 percent of the total quantity of imports of flanges in the twelve months preceding the filing of the petitions (June 2015 through May 2016). CR at IV-11; PR at IV-8. Accordingly, we find that subject imports from Spain are not negligible.

(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.[35]

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.[36] Only a "reasonable overlap" of competition is required.[37]

Petitioners argue that subject imports should be cumulated because the petitions were filed on the same day and there is a reasonable overlap in competition among imports from all subject countries and the domestic like product. They contend that subject imports from India, Italy, and Spain and the domestic like product are highly interchangeable because they are standardized in terms of ASTM and ASME specifications, size, type, pressure ratings, and materials. Subject imports from all three subject countries and the domestic like product are sold in all geographic markets in the United States, according to Petitioners. Subject imports and the domestic like product also are sold in the same channels of distribution, primarily to distributors. Finally, Petitioners note that subject imports were sold in all regions of the contiguous United States.[38]

The statutory threshold for cumulation is satisfied in these investigations because Petitioners filed the antidumping and countervailing duty petitions with respect to all three subject countries on the same day, June 30, 2016. As explained below, there is a reasonable

[35] *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).

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

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

[38] Petitioners' Prehearing Br. at 15-16, 18-20. Forgital did not submit any arguments on cumulation. Hearing Tr. at 137 (Hanson).

overlap of competition among the domestic like product and imports from all three subject sources and between imports from different subject sources.[39]

Fungibility. Finished carbon steel flanges, regardless of source, are generally produced to the same specifications.[40] A majority of responding domestic producers, importers, and purchasers reported that subject imports from the subject countries are "always" or "frequently" used interchangeably with each other and with the domestic like product.[41] Purchasers generally reported that imports from each subject country were comparable to both the domestic like product and imports from each other subject country with respect to a majority of non-price factors; the principal exception was whether subject imports were on approved manufacturers lists (AMLs), for which purchasers found subject imports from India inferior to both the domestic like product and subject imports from Italy and Spain.[42]

The record in the final phase of these investigations is mixed in terms of the extent to which fungibility may be limited by the use of AMLs by some end users and distributors. On the one hand, a majority of U.S. producers, importers, and purchasers reported that flanges on AMLs were only sometimes or never interchangeable with flanges not on AMLs.[43]

On the other hand, the record shows that domestically produced flanges and flanges from all subject sources, including India, are included on various AMLs.[44] Furthermore, Petitioners and a distributor appearing at the hearing testified that distributors and end users frequently and increasingly deviate from AMLs for price reasons.[45] Other record evidence tends to corroborate this testimony. Indeed, although purchasers reported that subject imports from India were inferior to domestically produced flanges in terms of AMLs, 15 of 18 purchasers stated that they had purchased subject imports from India instead of domestically produced flanges, and 14 reported that price was the primary reason for their decision to

[39] None of the statutory exceptions to cumulation applies. We observe that these investigations involve preliminary or final dumping findings concerning imports from three subject countries but that only subject imports from India are subject to a countervailing duty investigation. We have previously explained why we are continuing our longstanding practice of cross-cumulating dumped and subsidized imports. *Polyethylene Terephthalate Resin from Canada, China, India, and Oman*, Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), USITC Pub. 4604 at 9-11 (Apr. 2016).

[40] CR at I-18, IV-12 – IV-13; PR at I-14 – I-15, IV-8 – IV-9.

[41] CR/PR at Table II-11.

[42] With respect to 16 non-price purchasing factors, in comparisons with the domestic like product, pluralities or majorities of purchasers found subject imports from India comparable in 13 factors, and subject imports from Italy and Spain comparable in all 16 factors. In comparisons with subject imports from India, purchasers found subject imports from both Italy and Spain comparable in 14 of the factors. Purchasers found subject imports from Italy and Spain comparable in all 16 factors. CR/PR at Table II-10.

[43] CR/PR at Table II-5.

[44] CR/PR at Appendix D.

[45] Hearing Tr. at 41-44 (Bernobich), 43-44 (Coulas), 45 (Mattox).

purchase imported rather than U.S. product.[46] Nine of the 18 purchasers reported purchasing product from all three subject sources.[47]

Accordingly, we find that the record demonstrates that the domestic like product and imports from all three subject countries compete in the same segments of the market to a significant degree, notwithstanding the use of AMLs.

Channels of Distribution. Domestic producers of finished carbon steel flanges and importers of the subject merchandise from each of the subject countries sold mainly to distributors. The channels of distribution for subject imports from India were somewhat different in that a slightly larger minority of those imports (ranging from *** percent to *** percent during the POI) were sold to end users.[48]

Geographic Overlap. U.S. producers and importers from each subject country reported selling flanges in all regions of the contiguous United States.[49]

Simultaneous Presence in Market. Subject imports from each subject country were present in every month of the POI.[50]

Conclusion. The record indicates a reasonable overlap of competition between and among the domestic like product and subject imports from India, Italy, and Spain. Although there are purchaser perceptions that subject imports from India differ from both the domestic like product and subject imports from Italy and Spain as to their presence on AMLs, this does not preclude a finding that subject imports from India are fungible with the domestic like product and other subject imports. To the contrary, subject imports from India serve the same market segments and at least some of the same customers as flanges from domestic and other subject sources. Because the relevant antidumping duty and countervailing duty petitions were filed on the same day, and the record indicates that there is a reasonable overlap of competition between and among subject imports and the domestic like product, we analyze subject imports from India, Italy, and Spain on a cumulated basis for our analysis of 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 finished carbon steel flanges from Spain found by Commerce to be sold in the United States at less than fair value.

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

[46] CR at V-24 – V-25; PR at V-15.
[47] CR/PR at Table V-13.
[48] CR at II-3; PR at II-2.
[49] CR at II-3; PR at II-2; CR/PR at Table II-2.
[50] CR/PR at Table IV-4.

threatened with material injury by reason of the imports under investigation.[51] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[52] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[53] 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.[54] 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."[55]

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,[56] 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.[57] 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.[58]

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[51] 19 U.S.C. §§ 1671d(b), 1673d(b). The Trade Preferences Extension Act of 2015, Pub. L. 114-27, amended the provisions of the Tariff Act pertaining to Commission determinations of material injury and threat of material injury by reason of subject imports in certain respects. We have applied these amendments here.

[52] 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).

[53] 19 U.S.C. § 1677(7)(A).

[54] 19 U.S.C. § 1677(7)(C)(iii).

[55] 19 U.S.C. § 1677(7)(C)(iii).

[56] 19 U.S.C. §§ 1671d(a), 1673d(a).

[57] *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).

[58] 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).

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[59] In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.[60] 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.[61] It is clear that the existence of injury caused by other factors does not compel a negative determination.[62]

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[59] 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.

[60] 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.").

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

[62] *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.").

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports" and the Commission "ensure{s} that it is not attributing injury from other sources to the subject imports."[63] Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[64]

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.[65] 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 {less than fair value ("LTFV")} imports," and requires that the Commission not attribute injury from nonsubject imports or other factors to subject imports.[66] 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

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[63] *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*.

[64] *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.").

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

[66] *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).

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.[67]

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.[68] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[69]

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

Flanges are used in the oil and gas, construction, and petrochemical industries.[70] The oil and gas industry consumes a substantial share of the production of flanges.[71] Declining activity in the oil and gas industry beginning in 2014 led to falling demand for flanges.[72] Apparent U.S. consumption of flanges declined from 385.6 million pounds in 2014 to 363.2 million pounds in 2015 and to 256.7 million pounds in 2016.[73]

2. Supply Considerations

The three sources of supply of flanges in the U.S. market are domestic production, imports of subject merchandise, and imports from nonsubject countries. The ten domestic producers that responded to the Commission's U.S. producers' questionnaires accounted for

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

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

[69] *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.").

[70] CR/PR at II-1.

[71] CR/PR at II-1.

[72] CR at II-11 – II-12; PR at II-7 – II-8; CR/PR at Figure II-1.

[73] CR/PR at Table C-2.

approximately *** percent of U.S. production of flanges during 2016.[74] The domestic industry is comprised of both integrated and non-integrated producers. For example, Boltex produces its own flange forgings, which it processes into finished flanges, or sells to other companies that process flange forgings into finished flanges. ***. Seven other domestic producers purchase flange forgings and process them into finished flanges.[75]

Subject imports held the largest share of apparent U.S. consumption throughout the POI. The market share, by quantity, of cumulated subject imports was 42.5 percent in 2014, 56.7 percent in 2015, and 51.6 percent in 2016.[76] Domestic production held the next largest share of apparent U.S. consumption during the POI, which was *** percent in 2014, *** percent in 2015, and *** percent in 2016.[77] Nonsubject imports were present in the U.S. market throughout the POI, accounting for 14.1 percent of apparent U.S. consumption in 2014, 13.0 percent in 2015, and 13.6 percent in 2016.[78] The main sources of nonsubject imports were China, Korea, and Germany.[79]

3. Substitutability and Other Conditions

Flanges in the United States are generally produced to ASTM material and ASME design standards, and they are typically sold in standard sizes, pressure classes, and facings.[80] In addition to these standard flanges, many producers also make nonstandard or specialty flanges.[81]

As discussed above, a majority of responding domestic producers, importers, and purchasers reported that subject imports from the subject countries are "always" or "frequently" used interchangeably with each other and with the domestic like product.[82] Most U.S. producers reported that, in sales of flanges, differences other than price are only "sometimes" or "never" important and the majority of purchasers reported that non-price differences are "sometimes" important in comparing flanges from the United States and subject countries. In comparisons with domestically produced product, most importers also reported that differences other than price were only "sometimes" or "never" important with respect to flanges from Italy and Spain, but most importers reported that differences other than price were "always" or "frequently" significant with respect to flanges from India.[83]

[74] CR at I-6; PR at I-5.
[75] CR at III-4; PR at II-2.
[76] CR/PR at Table C-2.
[77] CR/PR at Table C-2.
[78] CR/PR at Table C-2.
[79] CR at IV-8; PR at IV-5.
[80] CR/PR at II-1; CR at V-7 n.8; PR at V-4, n.8; Hearing Tr. at 8, 37 (McConkey); 24 (Coulas); 54 (Bernobich); 57 (Mattox).
[81] Hearing Tr. at 54-55, 64, 87 (Bernobich); 57 (Mattox); 65-66 (Coulas).
[82] CR/PR at Table II-11.
[83] CR/PR at Table II-13.

Responding firms indicated that AMLs and "approved" flanges are an important non-price factor in the U.S. flange market.[84]

Although purchasers reported that AMLs and "approved" flanges were important non-price factors in purchasing decisions, they also referenced price to be an important factor more frequently than AMLs or other approvals. Price was listed as a top three purchasing factor by 17 purchasers, compared to five that listed acceptability or approval.[85] Price was also listed as a very important purchasing factor by 15 purchasers, while nine listed oil and gas AMLs and six listed other AMLs to be very important factors.[86] We observe that, although purchasers reported flanges from India to be inferior to the domestic like product and imports from the other subject countries in terms of AMLs,[87] there is record evidence that Indian producers have increasingly been added to AMLs.[88]

We find domestically produced flanges and flanges imported from the subject sources are highly substitutable when sold based on AML requirements, and also highly substitutable when AML designation is not required. The substitutability of flanges produced by AML listed suppliers (domestic or foreign) and those produced by non-AML listed suppliers, however, is variable. As a result, the substitutability of flanges from all sources varies somewhat based on AML designations and the degree that such a designation is required.[89]

Purchasers reported that purchasing U.S. product was not required for 62 percent of their purchases, while 32 percent of their purchases were required by their customers to be domestically produced.[90]

The main raw material used to produce flanges is carbon steel in the form of billets or forgings. The cost of raw materials, as a share of the cost of goods sold ("COGS"), declined from 66.0 percent in 2014 to 58.1 percent in 2016.[91]

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."[92]

Cumulated subject imports were a substantial presence in the U.S. market during the POI. They increased from 164.1 million pounds in 2014 to 206.1 million pounds in 2015 and

[84] CR at II-33; PR at II-23.

[85] CR/PR at Table II-7.

[86] CR/PR at Table II-8. Other factors that were reported by purchasers to be very important include but are not limited to "quality meets industry standards" (18), availability (17), product consistency (15), and reliability of supply (15). *Id.*

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

[88] Hearing Tr. at 58-56 (Mattox). *See also* CR/PR at Appendix D.

[89] CR at II-14 – II-15; PR at II-10.

[90] CR at II-25; PR at II-17.

[91] CR/PR at V-1.

[92] 19 U.S.C. § 1677(7)(C)(i).

then decreased to 132.4 million pounds in 2016.[93] The decline in subject import quantity from 2014 to 2016 occurred while apparent U.S. consumption of flanges declined from 385.6 million pounds in 2014 to 363.2 million pounds in 2015 and to 256.7 million pounds in 2016.[94]

The market share (by quantity) of cumulated subject imports increased from 42.5 percent in 2014 to 56.7 percent in 2015, and then decreased to 51.6 percent in 2016.[95] On an annual basis, the market shares of the cumulated subject imports and the domestic industry moved in opposite directions. As subject imports increased their market share from 2014 to 2015, the domestic industry's market share decreased from *** percent in 2014 to *** percent in 2015; as subject imports lost market share from 2015 to 2016, the domestic industry increased its market share to *** percent.[96] Nonsubject imports experienced much smaller shifts in market share, falling from 14.1 percent in 2014 to 13.0 percent in 2015 and then increasing to 13.6 percent in 2016.[97]

Cumulated subject imports were also substantial relative to domestic production, which declined during the POI.[98] The ratio of cumulated subject imports to domestic production was *** percent in 2014, *** percent in 2015, and *** percent in 2016.[99]

On the basis of the foregoing, we find that the volume of cumulated subject imports is significant both in absolute terms as well as relative to consumption and production in the United States.

D. Price Effects of the Subject Imports

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

> (I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and
>
> (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.[100]

[93] CR/PR at Table C-2.

[94] CR/PR at Table C-2.

[95] CR/PR at Table C-2.

[96] CR/PR at Table C-2. The market share of excluded domestic producer *** steadily declined from *** percent in 2014 to *** percent in 2015 and to *** percent in 2016. *Id.*

[97] CR/PR at Table C-2.

[98] CR/PR at Table C-2. Domestic industry production was *** pounds in 2014, *** pounds in 2015, and *** pounds in 2016. *Id.*

[99] Derived from CR/PR at Table IV-2 and ***'s Domestic Producer Questionnaire Response.

[100] 19 U.S.C. § 1677(7)(C)(ii).

As discussed above, the record indicates that domestically produced flanges and flanges imported from the subject sources are highly substitutable when sold based on AML requirements and when AML designation is not required, but the substitutability of flanges produced by AML listed suppliers (domestic or foreign) and those produced by non-AML listed suppliers is variable. The record also shows that price is an important factor in purchasing decisions.

The Commission collected quarterly pricing data on six flange products.[101] Seven U.S. producers and fifteen importers provided usable pricing data.[102]

The pricing data show that subject imports undersold the domestic like product in 190 out of 214 quarterly comparisons.[103] The margins of underselling ranged from *** to 50.4 percent.[104] There were *** pieces of subject imports in underselling observations, and *** pieces of subject imports in overselling observations.[105] Given the widespread underselling and the fact that price is an important consideration in purchasing decisions, we find the underselling to be significant.

This underselling allowed subject imports to obtain sales and to increase their market share at the expense of the domestic industry, particularly from 2014 to 2015. As discussed above, from 2014 to 2015, subject imports' market share rose from 42.5 percent to 56.7 percent, while the domestic industry's market share decreased from *** percent to *** percent.[106] Moreover, almost all responding purchasers reported that they had purchased subject imports instead of flanges from U.S. producers since 2014; all reported that prices for subject imports from India were lower than the domestic like product, and most reported that price was the primary reason for shifting purchases.[107]

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[101] The pricing products were: Product 1 – 3 inch, 150 class, Raised Face, Weld neck standard flange (3 150 WN STD); Product 2 – 4 inch, 150 class, Raised Face, Weld neck standard flange (4 150 WN STD); Product 3 – 6 inch, 150 class, Raised Face, Weld neck standard flange (6 150 WN STD); Product 4 – 16 inch, 150 class, Raised Face, Weld neck standard flange (16 150 WN STD); Product 5 – 6 inch, 150 class, Raised Face, Slip on standard flange (6 150 RF Slip on); and Product 6 – 2 inch, 150 class, Raised Face, Threaded standard flange (2 150 RF THD). CR at V-6 – V-7; PR at V-4.

[102] CR/PR at V-1. *** was one of the U.S. producers that provided usable pricing data. However, because we have excluded it from the domestic industry, we also excluded its information from the analysis below. As a percentage of the value of U.S. commercial shipments, the pricing data used in the analysis accounted for approximately *** percent for the domestic industry, 15.2 percent for subject imports from India, 6.4 percent of subject imports from Italy, and 7.4 percent for subject imports from Spain. Derived from CR at Tables V-3 – V-8 & C-2 and ***'s Domestic Producer Questionnaire Response.

[103] Derived from CR/PR at Tables V-3 – V-9 and ***'s Domestic Producer Questionnaire Response.

[104] Derived from CR/PR at Tables V-3 – V-9 and ***'s Domestic Producer Questionnaire Response.

[105] Derived from CR/PR at Tables V-3 – V-9 and ***'s Domestic Producer Questionnaire Response.

[106] CR/PR at Table C-2.

[107] CR at V-25 – V-26; PR at V-14. Specifically, 15 of 18 responding purchasers reported that they had purchased subject imports from India instead of flanges from U.S. producers since 2014; all 15 reported that prices for subject imports from India were lower than the domestic like product, and 14 (Continued...)

We further find that subject imports depressed prices for the domestic like product to a significant degree. Prices decreased between the first quarter of 2014 and the fourth quarter of 2016 for all six products from the United States and all three subject countries except for the prices of product 1 from India, which increased by 2.6 percent.[108] Price declines for the domestically produced flanges ranged from *** to *** percent while import price declines ranged from 3.7 to 19.0 percent for India, *** to *** percent for Italy, and *** to *** percent for Spain.[109] The majority of U.S. price declines across all pricing products occurred in 2016.[110]

Although we recognize that other factors may have contributed to the downward trend in prices, the record also indicates that subject imports were responsible in substantial part for declines in the prices of the domestic like product. Raw material costs declined overall during the POI, but the unit value of total net sales decreased by a substantially greater amount.[111] Although other metrics indicate that raw material prices fell more rapidly than domestic prices for flanges, the record contains only limited evidence that price trends for flanges are linked to trends in raw material prices.[112] Moreover, the record shows that the domestic industry reduced its prices twice in 2016 specifically to gain back market share from subject imports.[113] As described above, these efforts appear to have been at least partially successful as the domestic industry's market share increased in 2016, notwithstanding the decline in demand.[114] Furthermore, 10 out of 17 responding purchasers reported that U.S. producers had reduced prices in order to compete with lower-priced imports from subject countries.[115]

Accordingly, in light of the pervasive underselling, the record evidence demonstrating that the domestic industry reduced prices to compete with lower-priced subject imports, and the fact that the domestic industry was able recapture some market share in 2016, we find that

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(…Continued)
reported that price was the primary reason for shifting purchases. Eleven purchasers reported that they had purchased subject imports from Italy instead of flanges from U.S. producers since 2014; all 11 reported that prices for subject imports from Italy were lower than the domestic like product, and nine reported that price was the primary reason for shifting purchases. Eleven purchasers reported that they had purchased subject imports from Spain instead of flanges from U.S. producers since 2014; all 11 reported that prices for subject imports from Spain were lower than the domestic like product, and nine reported that price was the primary reason for shifting purchases. *Id.*

[108] CR at V-20; PR at V-11.

[109] Derived from CR at V-20; PR at V-11; CR/PR at Table V-9 and ***'s Domestic Producer Questionnaire Response.

[110] CR at V-20; PR at V-11.

[111] CR/PR at Tables VI-1 & VI-2. The unit value of total net sales decreased overall from $1,700.00 in 2014 to $1,318.00 in 2016, a change of $382.00, while unit raw material costs decreased overall from $771.00 in 2014 to $648, a change of $124.00. *Id.*

[112] CR/PR at Figures V-1, 2-7. Although several firms reported that the price of flanges fell as the price of steel declined, they did not indicate that there was a direct causal relationship between these prices. CR/PR at V-1.

[113] Hearing Tr. at 16-17, 78 (Bernobich).

[114] CR/PR at Table C-2.

[115] CR at V-28; PR at V-16; CR/PR at Table V-14.

the decline in prices for domestically produced product was due, in significant part, to subject imports.

We find that underselling by the subject imports was significant, and that the significant volume of low-priced subject imports depressed domestic prices to a significant degree. We therefore conclude that the subject imports had significant price effects.

E. Impact of the Subject Imports[116]

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."[117] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debts, research and development, and factors affecting domestic prices. No single factor is dispositive and all relevant factors are considered "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[118]

Most of the domestic industry's performance indicators eroded throughout the POI. The domestic industry's production declined from *** pounds in 2014 to *** pounds in 2015 and to *** pounds in 2016.[119] By contrast, its production capacity increased from *** pounds in 2014 to *** pounds in 2015 and to *** pounds in 2016.[120] Capacity utilization declined from

[116] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final determination, Commerce found dumping margins ranging from 18.81 percent to 24.43 percent for subject imports from Spain. 82 Fed. Reg. 18108, 18109 (Apr. 17, 2017). For the remaining investigations we refer, as the statute instructs, to Commerce's preliminary margins. *See* 19 U.S.C. § 1677(35)(C)(ii). In its preliminary determinations, Commerce reported dumping margins ranging from 8.58 percent to 12.56 percent for subject imports from India, 82 Fed. Reg. 9719, 9720 (Feb. 8, 2017), and from 79.17 percent to 204.53 percent for subject imports from Italy, 82 Fed. Reg. 9711, 9712 (Feb. 8, 2017). We take into account in our analysis the fact that Commerce has made preliminary or final findings that all subject producers in India, Italy, and Spain are selling subject imports in the United States at less than fair value. In addition to this consideration, our impact analysis has considered other factors affecting domestic prices. Our analysis of the significant price effects of subject imports, described in both the price effects discussion and below, is particularly probative to an assessment of the impact of the subject imports.

[117] 19 U.S.C. § 1677(7)(C)(iii); *see also* SAA at 851 and 885 ("In material injury determinations, the Commission considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they also may demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports.").

[118] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

[119] CR/PR at Table C-2.

[120] CR/PR at Tables III-4 & C-2.

*** percent in 2014 to *** percent in 2015 to *** percent in 2016.[121] The domestic industry's U.S. shipments declined from *** pounds in 2014 to *** pounds in 2015 and to *** pounds in 2016.[122] The domestic industry's share of apparent U.S. consumption declined from *** percent in 2014 to *** percent in 2015, and then increased to *** percent in 2016, a figure below that of 2014.[123] Ending inventory quantities declined from *** pounds in 2014 to *** pounds in 2015 and to *** pounds in 2016.[124]

The number of production related workers in the domestic industry declined from *** in 2014 to *** in 2015 and to *** in 2016.[125] Hours worked declined from *** in 2014 to *** in 2015 and to *** in 2016.[126] Wages paid declined from $*** in 2014 to $*** in 2015 and to $*** in 2016.[127] Productivity fell overall, declining from *** pounds per hour in 2014 to *** pounds per hour in 2015 before increasing to *** pounds per hour in 2016.[128]

There were substantial declines in the domestic industry's financial performance during the POI. Sales revenues, due to declining output and depressed prices, declined by *** percent from 2014 to 2016, falling from *** in 2014 to *** in 2015 and *** in 2016. [129] The domestic industry's ratio of cost of goods sold to net sales increased from *** percent in 2014 to *** percent in 2015 to *** percent in 2016.[130] Its gross profit declined from $*** in 2014 to $*** in 2015 and to $*** in 2016.[131] Operating income similarly declined from $*** in 2014 to $*** in 2015 and further declined in 2016 to ***.[132] Operating income margins declined from *** percent in 2014 to *** percent in 2015 and to *** percent in 2016.[133] Total net income declined from $*** in 2014 to $*** in 2015 and further declined to ***.[134] Cash flow declined from $*** in 2014 to $*** in 2015 and to $*** in 2016.[135] The domestic industry's capital expenditures declined from $*** in 2015 to $*** in 2015 and to $*** in 2016.[136]

As discussed above, we have found that the volume of cumulated subject imports was significant during the POI. Additionally, this significant volume of subject imports significantly undersold the domestic like product and took sales and market share from the domestic

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[121] CR/PR at Table C-2.

[122] CR/PR at Table C-2.

[123] CR/PR at Table C-2.

[124] CR/PR at Table C-2.

[125] CR/PR at Table C-2.

[126] CR/PR at Table C-2.

[127] CR/PR at Table-C-2.

[128] CR/PR at Table C-2.

[129] CR/PR at Tables VI-4 & C-2. Its net sales average unit value initially increased slightly from $*** in 2014 to $*** in 2015 before falling to $*** in 2016. *Id*.

[130] CR/PR at Table C-2.

[131] CR/PR at Tables VI-1, VI-4, & C-2.

[132] CR/PR at Tables VI-1, VI-4, & C-2.

[133] CR/PR at Tables VI-4, & C-2.

[134] CR/PR at Tables VI-1, VI-4, & C-2.

[135] CR/PR at Table VI-1.

[136] CR/PR at Table VI-5 & C-2. *** reported research and development expenses. CR at VI-15, PR at VI- 7.

industry, particularly in 2015. Cumulated subject imports also depressed U.S. prices to a significant degree; reduced prices allowed the domestic industry in 2016 to recoup some, although not all, the market share it lost the prior year to the subject imports. As a result of the lost sales, lost market share, and declining prices caused by the subject imports, the domestic industry's output, prices, and revenues were lower than they would have been otherwise. Indeed, almost all of the domestic industry's performance indicators declined over the POI. Consequently, we find that the significant volume of subject imports, at prices that consistently undersold the domestic like product, had a significant impact on the domestic industry.

We have also considered the role of nonsubject imports so as not to attribute injury from them to subject imports. As discussed above, nonsubject imports occupied a significantly smaller share of the market than subject imports throughout the POI.[137] The volume of nonsubject imports declined throughout the POI.[138] Moreover, as discussed above, although both the domestic industry and nonsubject imports lost market share to subject imports from 2014 to 2015 and both regained some market share in 2016, nonsubject imports did so to a lesser degree, and their market share fluctuated only within a narrow range.[139] Accordingly, nonsubject imports do not explain the domestic industry's loss of market share during the POI.

We have also considered the role of declining demand throughout the POI. As explained above, the decline in demand cannot account for the impact attributable to the domestic industry's loss of market share over the POI, nor can it fully explain the declines in prices.

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 finished carbon steel flanges from Spain found by Commerce to be sold in the United States at less than fair value.

[137] CR/PR at Table C-2.

[138] Nonsubject imports decreased from 54.4 million pounds in 2014 to 47.3 million pounds in 2015 and to 34.9 million pounds in 2016. CR/PR at Table C-2.

[139] Nonsubject imports' market share was 14.1 percent in 2014, 13.0 percent in 2015, and 13.6 percent in 2016. CR/PR at Table C-2.

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 Weldbend Corporation ("Weldbend"), Argo, Illinois and Boltex Mfg. Co., L.P. ("Boltex"), Houston, Texas on June 30, 2016, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized imports of finished carbon steel flanges ("flanges")[1] from India and less-than-fair-value ("LTFV") imports of flanges from India, Italy, and Spain. On November 29, 2016, Commerce preliminarily determined that imports of flanges from India were being subsidized.[2] On February 8, 2017, Commerce preliminarily determined that that imports of flanges from India,[3] Italy,[4] and Spain[5] were being sold in the United States at LTFV. On April 17, 2017, Commerce published its final determination that import of flanges from Spain were being sold in the United States at LTFV.[6] The following tabulation provides information relating to the background of these investigations.[7] [8]

[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] *Finished Carbon Steel Flanges from India: Preliminary Affirmative Countervailing Duty Determination*, 81 FR 85928, November 29, 2016.

[3] *Finished Carbon Steel Flanges from India: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination*, 82 FR 9719, February 8 2017.

[4] *Finished Carbon Steel Flanges from Italy: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination*, 82 FR 9711, February 8, 2017.

[5] *Finished Carbon Steel Flanges from Spain: Preliminary Determination of Sales at Less Than Fair Value*, 82 FR 9723, February 8, 2017.

[6] *Finished Carbon Steel Flanges from Spain: Final Determination of Sales at Less Than Fair Value*, 82 FR 18108, April 17, 2017.

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

[8] Appendix B of this report presents a list of witnesses appearing at the Commission's hearing.

Effective date	Action
June 30, 2016	Petition filed with Commerce and the Commission; institution of the Commission's investigation (81 FR 44328, July 7, 2016)
July 20, 2016	Commerce's notice of initiation (81 FR 49619 and 49625, July 28, 2016)
August 15, 2016	Commission's preliminary determination (81 FR 55482, August 19, 2016)
November 29, 2016	Commerce's preliminary countervailing duty determination (81 FR 85928)
February 8, 2017	Commerce's preliminary antidumping duty determinations (82 FR 9711, 9719, and 9723)
February 8, 2017	Scheduling of final phase of Commission investigation (82 FR 11056, February 17, 2017)
April 17, 2017	Commerce's final antidumping duty determination on Spain (82 FR 18108)
April 25, 2017	Commission's hearing
May 24, 2017	Commission's vote on Spain
June 7, 2017	Commission's views on Spain
June 23, 2017	Scheduled date for Commerce's final determinations on India and Italy
Pending	Scheduled date for the Commission's vote on India and Italy
Pending	Scheduled date for Commission's views on India and Italy

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--[9]

> *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 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—[10]

> *(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 and dumping margins, and domestic like product. *Part II* of this report presents information on

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

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

Flanges are generally used for connecting pipes, valves, pumps, and other equipment to form a piping system, providing easy access for cleaning, inspection, or modification. The leading U.S. producers of flanges are Boltex, Galperti, Inc. ("Galperti"), and Weldbend, while leading subject country producers of flanges include R N Gupta & Company Limited ("R N Gupta") of India,[11] Officine Ambrogio Melesi & C. S.R.L. ("Officine Ambrogio Melesi") of Italy,[12] and Ulma Forja of Spain. The leading U.S. importers of flanges from India are ***; the leading U.S. importers of flanges from Italy are ***; and the leading importers of flanges from Spain are ***. Leading importers of flanges from nonsubject countries (primarily China followed by Korea and Germany) include ***. Purchasers of flanges are primarily distributors serving the oil and gas industry, as well as serving other industries including the pipe, valves, and fittings (PVF) sector, other distributors, and commercial, mechanical, power chemicals, heavy industry, and agriculture applications. The largest responding purchasers of flanges are ***.

Apparent U.S. consumption of flanges totaled approximately 257 million pounds ($253 million) in 2016. Petitioners identified 14 firms believed to produce flanges in the United States, and staff identified an additional seven possible domestic producers of flanges. Responding U.S. producers' U.S. shipments of flanges totaled approximately 89 million pounds ($117 million) in 2016, and accounted for 34.8 percent of apparent U.S. consumption by quantity and 46.3 percent by value. U.S. imports from subject sources totaled approximately 132 million pounds ($95 million) in 2016 and accounted for 51.6 percent of apparent U.S. consumption by quantity and 37.4 percent by value. U.S. imports from nonsubject sources totaled approximately 35 million pounds ($41 million) in 2016 and accounted for 13.6 percent of apparent U.S. consumption by quantity and 16.3 percent by value.

[11] ***.

[12] ***.

SUMMARY DATA AND DATA SOURCES

A summary of data collected in these investigations is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on questionnaire responses of ten firms that accounted for approximately *** percent of U.S. production of flanges during 2016.[13] U.S. imports are based on official Commerce statistics for HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050, except as noted. Twenty-six usable U.S. importer responses were received;[14] these responses accounted for 69.6 percent of U.S. imports of flanges from India, 24.1 percent of U.S. imports from Italy, 39.5 percent of U.S. imports from Spain, 42.2 percent of U.S. imports from all other sources, and 51.9 percent of total U.S. imports in 2016.[15]

Foreign industry data are based on questionnaire responses from twelve Indian firms, five Italian firms, and one Spanish firm. These firms' 2016 exports to the United States were equivalent to 64.3 percent of U.S. imports of flanges from India; *** percent of U.S. imports of flanges from Italy; and *** percent of U.S. imports of flanges from Spain in 2016.[16]

PREVIOUS AND RELATED INVESTIGATIONS

Finished carbon steel flanges, as defined in these investigations, have not been subject to previous antidumping and/or countervailing duty investigations in the United States. However, the Commission conducted a safeguard investigation under section 201 of the Trade Act of 1974 concerning certain steel products, which included carbon and alloy steel flanges.[17] The Commission instituted that investigation following receipt of a request from the Office of the United States Trade Representative ("USTR") on June 22, 2001.[18] On July 26, 2001, the

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[13] The following methodology for U.S. production coverage was proposed by the petitioners (*See* Petition, pp. 3-4 and Exhibit I-15): "Because all finished flanges come from flange forgings, and because all flange forgings are used to make finished flanges, total U.S. production plus total U.S. imports of flange forgings is a reasonable substitute for finished carbon steel flanges." In 2016, Boltex produced *** pounds of flange forgings (*See* Counsel for petitioners, email message to staff, March 27, 2017), Ameriforge produced *** pounds of flange forgings (*See* Ameriforge, email message to staff, March 28, 2017), and U.S. imports of flange forgings imported under HTSUS subheading 7307.91.1000 were 29,014,000 pounds in 2016. ***. In addition, ***. The responding U.S. producers' reported quantity of production of finished flanges in 2016 was 88,047,000 pounds, versus total adjusted flange forging consumption (a proxy for finished flange production) in 2016 of *** pounds.

[14] A twenty-seventh questionnaire response was received from ***, however its data were unusable. ***.

[15] Coverage was derived from the responding U.S. importers' reported quantity of imports in 2016 (57,120,000 pounds from India, 7,602,000 pounds from Italy, 7,406,000 pounds from Spain, and 14,707,000 pounds from all other sources), versus official import statistics (*see* table IV-2).

[16] Coverage was derived from the responding foreign producers' quantity of exports in the United States in 2016 (*see* tables VII-3, VII-8, and VII-11), versus official import statistics (*see* table IV-2).

[17] *Steel, Investigation No. TA-201-73, Volume 1*, USITC Publication 3479 (December 2001).

[18] *Steel,* 66 FR 35267, July 3, 2001.

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.[19] On December 20, 2001, the Commission issued its determinations and remedy recommendations. It reached an affirmative determination with respect to certain steel products, including flanges. It recommended an additional 13 percent *ad valorem* duty on flanges in the first year of relief, to be reduced to a 10 percent *ad valorem* duty in the second year of relief, 7 percent *ad valorem* duty in the third year of relief, and 4 percent *ad valorem* duty in the fourth year of relief. [20] Presidential Proclamation 7529 implemented the safeguard measures, effective March 20, 2002, which were originally intended to last for a period of three years and one day.[21] On December 4, 2003, President Bush terminated the increased tariffs under the safeguard measure.[22]

In addition to the section 201 proceeding, the Commission conducted antidumping duty investigations regarding other flange and fitting products. In February 1994, the Commission determined that an industry in the United States was threatened with material injury by reason of imports of stainless steel flanges from India and Taiwan that Commerce had determined to be sold in the United States at less than fair value. In February 1994, Commerce issued antidumping duty orders on stainless steel flanges from India and Taiwan. In both the Commission's first and second expedited five-year reviews (July 2000 and December 2005), it determined that revocation of the antidumping duty orders on forged stainless steel flanges from India and Taiwan would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[23] 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.[24]

In December 1986, the Commission determined that an industry in the United States was materially injured by reason of imports of carbon steel butt-weld pipe fittings from Brazil and Taiwan that Commerce had determined to be sold in the United States at less than fair value. Subsequently, in January 1987, the Commission made an affirmative material injury determination regarding imports from Japan. In June 1992, the Commission determined that an industry in the United States was materially injured or threatened with material injury by

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[19] *Steel,* 66 FR 44158, August 22, 2001, and *Steel; Correction,* 66 FR 45324, August 28, 2001.

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

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

[22] *Presidential Proclamation 7741 of December 4, 2003, To Provide for the Termination of Action Taken With Regard to Imports of Certain Steel Products,* 68 FR 68483 December 8, 2003.

[23] *Forged Stainless Steel Flanges from India and Taiwan, Investigation Nos. 731-TA-639 and 640 (Second Review)*, USITC Publication 3827, December 2005.

[24] *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.

reason of imports of carbon steel butt-weld pipe fittings from China and Thailand that Commerce had determined to be sold in the United States at less than fair value. In the Commission's first expedited, second full, third expedited, and fourth expedited five-year reviews (December 1999, October 2005, April 2011, and August 2016), it determined that revocation of the antidumping duty orders on carbon steel butt-weld pipe fittings from Brazil, China, Japan, Taiwan, and Thailand would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[25]

NATURE AND EXTENT OF SUBSIDIES AND SALES AT LTFV

Subsidies

On November 29, 2016, Commerce published a notice in the *Federal Register* of its preliminary determination of countervailable subsidies for producers and exporters of flanges from India.[26] Table I-1 presents Commerce's findings of subsidization of flanges in India.

Table I-1
Flanges: Commerce's preliminary and final subsidy determination with respect to imports from India

Firm	Preliminary countervailable subsidy margin (*percent*)	Final countervailable subsidy margin (*percent*)
Bansidhar Chiranjilal	2.76	Pending
Norma (India) Limited	2.76	Pending
R.N. Gupta & Company Limited	3.66	Pending
UMA Shanker Khandelwal & Co.	2.76	Pending
USK Exports Private Limited	2.76	Pending
All others	3.21	Pending

Source: 81 FR 85928, November 29, 2016.

[25] *Carbon Steel Butt-Welded Pipe Fittings from Brazil, China, Japan, Taiwan, and Thailand, Investigation Nos. 731-TA-308-310 and 520-521 (Fourth Review)*, USITC Publication 4628, August 2016.

[26] *Finished Carbon Steel Flanges from India: Preliminary Affirmative Countervailing Duty Determination*, 81 FR 85928, November 29, 2016.

Commerce preliminarily determined the following five government programs in India to be countervailable:[27]

1. Duty Drawback Program
2. Export Promotion of Capital Goods Scheme
3. Merchandise Export from India Scheme
4. Interest Equalization Scheme
5. Status Holder Incentive Scheme

Sales at LTFV

On February 8, 2017, Commerce published a notice in the *Federal Register* of its preliminary determinations of sales at LTFV with respect to imports from India,[28] Italy, [29] and Spain.[30] On April 17, 2017, Commerce published a notice in the *Federal Register* of its final determinations of sales at LTFV with respect to imports from Spain.[31] Table I-2 presents Commerce's dumping margins with respect to imports of flanges from India, Italy, and Spain.

[27] *Department of Commerce, Decision Memorandum for the Preliminary Affirmative Determination: Countervailing Duty Investigation of Finished Carbon Steel Flanges from India*, Inv. No. C-533-872, November 21, 2016.

[28] *Finished Carbon Steel Flanges from India: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination*, 82 FR 9719, February 8 2017.

[29] *Finished Carbon Steel Flanges from Italy: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination*, 82 FR 9711, February 8, 2017.

[30] *Finished Carbon Steel Flanges from Spain: Preliminary Determination of Sales at Less Than Fair Value*, 82 FR 9723, February 8, 2017.

[31] *Finished Carbon Steel Flanges from Spain: Final Determination of Sales at Less Than Fair Value*, 82 FR 18108, April 17, 2017.

Table I-2
Flanges: Commerce's preliminary and final weighted-average LTFV margins with respect to imports from India, Italy, and Spain

Country	Firm	Preliminary dumping margin (*percent*)	Final dumping margin (*percent*)
India	Bansidhar Chiranjilal	8.58	Pending
	Norma (India) Limited	8.58	Pending
	R.N. Gupta & Company Limited	12.56	Pending
	UMA Shanker Khandelwal & Co.	8.58	Pending
	USK Exports Private Limited	8.58	Pending
	All others	10.57	Pending
Italy	Metalfar Prodotti Industriali S.p.A	204.53	Pending
	Officine Ambrogio Melesi & C. S.r.l.	204.53	Pending
	ASFO S.p.A	204.53	Pending
	All others	79.17	Pending
Spain	ULMA Forja, S.Coop	24.43	24.43
	All others	18.81	18.81

Source: 82 FR 9711, 82 FR 9719, and 82 FR 9723, February 8, 2017, and 82 FR 18108, April 17, 2017.

THE SUBJECT MERCHANDISE

Commerce's scope

Commerce has defined the scope of these investigations as follows:[32]

> *The scope of these investigations covers finished carbon steel flanges. Finished carbon steel flanges differ from unfinished carbon steel flanges (also known as carbon steel flange forgings) in that they have undergone further processing after forging, including, but not limited to, beveling, bore threading, center or step boring, face machining, taper boring, machining ends or surfaces, drilling bolt holes, and/or de-burring or shot blasting. Any one of these post-forging processes suffices to render the forging into a finished carbon steel flange for purposes of these investigations. However, mere heat treatment of a carbon steel flange forging (without any other further processing after forging) does not render the forging into a finished carbon steel flange for purposes of these investigations.*

[32] *Finished Carbon Steel Flanges from Spain: Final Determination of Sales at Less Than Fair Value*, 82 FR 18108, April 17, 2017.

While these finished carbon steel flanges are generally manufactured to specification ASME B16.5 or ASME B16.47 series A or series B, the scope is not limited to flanges produced under those specifications. All types of finished carbon steel flanges are included in the scope regardless of pipe size (which may or may not be expressed in inches of nominal pipe size), pressure class (usually, but not necessarily, expressed in pounds of pressure, e.g., 150, 300, 400, 600, 900, 1500, 2500, etc.), type of face (e.g., flat face, full face, raised face, etc.), configuration (e.g., weld neck, slip on, socket weld, lap joint, threaded, etc.), wall thickness (usually, but not necessarily, expressed in inches), normalization, or whether or not heat treated. These carbon steel flanges either meet or exceed the requirements of the ASTM A105, ASTM A694, ASTM A181, ASTM A350 and ASTM A707 standards (or comparable foreign specifications). The scope includes any flanges produced to the above-referenced ASTM standards as currently stated or as may be amended. The term "carbon steel" under this scope is steel in which:

(a) Iron predominates, by weight, over each of the other contained elements:

(b) The carbon content is 2 percent or less, by weight; and

(c) none of the elements listed below exceeds the quantity, by weight, as indicated:

(i) 0.87 percent of aluminum;
(ii) 0.0105 percent of boron;
(iii) 10.10 percent of chromium;
(iv) 1.55 percent of columbium;
(v) 3.10 percent of copper;
(vi) 0.38 percent of lead;
(vii) 3.04 percent of manganese;
(viii) 2.05 percent of molybdenum;
(ix) 20.15 percent of nickel;
(x) 1.55 percent of niobium;
(xi) 0.20 percent of nitrogen;
(xii) 0.21 percent of phosphorus;
(xiii) 3.10 percent of silicon;
(xiv) 0.21 percent of sulfur;
(xv) 1.05 percent of titanium;
(xvi) 4.06 percent of tungsten;
(xvii) 0.53 percent of vanadium; or
(xviii) 0.015 percent of zirconium.

Finished carbon steel flanges are currently classified under subheadings 7307.91.5010 and 7307.91.5050 of the Harmonized Tariff Schedule of the United States (HTSUS). They may also be entered under HTSUS subheadings 7307.91.5030 and 7307.91.5070. The HTSUS subheadings are provided for convenience and customs purposes; the written description of the scope is dispositive.

Tariff treatment[33]

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 statistical reporting numbers 7307.91.5010 and 7307.91.5050 of the Harmonized Tariff Schedule of the United States ("HTS"). The 2017 general rate of duty for subheading 7307.91.50 is 5.5 percent *ad valorem*. However, imports from India under this subheading are eligible for duty-free entry under the Generalized System of Preferences upon proper importer claim. Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

THE PRODUCT

Description and applications[34]

A flange is a product for connecting pipes, valves, pumps and other equipment to form a piping system. It also provides easy access for cleaning, inspection or modification. Flanges are usually welded or screwed to the pipes or other equipment requiring a connection. Flanged joints are made by bolting together two flanges with a gasket between them to provide a seal. The material of a flange is generally determined by the choice of the pipe, as in most cases a flange is of the same material as the pipe. Although the word "flange" generally refers to the actual raised rim or lip of a fitting, many flanged fittings are themselves known as 'flanges.' Flanges are also distinct from 'fittings' because flanges are used for pipe system connections whereas fittings are used when a change of direction or flow is required. Therefore, the two are not interchangeable.[35] The basic types of flanges are described below.[36]

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[33] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

[34] Unless otherwise indicated, information in this section was taken from the petition, pp. 7-11.

[35] Conference transcript, p. 33 (Bernobich).

[36] Illustrations found at JSC Valve website at http://jscvalve.com/up_files/weldneck.jpg, retrieved July 21, 2016; JSC Valve website http://jscvalve.com/pipe/544.html, retrieved March 31, 2017; Triround website at http://triround.com/product-flange%2003.html, retrieved July 19, 2016; Deelat website at http://www.deelat.com/blog/wp-content/uploads/2015/03/threaded-flange.jpg, retrieved July 21, 2016; Iksteelpipe website at http://www.lksteelpipe.com/Content/File_Img/S_Product/small/2015-11-25/, retrieved July 21, 2016.

- Weld neck (also called welding neck) flanges are circumferentially butt welded[37] at the neck of the flange to the pipe. The bores[38] of both pipe and flange match, which reduces turbulence and erosion inside the pipeline. The weld neck is therefore durable in demanding and critical applications, such as high pressure or extreme temperature. The neck, or hub, transmits stresses from the base of the hub to the wall thickness of the pipe at the butt weld, providing important reinforcement of the flange.[39]

- Slip-on flanges are fitted over the pipe. The flange is slipped over the pipe and then fillet welded[40] both inside and outside to provide sufficient strength and prevent leakage. Slip-on flanges are sometimes preferred to welding neck flanges owing to lower cost and easier assembly. They are not typically used in high stress applications because of the low hub and method of attachment.[41]

[37] A butt weld is when two parallel lengths of the same size (whether beveled or unbeveled) are welded together. The two pieces do not overlap. See http://www.weldguru.com/weldtypesandpositions.html for an illustration of various butt joints.

[38] A flange bore is the center hole through which the gas or liquid flows.

[39] Boltex Mfg. Co. at http://www.boltex.com/about-flanges.html, retrieved March 15, 2017 and Maass Global Group website at http://www.maassflange.com/sites/site_40.html, retrieved April 11, 2017.

[40] 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.

[41] Boltex Mfg. Co. at http://www.boltex.com/about-flanges.html, retrieved March 15, 2017 and Maass Global Group website at http://www.maassflange.com/sites/site_41.html, retrieved April 11, 2017.

- A socket-weld flange is similar to a slip-on flange, but the bore is counter-bored to accept pipe. The diameter of the remaining bore is the same as the inside diameter of the pipe. This allows the pipe to slip into the flange but prevents the flange from continuing down the length of the pipe. The flange is attached to the pipe by a fillet weld around the hub of the flange. 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.[42]

- 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 bore is threaded, thus enabling assembly without welding.[43]

- A lap-joint is similar to a slip-on flange, but whereas the slip-on flange has a raised radius on both sides of the bore, a lap-joint has a flat radius on at least one side to accommodate a 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.[44]

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[42] Boltex Mfg. Co. at http://www.boltex.com/about-flanges.html, retrieved March 15, 2017 and Maass Global Group website at http://www.maassflange.com/sites/site_46.html, retrieved April 11, 2017.

[43] Boltex Mfg. Co. at http://www.boltex.com/about-flanges.html, retrieved March 15, 2017 and Palmer Engineering website at http://www.forgedflangesandfittings.com/carbon-steel-forged-flanges/threaded-flanges.html, retrieved April 11, 2017.

[44] Boltex Mfg. Co. at http://www.boltex.com/about-flanges.html, retrieved March 15, 2017 and Palmer Engineering website at http://www.forgedflangesandfittings.com/carbon-steel-forged-flanges/lap-joint-flanges.html, retrieved April 11, 2017.

- 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.[45]

Weld-neck and slip-ons are the most common types of flanges. There are also other types of specialty flanges, however the sales volumes of these specialty flanges are very small relative to the flanges described above. Flanges are produced in a range of sizes from ½ inch to 100 inches in diameter. Flanges that are 24 inches in diameter or less are considered by some U.S. producers to be "commodity" flanges. Integrated producers that forge flanges can make standard and custom sized flanges for customers.[46] Flanges can be differentiated by their facings, number of bolt holes, pressure ratings, and type of material. Flange facings include flat, raised, tongue and groove, or ring joint[47] for creating various connections with pipes. Flanges also typically come with 4 -, 8-, 12- or 16-bolt holes. Additionally, flange pressure classes range from 150 to 2,500, with 150 and 300 being the most common.[48] Lastly, flanges are manufactured in many different types of materials, such as alloy steel, stainless steel, cast iron, aluminum, brass, bronze, plastic, and others in order to match the pipes for connection. Flanges are typically the same material as the system they are connecting. The most common material is carbon steel, produced in accordance with ASTM A105,[49] because of its relatively low cost.[50] Flanges are generally produced in accordance with ASME B16.5 in a number of standard

[45] Boltex Mfg. Co. at http://www.boltex.com/about-flanges.html, retrieved March 15, 2017 and Maass Global Group website at http://www.maassflange.com/sites/site_42.html, retrieved April 11, 2017.

[46] Staff fieldwork and interview with ***.

[47] Ring type joint flanges are used to ensure a leak-proof flange connection at high pressures. A metal ring is compressed into a hexagonal groove on the face of the flange to make a metal on metal seal. All of the described flanges could be modified to be "ring type" with the addition of a groove. Piping Designer website, http://www.piping-designer.com/index.php/disciplines/mechanical/83-stationary-equipment/pipe-flanges/2012-ring-type-joint-flange, retrieved July 21, 2016.

[48] Pressure classes are defined by ASME or other standards-producing organizations and specify pressure ratings for a range of temperatures. Boltex Mfg. Co. at http://www.boltex.com/about-flanges.html, retrieved April 5, 2017.

[49] The U.S. flange market is governed by ASTM standards, but these standards are broad and each end user typically requires its own tighter specifications. Staff fieldwork and interview with ***.

[50] Conference transcript, p. 58 (Bernobich) and p. 59 (McConkey).

dimensions.[51] Functionally, all flanges are used for the same types of applications, connecting pipes and other components, regardless of the industry to which they are sold.

A substantial share of flange production is consumed in the oil and gas industry as connection components for pipes, valves, and pumps. The oil and gas industry, along with the chemical industry, mostly require critical applications of flanges.[52] According to Indian respondents R N Gupta and Norma (India), commercial applications, also referred to as generic applications, are generally building and construction applications and tend to use non-critical flange connections.[53]

Manufacturing processes[54]

Flanges are produced from steel billet or hot-rolled bar by a series of major steps:

1. Production of an unfinished forged flange by a closed-die forging process.
2. Heat treating of the unfinished forging (not required for all flanges).
3. Machine finishing of the flange.
4. Marking, coating, and final inspection.

Only finished flanges are subject to these investigations. Unfinished forged flanges, including heat-treated forged flanges, are nonsubject goods. An integrated producer of finished flanges follows all four steps, whereas a flange finisher begins at step three.

Flanges are made from steel billet, which must be carefully sorted by heat lot number.[55] The steel billet is heated to forging temperature using inductive ovens, after which it is cut in a shearing press. The cut billet piece is then pushed into the forging press where it is located on the blocking station, the proper grain orientation is checked, and the piece is blocked into its pre-forging shape. This blocking operation improves the mechanical properties of the material being forged. The blocked piece is then moved to a set of forging dies where it is shaped to its approximate final appearance. It is then conveyed to the trim press where it receives its final shaping and all excess material is trimmed off the part. For larger forgings, the excess materials

[51] ASME B16.5 is the most commonly used flange specification in the world. It covers weld-neck, slip-on, lap joint, threaded, socket welding, and blind flanges. Boltex Mfg. Co. at: http://www.boltex.com/about-flanges.html, retrieved April 5, 2017.

[52] A situation is considered critical if the area is subject to movement, either from mechanical vibrations or through temperature or pressure expansions and contractions. Butt-welding is mostly used for flanges in critical applications whereas fillet welding or screw connections may be used for non-critical flange connections. Explore the World of Piping website, http://www.wermac.org/flanges/flanges_welding-neck_socket-weld_lap-joint_screwed_blind.html, retrieved July 28, 2016.

[53] Conference transcript, p. 109 (Khandelwar) and p. 134 (Levinson).

[54] Unless otherwise indicated, information in this section was taken from Petition Exhibit I-4.

[55] Heat lot numbers are recorded and verified throughout the entire process to ensure material traceability from steel producer to the final end user.

cut from the inside of the flanges can be used to produce additional, smaller flange forgings in an integrated press line.[56] Once these parts are completely forged, they are loaded into steel containers for controlled still-air cooling and are then sent to post-forging heat treatment.

Post-forging heat treatment is required for certain flanges that must achieve specified mechanical properties or grain orientation to prevent failure during use.[57] During heat treatment, forgings are heated and cooled under controlled conditions to impart desired properties. First, the forgings are stacked on pallets and placed in ovens where they are heated to 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. Some producers operate multiple forging presses simultaneously, producing different sizes and types of flanges with each press.[58]

At this point in the production process, the completed forgings are ready to be transformed into finished carbon steel flanges. The finishing process requires setting up tooling, which includes carbide milling inserts, drilling bits, etc. and is controlled by computer program. This program instructs the machining center to move the tooling and the forging so that the part may be consistently machined. It also warns the operator if the part is out of the dimensions and tolerances set up by the programmer. Each flange goes through a four stage machining process. The face and internal diameter is machined first, then the back face and outer diameter, followed by drilling/deburring, and lastly stamping for identification and traceability.

Once the flange is completely machined, it is sent to the paint department for coating to prevent rusting during its shelf life. Flanges are dipped in paint rather than sprayed owing to environmental regulations that restrict spraying.[59] This paint is strictly a rust preventative and is usually removed after welding.[60] Upon completion of the painting operation, it is ready for final inspection.

DOMESTIC LIKE PRODUCT ISSUES

In the preliminary phase of these investigations, the petitioners proposed that the domestic like product be defined as co-extensive with the scope definition.[61] Respondents representing exporters and importers of flanges from India argued that the Commission should find two domestic like products, namely 1) "unapproved" flanges produced in India, and 2) "approved" flanges produced in the United States, Italy, and Spain.[62] In its preliminary

[56] Staff fieldwork and interview with ***.
[57] ***.
[58] Staff fieldwork and interview with ***.
[59] Staff fieldwork and interview with ***.
[60] Conference transcript, p. 59 (Coulas).
[61] Petition, p. 19, and Petitioners' postconference brief, p. 6.
[62] Silbo's postconference brief, p. 14, and Conference transcript, pp. 105 and 136 (Schutzman).

determinations, the Commission defined a single domestic like product coextensive with the scope of these investigations.[63]

No party provided comments on the Commission's draft questionnaires for the final phase of these investigations. Therefore, the Commission collected data and other information based on a single domestic like product coextensive with the scope.[64] In its prehearing brief, respondent Forgital argued that the Commission should find two separate like products: "specialized and custom" flanges and "standard" flanges.[65] Forgital initially defined "specialized and custom" flanges as made-to-order, not held in general inventory, engineered to the end user's performance requirements, and dissimilar to and distinct from "standard commodity" flanges.[66] Subsequently, Forgital defined "specialized and custom" flanges based on the following characteristics:[67]

1. Specialized and custom flanges are not manufactured from any of the following materials: ASTM A105, ASTM A694, ASTM A181, or ASTM A350.
2. Specialized and custom flanges have a metallurgy that must meet the weight percentage limitations defined for the following elements:
    a. Arsenic (As) — 0.010 maximum
    b. Antimony (Sb) — 0.010 maximum
    c. Tin (Sn) — 0.010 maximum
3. Specialized and custom flanges are Ultrasonic Tested on all surfaces and conform to SAE-AMS-STD-2154 Class A.

Petitioners argue that the Commission's traditional six-factor analysis does not support a determination that "specialized and custom" flanges constitute a separate like product. They further argue that were the Commission to find that a separate like product exists, there is insufficient information for the Commission to determine whether or not the related domestic industry is material injured or threatened with material injury by reason of subject imports of "specialized and custom" flanges. Therefore, petitioners contend that the Commission should continue to find that finished carbon steel flanges are a single domestic like product.[68]

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[63] *Finished Carbon Steel Flanges from India, Italy, and Spain, Investigation Nos.701-TA-563 and 731-TA-1331-1333 (Preliminary)*, USITC Publication 4631, August 2016, p. 9.

[64] Staff recognizes that only articles that are produced domestically may be included in a domestic like product; however, additional information regarding "approved" and "unapproved" flanges can be found in *Parts II*, *IV*, and appendix D of this report.

[65] Forgital's prehearing brief, pp. 2-7.

[66] Ibid., p. 1.

[67] Forgital's posthearing brief, p. 2.

[68] Petitioners' posthearing brief, p. 15.

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. Information regarding these factors is discussed below. The Commission's six-factor analysis is based on the questionnaire response of ***, which respondent Forgital argues produces the domestic product most similar to Forgital's "specialized and custom" flanges.[69] Because Forgital's argument was not raised until after questionnaires were issued, information available to Staff regarding "specialized and custom" flanges is limited. Moreover, the product produced by ***. Specifically, ***.[70]

Physical characteristics and uses

's flanges, which it considers ***,[71] include ***.[72] *** stated that "."[73] *** did not provide any information regarding the end use of its flanges because it *** and therefore does not know the end user type to which its flange is ultimately sold.

Manufacturing facilities and production employees

*** stated that its manufacturing facilities "***."[74] From 2014 to 2016, ***'s reported production and related workers ("PRWs") ranged from *** to *** workers, its reported productivity ranged from *** pounds per hour to *** pounds per hour, and its reported wages ranged from $*** per hour to $*** per hour.

Interchangeability

Staff did not collect data on the interchangeability of "specialized and custom" flanges compared to "standard commodity" flanges. *** described its flanges as *** and stated that ***.[75]

[69] Ibid., p. 6.
[70] ***, email message to USITC staff, ***.
[71] ***, email message to USITC staff, ***.
[72] Forgital prehearing brief, p. 9.
[73] ***, email message to USITC staff, ***.
[74] Ibid.
[75] Ibid.

Customer and producer perceptions

Staff did not collect data on customer and producer perceptions of "specialized and custom" flanges compared to "standard commodity" flanges. *** stated that "***."[76]

Channels of distribution

*** reported selling *** from 2014 to 2016.

Price

*** reported pricing data with unit values that were *** higher than other U.S. producers.[77] *** reported unit values for product 1 ranging from $*** per flange to $*** per flange; for product 2 reported unit values of $*** per flange, $*** per flange, and $*** per flange; for products 3 and 5 unit values were $*** per flange; and for product 6 unit values ranging from $*** per flange to $*** per flange. The average unit values of ***'s U.S. shipments were *** higher than the U.S. industry average in 2014 and 2015, and *** higher than the U.S. industry average in 2016.

[76] Ibid.

[77] Due to these high values, Staff excluded the pricing data provided by ***.

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

U.S. MARKET CHARACTERISTICS

Flanges are connection components for pipes, valves, and pumps, and are used to form a piping system. The material used to produce the flange matches the material of the pipe that it connects.[1] Flanges sold in the United States are generally produced to ASTM material and ASME design standards.[2] Flanges typically are sold in standard sizes (0.5 inches to 24 inches or 26 inches to 60 inches), pressure classes (e.g., 150, 300, 400, 600, etc.), and facings (e.g., slip-on, weld neck, and blind).[3] A substantial share of flange production is consumed by the oil and gas industry.[4] Flanges are also used by the construction and petrochemical industries.[5] Petitioners stated that the flanges are a commodity-like product that is highly price sensitive.

Apparent U.S. consumption of flanges decreased during 2014-16. Overall, apparent U.S. consumption in 2016 was 33.4 percent lower than in 2014 by quantity. The flanges market is supplied by domestically produced and imported flanges. As a share of apparent U.S. consumption, U.S. producers represented 34.8 percent, subject imports represented 51.6 percent,[6] and imports from nonsubject countries represented 13.6 percent in 2016.

U.S. PURCHASERS

The Commission received 18 usable questionnaire responses from firms that have purchased flanges since January 1, 2014.[7] Sixteen responding purchasers are distributors, one is

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[1] Petitioners' prehearing brief, p 4.

[2] Respondent Forgital stated that it imports a nominal amount of made-to-order "specialized and custom" flanges for use in extraordinary end use applications. Respondent Forgital's prehearing brief, p. 1.

[3] Petitioners' prehearing brief, p. 4.

[4] Petition, p. 11.

[5] In the preliminary-phase investigations, Indian respondents argued that there are two distinct markets for flanges: the "approved" market, consisting of U.S. refineries, oil exploration, chemical companies, and other end users that reportedly purchase flanges only from manufacturers listed on the end user's or distributor's approved manufacturers list (AML), and the "generic" or "non-approved" market. Conference transcript, p. 134 (Levinson), Respondents Norma and RN Gupta's postconference brief, pp. 2-3. See also Respondent Bebitz's postconference brief, p. 1. Petitioners argued that there is no such bright line distinction. Petitioners' postconference brief, pp. 14, 21, 23. Additional information regarding AMLs is presented in appendix D.

[6] As a share of total U.S. imports, subject imports from India represented 49.1 percent, subject imports from Italy represented 18.9 percent, and subject imports from Spain represented 11.2 percent in 2016.

[7] Of the 18 responding purchasers, 15 purchased domestic flanges, 14 purchased imports of flanges from India, 10 purchased flanges from Italy, 10 purchased flanges from Spain, and 5 purchased imports of flanges from other sources, including Canada, China, Germany, Korea, Malaysia, and Vietnam.

an end user, and one is a broker.[8] Twelve purchasers reported serving the oil and gas industry; 13 reported serving other industries including the pipe, valves, and fittings (PVF) sector, other distributors, and commercial, mechanical, power chemicals, heavy industry, and agriculture applications; and 7 purchasers reported that they serve both the oil and gas industry and other industries. Responding U.S. purchasers were mainly located in the Midwest and the Central Southwest, with additional purchasers in the Southeast and Pacific Coast. The largest responding purchasers of flanges are ***; combined these purchasers accounted for 60.6 percent of all 2016 reported purchases.

CHANNELS OF DISTRIBUTION

U.S. producers and importers sold mainly to distributors, as shown in table II-1. More than 90 percent of commercial shipments from U.S. producers and subject imports from Italy and Spain and more than 80 percent of commercial shipments of imports from India were to distributors.[9] Nearly 60 percent of shipments of imports from nonsubject countries also went to distributors.

Table II-1
Flanges: U.S. producers' and importers' U.S. commercial shipments, by sources and channels of distribution, 2014-16

* * * * * * *

GEOGRAPHIC DISTRIBUTION

U.S. producers and importers reported selling flanges to all regions in the United States (table II-2). U.S. producers reported that 34.1 percent of their sales were within 100 miles of their production facility or point of shipment, 41.0 percent between 101 and 1,000 miles, and 24.9 percent over 1,000 miles while importers reported that 56.8 percent of their sales were within 100 miles of their production facility or point of shipment, 35.5 percent between 101 and 1,000 miles, and 7.7 percent over 1,000 miles.

[8] Purchaser *** reported it is an end user, however some responses elsewhere in its questionnaire response indicate it may be a distributor. Staff requested a clarification on this point from the firm, but received no response.

[9] Petitioners stated that the reason importers reported a *** of their sales of Indian flanges to distributors than either U.S. producers or other import sources is that *** imports flanges from India and reportedly sells them directly to end users. Petitioners' prehearing brief, pp. 15-16

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

Region	U.S. producers	Importers		
		India	Italy	Spain
Northeast	9	10	3	4
Midwest	9	13	3	4
Southeast	9	14	5	4
Central Southwest	9	15	8	6
Mountain	8	12	5	5
Pacific Coast	9	12	5	3
Other[1]	5	5	2	2
All regions (except Other)	8	10	3	3
Reporting firms	9	15	9	6

[1] 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

Table II-3 summarizes of supply factors regarding capacity utilization, inventories, and commercial shipments in 2016 reported by firms producing flanges in the United States, India, Italy, and Spain.

Table II-3
Flanges: Industry factors that affect ability to increase shipments to the U.S. market, 2016

* * * * * * *

U.S. supply

Domestic production

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

Industry capacity

Domestic capacity utilization decreased from 65.7 percent in 2014 to 36.3 percent in 2016 as a result of both increased capacity and decreased production. This low level of capacity utilization suggests that U.S. producers may have a substantial ability to increase production of flanges in response to an increase in prices.

Alternative markets

U.S. producers' exports, as a percentage of total shipments, were steady at *** percent from 2014 to 2016, indicating that U.S. producers may have a very limited ability to shift shipments between the U.S. market and other markets in response to price changes. *** as its export markets.[10] U.S. producers stated that the United States is the largest market for flanges and is an attractive market for that reason.[11]

Inventory levels

U.S. producers' inventories, relative to total shipments, increased from *** percent in 2014 to *** percent in 2016. These inventory levels suggest that U.S. producers may have ample ability to respond to changes in demand with changes in the quantity shipped from inventories.

Production alternatives

Seven of 10 responding U.S. producers stated that they could not switch production from flanges to other products and they do not produce any other products on the same equipment as flanges. *** reported that it can produce pipe fittings using the same equipment and/or labor that it uses to produce flanges. *** reported production of tube and pipe fittings in the same equipment as flanges, however it stated it could not switch production from flanges to other products. It stated that its equipment is configured to produce flanges and other machined pipe fittings but that it is not easily convertible to make other products. The labor force is only trained to produce flanges and pipe fittings. *** stated that production shifting would require retooling its entire machine shop.

Subject imports from subject countries[12]

Table II-3 above provides a summary of selected factors affecting the supply of flanges from subject countries in 2016; additional data are provided in Part VII.

Industrial capacity

Production capacities in India, Italy, and Spain decreased irregularly from 2014 to 2016 to relatively low levels of capacity utilization, suggesting that producers from all three subject countries may have substantial ability to increase production of flanges in response to an increase in prices.

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[10] *** reported exports ***.

[11] Hearing transcript, p. 25 (Coulas).

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

Alternative markets

Indian producers' home market shipments and exports to non-U.S. markets increased from 2014 to 2016. Italian producers' home market shipments decreased while exports to non-U.S. markets increased over the period. Spanish producer AMES ***.

Inventory levels

Indian producers' inventories were small relative to total shipments and increased slightly from 2014 to 2016. Italian producers' inventories declined but remained above *** percent of total shipments from 2014 to 2016. Spanish producer AMES' inventories *** during the period. This suggests that Italian producers may have some ability to respond to changes in demand with changes in the quantity shipped from inventories, while producers in India and Spain may have limited ability to do so.

Production alternatives

Eleven of 12 responding Indian producers stated that they could switch production from flanges to other products. Other products that Indian producers reportedly can produce on the same equipment as flanges include automotive gears and parts, rolled rings, machinery parts, stainless steel, alloy steel and other than carbon steel flanges, railway and tractor parts, and stainless steel pipe fittings. Four of five responding Italian producers stated that they could switch production from flanges to other products. These firms reported that they can produce open-die forgings, rolled rings, butt weld fittings, customized products, as well as stainless, duplex, low alloy and any other material flanges. Spanish producer AMES stated that ***. This suggests that producers from all three subject countries may have some ability to switch production to or from flanges with changes in demand.

Supply constraints

All nine responding U.S. producers and most responding importers of flanges from India, Italy, or Spain (21 of 26) stated that they did not experience any constraints in their ability to supply flanges since January 1, 2014. Importer *** stated that it has been unable to order sufficient quantities from India, Italy, and Spain since the antidumping and countervailing duty investigations began. Importer *** stated that production delays on its only purchase of flanges from India caused it to ship the product late.

Five of the 18 responding purchasers stated that they had encountered supply constraints since 2014 including: manufacturers that were not taking new customers, increasing backorders, refusing to sell to the purchaser because it did not purchase other types of products, and difficulty getting quotes for imports.

Nonsubject imports

The largest source of nonsubject imports during 2014-16 was China, followed by Korea and Germany. Combined, these countries accounted for 90.8 percent of nonsubject imports and 18.9 percent of total imports in 2016.[13]

New suppliers

One of 18 responding purchasers indicated that new suppliers have entered the U.S. market since January 1, 2014. This purchaser reported that new sources included Indian, Chinese, and Korean sources.

U.S. demand

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

End uses and cost share

U.S. demand for flanges depends on the demand for piping systems, including pipelines, waterlines, commercial and residential plumbing systems, piping systems for petrochemical or bulk material processing plants, and industrial pressure piping systems. Flanges account for a small-to-moderate share of the cost of these piping systems, generally ranging from 5 to 25 percent.

Business cycles

Three of eight responding U.S. producers, 10 of 26 responding importers, and 11 of 18 responding purchasers indicated that the market was subject to business cycles or other distinct conditions of competition. Specifically, two of the three U.S. producers (***), one of the five importers (***), and three purchasers reported that it follows the oil and gas industry.[14] Two U.S. producers (***), eight importers (***), and eight purchasers stated that the market is subject to distinct conditions of competition. *** stated that there are two distinct markets for flanges in the United States: (1) general commercial applications and (2) oil and gas applications. It stated that flanges sold for oil and gas applications carry a price premium

[13] Based on HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050.

[14] Other reasons for the effect of business cycles on the flange market included weather and stocking cycles.

because the “products have been approved" for specific oil and gas applications, that "approved" flanges are manufactured to tighter specifications due to the more demanding uses in the oil and gas sector, and are regarded as higher quality products. Importer *** stated that the decline in oil prices that reduced oil and gas sector activity has shrunk demand for flanges and shifted demand to cheaper sources of material, especially “non-approved” flanges from India, China, and South Korea. Importer *** also reported a distinct competitive difference between “approved” and “unapproved” flanges. Importer *** reported it was only able to compete if special flanges were needed.[15]

Demand trends

Most firms reported a decrease in U.S. demand for flanges since January 1, 2014, particularly in the oil and gas sector (table II-4).

Table II-4
Flanges: Firms’ responses regarding U.S. demand and demand outside the United States

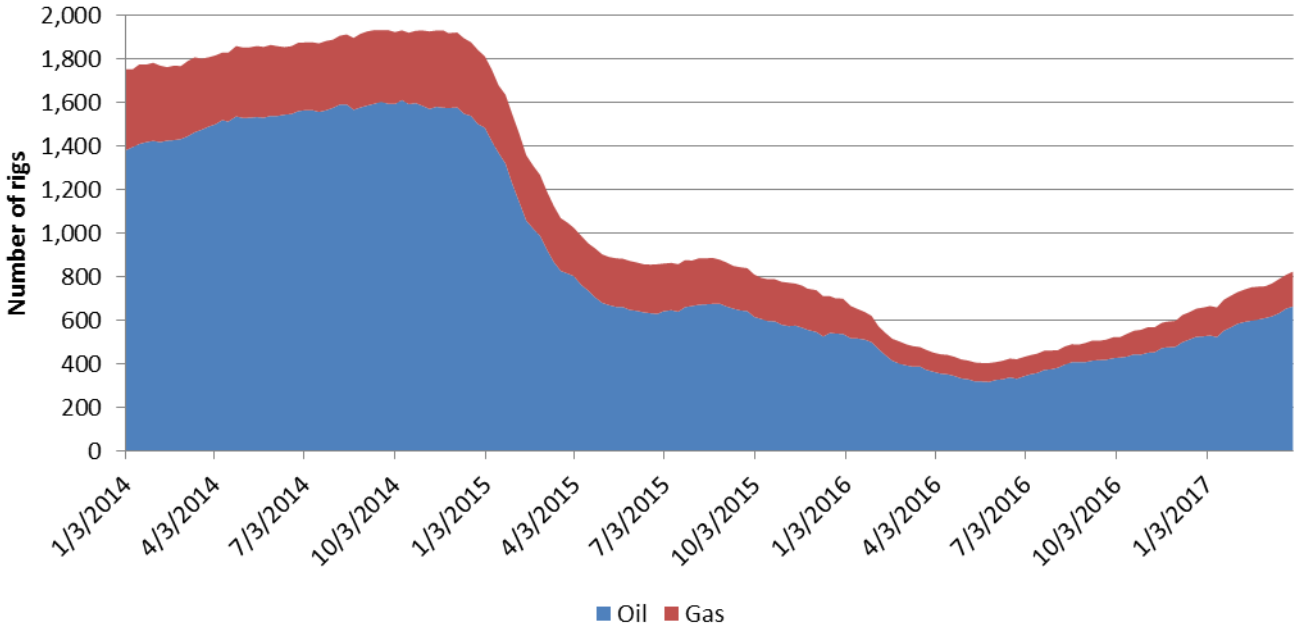
Item	Increase	No change	Decrease	Fluctuate
Demand in the United States: Oil and gas sector				
U.S. producers	0	0	9	0
Importers	1	3	14	5
Purchasers	0	1	12	1
Demand outside the United States: Oil and gas sector				
U.S. producers	0	0	5	0
Importers	0	2	9	4
Purchasers	0	0	7	0
Demand in the United States: All other sectors				
U.S. producers	0	0	6	2
Importers	1	4	6	6
Purchasers	0	6	5	2
Demand outside the United States: All other sectors				
U.S. producers	0	0	3	2
Importers	0	2	4	5
Purchasers	0	2	4	1
Demand for purchasers’ final products				
Purchasers	0	0	2	0

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

[15] Other reported reasons for distinctive conditions of competition included domestic product requirements and construction projects. Also, because there are relatively few manufacturers in the United States, a major change by one firm may affect the other firms.

According to parties, the decline in demand for flanges that began in 2014 has followed the decline in the oil and gas industry.[16] As can be seen in figures II-1 and II-2, the oil and gas rig count and oil and gas prices declined sharply during the first and second quarters of 2015 and continued to decline into the first half of 2016. The rig count declined by 62 percent and crude oil prices declined by 45 percent from January 2014 to December 2016. The rig count increased 32 percent while crude oil prices declined 5 percent from January-March 2017. Respondents contend that the domestic flange industry suffered due to the historic collapse of the oil and gas industry.[17]

Figure II-1
Baker-Hughes United States oil and gas rig count, weekly, January 2014-March 2017

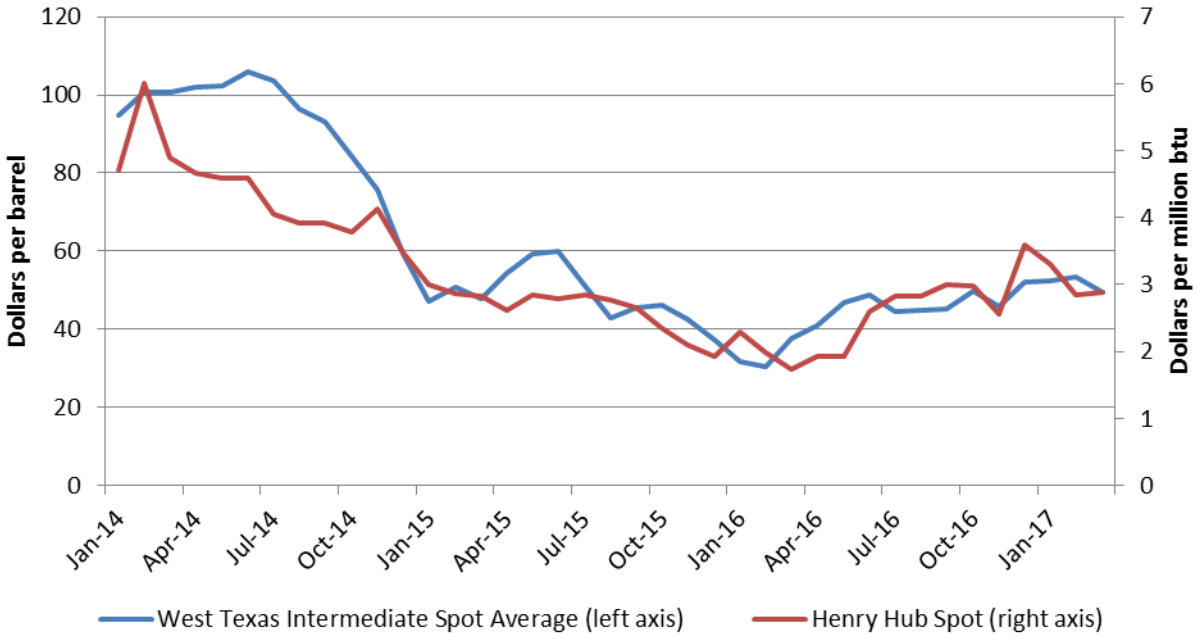


Source: Baker Hughes North America Rotary Rig Count, accessed May 1, 2017.

[16] Hearing transcript, p. 25 (Coulas).

[17] Respondents Norma and RN Gupta's postconference brief, p. 8, and Bebitz's postconference brief, p. 7.

Figure II-2
Crude oil (WTI) and natural gas (Henry Hub spot) prices, monthly, January 2014-March 2017

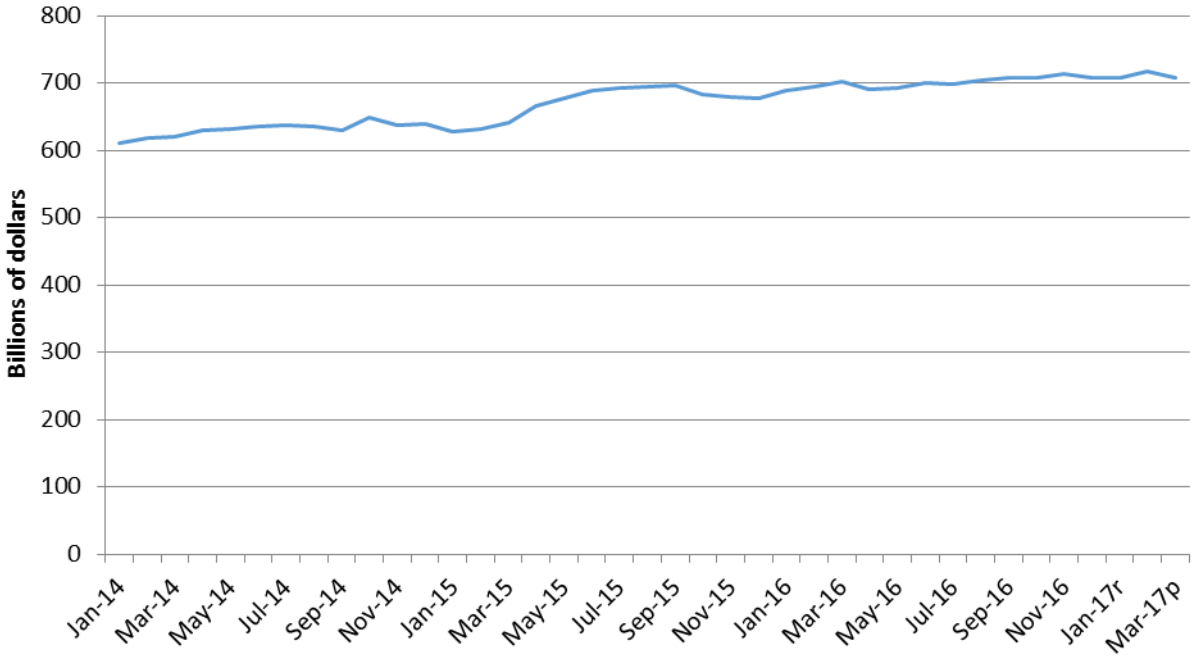


Source: U.S. Energy Information Administration, https://www.eia.gov/outlooks/steo/data/browser/#/?v=8&f=M&s=0&start=201401&end=201703&linechart=WTIPUUS~NGHHUUS&ctype=linechart&maptype=0&id=&map=, accessed May 1, 2017.

The construction industry is also an end-use market for flanges. As seen in figure II-3, nonresidential construction primarily grew from January 2014 to September 2015, and then leveled off, on a seasonally adjusted basis.[18] Overall, the value of nonresidential construction put in place increased by 16 percent from January 2014 to March 2017.

[18] Non-seasonally adjusted data indicate peaks in construction in the summer months and troughs in the winter months during 2014-16.

Figure II-3
Nonresidential construction: Seasonally adjusted monthly value of construction put in place, January 2014-March 2017



Source: https://www.census.gov/construction/c30/historical_data.html retrieved May 1, 2017.

Substitute products

All responding U.S. producers (8) and importers (21) reported that there were no substitutes for flanges. Two of the 17 responding purchasers reported substitutes for flanges including unions and couplings (although the purchaser reported that it had separate uses from flanges), or by joining pipe by butt-welding or threading.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported flanges depends upon such factors as relative prices, quality (e.g., grade standards, reliability of supply, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, payment terms, product services, etc.). Based on available data, staff believes that domestically produced flanges and flanges imported from subject sources are highly substitutable when sold based on the AML requirements and when AML designation is not required. However, the substitutability of flanges produced by AML listed suppliers (domestic or foreign) and those produced by non-AML listed suppliers is variable. Due to this, staff believes substitutability between domestically produced flanges and flanges imported from subject sources varies somewhat based on AML designation and the degree of requirement.

Approved manufacturers lists (AMLs)

During the preliminary-phase investigations, petitioners argued that domestically produced flanges compete vigorously against Indian-produced flanges for customers in the United States throughout the market (including oil and gas, petrochemical, pipelines, and commercial applications).[19] They also argued that there is no bright line between "approved" and "unapproved" flanges. They stated that some end users have AMLs while other end users do not, and that domestic producers may or may not be on a particular end user's AML. They stated that the lack of any industry-wide AML renders the adoption and implementation of AMLs both highly variable and highly subjective.[20] Respondent Silbo argued that flanges sourced from India are not sold in significant quantities in the oil and gas market because Indian vendors are not listed on AMLs maintained by companies constructing pipelines in the United States, while domestically produced flanges and flanges produced in Italy and Spain are.[21] Silbo further contended that the approval process is restrictive, time consuming, expensive, and by its nature highly subjective. Lastly, Silbo stated that the existence of AMLs creates a clear dividing line between companies which have been approved and those which have not.[22] Respondents Norma and RN Gupta contended that there is little head-to-head competition between imports from India and domestically produced flanges due to the existence of two distinct markets. They also argued that flanges from India are not substitutable with domestically produced flanges or flanges imported from Italy and Spain.[23] [24]

During the final-phase investigations, the Commission asked producers, importers, and purchasers a series of questions regarding the use of AMLs in the flange industry. Seven responding U.S. producers reported that during 2014-16 between 22 percent and 30 percent of their commercial shipments of flanges were subject to AMLs and 10 responding importers reported that, on average, about 40 percent of their commercial shipments of imported flanges were subject to AMLs. Purchasers that identified themselves as distributors reported that between 12 and 100 percent of their commercial sales were subject to AMLs, with 8 of 11 reporting that 50 percent or more of their sales were subject to AMLs. While four of the eight identified themselves as only serving the oil and gas industry, the remaining four serve the oil and gas industry and other industries, as well.

One producer, 7 importers, and 11 purchasers provided AMLs in their questionnaire responses. Appendix D summarizes these lists.

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[19] Petitioners' postconference brief, p. 5.

[20] Petitioners' postconference brief, p. 15. See also, pp. 20-25.

[21] Respondent Silbo Industries' postconference brief, p. 8.

[22] Respondent Silbo Industries' postconference brief, p. 9.

[23] Respondents Norma and RN Gupta postconference brief, p. 2.

[24] Respondents Silbo Industries, Norma, and RN Gupta did not appear at the Commission's April 25, 2017 hearing, nor have they provided prehearing or posthearing briefs in the final phase of these investigations.

When asked if there are distinctions between different types or classes of AMLs, producers, importers, and purchasers reported that some AMLs can be categorized by carbon, alloy, or stainless steel; others can be categorized by pressure class, design specification, size, high yield, low temp, and A105N specifications. In addition, U.S. producer *** reported that some AMLs differentiate between grades of material and some differentiate between normal business and emergency business. U.S. producer *** stated that certain end users/operators' AMLs will have tiers with preferred manufacturers and additional acceptable manufacturers. U.S. producer *** stated that pipeline companies have stricter requirements on high yield than on standard A105-grade flanges. Importer *** stated that a specific manufacturer may sometimes have only part of its product offering approved by an AML owner. Importer *** stated that each customer has its own approval list and either the manufacturer is part of a large approval list such as the one for ExxonMobil, or the customer simply has prior experience and knowledge of the product from this particular manufacturer and therefore is considered "an approved manufacturer" under their own criteria. Importer *** stated that every company has its own AML, and even within the same company (Chevron or BP, for example) there can be different AMLs for different projects. Importer *** stated that carbon steel flanges have fewer restrictions on manufacturing than higher grade (alloy & stainless steel) flanges. *** stated that some end-user AMLs may have distinctions like high yield, low temp, etc., but it does not have these distinctions on its own AML. Purchaser *** stated that each grade or type of flange must be listed on an AML in order for it to provide the material and for its customers to accept it. Purchaser *** stated that standard, high yield, and low temperature categories can each have a different AML and each client within those classes could have a different AML.

Eleven purchasers reported that their customers provide the purchaser with their own list or instruct them to reference a large company's list, such as ExxonMobil, Chevron, Shell, or Dow. Four purchasers (***) maintain their own lists. *** stated that vendors are generally selected based on quality certifications such as ISO and/or the ability to meet industry standards.

Producers, importers, and purchasers were also asked how frequently flanges from manufacturers on AMLs were interchangeable with those not on AMLs (table II-5). A plurality of responding purchasers (6 of 18) reported these flanges are "never" interchangeable and five reported they "sometimes" are interchangeable. Importers had a similar dispersion of responses, while most U.S. producers' responses reported "sometimes" interchangeable; *** reported that they are "always" interchangeable. Purchaser *** stated that there is very little overlap between "oil/gas approved" and "unapproved". Purchaser *** stated that manufacturers are either approved or not. Purchaser *** stated that customers without an AML will accept material made by any manufacturer but customers that do have an AML will only accept material manufactured by a mill on the customer's AML. Purchaser *** stated that if a manufacturer is not listed, it cannot be used 95 percent of the time unless an exception is granted. Purchaser *** stated that if a purchaser needs to follow an AML, both types of flanges are not interchangeable. Purchaser *** stated that on a rare occasion the customer may make an exception if the material is not available per the AML in the required time frame. Purchaser *** stated that all flanges meet the same specifications dimensionally, chemically, and physically and that the only difference is whether it meets the customer's restrictions.

Table II-5
Flanges: Interchangeability of flanges on AMLs and not on AMLs

Purchaser/Customer Decision	Always	Usually	Sometimes	Never
Producers	2	1	6	1
Importers	2	4	6	7
Purchasers	3	4	5	6

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

During the preliminary-phase investigations, respondent Silbo stated that distributors maintain separate inventories of "approved" and "unapproved" product and the products are never comingled.[25] When asked this question in the final-phase investigation questionnaires, 11 of 17 responding purchasers reported that they separate their inventories based on whether or not flanges are on AMLs. Purchasers also generally indicated that they separate their inventories into three categories: domestic, "import approved," and "generic imports."[26] U.S. producer *** stated that ExxonMobil created the first AML about 40 years ago, that other companies soon followed, and that the process for getting on an AML is not precise. It also stated that there is "no such thing" as a strictly approved project, and that when faced with a shortage, customers will frequently turn to alternative suppliers, regardless of their standing on AMLs.[27] Producer *** stated that the process to get on ExxonMobil's AML took a year, cost $45,000, involved blind destructive and nondestructive testing by ExxonMobil officials, and is subject to regular audits. It also stated that pipeline customers are very stringent about what they buy, and that product quality is an important purchasing factor. Lastly, *** stated that flanges from some other countries are not of the same quality as those on AMLs. It noted certain instances when customers had ordered imported flanges that did not meet application standards and the customer placed a rush order with ***.[28]

Lead times

Flanges are both produced-to-order and sold from inventory. U.S. producers reported that in 2016, 61.8 percent of their sales were from inventory, with lead times ranging between 1 and 7 days, and that the remaining 38.2 percent were produced-to-order, with lead times ranging between 3 and 30 days, with a majority reporting lead times between 5 and 14 days. Importers of flanges from India, Italy, and Spain reported that 28.7 percent of their sales were produced-to-order, with lead times ranging between 14 and 210 days, with 5 of 13 responding importers reporting 120 days and four reporting 60 days or less. In total, 63.3 percent were sold from U.S. inventories, with most lead times reported under 10 days, and 7.9 percent were from foreign inventories, with lead times ranging between 14 and 126 days, with five of seven responding importers reporting lead times of 90 days or less.

[25] Conference transcript, p. 118 (Shalom).
[26] ***.
[27] ***.
[28] ***.

Knowledge of country sources

Seventeen purchasers indicated they had marketing/pricing knowledge of domestic product, 13 of product from India, 12 of product from Italy, 12 of product from Spain, and 9 of product from nonsubject countries, including China, Germany, Korea, Malaysia, Mexico, the United Kingdom, and Vietnam.

As shown in table II-6, most purchasers and their customers "usually" or "sometimes" make purchasing decisions based on the producer or country of origin. Of the 13 purchasers that reported that they "usually" or "sometimes" make decisions based the manufacturer, three firms cited AMLs as the basis for the decision. Other reasons cited include having product at different price points, on time shipments, availability, quality brands, and price.

Table II-6
Flanges: Purchasing decisions based on producer and country of origin

Purchaser/customer decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	3	6	6	3
Purchaser's customers make decision based on producer	0	5	8	2
Purchaser makes decision based on country	4	6	6	2
Purchaser's customers make decision based on country	0	6	8	2

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 flanges were price (17 firms), availability (14 firms), and quality (11 firms) as shown in table II-7. Quality was the most frequently cited first-most important factor (cited by 8 firms), followed by price (6 firms); availability was the most frequently reported second-most important factor (8 firms); and price was the most frequently reported third-most important factor (7 firms). Three firms reported acceptability/approval as their first-most important factor and two others reported acceptability/approval as their second-most important purchasing factor.

Table II-7
Flanges: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Availability	1	8	5	14
Quality	8	3	0	11
Price	6	4	7	17
Acceptability/approval	3	2	0	5
Other[1]	0	1	5	6

[1] Other factors include delivery, payment terms, supplier relationship, discounts/rebates, response time, financial stability of manufacturer, product range, and extension of credit.

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

The majority of purchasers (16 of 18) reported that they "usually" purchase the lowest-priced product. When asked if they purchased flanges from one source although a comparable product was available at a lower price from another source, 15 purchasers reported reasons including customer requirements, AML approvals, availability, quality, delivery time, and supplier relationship. Only three of 18 purchasers reported that certain types of product were only available from a single source.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 17 factors in their purchasing decisions (table II-8). The factors rated as "very important" by more than half of responding purchasers were quality meets industry standards (18 purchasers), availability (17), product consistency (15), reliability of supply (15), price (15), delivery time (13), AML oil and gas (9), and delivery terms (9).

Table II-8
Flanges: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Very important	Somewhat important	Not important
Approved manufacturer's list: oil and gas industry	9	4	3
Approved manufacturer's list: other than oil and gas industry	6	5	6
Availability	17	1	0
Delivery terms	9	7	2
Delivery time	13	5	0
Discounts offered	8	7	3
Extension of credit	7	5	6
Minimum quantity requirements	4	8	6
Packaging	4	9	5
Price	15	3	0
Product consistency	15	2	1
Product range	6	11	1
Quality meets industry standards	18	0	0
Quality exceeds industry standards	7	8	3
Reliability of supply	15	3	0
Technical support/service	6	11	1
U.S. transportation costs	3	13	1

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

Sixteen firms commented on the importance of AMLs in the oil and gas industry, with more than half indicating that they are "very important." Of the nine purchasers reporting that AMLs in the oil and gas industry are "very important," four serve both the oil and gas as well as other industries (***), three serve only the oil and gas industry (***), and two serve only other industries ***). In addition, 17 firms commented on the importance of AMLs in other industries, with a balanced dispersion of responses. Of the six firms that identified themselves as serving non-oil and gas sectors exclusively, four indicated that the presence of a supplier on a non-oil and gas related AML was "not important" as a purchasing factor for flanges, while one each indicated that it was "somewhat important" and "very important." Of the five firms that identified themselves as serving oil and gas sectors exclusively, three indicated that the presence of a supplier on a non-oil and gas related AML was "somewhat important" as a purchasing factor for flanges, while one each indicated that it was "not important" and "very important." Of the six firms that identified themselves as serving the oil and gas sectors and other sectors, four indicated that the presence of a supplier on a non-oil and gas related AML was "very important" as a purchasing factor for flanges, while one each indicated that it was "somewhat important" and "not important."

Supplier certification

Fourteen of 17 responding purchasers require their suppliers to become certified or qualified to sell flanges to their firm, 13 of which reported that the necessary qualification is by presence on AMLs. Purchasers reported that the time to qualify a new supplier can take up to four months and that the process can include factory audits, working with suppliers to correct non-conformities, destructive and non-destructive testing, inspection of inbound materials, and compliance with ISO 9001. Four purchasers reported that a domestic or foreign supplier had failed in its attempt to qualify product, or had lost its approved status since 2014. Purchaser *** failed to certify Norma India due to poor quality in multiple instances. Purchaser *** stated that it has tested, failed, and de-listed many suppliers - both domestic and foreign - typically because their flanges do not meet the specifications of its AML criteria. Purchaser *** stated that the *** flange manufacturer, Boltex, is not certified because Boltex stopped manufacturing for the firm in 2009.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2014 (table II-9); reasons reported for decreased purchases were generally due to market slowdown. Purchaser *** explained that overall sales in 2015-16 were down compared to 2014, adding that many customers switched to approved imported flanges which were 20-35 percent less expensive than domestic flanges. It attributed this shift to a desire to lower costs which became its customers' top priority after the start of the oil and gas downturn in 2015.

Table II-9
Flanges: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	1	7	2	4	4
India	0	6	1	5	3
Italy	4	4	3	4	1
Spain	5	2	4	4	1
All other sources	4	5	2	1	1
Sources unknown	4	2	1	2	1

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

Four of 18 responding purchasers reported that they had changed suppliers since January 1, 2014. *** stated that due to a lack of sales, manufacturers accepted new customers in order to grow their businesses and that it added Ulma and Bebitz India. Purchaser *** stated that, in an effort to diversify suppliers and maintain multiple sources, it shifted some import tonnage away from India and Germany toward Spain. Purchaser *** added Boltex in 2016 because its strategy needed domestic production. Purchaser *** stated that Team Alloys is now out of business and it is buying less from Service Metals due to low stock levels.

Importance of purchasing domestic product

Purchasers reported that purchasing U.S.-produced product was not required for 62 percent of their purchases while 32 percent of their purchases were required by their customers to be domestically produced. Sixteen of 18 responding purchasers reported that at least some of their purchases did not require domestically produced flanges, three of which (***) did not require any domestically produced flanges. Eleven reported that domestic product was required by their customers, eight reported that domestic product was required by law, and three reported other preferences for domestic product.

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing flanges produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 17 factors (table II-10) for which they were asked to rate the importance. Most purchasers reported that flanges produced in the United States were “comparable” to flanges imported from India on several factors. However, with respect to AMLs, most responding purchasers reported that the flanges produced in the United States are “superior” to those imported from India. A majority of responding purchasers reported that flanges from the United States are “comparable” to those imported from Italy and Spain on most factors, including AMLs.

Most purchasers reported that U.S. and nonsubject product were comparable on eight factors. However, flanges produced in the United States were rated as superior to flanges imported from nonsubject countries with respect to AMLs. Purchasers compared flanges from India with those from Italy, reporting that flanges from India were “inferior” to flanges from Italy with respect to AMLs, but “comparable” on several other factors. Purchasers also

compared flanges from India with those from Spain, reporting that flanges from India were "inferior" to flanges from Spain with respect to AMLs, but "comparable" on several other factors. India was rated as "superior" to Italy, Spain, and the United States with respect to price.

Table II-10
Flanges: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. India			U.S. vs. Italy			U.S. vs. Spain		
	S	C	I	S	C	I	S	C	I
Approved manufacturer's list: oil and gas industry	9	2	0	1	11	0	1	11	0
Approved manufacturer's list: other than oil and gas industry	8	3	0	0	12	0	0	12	0
Availability	4	9	1	4	8	0	2	9	1
Delivery terms	5	7	2	3	8	1	2	9	1
Delivery time	7	6	1	5	7	0	4	7	1
Discounts offered	0	7	5	0	7	4	0	8	3
Extension of credit	1	11	0	0	11	0	0	11	0
Minimum quantity requirements	3	10	0	2	10	0	2	10	0
Packaging	1	12	0	1	11	0	1	10	1
Price[1]	0	2	12	0	5	7	0	6	6
Product consistency	3	10	1	0	13	0	0	13	0
Product range	1	12	1	1	12	0	1	12	0
Quality meets industry standards	4	10	0	0	13	0	0	13	0
Quality exceeds industry standards	6	7	0	1	11	0	0	12	0
Reliability of supply	4	10	0	4	9	0	3	10	0
Technical support/service	6	6	0	3	9	0	2	10	0
U.S. transportation costs[1]	3	9	1	3	7	2	3	8	1
Factor	**India vs. Italy**			**India vs. Spain**			**Italy vs. Spain**		
	S	C	I	S	C	I	S	C	I
Approved manufacturer's list: oil and gas industry	0	1	9	0	2	8	0	9	1
Approved manufacturer's list: other than oil and gas industry	0	1	9	0	2	8	0	10	1
Availability	1	9	1	1	8	2	1	9	0
Delivery terms	0	8	2	0	7	3	0	10	0
Delivery time	1	6	3	0	6	4	0	10	0
Discounts offered	3	6	0	2	7	0	0	9	0
Extension of credit	0	7	1	0	7	1	0	9	0
Minimum quantity requirements	0	10	0	0	10	0	0	10	0
Packaging	0	8	1	0	8	1	0	9	1
Price[1]	10	1	0	9	2	0	1	9	0
Product consistency	0	7	4	0	9	2	0	11	0
Product range	0	10	1	0	10	1	0	10	1
Quality meets industry standards	0	10	1	0	9	2	0	11	0
Quality exceeds industry standards	0	5	5	0	6	4	0	10	0
Reliability of supply	1	7	3	1	6	4	0	11	0
Technical support/service	0	7	3	1	6	3	0	10	0
U.S. transportation costs[1]	0	9	0	1	8	0	1	8	0

Table continued on next page.

Table II-10--Continued
Flanges: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. nonsubject			India vs. nonsubject			Italy vs. nonsubject		
	S	C	I	S	C	I	S	C	I
Approved manufacturer's list: oil and gas industry	5	1	0	0	4	1	4	1	0
Approved manufacturer's list: other than oil and gas industry	5	1	0	0	5	1	4	1	0
Availability	2	5	0	0	5	1	2	4	0
Delivery terms	2	5	0	0	5	1	1	5	0
Delivery time	2	5	0	0	5	1	1	5	0
Discounts offered	2	3	0	1	3	0	1	3	0
Extension of credit	2	3	0	0	4	0	1	3	0
Minimum quantity requirements	3	3	0	0	5	0	2	3	0
Packaging	1	5	0	0	5	0	0	5	0
Price[1]	0	1	6	2	4	0	0	3	2
Product consistency	2	5	0	0	6	0	1	5	0
Product range	1	5	1	0	6	0	1	5	0
Quality meets industry standards	1	5	0	0	6	0	2	4	0
Quality exceeds industry standards	2	4	0	0	5	0	3	2	0
Reliability of supply	4	3	0	0	5	1	1	5	0
Technical support/service	3	3	0	0	4	1	2	3	0
U.S. transportation costs[1]	3	3	0	0	5	0	2	3	0

Factor	Spain vs. nonsubject		
	S	C	I
Approved manufacturer's list: oil and gas industry	4	1	0
Approved manufacturer's list: other than oil and gas industry	4	1	0
Availability	1	5	0
Delivery terms	0	6	0
Delivery time	0	6	0
Discounts offered	0	4	0
Extension of credit	1	3	0
Minimum quantity requirements	1	4	0
Packaging	2	3	0
Price[1]	1	2	2
Product consistency	1	5	0
Product range	0	6	0
Quality meets industry standards	3	3	0
Quality exceeds industry standards	3	2	0
Reliability of supply	0	6	0
Technical support/service	3	2	0
U.S. transportation costs[1]	1	4	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 flanges

In order to determine whether U.S.-produced flanges can generally be used in the same applications as imports from India, Italy, and Spain, 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-11, most responding U.S. producers, importers, and purchasers reported that flanges are either "always" or "frequently" interchangeable across subject and nonsubject sources, with the exception of responding purchasers, who are evenly split with respect to domestic and subject product compared to flanges imported from China.

Table II-11
Flanges: Interchangeability between 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. India	5	2	1	0	12	3	2	2	6	3	5	0
U.S. vs. Italy	6	1	1	0	10	7	1	0	7	4	3	0
U.S. vs. Spain	6	1	1	0	9	6	0	0	8	4	3	0
Subject countries comparisons:												
India vs. Italy	3	1	0	0	9	2	1	3	6	1	5	0
India vs. Spain	3	1	0	0	9	2	1	2	7	1	4	0
Italy vs. Spain	4	0	0	0	10	5	0	0	9	3	1	0
Nonsubject countries comparisons:												
U.S. vs. China	4	2	2	0	8	5	0	3	3	1	3	1
U.S. vs. other nonsubject	4	3	1	0	8	4	1	1	4	2	3	0
India vs. China	2	2	0	0	8	5	0	2	3	1	3	1
India vs. other nonsubject	2	2	0	0	8	3	1	1	4	2	4	0
Italy vs. China	2	2	0	0	7	4	0	3	3	1	3	1
Italy vs. other nonsubject	2	2	0	0	8	3	1	1	4	2	4	0
Spain vs. China	2	2	0	0	7	3	0	2	3	1	3	1
Spain vs. other nonsubject	2	2	0	0	8	3	1	1	4	2	4	0
China vs. other nonsubject	2	2	0	0	7	3	0	1	4	1	2	1

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

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

In explaining factors that limit or preclude interchangeability, producer *** stated that in all cases with the United States, it depends on whether or not the end user is willing to accept imported flanges.

Importer *** explained that flanges imported from Italy and those imported from India and China are not interchangeable based on oil company approvals and their acceptance of the manufacturer. It added that, generally, flanges from Italy are approved by the major oil companies because of their quality and that flanges from India, China, and South Korea are not on major U.S. oil companies' approved list of suppliers, and are thus of lower quality. Importer *** stated that different customers require different restrictions on usable products and that sometimes customers can take flanges from India in place of domestic product depending on the customer requirements. It further stated that if a customer is seeking material from India, it will never purchase flanges from Western Europe. *** stated that flanges produced in the United States, Italy, and Spain are typically sold as "approved" flanges to customers in the oil and gas sectors and that as "approved" products, they are regarded as being of higher quality and suitable for the rigorous environments in oil and gas applications. It added that customers in the oil and gas sector limit purchases to "approved" flanges, and often are unwilling to purchase "non-approved" flanges such as those originating in India or other countries. Lastly, according to ***, flanges from the United States, Italy, and Spain are regarded as interchangeable whereas flanges produced in India have limited interchangeability with other sources. Importer *** stated that since all flanges can be made to the same dimensional standard (ASME B16.5 for example) flanges are always interchangeable, unless company policies prohibit material of a certain origin. Importer *** stated that flanges are a commodity product and therefore always interchangeable, although pricing would affect interchangeability. Importer *** stated that domestic, Italian, and Spanish product is approved while Indian and Chinese product are "unapproved", and that "approved" and "unapproved" products are not interchangeable.

Purchaser *** stated that if domestic, Italian, or Spanish material is not available in the time frame needed by the customer, the customer may accept Indian flanges, but that all of its customers state that they will not accept any material from China. Purchaser *** stated that its response is based on typical customer restrictions only and that actual flanges per specifications are always interchangeable in application. Furthermore, Western Europe restrictions usually include Italy and Spain and that if China is acceptable, then there are normally no restrictions.

As can be seen from table II-12, nine responding purchasers reported that domestically produced flanges "always" met minimum quality specifications, and the remaining responding purchasers reported that domestically produced flanges "usually" do. Six responding purchasers reported that flanges imported from India "always" met minimum quality specifications, and seven each reported that flanges imported from Italy and Spain "always" met minimum quality specifications.

Table II-12
Flanges: Ability to meet minimum quality specifications, by source[1]

Source	Always	Usually	Sometimes	Rarely or never
United States	9	8	0	0
India	6	7	3	0
Italy	7	7	0	0
Spain	7	8	0	0
China	1	1	2	1
Other[2]	3	3	0	0

[1] Purchasers were asked how often domestically produced or imported flanges meet minimum quality specifications for their own or their customers' uses.
[2] Other countries include: Germany and Korea.

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 flanges from the United States, subject, or nonsubject countries. As seen in table II-13, most U.S. producers reported that there are "sometimes" or "never" differences other than price between flanges across all country pairs. However, the majority of importers reported that there are either "sometimes" or "always" differences other than price between flanges from India and domestically produced flanges and "sometimes" with respect to flanges from Italy and Spain. The majority of purchasers reported that there are "sometimes" differences other than price between flanges from all three subject countries and domestically produced flanges.

Table II-13
Flanges: Significance of differences other than price between 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. India	1	1	3	3	7	3	7	0	2	3	9	0
U.S. vs. Italy	1	1	1	5	3	2	8	4	1	1	9	2
U.S. vs. Spain	1	1	1	5	2	2	7	3	2	1	9	2
Subject countries comparisons:												
India vs. Italy	0	0	2	2	4	4	4	2	3	2	4	2
India vs. Spain	0	0	2	2	4	3	5	2	3	1	5	2
Italy vs. Spain	0	0	1	3	1	1	7	5	2	1	5	4
Nonsubject countries comparisons:												
U.S. vs. China	2	0	4	1	6	2	6	0	0	1	5	2
U.S. vs. other nonsubject	1	0	3	2	2	1	9	1	0	0	7	0
India vs. China	0	0	3	1	4	2	6	2	0	0	4	2
India vs. other nonsubject	0	0	3	1	3	2	7	0	0	1	6	0
Italy vs. China	0	0	3	1	4	2	6	0	1	0	3	2
Italy vs. other nonsubject	0	0	3	1	2	1	7	2	1	0	5	1
Spain vs. China	0	0	3	1	4	2	5	0	1	0	3	2
Spain vs. other nonsubject	0	0	3	1	2	1	7	2	1	0	5	1
China vs. other nonsubject	0	0	3	1	3	2	5	0	0	0	4	2

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

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

Responding firms reiterated that AMLs and "approved" flanges are an important factor other than price in the flange market. Producer *** stated that quality is a determining factor in all cases and it is a function of the end users' desire to use or not use imported flanges. Producer *** stated that flanges imported from India and China are known to be of lower quality than domestically produced flanges and flanges imported from Italy and Spain have transportation challenges.

Importer *** stated that the quality of the flanges is measured by major U.S. oil company approvals; if a manufacturer is on a major U.S. oil company approval list, its flanges are deemed the same quality regardless of where they were produced. It also stated that one can compare among approved manufacturers (domestic or foreign) but one cannot compare a domestic non-approved manufacturer to a foreign approved manufacturer. It reiterated that "approved" is defined as quality certified by U.S. oil companies, refiners, fabricators, and industrial users of flanges. It added that these companies have performed industry audits and determined that the quality of "approved" products are superior to products manufactured by companies that are non-approved by major U.S. oil companies. Importer *** stated that price is

the primary and most significant factor although inventory and availability are other factors. Importer *** stated that quality is a significant factor; that the quality from domestic mills is viewed as the highest, with Western European mills second, and India last; and that the quality difference between domestic flanges and flanges imported from India is viewed as significant. Importer *** stated that, in its experience, "approved" status is the non-price factor that most readily influences how flanges are sold in the U.S. market. It stated that it sells flanges predominantly for commercial applications other than oil and gas and that its customer base does not typically demand "approved" flanges or express a country-of-origin preference. Therefore, it is able to sell Indian-origin flanges for general commercial applications. *** stated that there are quality concerns with Indian and Chinese products. *** stated that the AML market generally will not accept Indian flanges. *** listed the following factors as significant in sales of flanges: overall market scenario/demand, delivery performance, product/end consumer approvals, quality and consistency of quality in products supplied, manufacturing process and technology used, customer service and responsiveness to issues, communication with customers, and adapting to individual customer needs. *** stated that the status of the product as approved or unapproved is the primary factor in determining its sales. Importer *** stated that some quality differences may exist in comparing an approved product from Spain against a "sub-par manufacturer" from India. However, it added that all reputable manufacturers from India are at the same quality levels as any approved and domestic manufacturer.

Purchasers *** stated that quality is an important factor, as well as meeting the requirements for the application, reliable delivery, minimum grades, and appropriate packaging. *** also noted that a domestic producer had packaging issues in which the cardboard packaging becomes stuck to the flange face and it either has to spend hours cleaning the flange faces or ship the entire lot back to the supplier to be remedied.

During the preliminary-phase investigations, respondent Silbo argued that the flanges sold by Weldbend and other domestic producers in the construction market are, "by definition, approved products, since they bear the Weldbend (or other approved) name, and as such command a price in the market that is dramatically different from prices at which Indian flanges are sold."[29] Respondents Norma and RN Gupta argued that there exists perceived qualitative differences in the flange market between the "generic" product from India and the "approved" product manufactured domestically, and imported from Italy and Spain.[30]

[29] Respondent Silbo Industries' postconference brief, p. 10.

[30] Respondents Norma and RN Gupta's postconference brief, p. 3.

ELASTICITY ESTIMATES

This section discusses elasticity estimates; parties were encouraged to comment on these estimates; no parties commented.

U.S. supply elasticity

The domestic supply elasticity[31] for flanges measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of 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 flanges. Analysis of these factors above indicates that the U.S. industry has the ability to greatly increase or decrease shipments to the U.S. market; an estimate in the range of 4 to 6 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for flanges measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of 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 flanges in the production of any downstream products. Based on the available information, the aggregate demand for flanges is likely to be moderately inelastic; a range of -0.5 to -1.0 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[32] 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 flanges and imported flanges depends in part on whether or not a manufacturer is listed on AMLs, and likely to be in the range of 2 to 6. For customers requiring supply by a manufacturer on a specific AML, the substitutability of flanges from suppliers not on the AML would be at the lower end of the range. Likewise, certain flanges meeting highly specific requirements, such as those supplied by ***, would be at the lower end of the range. In all other instances, substitutability would be at the higher end.

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

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

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

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the subsidies and dumping margins was presented in *Part I* of this report and information on the volume and pricing of imports of the subject merchandise is presented in *Part IV* and *Part V*. Information on the other factors specified is presented in this section and/or *Part VI* and (except as noted) is based on the questionnaire responses of 10 firms that accounted for approximately *** percent of U.S. production of flanges during 2016.

U.S. PRODUCERS

The Commission issued a U.S. producer questionnaire to 14 firms based on information contained in the petition, and to seven additional firms based on staff research. Ten firms provided usable data on their productive operations.[1] Table III-1 lists U.S. producers of flanges, their production locations, positions on the petition, and shares of total production.

[1] In the preliminary-phase investigations, six U.S. producers provided the Commission with a usable questionnaire response. They were: Ameriforge, Boltex, Federal Flange, Galperti, Piping Products, and Weldbend. All six also provided questionnaire responses in these final-phase investigations, as did General Flange, Gibson, Kerkau, and Precision Flange. In these final-phase investigations, the Commission did not receive a response from ***. *** (*See* ***, email message to staff, March 28, 2017). One firm, *** indicated that although it purchases flange forgings, it does not produce finished flanges ***.

Table III-1
Flanges: U.S. producers of flanges, their positions on the petition, production locations, and shares of reported production, 2016

Firm	Position on petition	Production location(s)	Share of production (percent)
Ameriforge	***	Houston, TX (2 plants) Woodville, TX	***
Boltex	***	Houston, TX (2 plants)	***
Federal Flange	***	Houston, TX	***
Galperti	***	Houston, TX	***
General Flange[1]	***	Huntingdon Valley, PA	***
Gibson[2]	***	Houston, TX	***
Kerkau[2]	***	Bay City, MI	***
Piping Products	***	Houston, TX	***
Precision Flange[2]	***	Houston, TX	***
Weldbend	***	Bedford Park, IL	***
Total			100.0

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

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

Table III-2 presents information on U.S. producers' ownership and related/affiliated firms. Three U.S. producers, ***, are related to foreign flange producers.

Table III-2
Flanges: U.S. producers' ownership, related, and/or affiliated firms, since January 2014

* * * * * * *

The U.S. flange industry consists of both integrated and non-integrated producers. Boltex and Ameriforge produce their own flange forgings, which they process into finished flanges, or sell to other companies that process flange forgings into finished flanges.[2] ***.[3] The remaining domestic producers purchase flange forgings and process them into finished flanges. In addition, as discussed in greater detail below, *** directly imports finished flanges from ***.

Producers were asked to report any changes in operations since January 2014. There was one reported plant closing, two reported expansions, and six reported production shutdowns or curtailments. In addition, Westbrook LLC purchased Federal Flange in July 2015,[4] ***, and ***. Table III-3 presents producer responses regarding changes in operations.

[2] Petition, p. 2.
[3] Staff fieldwork and interview with ***.
[4] *Finished Carbon Steel Flanges from India, Italy, and Spain, Investigation Nos. 701-TA-563 and 731-TA-1331-1333 (Preliminary)*, USITC Publication 4631, August 2016, p. III-2, fn. 3.

Table III-3
Flanges: U.S. producers' reported changes in operations, since January 1, 2014

* * * * * * *

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-4 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. From 2014 to 2016, capacity increased by 1.2 percent, while production decreased by 44.2 percent and capacity utilization decreased by 29.4 percentage points over the same period. Capacity levels largely reflect an increase in capacity by *** and a decrease in capacity by *** from 2014 to 2016. *** also reported slight increases in capacity. Each of these firms also reported a decrease in production from 2014 to 2016; indeed, only one producer, ***, reported an increase in production in 2016.[5] Production and capacity utilization experienced the largest year-to-year decline (31.3 percent and 19.8 percentage points, respectively) from 2014 to 2015.

Firms reported operating between 50 and 52 weeks per year; however the reported hours worked per week varied from 40 to 140 hours. Producers calculated their production capacities based on prior or estimated production levels. *** each reported an increase in capacity due to new or upgraded machinery, while *** reported a decrease in capacity due to ***.

The Commission asked producers to report constraints on their capacity to produce flanges. Most firms indicated current machinery and plant size to be the only constraints on capacity. *** reported that its capacity is constrained by customer demand, *** reported that its capacity is constrained by the size of its painting, marking, and inspection departments, and *** reported that it has full flexibility to shift production.

Table III-5 presents data on U.S. producers' capacity and production of other products using the same equipment and machinery as finished flanges. *** are the only U.S. producers that reported production of other tube and pipe fittings on the same equipment. *** reported producing other types of out-of-scope merchandise on the same equipment.

[5] ***.

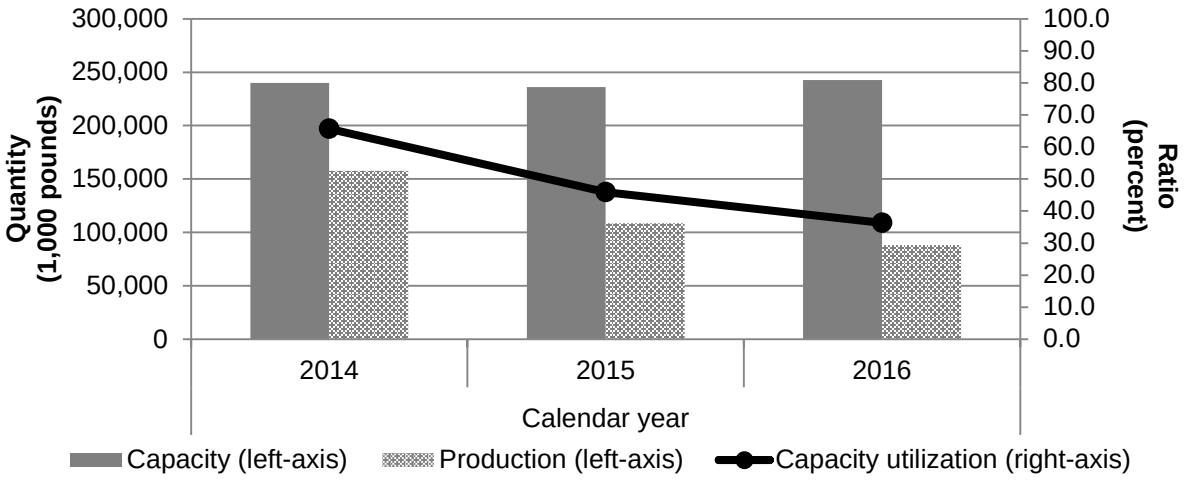
Table III-4
Flanges: U.S. producers' production, capacity, and capacity utilization, 2014-16

Item	Calendar year		
	2014	2015	2016
	Capacity (1,000 pounds)		
Ameriforge	***	***	***
Boltex	***	***	***
Galperti	***	***	***
Weldbend	***	***	***
All others	***	***	***
Total capacity	240,005	236,162	242,775
	Production (1,000 pounds)		
Ameriforge	***	***	***
Boltex	***	***	***
Galperti	***	***	***
Weldbend	***	***	***
All others	***	***	***
Total production	157,681	108,404	88,047
	Capacity utilization (percent)		
Ameriforge	***	***	***
Boltex	***	***	***
Galperti	***	***	***
Weldbend	***	***	***
All others	***	***	***
Average capacity utilization	65.7	45.9	36.3

Note.--Quantities may be slightly overstated due to the inclusion by *** of stainless steel flanges in its questionnaire data. The company stated that the stainless steel flanges ***. ***, email message to USITC staff, ***.

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

Figure III-1
Flanges: U.S. producers' production, capacity, and capacity utilization, 2014-16



Source: Table III-4.

Table III-5

Flanges: U.S. producers' overall capacity and production on the same equipment as subject production, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
Overall capacity	255,954	252,060	258,763
Production: Flanges	157,681	108,404	88,047
Tube/pipe fittings other than flanges	***	***	***
All other products	***	***	***
Out-of-scope production	11,659	11,770	12,669
Total production on same machinery	169,340	120,174	100,716
	Ratios and shares (percent)		
Overall capacity utilization	66.2	47.7	38.9
Share of production: Flanges	93.1	90.2	87.4
Tube/pipe fittings other than flanges	***	***	***
All other products	***	***	***
Out-of-scope production	6.9	9.8	12.6
Total production on same machinery	100.0	100.0	100.0

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

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

Table III-6 presents U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. producers' U.S. shipments decreased by 46.5 percent (quantity) and by 56.0 (value) from 2014 to 2016. The average unit values of these shipments increased by 3.8 percent from 2014 to 2015 before decreasing by 20.7 percent from 2015 to 2016.[6] Boltex stated that it was forced to decrease its prices by 25 percent in the beginning of 2016, and then decrease its prices again by an additional 25 percent in November 2016.[7] Boltex, ***, stated that these decreases ***.[8] *** also confirmed that domestic prices remained stable for nearly a decade before declining in 2016.[9] Export shipments constituted *** percent of total shipments by quantity in each year from 2014 to 2016 and exhibited a substantially smaller net decline in average unit values between 2014 and 2016. Three firms reported exporting finished flanges from 2014 to 2016. ***.

[6] ***.
[7] Hearing transcript, pp. 16-17 (Bernobich).
[8] Staff fieldwork and interview with ***.
[9] Staff telephone interview with ***.

Table III-6
Flanges: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
U.S. shipments	167,162	109,849	89,407
Export shipments	***	***	***
Total shipments	***	***	***
	Value (1,000 dollars)		
U.S. shipments	266,323	181,646	117,281
Export shipments	***	***	***
Total shipments	***	***	***
	Unit value (dollars per 1,000 pounds)		
U.S. shipments	1,593	1,654	1,312
Export shipments	***	***	***
Total shipments	***	***	***
	Share of quantity (percent)		
U.S. shipments	***	***	***
Export shipments	***	***	***
Total shipments	100.0	100.0	100.0
	Share of value (percent)		
U.S. shipments	***	***	***
Export shipments	***	***	***
Total shipments	100.0	100.0	100.0

Note.--Quantities and values may be slightly overstated due to the inclusion by *** of stainless steel flanges in its questionnaire data. The company stated that the stainless steel flanges ***. ***, email message to USITC staff, ***.

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

U.S. PRODUCERS' INVENTORIES

Table III-7 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**.** U.S. producers' inventories of flanges decreased by 8.8 percent from 2014 to 2016. However, the decline in inventories was less than U.S. producers' aggregate reductions in production and shipments. As a result, the ratio of inventories relative to U.S. production and U.S. shipments each increased by more than 20 percentage points from 2014 to 2016, ***.[10]

[10] ***.

Table III-7
Flanges: U.S. producers' inventories, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
U.S. producers' end-of-period inventories	56,326	53,636	51,367
	Ratio (percent)		
Ratio of inventories to.--			
U.S. production	35.7	49.5	58.3
U.S. shipments	33.7	48.8	57.5
Total shipments	***	***	***

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

U.S. PRODUCERS' IMPORTS AND PURCHASES

U.S. producers' imports and purchases of flanges are presented in table III-8. ***, reported direct imports of subject flanges from India ***.

Table III-8
Flanges: U.S. producers' U.S. production, imports and purchases, 2014-16

* * * * * * *

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-9 shows U.S. producers' employment-related data. From 2014 to 2016, the number of production and related workers ("PRWs") decreased by 21.9 percent, total hours worked decreased by 28.8 percent, and hours worked per PRW decreased by 8.9 percent. During the same period, total wages paid decreased by 32.7 percent, hourly wages decreased 5.5 percent, and productivity decreased by 21.5 percent.[11] Unit labor costs increased by $43.34 from 2014 to 2015 before decreasing by $9.21 from 2015 to 2016.[12] Five producers indicated that employment trends were the result of decreased demand for flanges, one producer indicated that employment trends were the result of increased volumes of "aggressively imported" flanges, and two producers indicated that employment trends were the result of a combination of these two factors.

[11] Boltex's reductions in employment levels were not proportional to its declines in production because employees were reassigned in an attempt to preserve their jobs and commensurate benefits. Hearing transcript, pp.77-78 (Bernobich).

[12] ***.

Table III-9
Flanges: U.S. producers' employment-related data, 2014-16

Item	Calendar year		
	2014	2015	2016
Production and related workers (PRWs) (number)[1]	539	500	421
Total hours worked (1,000 hours)	1,329	1,158	946
Hours worked per PRW (hours)	2,466	2,316	2,247
Wages paid ($1,000)	26,231	22,731	17,652
Hourly wages (dollars per hour)	$19.74	$19.63	$18.66
Productivity (pounds per hour)	118.6	93.6	93.1
Unit labor costs (dollars per 1,000 pounds)	$166.35	$209.69	$200.48

[1] All ten responding firms reported a decline in PRWs from 2014 to 2016.

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 100 firms believed to be importers of subject flanges, as well as to all U.S. producers of flanges.[1] As discussed in *Part I*, usable questionnaire responses were received from 26 companies, representing 69.6 percent of U.S. imports of flanges from India, 24.1 percent of U.S. imports from Italy, 39.5 percent of U.S. imports from Spain, 42.2 percent of U.S. imports from all other sources, and 51.9 percent of total U.S. imports in 2016.[2] Table IV-1 lists all responding U.S. importers of flanges from India, Italy, Spain, and other sources, their headquarters,[3] and their shares of U.S. imports in 2016.

Table IV-1
Flanges: U.S. importers, their headquarters, and share of total imports by source, 2016

Firm	Headquarters	Share of imports by source (percent)					
		India	Italy	Spain	Subject	All other	Total
Allied[1]	Houston, TX	***	***	***	***	***	***
American Piping Products[2]	Chesterfield, MO	***	***	***	***	***	***
Ameriforge[3]	Houston, TX	***	***	***	***	***	***
Anchor Flange	Cincinnati, OH	***	***	***	***	***	***
API International	Tualatin, OR	***	***	***	***	***	***
Bebitz USA[4]	Garden City, NY	***	***	***	***	***	***
CAB[5]	Buford, GA	***	***	***	***	***	***
Con-Tech	New Orleans, LA	***	***	***	***	***	***
Ferguson[6]	Newport News, VA	***	***	***	***	***	***
Forged Components	Humble, TX	***	***	***	***	***	***
Forgital USA[7]	Houston, TX	***	***	***	***	***	***
Global Stainless Supply[8]	Houston, TX	***	***	***	***	***	***
Industrial Piping Specialists	Tulsa, OK	***	***	***	***	***	***
Industrial Valco	Rancho Dominguez, CA	***	***	***	***	***	***
ITEX Piping Products[9]	Houston, TX	***	***	***	***	***	***
Linde[10]	Houston, TX	***	***	***	***	***	***
Merit Brass	Cleveland, OH	***	***	***	***	***	***
Norca Industrial[11]	Lake Success, NY	***	***	***	***	***	***

Table continued on the next page.

[1] The Commission issued questionnaires to those firms identified in the petition, along with firms that, based on a review of data provided by ***, may have accounted for more than one percent of total imports under HTS subheading 7307.91.5010 and 7307.91.5050 in 2016.

[2] The Commission did not receive a questionnaire response from ***.

[3] Ten importers reported being headquartered in Houston, Texas, a notable port of entry and production hub for finished flanges.

Table IV-1—Continued
Flanges: U.S. importers, their headquarters, and share of total imports by source, 2016

PM International[12]	Lakeland, FL	***	***	***	***	***	***
Pro-Flange[13]	Cambridge, ON	***	***	***	***	***	***
Quarter Turn Resources	Ponca City, OK	***	***	***	***	***	***
Regal Beloit America	Beloit, WI	***	***	***	***	***	***
Service Metal Products	St Louis, MO	***	***	***	***	***	***
Silbo Industries	Montvale, NJ	***	***	***	***	***	***
STATS[14]	Houston, TX	***	***	***	***	***	***
Texas Pipe and Supply[15]	Houston, TX	***	***	***	***	***	***
US Metals	Houston, TX	***	***	***	***	***	***
Weldfit	Houston, TX	***	***	***	***	***	***
Total		100.0	100.0	100.0	100.0	100.0	100.0

[1] Allied ***.
[2] American Piping Products ***.
[3] Ameriforge ***.
[4] Bebitz USA ***.
[5] CAB ***.
[6] Ferguson ***.
[7] Forgital USA ***.
[8] Global Stainless Supply ***. Global Stainless Supply, together with Forgings, Flanges, and Fittings, LLC, and Global Valve Products, is part of The Global Group.
[9] ITEX Piping Products ***.
[10] Linde ***.
[11] Norca ***.
[12] PM International ***.
[13] Pro-Flange ***.
[14] STATS ***.
[15] U.S. importer *** Texas Pipe and Supply.
[16] ***.

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

U.S. IMPORTS

Table IV-2 and figure IV-1 present data for U.S. imports of flanges from India, Italy, Spain, and nonsubject sources. U.S. import data is compiled from official import data using HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050.

Table IV-2
Flanges: U.S. imports by source, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
U.S. imports from.--			
India	122,354	148,691	82,111
Italy	26,332	31,100	31,599
Spain	15,377	26,270	18,727
Subject	164,063	206,061	132,437
Nonsubject sources	54,421	47,304	34,860
Total U.S. imports[1]	218,484	253,365	167,297
	Value (1,000 dollars)		
U.S. imports from.--			
India	83,090	98,213	44,016
Italy	34,060	35,259	32,765
Spain	21,280	28,788	17,951
Subject	138,430	162,259	94,731
Nonsubject sources	79,669	61,202	41,306
Total U.S. imports	218,099	223,461	136,037
	Unit value (dollars per 1,000 pounds)		
U.S. imports from.--			
India	679	661	536
Italy	1,293	1,134	1,037
Spain	1,384	1,096	959
Subject	844	787	715
Nonsubject sources	1,464	1,294	1,185
Total U.S. imports	998	882	813
	Share of quantity (percent)		
U.S. imports from.--			
India	56.0	58.7	49.1
Italy	12.1	12.3	18.9
Spain	7.0	10.4	11.2
Subject	75.1	81.3	79.2
Nonsubject sources	24.9	18.7	20.8
Total U.S. imports	100.0	100.0	100.0
	Share of value (percent)		
U.S. imports from.--			
India	38.1	44.0	32.4
Italy	15.6	15.8	24.1
Spain	9.8	12.9	13.2
Subject	63.5	72.6	69.6
Nonsubject sources	36.5	27.4	30.4
Total U.S. imports	100.0	100.0	100.0

Table continued on the next page.

Table IV-2
Flanges: U.S. imports by source, 2014-16

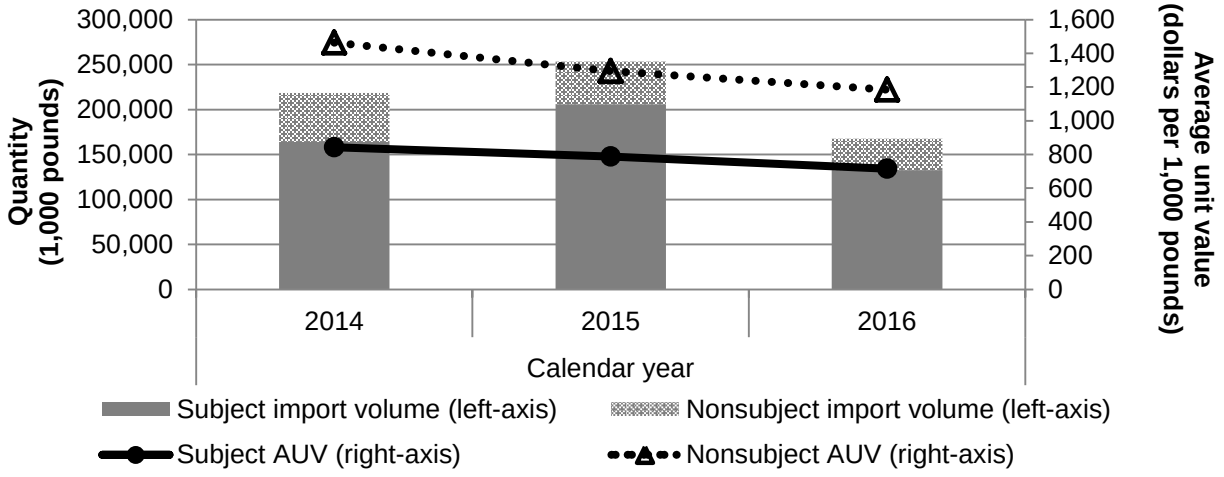
Item	Calendar year		
	2014	2015	2016
	Ratio to U.S. production		
U.S. imports from.--			
India	81.1	145.5	98.7
Italy	17.4	30.4	38.0
Spain	10.2	25.7	22.5
Subject	108.7	201.6	159.2
Nonsubject sources	36.1	46.3	41.9
Total U.S. imports	144.8	247.9	201.1

[1] The increase in the quantity of imports from 2014 to 2015 primarily reflected an increase in flanges with an inside diameter of less than 360 mm from each of the subject countries.

Note.--Import data may be slightly understated, as the individual element limits used to define finished carbon steel flanges in these investigations crosses over the defined limits for alloy steel (other than stainless steel) used in the Harmonized Tariff Schedule.

Source: Official U.S. import statistics using HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050, accessed February 27, 2017.

Figure IV-1
Flanges: U.S. import volumes and prices, 2014-16



Source: Table IV-2.

Regarding imports of flanges from India, quantities and values increased by 21.5 percent and 18.2 percent, respectively, from 2014 to 2015 and decreased by 44.8 percent and 55.2 percent, respectively, from 2015 to 2016. Overall from 2014 to 2016, imports from India decreased by 32.9 and 47.0 percent (as measured by quantity and value, respectively), while imports from India as a share of import quantities and values from all sources similarly decreased by 6.9 and 5.7 percentage points, respectively. Average unit values decreased by 21.1 percent from 2014 to 2016. Average unit values of imports from India were approximately half the level of imports from Italy, Spain, China (the leading nonsubject source), and all nonsubject sources combined.

Regarding imports of flanges from Italy, quantities increased by 18.1 percent from 2014 to 2015 and by 1.6 percent from 2015 to 2016, resulting in an overall increase of 20.0 percent from 2014 to 2016. Values increased by 3.5 percent from 2014 to 2015 and decreased by 7.1 percent from 2015 to 2016, resulting in an overall decrease in value of 3.8 percent from 2014 to 2016. Over the same period, imports from Italy as a share of total imports increased 6.8 percentage points by quantity and 8.5 percentage points by value. Average unit values decreased by 19.8 percent from 2014 to 2016.

Regarding imports of flanges from Spain, quantities and values increased by 70.8 percent and 35.3 percent, respectively, from 2014 to 2015 and decreased by 28.7 percent and 37.6 percent, respectively, from 2015 to 2016. Overall from 2014 to 2016, imports from Spain increased 21.8 percent by quantity and decreased 15.6 percent by value. Over the same period, imports from Spain as a share of total imports increased 4.2 percentage points by quantity and 3.4 percentage points by value. Average unit values decreased by 30.7 percent from 2014 to 2016.

Regarding imports of flanges from nonsubject sources, quantities and values decreased by 35.9 percent and 48.2 percent, respectively, from 2014 to 2016. Over the same period, imports from nonsubject sources as a share of total imports decreased 4.1 percentage points by quantity and 6.1 percentage points by value. Average unit values decreased by 19.1 percent from 2014 to 2016.

Table IV-3 presents data for U.S. imports of flanges from nonsubject sources. The leading nonsubject source of U.S. imports in 2016 was China, followed by Korea and Germany. China accounted for more than half of all imports from nonsubject countries from 2014 to 2016.[4] Imports of flanges from China decreased by 22.6 percent (quantity) and by 36.5 percent (value) from 2014 to 2016. During the same period, average unit values decreased by 18.0 percent, while imports from China as a ratio to U.S. production increased by 7.3 percentage points.

[4] According to proprietary Customs data, flanges manufactured by ***.

Table IV-3
Flanges: U.S. imports by nonsubject source, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
U.S. imports from.--			
China	27,224	25,804	21,062
Korea	10,712	11,605	5,605
Germany	11,062	6,817	4,986
Canada	628	392	677
Japan	330	110	76
All other sources	4,465	2,576	2,455
Total nonsubject U.S. imports	54,421	47,304	34,860
	Value (1,000 dollars)		
U.S. imports from.--			
China	36,174	30,187	22,967
Korea	12,976	11,959	4,670
Germany	14,193	9,494	5,812
Canada	4,391	2,379	1,818
Japan	3,571	2,070	2,584
All other sources	8,364	5,114	3,455
Total nonsubject U.S. imports	79,669	61,202	41,306
	Unit value (dollars per 1,000 pounds)		
U.S. imports from.--			
China	1,329	1,170	1,090
Korea	1,211	1,031	833
Germany	1,283	1,393	1,166
Canada	6,992	6,069	2,685
Japan	5,686	5,281	3,817
All other sources	1,873	1,985	1,407
Total nonsubject U.S. imports	1,464	1,294	1,185

Table continued on the next page.

Table IV-3—Continued
Flanges: U.S. imports by nonsubject source, 2014-16

Item	Calendar year		
	2014	2015	2016
	Share of total quantity (percent)		
U.S. imports from.--			
China	12.5	10.2	12.6
Korea	4.9	4.6	3.4
Germany	5.1	2.7	3.0
Canada	0.3	0.2	0.4
Japan	0.2	0.0	0.0
All other sources	2.0	1.0	1.5
Total nonsubject U.S. imports	24.9	18.7	20.8
	Share of total value (percent)		
U.S. imports from.--			
China	16.6	13.5	16.9
Korea	5.9	5.4	3.4
Germany	6.5	4.2	4.3
Canada	2.0	1.1	1.3
Japan	1.6	0.9	1.9
All other sources	3.8	2.3	2.5
Total nonsubject U.S. imports	36.5	27.4	30.4
	Ratio to U.S. production		
U.S. imports from.--			
China	17.3	23.8	23.9
Korea	6.8	10.7	6.4
Germany	7.0	6.3	5.7
Canada	7.0	6.3	5.7
Japan	0.2	0.1	0.1
All other sources	2.8	2.4	2.8
Total nonsubject U.S. imports	34.5	43.6	39.6

Note.--Import data may be slightly understated, as the individual element limits used to define finished carbon steel flanges in these investigations crosses over the defined limits for alloy steel (other than stainless steel) used in the Harmonized Tariff Schedule.

Source: Official U.S. import statistics using HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050, accessed February 27, 2017.

NEGLIGIBILITY

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[5] Negligible imports are generally defined in the Tariff Act of 1930, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the 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.[6] Imports from India accounted for 54.5 percent of the total quantity of imports of flanges during June 2015 through May 2016; imports from Italy accounted for 13.9 percent; and imports from Spain accounted for 11.3 percent.

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

U.S. producers and importers were asked to report the share of their commercial U.S. shipments that met ASME or an internationally equivalent standard in 2016.[7] Regarding domestically produced flanges, responses ranged from 80 to 100 percent, with 99 percent of total reported commercial U.S. shipments meeting ASME standards. Regarding imports from India, responses ranged from 64 to 100 percent, with 96 percent of total reported commercial U.S. shipments meeting ASME standards. Regarding imports from Italy, responses ranged from

[5] 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)).

[6] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

[7] Finished carbon steel flanges are generally manufactured to specification ASME B16.5 or ASME B16.47 series A or series B.

0 to 100 percent, with 99 percent of total reported commercial U.S. shipments meeting ASME standards. Regarding imports from Spain, all firms responded that 100 percent of total reported commercial U.S. shipments met ASME standards. With regards to the fungibility of "specialized and custom" flanges from each of the three subject countries, respondent Forgital did not take a position regarding the fungibility of its flanges to those from India and Spain, but it did state that its "specialized and custom" are not interchangeable with "standard" flanges produced in Italy.[8]

Table IV-4 presents U.S. imports and U.S. producers' commercial U.S. shipments in 2016 according to inside diameter size, which corresponds to the two HTS statistical reporting numbers under which finished flanges are imported into the United States. Both flanges with an inside diameter of less than 360 mm (14.17 inches) and with an inside diameter greater than or equal to 360 mm (14.17 inches) accounted for a sizeable share of U.S. shipments or imports from each source.

[8] Hearing transcript, p. 122 (Spezzapria). Forgital accounted for *** percent of imports from Italy in 2016.

Table IV-4
Flanges: U.S. imports and U.S. producers' U.S. shipments, by inside diameter size, 2016

Item	Calendar year 2016		
	Inside diameter of less than 360 mm[1]	Inside diameter greater than or equal to 360 mm[2]	Total
	Quantity (1,000 pounds)		
U.S. imports from.--			
India	58,071	24,040	82,111
Italy	16,598	15,001	31,599
Spain	10,381	8,346	18,727
Subject U.S. imports	85,050	47,387	132,437
Nonsubject U.S. imports	19,966	14,893	34,860
Total U.S. imports	105,016	62,280	167,297
U.S. producers' commercial U.S. shipments	60,463	24,357	84,820
Total	165,479	86,637	252,117
	Share of quantity across (percent)		
U.S. imports from.--			
India	70.7	29.3	100.0
Italy	52.5	47.5	100.0
Spain	55.4	44.6	100.0
Subject U.S. imports	64.2	35.8	100.0
Nonsubject U.S. imports	57.3	42.7	100.0
Total U.S. imports	62.8	37.2	100.0
U.S. producers' commercial U.S. shipments	71.3	28.7	100.0
Total	65.6	34.4	100.0
	Share of quantity down (percent)		
U.S. imports from.--			
India	35.1	27.7	32.6
Italy	10.0	17.3	12.5
Spain	6.3	9.6	7.4
Subject U.S. imports	51.4	54.7	52.5
Nonsubject U.S. imports	12.1	17.2	13.8
Total U.S. imports	63.5	71.9	66.4
U.S. producers' commercial U.S. shipments	36.5	28.1	33.6
Total	100.0	100.0	100.0

Note.--***.

[1] Corresponds to HTS statistical reporting number 7307.91.5010.
[2] Corresponds to HTS statistical reporting number 7307.91.5050.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050, accessed February 27, 2017.

In the preliminary phase of these investigations, respondents argued that there is a clear distinction between Indian flanges and those flanges produced in the United States, Italy, and Spain with respect to customer perceptions and price.[9] They contended that U.S., Italian, and Spanish flanges are distinctly different from Indian flanges based on perceived qualitative differentiation in the flange market between the "generic" product from India and the "approved" product manufactured domestically, and in Italy and Spain.[10] Respondents also stated that the existence of AMLs creates a clear dividing line between flanges from companies which have been approved as suppliers and those which have not.[11] [12] Petitioners, in contrast, argued that there is no basis for the respondents' alleged AML/non-AML distinction. They contended that flanges sold to companies with an AML and those without an AML share the same physical characteristics, and that distributors are quoted one price regardless of whether or not its customer maintains an AML.[13] In these final-phase investigations, petitioners further argue that AMLs are subjective, that not all end users have AMLs, that the same producer may be on some AMLs but not others, that subject country producers can be found on AMLs, and that flanges produced by non-approved manufacturers will still compete for projects requiring flanges from approved manufacturers.[14] Interchangeability is addressed in greater detail in *Part II* of this report.

Geographical markets

As discussed in *Part II*, both U.S. producers and U.S. importers reported shipping flanges throughout the United States. Table IV-5 presents import statistics for flanges by Customs district of entry in 2016. Slightly less than half of imports from India, along with the vast majority of imports from Italy and Spain, entered into the United States through Houston-Galveston, Texas in 2016.

[9] Silbo's postconference brief, p. 14.
[10] Indian producers' postconference brief, p. 3.
[11] Silbo's postconference brief, p. 9.
[12] Further information regarding AMLs is discussed in *Part II* and in appendix D.
[13] Petitioners' postconference brief, pp. 14-16.
[14] Hearing transcript, pp. 18-20, 27-28 and 42 (Bernobich).

Table IV-5

Flanges: Subject U.S. imports by Customs districts of entry, 2016

Item	Calendar year 2016	
	Quantity (1,000 pounds)	Share of quantity(percent)
U.S. imports from India.--		
Houston-Galveston, TX	38,384	46.7
Cleveland, OH	9,258	11.3
New York, NY	7,413	9.0
Savannah, GA	6,706	8.2
Los Angeles, CA	6,602	8.0
All other districts	13,748	16.7
Total U.S. imports from India	82,111	100.0
U.S. imports from Italy.--		
Houston-Galveston, TX	29,127	92.2
New Orleans, LA	1,152	3.6
Los Angeles, CA	467	1.5
Savannah, GA	289	0.9
Cleveland, OH	193	0.6
All other districts	371	1.2
Total U.S. imports from Italy	31,599	100.0
U.S. imports from Spain.--		
Houston-Galveston, TX	18,207	97.2
Norfolk, VA	298	1.6
Los Angeles, CA	211	1.1
Savannah, GA	10	0.1
Great Falls, MT	1	0.0
All other districts	---	0.0
Total U.S. imports from Italy	18,727	100.0

Source: Official U.S. import statistics using HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050, accessed February 27, 2017.

Presence in the market

Table IV-6 and figure IV-2 present monthly import statistics for flanges during January 2014 through March 2017. Imports of flanges from each subject country as well as from nonsubject sources entered the U.S. market during each month during this time period.

Table IV-6

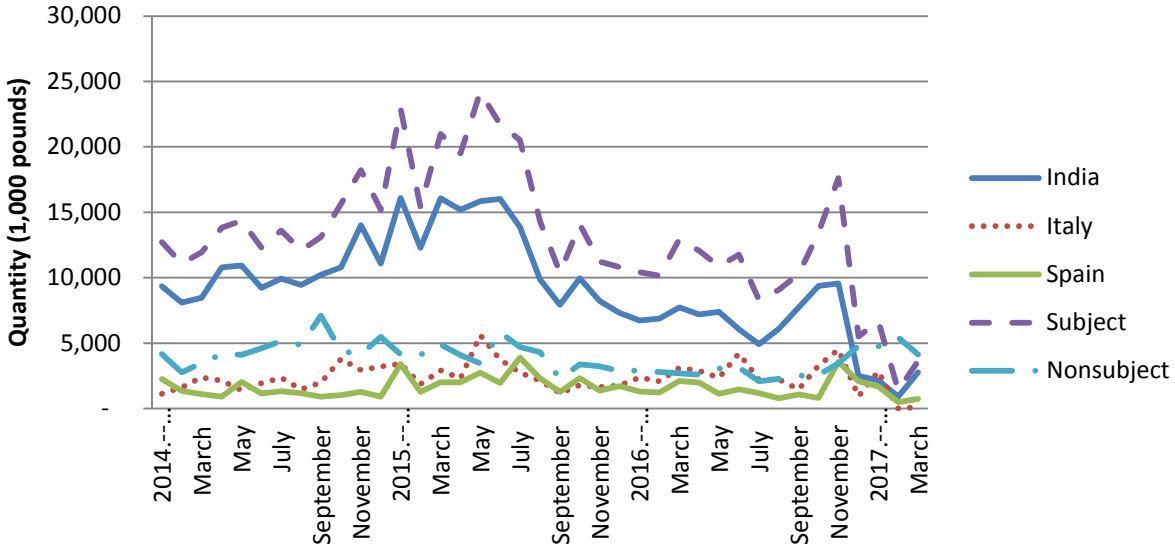
Flanges: Monthly U.S. imports by source, January 2014 to March 2017

Item	Source					
	India	Italy	Spain	Subject sources	Nonsubject sources	All sources
	Quantity (1,000 pounds)					
2014.-- January	9,356	1,118	2,247	12,721	4,154	16,875
February	8,107	1,625	1,341	11,073	2,777	13,850
March	8,459	2,384	1,101	11,944	3,475	15,419
April	10,793	2,124	902	13,819	4,165	17,983
May	10,925	1,404	2,023	14,353	4,102	18,455
June	9,222	1,927	1,153	12,303	4,606	16,908
July	9,924	2,346	1,324	13,595	5,160	18,755
August	9,437	1,467	1,174	12,077	4,864	16,941
September	10,222	1,983	899	13,105	7,090	20,194
October	10,801	3,804	1,041	15,647	4,382	20,029
November	14,019	2,939	1,273	18,231	4,166	22,397
December	11,087	3,211	898	15,196	5,482	20,678
2015.-- January	16,093	3,432	3,402	22,928	4,147	27,075
February	12,288	1,857	1,278	15,423	4,117	19,541
March	16,060	2,921	2,002	20,983	4,902	25,885
April	15,195	2,291	2,005	19,491	4,090	23,580
May	15,841	5,610	2,731	24,182	3,457	27,639
June	16,025	3,746	1,961	21,732	5,816	27,548
July	13,875	2,736	3,901	20,512	4,703	25,214
August	9,862	2,126	2,304	14,292	4,302	18,594
September	7,937	1,187	1,271	10,395	2,287	12,681
October	9,964	1,783	2,317	14,065	3,384	17,448
November	8,227	1,640	1,372	11,239	3,233	14,472
December	7,323	1,770	1,727	10,820	2,867	13,687
2016.-- January	6,737	2,388	1,300	10,425	2,913	13,338
February	6,864	2,072	1,224	10,160	2,785	12,944
March	7,733	3,100	2,104	12,937	2,694	15,631
April	7,192	2,879	1,993	12,064	2,599	14,663
May	7,378	2,356	1,119	10,853	3,062	13,915
June	6,079	4,200	1,483	11,763	3,122	14,884
July	4,908	2,197	1,186	8,291	2,090	10,381
August	6,083	2,224	780	9,087	2,280	11,366
September	7,728	1,475	1,073	10,276	2,498	12,774
October	9,365	3,281	814	13,460	2,562	16,021
November	9,555	4,500	3,569	17,624	3,463	21,087
December	2,489	926	2,083	5,498	4,793	10,291
2017.-- January	2,149	2,840	1,684	6,672	4,745	11,417
February	897	8	504	1,409	5,440	6,849
March	2,760	106	745	3,612	4,144	7,756

Source: Official U.S. import statistics using HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050, accessed May 8, 2017.

Figure IV-2

Flanges: Monthly U.S. imports by sources, January 2014 through March 2017



Source: Table IV-6

APPARENT U.S. CONSUMPTION

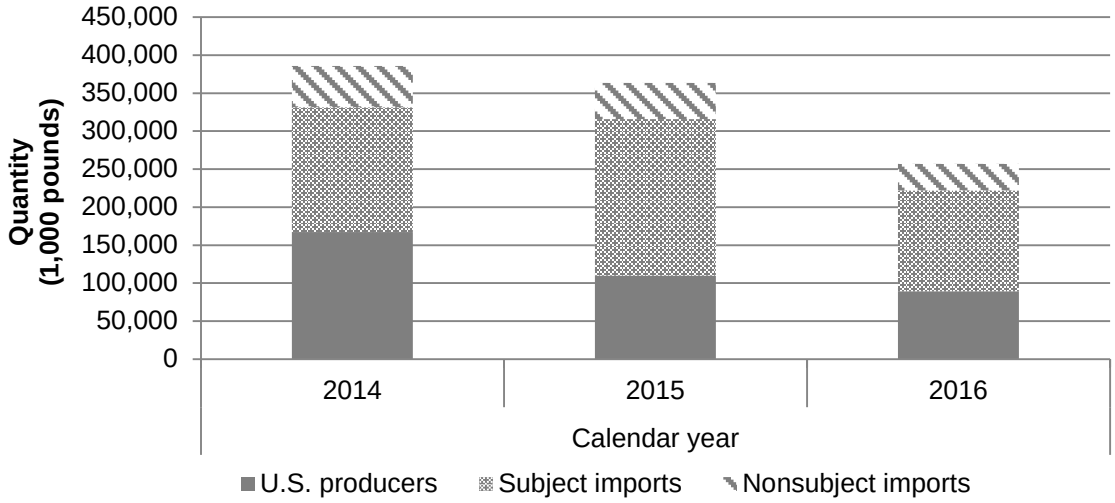
Table IV-7 and figure IV-3 presents data on apparent U.S. consumption and U.S. market shares for flanges. Apparent U.S. consumption decreased 33.4 percent by quantity and 47.7 percent by value from 2014 to 2016. During the same period, U.S. producers' share of apparent U.S. consumption, based on quantity, decreased by 8.5 percentage points. The market share of imports of flanges from India increased by 9.2 percentage points from 2014 to 2015 and decreased by 8.9 percentage points from 2015 to 2016, for an overall increase of 0.3 percentage points from 2014 to 2016. The market share of imports of flanges from Italy increased by 5.5 percentage points, and the market share of imports of flanges from Spain increased by 3.3 percentage points, from 2014 to 2016. The market share of imports of flanges from nonsubject sources decreased by 0.5 percentage points from 2014 to 2016.

Table IV-7
Flanges: U.S. shipments of domestic product, U.S. imports, apparent U.S. consumption, and market shares, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
U.S. producers' U.S. shipments	167,162	109,849	89,407
U.S. imports from.--			
India	122,354	148,691	82,111
Italy	26,332	31,100	31,599
Spain	15,377	26,270	18,727
Subject sources	164,063	206,061	132,437
Nonsubject sources	54,421	47,304	34,860
All import sources	218,484	253,365	167,297
Apparent U.S. consumption	385,646	363,214	256,704
	Value (1,000 dollars)		
U.S. producers' U.S. shipments	266,323	181,646	117,281
U.S. imports from.--			
India	83,090	98,213	44,016
Italy	34,060	35,259	32,765
Spain	21,280	28,788	17,951
Subject sources	138,430	162,259	94,731
Nonsubject sources	79,669	61,202	41,306
All import sources	218,099	223,461	136,037
Apparent U.S. consumption	484,422	405,107	253,318
	Share of quantity (percent)		
U.S. producers' U.S. shipments	43.3	30.2	34.8
U.S. imports from.--			
India	31.7	40.9	32.0
Italy	6.8	8.6	12.3
Spain	4.0	7.2	7.3
Subject sources	42.5	56.7	51.6
Nonsubject sources	14.1	13.0	13.6
All import sources	56.7	69.8	65.2
	Share of value (percent)		
U.S. producers' U.S. shipments	55.0	44.8	46.3
U.S. imports from.--			
India	17.2	24.2	17.4
Italy	7.0	8.7	12.9
Spain	4.4	7.1	7.1
Subject sources	28.6	40.1	37.4
Nonsubject sources	16.4	15.1	16.3
All import sources	45.0	55.2	53.7

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050, accessed February 27, 2017.

Figure IV-3
Flanges: U.S. imports and U.S. shipments of domestic product, 2014-16



Source: Table IV-7.

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

The principle raw material used to produce flanges is carbon steel, either in billet form or as a forging.[1] Seven of the ten responding U.S. producers are not integrated, so their main raw material is a steel forging, i.e., an unfinished flange. The three integrated U.S. producers cast their own forgings from purchased steel billets. The average price of scrap metal decreased by 23.5 percent during January-December 2014, decreased by 59.8 percent during January-December 2015, then increased by 60.4 percent over the course of 2016, and increased another 5.4 percent during January-March 2017 (figure V-1). Overall, scrap prices declined by 43.3 percent from January 2014 to December 2016. Raw materials, as a share of the cost of goods sold, decreased from 66.0 percent in 2014 to 58.1 percent in 2016.

Figure V-1
Steel scrap metal: Prices and quantities of Chicago No. 1 heavy melt scrap, monthly, January 2014-March 2017

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Five of nine responding U.S. producers reported that raw material prices have decreased since January 1, 2014, while the other four producers reported that raw material prices have fluctuated. Nine of 23 responding importers reported that raw material prices have fluctuated since January 1, 2014; eight reported that prices decreased, four reported no change in prices, and two reported an increase in raw material prices over the period. *** noted that steel is the biggest cost component for producing flanges. U.S. producer *** and importers *** stated that as the price of steel has declined, so has the price of flanges.

Transportation costs to the U.S. market

Transportation costs for flanges shipped from India, Italy, and Spain to the United States averaged 7.1, 6.2, and 3.0 percent, respectively, in 2016. These estimates were derived from official import data and represent transportation and other charges on imports.[2]

[1] Conference transcript, p. 87 (Bernobich).

[2] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2015 and then dividing by the customs value based on the HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050.

U.S. inland transportation costs

Five of nine responding U.S. producers and 16 of 24 importers reported that they typically arrange transportation to their customers. Fourteen importers ship from a U.S. storage facility whereas nine ship from the point of importation. Six of nine U.S. producers reported that their U.S. inland transportation costs ranged from 3 to 5 percent (*** reported inland transportation costs of 15 percent), while eight importers reported that costs ranged from 1 to 5 percent, two importers reported that costs were 10 percent, and one importer reported that costs were 15 percent.

PRICING PRACTICES

Pricing methods

U.S. producers reported using transaction-by-transaction and set price lists to establish their prices while importers reported using transaction-by-transaction negotiations, contracts, and set price lists. As presented in table V-1, U.S. producers and importers sell primarily using transaction-by-transaction negotiations. U.S. producers Boltex and Weldbend sell using price lists and discount prices off of those price lists, although Boltex is currently only "partially" using its price list.[3] *** uses both a price list and transaction-by-transaction negotiations.

Table V-1
Flanges: U.S. producers and importers reported price setting methods, by number of responding firms

Method	U.S. producers	Importers
Transaction-by-transaction	7	22
Contract	1	4
Set price list	3	3
Other[1]	0	4

[1] Other pricing methods included "competition." Two importers (***) reported that they either sell flanges as part of a complete package or internally use the flanges they import.

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

Nearly all U.S.-produced and subject imported flanges are sold on the spot market (table V-2). According to Boltex and Weldbend representatives, they "produce for the day" based on daily orders, and do not have order backlogs or pre-orders for the next day, week, month, or

[3] Conference transcript, pp. 85 (Bernobich) and 131 (Jakob). Mr. Shalom of respondent Silbo stated that Boltex and Weldbend have been selling off the same price list since at least 2009. On Boltex's website, its prices are listed under "Price Schedule 07-08" while showing that Boltex suspended its price list as of February 12, 2016. http://www.boltex.com/about-boltex-flanges.html, retrieved August 5, 2016.

year.[4] Importers sell flanges primarily on the spot market, while selling the balance through short-term contracts.

Table V-2
Flanges: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2016

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Two U.S. producers reported that their short-term contracts, which have an average duration of 90 days, do not include price renegotiation but fix both price and quantity. One producer's short-term contracts include meet-or-release provisions while the other does not. All five responding importers that reported short-term contracts, with average duration ranging from 45 days to 300 days, do not include price renegotiations. One importer fixes quantity, three importers fix price, and three importers fix both in their short-term contracts.[5] Four of five responding importers reported that their contracts do not contain meet-or-release provisions.

Six purchasers reported that they purchase product daily, four purchase weekly, four purchase monthly, three purchase quarterly, and one purchases on a project-driven basis. Thirteen of 18 responding purchasers reported that their purchasing frequency has not changed since 2014. Most (14 of 17) purchasers contact between 1 and 5 suppliers before making a purchase.

Sales terms and discounts

Most responding U.S. producers (7 of 9) and importers (16 of 25) typically quote prices on an f.o.b. basis. In addition, four importers reported quoting prices on both an f.o.b. and a delivered basis. Four of nine producers offer quantity discounts, three offer total volume discounts, and four have no discount policy. Boltex reported that it ***. In contrast, 13 of the 25 responding importers do not have a discount policy, 9 offer quantity discounts, 7 offer total volume discounts, and 2 offer rebates to some customers. The majority of responding producers (8 of 9) and importers (18 of 24) reported sales terms of net 30 days.

Price leadership

Purchasers reported that Boltex (reported by 12 purchasers), Weldbend (reported by 7 purchasers), and Allied Fittings (reported by 3 purchasers) were price leaders, with the majority stating that when Boltex changes its prices, the rest typically follow. Purchaser *** stated that Boltex is the price leader, that the majority of the industry uses their 2008 published price

[4] Conference transcript, p. 86 (Bernobich and Coulas).

[5] Importer *** reported that it fixes quantity, fixes price, and fixes both in its short-term contracts. It is included in the total count for each category.

sheet, and that Weldbend is a similar situation. It also stated that importers do not use a price sheet but rather a formula based on machining and steel pricing per pound. Purchaser *** stated that both Boltex's and Weldbend's published price lists are universally used, with various multipliers. ***.[6]

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 flange products shipped to unrelated U.S. customers during January 2014-December 2016.

Product 1.--3 inch, 150 class, Raised Face, Weld neck standard flange (3 150 RF WN STD)

Product 2.-- 4 inch, 150 class, Raised Face, Weld neck standard flange (4 150 RF WN STD)

Product 3.-- 6 inch, 150 class, Raised Face, Weld neck standard flange (6 150 RF WN STD)

Product 4.--16 inch, 150 class, Raised Face, Weld neck standard flange (16 150 RF WN STD)

Product 5.--6 inch, 150 class, Raised Face, Slip on standard flange (6 150 RF Slip on)

Product 6.--2 inch, 150 class, Raised Face, Threaded standard flange (2 150 RF THD)

Seven U.S. producers and fifteen importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters for all countries.[7] [8] [9] As a percentage of the value of U.S. commercial shipments, pricing data reported by these firms accounted for approximately 6.9 percent for U.S. producers, 15.2 percent for subject imports from India, 6.4 percent for subject imports from Italy, and 7.4 percent for subject imports from Spain in 2016.[10]

Price data for products 1-6 are presented in tables V-3 to V-8 and figures V-2 to V-7. Price data for flanges imported from nonsubject countries are presented in Appendix E.

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[6] ***.

[7] 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.

[8] Staff has excluded data provided by U.S. producer *** because the unit values were ***. Staff has also excluded data provided by importer *** because the ***. Data do not include two quarters with very low quantities of ***.

[9] Importer *** did not provide price data.

[10] Over the period January 2014-December 2016, the coverage for these pricing products was 7.3 percent for the producers of flanges in the United States, 15.1 percent for importers of flanges from India, 7.1 percent for importers of flanges from Italy, and 7.8 percent for importers of flanges from Spain.

Table V-3
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 1,[1] and margins of underselling/(overselling), by quarter, January 2014-December 2016

Period	United States		India			Italy		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014:								
Jan.-Mar.	14.43	83,924	8.56	82,828	40.6	***	***	***
Apr.-June	14.18	95,191	9.53	55,686	32.8	***	***	***
July-Sept.	14.07	99,784	9.45	63,604	32.8	***	***	***
Oct.-Dec.	14.23	69,294	9.95	45,381	30.1	***	***	***
2015:								
Jan.-Mar.	12.30	56,459	9.07	60,221	26.3	***	***	***
Apr.-June	14.08	43,543	9.26	57,823	34.2	***	***	***
July-Sept.	14.03	40,199	9.32	35,130	33.6	***	***	***
Oct.-Dec.	14.79	34,616	8.55	32,434	42.2	***	***	***
2016:								
Jan.-Mar.	12.61	36,911	8.70	34,536	31.0	***	***	***
Apr.-June	10.89	25,411	8.20	32,010	24.7	***	***	***
July-Sept.	9.72	36,243	7.79	41,634	19.8	***	***	***
Oct.-Dec.	9.15	44,965	8.79	29,109	3.9	***	***	***

Period	United States		Spain		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014:					
Jan.-Mar.	14.43	83,924	***	***	***
Apr.-June	14.18	95,191	***	***	***
July-Sept.	14.07	99,784	***	***	***
Oct.-Dec.	14.23	69,294	***	***	***
2015:					
Jan.-Mar.	12.30	56,459	***	***	***
Apr.-June	14.08	43,543	***	***	***
July-Sept.	14.03	40,199	***	***	***
Oct.-Dec.	14.79	34,616	***	***	***
2016:					
Jan.-Mar.	12.61	36,911	***	***	***
Apr.-June	10.89	25,411	***	***	***
July-Sept.	9.72	36,243	***	***	***
Oct.-Dec.	9.15	44,965	***	***	***

[1] Product 1: 3 inch, 150 class, Raised Face, Weld neck standard flange (3 150 RF WN STD).

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

Table V-4
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 2,[1] and margins of underselling/(overselling), by quarter, January 2014-December 2016

Period	United States		India			Italy		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014: Jan.-Mar.	17.60	88,927	11.69	61,908	33.6	***	***	***
Apr.-June	17.49	102,197	11.77	53,015	32.7	***	***	***
July-Sept.	17.26	105,557	11.77	62,050	31.8	***	***	***
Oct.-Dec.	17.25	75,757	12.25	51,426	29.0	***	***	***
2015: Jan.-Mar.	16.91	57,797	11.79	67,649	30.3	***	***	***
Apr.-June	17.16	48,339	12.13	52,704	29.3	***	***	***
July-Sept.	17.03	49,252	12.12	33,656	28.8	***	***	***
Oct.-Dec.	16.92	41,920	10.45	32,629	38.3	***	***	***
2016: Jan.-Mar.	15.18	37,617	10.50	35,003	30.8	***	***	***
Apr.-June	13.19	31,539	10.31	34,161	21.8	***	***	***
July-Sept.	11.65	44,850	9.44	44,982	18.9	***	***	***
Oct.-Dec.	10.94	58,963	10.48	27,323	4.2	***	***	***

Period	United States		Spain		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014: Jan.-Mar.	17.60	88,927	***	***	***
Apr.-June	17.49	102,197	***	***	***
July-Sept.	17.26	105,557	***	***	***
Oct.-Dec.	17.25	75,757	***	***	***
2015: Jan.-Mar.	16.91	57,797	***	***	***
Apr.-June	17.16	48,339	***	***	***
July-Sept.	17.03	49,252	***	***	***
Oct.-Dec.	16.92	41,920	***	***	***
2016: Jan.-Mar.	15.18	37,617	***	***	***
Apr.-June	13.19	31,539	***	***	***
July-Sept.	11.65	44,850	***	***	***
Oct.-Dec.	10.94	58,963	***	***	***

[1] Product 2: 4 inch, 150 class, Raised Face, Weld neck standard flange (4 150 RF WN STD).

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

Table V-5
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 3,[1] and margins of underselling/(overselling), by quarter, January 2014-December 2016

Period	United States		India			Italy		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014:								
Jan.-Mar.	26.54	50,252	18.15	50,493	31.6	***	***	***
Apr.-June	26.30	49,087	18.03	42,153	31.4	***	***	***
July-Sept.	26.28	50,786	17.67	40,167	32.8	***	***	***
Oct.-Dec.	24.92	47,158	18.39	38,173	26.2	***	***	***
2015:								
Jan.-Mar.	25.53	34,977	17.94	44,151	29.7	***	***	***
Apr.-June	24.70	29,889	17.76	37,792	28.1	***	***	***
July-Sept.	24.26	27,293	16.80	26,951	30.7	***	***	***
Oct.-Dec.	25.98	21,607	15.88	26,679	38.9	***	***	***
2016:								
Jan.-Mar.	22.95	24,884	15.61	28,482	32.0	***	***	***
Apr.-June	20.12	19,841	14.45	28,281	28.2	***	***	***
July-Sept.	17.69	33,276	13.54	29,085	23.5	***	***	***
Oct.-Dec.	16.84	32,746	14.71	20,446	12.7	***	***	***

Period	United States		Spain		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014:					
Jan.-Mar.	26.54	50,252	***	***	***
Apr.-June	26.30	49,087	***	***	***
July-Sept.	26.28	50,786	***	***	***
Oct.-Dec.	24.92	47,158	***	***	***
2015:					
Jan.-Mar.	25.53	34,977	***	***	***
Apr.-June	24.70	29,889	***	***	***
July-Sept.	24.26	27,293	***	***	***
Oct.-Dec.	25.98	21,607	***	***	***
2016:					
Jan.-Mar.	22.95	24,884	***	***	***
Apr.-June	20.12	19,841	***	***	***
July-Sept.	17.69	33,276	***	***	***
Oct.-Dec.	16.84	32,746	***	***	***

[1] Product 3: 6 inch, 150 class, Raised Face, Weld neck standard flange (6 150 RF WN STD).

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

Table V-6
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 4,[1] and margins of underselling/(overselling), by quarter, January 2014-December 2016

Period	United States		India			Italy		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014: Jan.-Mar.	237.77	1,641	140.03	2,071	41.1	***	***	***
Apr.-June	236.51	1,596	151.90	1,540	35.8	***	***	***
July-Sept.	232.94	1,928	146.26	1,421	37.2	***	***	***
Oct.-Dec.	232.79	1,770	150.32	1,612	35.4	***	***	***
2015: Jan.-Mar.	231.92	1,995	149.46	1,584	35.6	***	***	***
Apr.-June	225.02	1,180	135.06	1,072	40.0	***	***	***
July-Sept.	227.14	1,289	134.94	1,342	40.6	***	***	***
Oct.-Dec.	231.39	1,116	133.50	625	42.3	***	***	***
2016: Jan.-Mar.	197.00	1,722	117.69	1,230	40.3	--	0	--
Apr.-June	175.61	1,083	122.55	1,653	30.2	--	0	--
July-Sept.	150.28	1,440	***	***	***	***	***	***
Oct.-Dec.	146.05	1,334	***	***	***	***	***	***

Period	United States		Spain		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014: Jan.-Mar.	237.77	1,641	***	***	***
Apr.-June	236.51	1,596	***	***	***
July-Sept.	232.94	1,928	***	***	***
Oct.-Dec.	232.79	1,770	***	***	***
2015: Jan.-Mar.	231.92	1,995	***	***	***
Apr.-June	225.02	1,180	***	***	***
July-Sept.	227.14	1,289	***	***	***
Oct.-Dec.	231.39	1,116	***	***	***
2016: Jan.-Mar.[2]	197.00	1,722	***	***	***
Apr.-June	175.61	1,083	***	***	***
July-Sept.	150.28	1,440	***	***	***
Oct.-Dec.	146.05	1,334	***	***	***

[1] Product 4: 16 inch, 150 class, Raised Face, Weld neck standard flange (16 150 RF WN STD).
[2] ***.

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

Table V-7
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 5,[1] and margins of underselling/(overselling), by quarter, January 2014-December 2016

Period	United States		India			Italy		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014:								
Jan.-Mar.	23.01	18,264	13.68	60,929	40.5	***	***	***
Apr.-June	22.84	19,889	13.92	60,166	39.0	***	***	***
July-Sept.	22.89	17,259	13.82	63,180	39.6	***	***	***
Oct.-Dec.	22.72	14,356	14.42	52,703	36.5	***	***	***
2015:								
Jan.-Mar.	22.92	13,609	15.10	40,397	34.1	***	***	***
Apr.-June	22.90	12,979	14.27	52,566	37.7	***	***	***
July-Sept.	22.94	11,999	13.71	40,378	40.2	***	***	***
Oct.-Dec.	22.84	11,334	13.51	28,049	40.9	***	***	***
2016:								
Jan.-Mar.	20.47	9,740	13.38	29,542	34.6	***	***	***
Apr.-June	17.48	9,326	12.77	26,516	26.9	***	***	***
July-Sept.	15.85	12,445	11.47	38,114	27.7	***	***	***
Oct.-Dec.	14.65	13,885	12.46	29,812	14.9	***	***	***

Period	United States		Spain		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014:					
Jan.-Mar.	23.01	18,264	***	***	***
Apr.-June	22.84	19,889	***	***	***
July-Sept.	22.89	17,259	***	***	***
Oct.-Dec.	22.72	14,356	***	***	***
2015:					
Jan.-Mar.	22.92	13,609	***	***	***
Apr.-June	22.90	12,979	***	***	***
July-Sept.	22.94	11,999	***	***	***
Oct.-Dec.	22.84	11,334	***	***	***
2016:					
Jan.-Mar.	20.47	9,740	***	***	***
Apr.-June	17.48	9,326	***	***	***
July-Sept.	15.85	12,445	***	***	***
Oct.-Dec.	14.65	13,885	***	***	***

[1] Product 5: 6 inch, 150 class, Raised Face, Slip on standard flange (6 150 RF Slip on).

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

Table V-8
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 6,[1] and margins of underselling/(overselling), by quarter, January 2014-December 2016

Period	United States		India			Italy		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014: Jan.-Mar.	12.31	25,611	7.15	18,103	41.9	***	***	***
Apr.-June	12.13	27,729	6.73	27,296	44.5	***	***	***
July-Sept.	12.04	29,505	7.48	24,728	37.9	***	***	***
Oct.-Dec.	12.04	28,229	7.23	20,898	39.9	***	***	***
2015: Jan.-Mar.	11.92	23,581	7.16	23,918	40.0	***	***	***
Apr.-June	11.97	15,155	8.04	12,215	32.8	***	***	***
July-Sept.	11.99	19,186	5.98	19,775	50.1	***	***	***
Oct.-Dec.	11.81	16,018	6.77	13,048	42.7	***	***	***
2016: Jan.-Mar.	10.86	14,435	6.58	17,549	39.4	***	***	***
Apr.-June	9.74	13,538	6.36	16,240	34.7	***	***	***
July-Sept.	8.20	17,216	6.70	18,912	18.3	***	***	***
Oct.-Dec.	8.10	19,665	6.88	17,566	15.0	***	***	***

Period	United States		Spain		
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*	Margin *(percent)*
2014: Jan.-Mar.	12.31	25,611	***	***	***
Apr.-June	12.13	27,729	***	***	***
July-Sept.	12.04	29,505	***	***	***
Oct.-Dec.	12.04	28,229	***	***	***
2015: Jan.-Mar.	11.92	23,581	***	***	***
Apr.-June	11.97	15,155	***	***	***
July-Sept.	11.99	19,186	***	***	***
Oct.-Dec.	11.81	16,018	***	***	***
2016: Jan.-Mar.	10.86	14,435	***	***	***
Apr.-June	9.74	13,538	***	***	***
July-Sept.	8.20	17,216	***	***	***
Oct.-Dec.	8.10	19,665	***	***	***

[1] Product 6: 2 inch, 150 class, Raised Face, Threaded standard flange (2 150 RF THD).

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

Figure V-2
Flanges: Weighted-average prices and quantities of domestic and imported product 1, by quarter, January 2014-December 2016

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Figure V-3
Flanges: Weighted-average prices and quantities of domestic and imported product 2, by quarter, January 2014-December 2016

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Figure V-4
Flanges: Weighted-average prices and quantities of domestic and imported product 3, by quarter, January 2014-December 2016

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Figure V-5
Flanges: Weighted-average prices and quantities of domestic and imported product 4, by quarter, January 2014-December 2016

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Figure V-6
Flanges: Weighted-average prices and quantities of domestic and imported product 5, by quarter, January 2014-December 2016

* * * * * * *

Figure V-7
Flanges: Weighted-average prices and quantities of domestic and imported product 6, by quarter, January 2014-December 2016

* * * * * * *

Price trends

Prices decreased during January 2014-December 2016 for all six products from the United States and all three subject countries except for prices of product 1 from India, which increased by 2.6 percent. Table V-9 summarizes the price trends, by product and by country. As shown in the table, U.S. price declines ranged from 34.2 to 38.6 percent while import price declines ranged from 3.7 to 19.0 percent for India, *** to *** percent for Italy, and *** to *** percent for Spain. The majority of the U.S. price declines across all pricing products occurred in 2016. Boltex stated that it reduced overall prices by 50 percent in 2016.[11]

[11] Hearing transcript, pp. 16-17 (Bernobich).

Table V-9
Flanges: Summary of weighted-average f.o.b. prices and price changes for products 1-6 from the United States and India, Italy, and Spain, January 2014-December 2016

Item	Number of quarters	Low price (per flange)	High price (per flange)	Change in price[1] (percent)
Product 1				
United States	12	9.15	14.79	(36.6)
India	12	7.79	9.95	2.6
Italy	12	***	***	***
Spain	12	***	***	***
Product 2				
United States	12	10.94	17.60	(37.9)
India	12	9.44	12.25	(10.3)
Italy	12	***	***	***
Spain	12	***	***	***
Product 3				
United States	12	16.84	26.54	(36.5)
India	12	13.54	18.39	(19.0)
Italy	12	***	***	***
Spain	12	***	***	***
Product 4				
United States	12	146.05	237.77	(38.6)
India	12	***	***	(18.2)
Italy	10	***	***	***
Spain	12	***	***	***
Product 5				
United States	12	14.65	23.01	(36.4)
India	12	11.47	15.10	(9.0)
Italy	12	***	***	***
Spain	12	***	***	***
Product 6				
United States	12	8.10	12.31	(34.2)
India	12	5.98	8.04	(3.7)
Italy	12	***	***	***
Spain	12	***	***	***

[1] Percentage change is calculated using data from the first quarter in which data were available in the first year to the last quarter in which data were available.

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

Price comparisons

As shown in table V-10, prices for imported flanges were below those for U.S.-produced product in all 72 instances for flanges from India (2.3 million flanges), 67 of 70 instances for flanges from Italy (*** flanges), and 49 of 72 instances for flanges from Spain (*** flanges). Margins of underselling ranged from 3.9 to 50.1 percent for India, *** to *** percent for Italy, and *** to *** percent for Spain. In the remaining three instances for Italy (*** flanges), prices were *** to *** percent above prices for domestic flanges and in the remaining 23 instances for Spain (*** flanges), prices were *** to *** percent above prices for the domestic product.

Table V-10
Flanges: Instances of underselling/overselling and the range and average of margins, by country, January 2014-December 2016

Source	Underselling				
	Number of quarters	Quantity[1] (flanges)	Average margin (percent)	Margin range (percent)	
				Min	Max
India	72	2,316,344	32.0	3.9	50.1
Italy	67	***	***	***	***
Spain	49	***	***	***	***
Total	188	2,662,039	23.0	0.6	50.1
Source	**(Overselling)**				
	Number of quarters	Quantity[1] (flanges)	Average margin (percent)	Margin range (percent)	
				Min	Max
India	0	0	---	---	---
Italy	3	***	***	***	***
Spain	23	***	***	***	***
Total	26	91,116	(9.5)	(0.1)	(37.1)

[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.

In the second half of 2016, there was a change in the pattern of underselling and overselling for Italy and Spain. All 3 instances of overselling from Italy and 11 of 13 total instances of overselling from Spain occurred in the third and fourth quarters of 2016 (table V-11).

Table V-11
Flanges: Quarterly Instances of underselling/overselling and the range and average of margins, by country, 2016

Source, Period	Underselling			(Overselling)		
	Number of quarters	Quantity (flanges)	Average margin (percent)	Number of quarters	Quantity (flanges)	Average margin (percent)
India:						
Jan.-Mar.	6	146,342	34.7	0	---	---
Apr.-June	6	138,861	27.8	0	---	---
July-Sept.	6	177,387	22.0	0	---	---
Oct.-Dec.	6	129,435	12.1	0	---	---
Total India	24	592,025	24.1	0	---	---
Italy:						
Jan.-Mar.	5	***	***	0	---	---
Apr.-June	5	***	***	0	---	---
July-Sept.	4	***	***	2	***	***
Oct.-Dec.	5	***	***	1	***	***
Total Italy	19	***	***	3	***	***
Spain:						
Jan.-Mar.	6	***	***	0	---	---
Apr.-June	4	***	***	2	***	***
July-Sept.	0	---	---	6	***	***
Oct.-Dec.	1	***	***	5	***	***
Total Spain	11	***	***	13	***	***
Total all subject	54	660,844	18.7	16	41,622	(12.8)

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 U.S. producers of flanges to report the names of purchasers where they experienced instances of lost sales or revenue due to competition from imports of flanges from India, Italy, and/or Spain since January 2013. Two U.S. producers (***) submitted lost sale and lost revenue allegations, and identified 40 firms with which they lost sales and lost revenue.[12] Both U.S. producers listed all three subject countries – India, Italy, and Spain – as the subject countries to which they had lost sales and revenue.

U.S. producers were also asked to provide information regarding the timing, method of sale, and product type related to the lost sales and lost revenue allegations. *** listed ***, and *** listed ***. The methods of sale listed by *** were "***" and the methods of sale listed by

[12] The responding U.S. producers alleged both lost sales and lost revenue for all 40 firms listed.

*** were "***" for all allegations. Regarding product type, *** listed "***" and *** listed "***" for all allegations.

In the final phase of these investigations, of the eight responding U.S. producers, six reported that they had to reduce prices, one had to roll back announced price increases, and six firms reported that they had lost sales.

Staff contacted 46 purchasers and received responses from 18 purchasers.[13] Responding purchasers reported purchasing *** pounds of flanges during 2014-16 (table V-12). In 2016, 12 of 18 purchasers purchased from both domestic producers and from importers of flanges from subject countries.

Table V-12
Flanges: Purchasers' responses to purchasing patterns

* * * * * * *

Of the 18 responding purchasers, 15 reported that, since 2014, they had purchased imported flanges from India instead of U.S.-produced flanges. All of these purchasers reported that subject import prices from India were lower than U.S.-produced product, and 14 of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product. Eleven purchasers reported that, since 2014, they had purchased imported flanges from Italy instead of U.S.-produced flanges. All 11 of these purchasers reported that subject import prices from Italy were lower than U.S.-produced product, and nine of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product. Eleven purchasers reported that, since 2014, they had purchased imported flanges from Spain instead of U.S.-produced flanges. All 11 of these purchasers reported that subject import prices from Spain were lower than U.S.-produced product, and nine of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product. The reported estimated quantity these firms purchased from subject imports sources rather than domestic sources was *** pounds of flanges (table V-13). Purchasers identified the following as non-price reasons for purchasing imported rather than U.S.-produced product: expanding international vendor relationships to capture global market share, consumer demand, AMLs, and product range.

Table V-13
Flanges: Purchasers' responses to purchasing subject imports instead of domestic product

* * * * * * *

[13] One purchaser submitted lost sales lost revenue survey responses in the preliminary phase, but did not submit a purchaser questionnaire response in the final phase.

Of the 17 responding purchasers, ten reported that U.S. producers had reduced prices in order to compete with lower-priced imports from subject countries while six reported that they did not know whether producers had lowered prices to compete (table V-14). The reported estimated price reduction ranged from *** to *** percent for all three subject countries. In describing the price reductions, purchasers indicated that there was a price reduction in the first quarter of 2016 and that Boltex reduced prices in September 2016.

Table V-14
Flanges: Purchasers' responses to U.S. producer price reductions

* * * * * * *

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

BACKGROUND

The financial results presented in this section of the report reflect the flange operations of the following U.S. producers: ***.[1] For the period as a whole and with respect to usable financial information reported to the Commission, the three largest producers accounted for *** percent of total sales quantity: ***. The remaining U.S. producers accounted for between *** percent of total sales quantity (***) and *** percent (***).

As noted in Part III, a number of U.S. producers reported reductions in output and labor during 2014-16. One U.S. producer, ***, also reported that it was unable to utilize recently-purchased equipment due to market conditions.

OPERATIONS ON FLANGES

Income-and-loss data for the U.S. producers' flanges operations are presented in table VI-1. Table VI-2 presents corresponding changes in average unit values. Table VI-3 presents a variance analysis of U.S. producers' financial results on flanges.[2] Table VI-4 presents company-specific financial information.

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[1] The following U.S. producers reported on a fiscal year basis: ***.

Staff conducted verifications of the financial section, and selected elements of the trade and pricing sections, of the U.S. producer questionnaires of Weldbend and Boltex on April 3-4, 2017 and April 5-6, 2017, respectively. Data changes pursuant to these verifications are reflected in this and other relevant sections of the staff reports. Verification report (Weldbend), pp. 2-3. Verification report (Boltex), p. 2.

***. Ibid. ***. Ibid.

[2] The Commission's variance analysis is calculated in three parts: sales variance, cost of goods sold (COGS) variance, and SG&A expenses variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expenses variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. As summarized at the bottom of table VI-3, the price variance is from sales, the cost/expense variance is the sum of those items from the COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expenses variances. With regard to their flange sales, U.S. industry witnesses at the Commission's staff conference stated that product mix did not change notably during the period. Conference transcript, p. 87 (Bernobich, Coulas). In general, the utility of the Commission's variance analysis is enhanced when product mix remains the same throughout the period.

Table VI-1
Flanges: Results of operations of U.S. producers, 2014-16

Item	Fiscal year		
	2014	2015	2016
	Quantity (1,000 pounds)		
Total net sales	131,084	94,559	79,421
	Value (1,000 dollars)		
Total net sales	222,866	162,622	104,677
Cost of goods sold.-- Raw materials	101,074	76,012	51,430
Direct labor	19,631	16,465	14,283
Other factory costs	32,502	24,217	22,856
Total COGS	153,207	116,694	88,569
Gross profit	69,659	45,928	16,108
SG&A expense	32,731	26,148	19,947
Operating income or (loss)	36,928	19,780	(3,839)
Interest expense	666	688	730
All other expenses	7	3	8
All other income	971	1,017	458
Net income or (loss)	37,226	20,106	(4,119)
Depreciation/amortization	6,029	5,579	6,530
Cash flow	43,255	25,685	2,411
	Ratio to net sales (percent)		
Cost of goods sold.-- Raw materials	45.4	46.7	49.1
Direct labor	8.8	10.1	13.6
Other factory costs	14.6	14.9	21.8
Average COGS	68.7	71.8	84.6
Gross profit	31.3	28.2	15.4
SG&A expense	14.7	16.1	19.1
Operating income or (loss)	16.6	12.2	(3.7)
Net income or (loss)	16.7	12.4	(3.9)

Table continued on next page.

Table VI-1--Continued
Flanges: Results of operations of U.S. producers, 2014-16

Item	Fiscal year		
	2014	2015	2016
	Ratio to total COGS (percent)		
Cost of goods sold.-- Raw materials	66.0	65.1	58.1
Direct labor	12.8	14.1	16.1
Other factory costs	21.2	20.8	25.8
Average COGS	100.0	100.0	100.0
	Unit value (dollars per 1,000 pounds)		
Total net sales	1,700	1,720	1,318
Cost of goods sold.-- Raw materials	771	804	648
Direct labor	150	174	180
Other factory costs	248	256	288
Average COGS	1,169	1,234	1,115
Gross profit	531	486	203
SG&A expense	250	277	251
Operating income or (loss)	282	209	(48)
Net income or (loss)	284	213	(52)
	Number of firms reporting		
Operating losses	0	0	4
Net losses	0	0	5
Data	7	7	7

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

Table VI-2
Flanges: Changes in average per thousand pound values, between fiscal years

Item	Between fiscal years		
	2014-16	2014-15	2015-16
Total net sales	(382)	20	(402)
Cost of goods sold.-- Raw materials	(124)	33	(156)
Direct labor	30	24	6
Other factory costs	40	8	32
Average COGS	(54)	65	(119)
Gross profit	(329)	(46)	(283)
SG&A expense	1	27	(25)
Operating income or (loss)	(330)	(73)	(258)
Net income or (loss)	(336)	(71)	(264)

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

Table VI-3
Flanges: Variance analysis of financial results of U.S. producers, 2014-16

Item	Between fiscal years		
	2014-16	2014-15	2015-16
Net sales:			
Price variance	(30,353)	1,855	(31,911)
Volume variance	(87,836)	(62,099)	(26,034)
Net sales variance	(118,189)	(60,244)	(57,945)
COGS:			
Cost variance	4,256	(6,176)	9,443
Volume variance	60,382	42,689	18,682
COGS variance	64,638	36,513	28,125
Gross profit variance	(53,551)	(23,731)	(29,820)
SG&A expenses:			
Cost/expense variance	(116)	(2,537)	2,015
Volume variance	12,900	9,120	4,186
Total SG&A expense variance	12,784	6,583	6,201
Operating income variance	(40,767)	(17,148)	(23,619)
Summarized (at the operating income level) as:			
Price variance	(30,353)	1,855	(31,911)
Net cost/expense variance	4,140	(8,713)	11,458
Net volume variance	(14,554)	(10,290)	(3,167)

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

Table VI-4
Flanges: Results of operations of U.S. producers, by firm, 2014-16

* * * * * *

Net sales

Table VI-1 shows that the value of the U.S. industry's total revenue, made up of almost entirely commercial sales, declined by similar magnitudes in 2015 and 2016.[3] As indicated in the revenue section of the variance analysis (table VI-3), the decline in 2015 revenue was due to a negative volume variance, which was partially offset by a positive price variance. In contrast, the decline in 2016 revenue reflects the combination of a negative price variance and a negative volume variance.

Table VI-4 shows that most U.S. producers reported declines in sales volume in 2015 and 2016. A notable exception to this pattern was ***, which reported a *** percent decline in sales volume in 2015 followed by a *** percent increase in 2016. In contrast, *** reported declines in 2015 and 2016 sales volume of *** percent and *** percent, respectively. *** reported a *** percent increase in 2015 sales volume followed by an *** percent decline in

[3] Because flanges revenue primarily reflects commercial sales, the tables in this section of the report present a single revenue line item.

2016. In 2014-15, the pattern of company-specific average unit sales values reflected a mix of increases and decreases (see table VI-4). In contrast, virtually all U.S. producers reported declines in average unit sales values in 2015-16.[4] ***, the *** to report an increase in sales volume in 2016, reported a *** percent decline in average sales value in that year (see footnote 15).

Cost of goods sold

On an overall basis, raw material cost (declining from 66.0 percent of total COGS in 2014 to 58.1 percent in 2016) accounted for the largest share of total COGS. As noted in Part I, flanges are produced in an integrated process from carbon steel billets, as well as from purchased flange forgings. As shown in table VI-4 and consistent with *** generally reported the lowest average unit raw material costs. *** reported somewhat higher average raw material costs.[5] The other U.S. producers presented in this section of the report, whose primary raw material input is purchased flange forgings, also generally reported higher average unit raw material costs.

As shown in table VI-1, average unit raw material cost increased to its highest level in 2015 and then declined in 2016. Table VI-4 shows that, while the directional trend of company-specific average unit raw material costs was mixed in 2014-15,[6] all U.S. producers reported lower average unit raw material cost in 2016 compared to 2015.[7] While *** average unit raw material cost, which reflects the cost of flange forgings transferred from its forging division, declined somewhat in 2016, the decline was relatively modest compared to the declines reported by other U.S. producers.[8]

On an overall basis, conversion costs (direct labor and other factory costs), which make up the remainder of flange COGS, increased from 34.0 percent of total COGS in 2014 to 41.9 percent in 2016 (see table VI-1). At the Commission's staff conference, petitioners observed that fixed costs represent a relatively large share of total COGS, which requires U.S. producers to maintain production and sales volume in order to avoid underutilized capacity and corresponding higher average unit costs.[9] Making a related point, a Weldbend company official

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[4] ***. March 21, 2017 e-mail with attachments from *** to USITC auditor. ***. Ibid.

[5] ***. March 22, 2017 e-mail with attachment from *** to USITC auditor. ***. March 21, 2017 e-mail with attachment from *** to USITC auditor.

***. *** U.S. producer questionnaire (final phase) response to III-7. ***. *** U.S. producer questionnaire (final phase) response to III-6. The Commission's practice requires that relevant cost information associated with inputs purchased from related suppliers correspond to the manner in which this information is reported in the U.S. producer's own accounting books and records.

[6] As shown in table VI-4, *** was the *** U.S. producer to report a notably large increase in average per short ton raw material costs in 2015. ***. April 26, 2017 e-mail from *** to USITC auditor.

[7] Several U.S. producers confirmed that raw material costs were lower, to some extent, in 2016. ***. March 20, 2017 e-mail with attachment from *** to USITC auditor. ***. March 21, 2017 e-mail with attachment from *** to USITC auditor. ***. March 28, 2017 e-mail with attachment from *** to USITC auditor.

[8] ***. ***. ***. March 22, 2017 e-mail with attachment from *** to USITC auditor.

[9] Conference transcript, p. 16 (McConkey).

stated that flange production facilities are highly capital intensive and require significant investment to maintain.[10] While several U.S. producers noted that costs were impacted by lower sales/production volumes,[11] *** was notable inasmuch as its average unit conversion costs were about the same in 2014 and 2015 and then somewhat lower in 2016.[12] As shown in table VI-4, the pattern of company-specific average unit direct labor and other factory costs was mixed during the period.

Gross profit

Table VI-1 shows that the U.S. industry's gross profit, on an absolute basis and as a share of total revenue, declined throughout 2014-16. While magnitudes varied, company-specific gross profit also declined for *** U.S. producers throughout 2014-16 (see table VI-4).

On an average unit basis (see table VI-2), the U.S. industry's lower gross profit in 2015 reflected an increase in average unit COGS which more than offset the corresponding increase in average unit sales value. In 2015, the pattern of higher average unit COGS reflected increases in all three primary cost categories. In 2016, continued lower gross profit was due to a relatively large decline in average unit sales value which was only partially offset by a corresponding decline in average unit COGS. The decline in average unit COGS in 2016 reflected continued increases in average unit direct labor and other factory costs which were more than offset by lower average unit raw material cost.

SG&A expenses and operating income or loss

Table VI-1 shows that in 2015 the U.S. industry's total operating profit declined, on an absolute basis and as a share of sales, and declined further to an operating loss in 2016. While total SG&A expenses declined throughout the period, revenue declined at a faster rate which yielded SG&A expense ratios (total SG&A expenses divided by total revenue) which increased each year. While increasing SG&A expense ratios were a factor to some extent, the decline in operating income in 2015 and the operating loss in 2016 primarily reflect the contraction in gross profit noted above.[13]

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[10] Conference transcript, p. 28 (Coulas). ***. Petitioners' postconference brief (Exhibit 6), p. 5.

[11] ***. March 21, 2017 e-mail with attachments from *** to USITC auditor.

[12] ***. March 22, 2017 e-mail with attachment from *** to USITC auditor.

[13] *** accounted for the majority of the overall decline reported SG&A expenses in 2015 and *** accounted for the majority of the decline in 2016. Table VI-4 shows that most U.S. producers reported increases in their SG&A expense ratios during 2014-16 with *** reporting a notable increase in its SG&A expense ratio in 2016. In general, this pattern reflects the fact that *** 2016 SG&A expenses were only marginally lower in absolute terms compared to 2015 whereas its total revenue was substantially lower.

As shown in table VI-4, most U.S. producers reported declines in operating income in 2015 and operating losses in 2016. While reporting period-to-period variations, *** were the only companies to report operating profit throughout the period.[14] *** accounted for the largest cumulative decline in company-specific operating results during 2014-16 (***).[15] *** reported somewhat smaller cumulative declines in operating results of *** and ***, respectively.[16]

Interest expense, other expenses, and net income or loss

The majority of U.S. producers reported some level of interest expense during the period with the exceptions being ***. As shown in table VI-1, differences between the U.S. industry's operating results and net results were relatively small throughout 2014-16.

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

Table VI-5 presents the capital expenditures and research and development (R&D) expenses reported by U.S. producers' on their flanges operations. As shown in table VI-5, *** reported R&D expenses related to their flange operations.

Table VI-5
Flanges: U.S. producers' capital expenditures and research and development (R&D) expenses, 2014-16

* * * * * *

*** accounted for the largest share of the U.S. industry's total 2014-16 capital expenditures *** percent.[17] *** accounted for *** percent and *** percent, respectively, of total 2014-16 capital expenditures.[18] *** and *** accounted for *** percent and *** percent of total 2014-16 capital expenditures, respectively. As shown in table VI-6, *** reported *** capital expenditures.

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[14] ***. March 21, 2017 e-mail with attachments from *** to USITC auditor.

[15] ***. March 22, 2017 e-mail with attachment from *** to USITC auditor.

***. July 22, 2016 e-mail from *** to USITC auditor. ***. March 21, 2017 e-mail with attachment from *** to USITC auditor.

[16] ***. Verification report (***), p. 4.

***. Petitioners' postconference brief (Exhibit 14), p. 1. ***. March 28, 2017 e-mail with attachment from *** to USITC auditor.

[17] ***. *** U.S. producer questionnaire response (final phase) to III-13 (note 1). ***. July 22, 2016 e-mail from *** to USITC auditor.

[18] ***. March 28, 2017 e-mail with attachment from *** to USITC auditor.

***. Petitioners' postconference brief (Exhibit 13), p. 3.

ASSETS AND RETURN ON ASSETS

Table VI-6 presents the U.S. producers' flange-related total assets, asset turnover (sales divided by total assets), and return on assets.[19]

Table VI-6
Flanges: U.S. producers' total assets, asset turnover, and return on assets, 2014-16

* * * * * *

CAPITAL AND INVESTMENT

The Commission requested the U.S. producers of 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 flanges from India, Italy, or Spain. Table VI-7 tabulates the U.S. producers' responses regarding actual negative effects on investment, growth and development, as well as anticipated negative effects.[20] Table VI-8 presents U.S. producers' narrative responses regarding actual and anticipated negative effects on investment, growth and development.

[19] Staff notes that a total asset value (i.e., the bottom line value on the asset side of a company's balance sheet) reflects an aggregation of a number of assets which in many instances are not product specific. Accordingly, high-level allocation factors were required, to some extent, in order to report a total asset value specific to flange operations. As such, it should be noted that the pattern of asset values reported can reflect changes in underlying asset account balances, as well as period-to-period variations in relevant allocation factors. The ability of U.S. producers to assign total asset values to discrete product lines affects the meaningfulness of calculated asset turnover and corresponding return on assets; i.e., asset turnover ratio multiplied by corresponding profit ratio. See also table VI-6 (note 1).

[20] ***.

Table VI-7
Flanges: Negative effects of imports from subject sources on investment, growth, and development since January 1, 2014

Item	No	Yes
Negative effects of imports on investment[1]	4	5
Cancellation, postponement, or rejection of expansion projects		2
Denial or rejection of investment proposal		0
Reduction in the size of capital investments		2
Return on specific investments negatively impacted		2
Other		1
Does investment response differ by country?[2]	8	1
Negative effects on growth and development[3]	5	4
Rejection of bank loans		0
Lowering of credit rating		0
Problem related to the issue of stocks or bonds		0
Ability to service debt		0
Other		4
Does growth and development response differ by country?	9	0
Anticipated negative effects of imports[4]	3	6
Does anticipated response differ by country?[5]	8	1

[1] *** reported "No" with respect to actual negative effects of imports on investment.
[2] *** company indicating that actual negative effects of imports on investment differed by country. ***.
[3] *** reported "No" with respect to actual negative effects of imports on growth and development.
[4] *** reported "No" with respect to anticipated negative effects due to imports from subject countries.
[5] *** company indicating that anticipated negative effects of imports differed by country. ***.

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

Table VI-8
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, 2014

* * * * * *

PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

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

> *In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the subject merchandise, the Commission shall consider, among other relevant economic factors*[1]*--*
>
> *(I) if a countervailable subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the countervailable subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement), and whether imports of the subject merchandise are likely to increase,*
>
> *(II) any existing unused production capacity or imminent, substantial increase in production capacity in the exporting country indicating the likelihood of substantially increased imports of the subject merchandise into the United States, taking into account the availability of other export markets to absorb any additional exports,*
>
> *(III) a significant rate of increase of the volume or market penetration of imports of the subject merchandise indicating the likelihood of substantially increased imports,*
>
> *(IV) whether imports of the subject merchandise are entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices, and are likely to increase demand for further imports,*
>
> *(V) inventories of the subject merchandise,*

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[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 volume and pricing of imports of the subject merchandise is presented in *Parts IV* and *V*; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in *Part VI*. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries.

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

THE INDUSTRY IN INDIA

The Commission issued foreign producers' or exporters' questionnaires to 36 firms believed to produce and/or export flanges from India.[3] Usable responses to the Commission's questionnaire were received from 12 firms.[4] As discussed in *Part I*, these firms' 2016 exports to the United States were equivalent to 64.3 percent of U.S. imports of flanges from India in 2016. Most Indian producers were unable to estimate their share of the overall production of flanges in India.[5] Twenty-five Indian producers/exporters were present on AMLs provided to Staff during these final-phase investigations.[6] Table VII-1 presents summary data on responding producers in India by firm in 2016.

[3] These firms were identified through a review of information submitted in the petition and contained in proprietary Customs data.

[4] In the preliminary-phase investigations, 14 firms in India provided the Commission with a usable questionnaire response. They were: Bebitz Flange Works, CHW Forge, Echjay Forgings, Echjay Industries, Hindon Forge, JAI Auto, Norma (India), R N Gupta, RD Forge, Steel Shape India, Tirupati Forge, Uma Shanker Khandelwal & Co., USK Exports, and Uma Shanker Khandelwal Forging. Of those 14 foreign producers, eight also provided a usable questionnaire response in these final-phase investigations.

[5] For the three firms that did provide estimates, each of the estimated totals was less than actual reported production in 2016.

[6] Of the 25 Indian firms identified on AMLs, seven provided a questionnaire response in these final-phase investigations: ***.

Table VII-1
Flanges: Summary data on firms in India, 2016

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)
Balkrishna Steel	***	***	***	***	***	***
CHW Forge	***	***	***	***	***	***
Echjay Forgings	***	***	***	***	***	***
Echjay Industries[1]	***	***	***	***	***	***
Hindon Forge	***	***	***	***	***	***
JAI Auto	***	***	***	***	***	***
Munish Forge	***	***	***	***	***	***
R N Gupta	***	***	***	***	***	***
RD Forge	***	***	***	***	***	***
Steel Shape India	***	***	***	***	***	***
Sudhir Forgings	***	***	***	***	***	***
Tirupati Forge	***	***	***	***	***	***
Total	75,053	100.0	52,813	100.0	75,130	70.3

[1] Echjay Industries reported that ***.

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

Producers were asked to report any changes in operations since January 2014. Table VII-2 presents Indian producer responses. There was one reported expansion *** and two reported shutdowns or curtailments ***. *** also noted that ***. No firm reported any anticipated changes in operations.

Table VII-2
Flanges: Reported changes in operations for producers in India, since January 1, 2014

* * * * * * *

Table VII-3 presents information on the flange operations of the responding producers and exporters in India. Capacity remained unchanged during from 2014 to 2016, while production increased by 1.6 percent from 2014 to 2015 before decreasing by 27.5 percent from 2015 to 2016. Capacity and production in 2017 and 2018 is projected to remain at or near 2016 levels. From 2014 to 2016, exports to the United States as a share of total shipments decreased by 7.3 percentage points, from 77.6 percent to 70.3 percent, and is projected to decrease below 60 percent in 2017 and 2018.

Table VII-3

Flanges: Data on subject industry in India, 2014-16 and projection calendar years 2017 and 2018

Item	Actual experience			Projections	
	Calendar year			Calendar year	
	2014	2015	2016	2017	2018
	Quantity (1,000 pounds)				
Capacity	163,095	163,095	163,095	163,095	163,095
Production	101,869	103,502	75,053	73,746	75,707
End-of-period inventories	1,427	1,489	1,401	1,332	1,424
Shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial shipments	***	***	***	***	***
Subtotal, home market shipments	7,199	9,347	7,953	9,888	10,350
Export shipments to:					
United States	78,277	74,555	52,813	43,118	43,899
All other markets	15,394	19,459	14,364	20,180	20,605
Total exports	93,671	94,014	67,177	63,298	64,504
Total shipments	100,870	103,361	75,130	73,186	74,854
	Ratios and shares (percent)				
Capacity utilization	62.5	63.5	46.0	45.2	46.4
Inventories/production	1.4	1.4	1.9	1.8	1.9
Inventories/total shipments	1.4	1.4	1.9	1.8	1.9
Share of shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Home market shipments	***	***	***	***	***
Subtotal, home market shipments	7.1	9.0	10.6	13.5	13.8
Export shipments to:					
United States	77.6	72.1	70.3	58.9	58.6
All other markets	15.3	18.8	19.1	27.6	27.5
Total exports	92.9	91.0	89.4	86.5	86.2
Total shipments	100.0	100.0	100.0	100.0	100.0

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

Indian producers were asked to report constraints on their capacity to produce flanges. Firms reported market demand, raw material supply, infrastructure and machinery, labor, and financial resources as restraints on production and capacity. In addition, RN Gupta also noted that ***.

All but two Indian producers reported production of other products on the same machinery as flanges, and all but one firm reported that it is able to switch production (capacity) between flanges and other products, using the same equipment and/or labor. Firms reported being able to switch production to stainless steel or alloy flanges, auto parts including gears, crankshafts, and rings, and agriculture machinery parts using the same machinery as

subject flanges. Firms reported the time and cost associated with manufacturing new dies, tooling, market demand, long-term sales commitments, sales costs, labor skillset, machinery limitations, and productivity as factors impacting their ability to switch production.

Table VII-4 presents data on Indian producers' capacity and production of other products using the same equipment and machinery as subject flanges. Subject flanges, as a share of total production on this equipment and machinery, increased from 63.6 percent in 2014 to 67.2 percent in 2015 before declining to 57.0 percent in 2016.

Table VII-4

Flanges: Overall capacity and production on the same equipment as in-scope production for producers in India, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
Overall capacity	254,989	254,989	256,989
Production:			
Flanges	101,869	103,502	75,053
Fittings other than flanges	***	***	***
All other products	***	***	***
Out-of-scope production	58,303	50,560	56,565
Total production on same machinery	160,172	154,062	131,618
	Ratios and shares (percent)		
Overall capacity utilization	62.8	60.4	51.2
Share of production:			
Flanges	63.6	67.2	57.0
Fittings other than flanges	***	***	***
All other products	***	***	***
Out-of-scope production	36.4	32.8	43.0
Total production on same machinery	100.0	100.0	100.0

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

Table VII-5 presents data on India's top export markets of iron and steel flanges and forgings from 2014 to 2016.[7] With regards to quantity, the United States was India's largest export market in 2016, followed by Canada, the United Arab Emirates, Turkey, and Kuwait. From 2014 to 2016, the United States' share of exports from India decreased by 8.2 percentage points.

[7] Iron and steel flanges and forgings reported under HS subheading 7307.91 do not include stainless steel.

Table VII-5

Iron and steel flanges and forgings: Exports from India by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
Exports from India to the United States	178,679	151,305	91,650
Exports from India to other major destinations.--			
Canada	13,581	19,239	12,178
United Arab Emirates	4,736	1,789	6,282
Turkey	3,123	2,295	2,379
Kuwait	152	56	2,150
Belgium	909	835	1,601
Australia	83	1,120	1,231
United Kingdom	2,759	1,515	1,220
Morocco	784	661	1,024
Oman	979	674	976
Germany	1,909	1,219	920
All other destination markets	19,218	12,384	8,452
Total exports from India	226,912	193,093	130,062
	Value ($1,000)		
Exports from India to.--			
United States	147,212	122,678	63,573
Exports from India to other major destinations.--			
Canada	10,715	15,599	7,833
United Arab Emirates	6,669	3,258	5,505
Turkey	2,909	2,040	1,537
Kuwait	436	144	3,836
Belgium	2,023	1,763	1,833
Australia	75	1,710	1,628
United Kingdom	3,013	2,049	1,249
Morocco	961	835	1,131
Oman	1,623	1,436	1,512
Germany	2,334	1,801	980
All other destination markets	27,021	18,040	10,085
Total exports from India	204,989	171,355	100,703

Table continued on next page.

Table VII-5—Continued

Iron and steel flanges and forgings: Exports from India by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Unit value (dollars per 1,000 pounds)		
Exports from India to the United States	824	811	694
Exports from India to other major destinations.--			
Canada	789	811	643
United Arab Emirates	1,408	1,821	876
Turkey	931	889	646
Kuwait	2,870	2,580	1,784
Belgium	2,224	2,111	1,145
Australia	895	1,527	1,322
United Kingdom	1,092	1,353	1,024
Morocco	1,226	1,263	1,105
Oman	1,658	2,130	1,550
Germany	1,222	1,478	1,065
All other destination markets	1,406	1,457	1,193
Total exports from India	903	887	774
	Share of quantity (percent)		
Exports from India to.--			
United States	78.7	78.4	70.5
Exports from India to other major destinations.--			
Canada	6.0	10.0	9.4
United Arab Emirates	2.1	0.9	4.8
Turkey	1.4	1.2	1.8
Kuwait	0.1	0.0	1.7
Belgium	0.4	0.4	1.2
Australia	0.0	0.6	0.9
United Kingdom	1.2	0.8	0.9
Morocco	0.3	0.3	0.8
Oman	0.4	0.3	0.8
Germany	0.8	0.6	0.7
All other destination markets	8.5	6.4	6.5
Total exports from India	100.0	100.0	100.0

Source: Official exports statistics as reported by Indian Customs in the HIS/GTA database under HS subheading 7307.91 (“Pipe or Tube Fittings, Nesoi, Iron or Nonstainless Steel Flanges”), accessed March 7, 2017.

THE INDUSTRY IN ITALY

The Commission issued foreign producers' or exporters' questionnaires to 16 firms believed to produce and/or export flanges from Italy.[8] Usable responses to the Commission's questionnaire were received from five firms.[9] As discussed in *Part I*, these firms' 2016 exports to the United States were equivalent to approximately *** percent of U.S. imports of flanges from Italy in 2016. According to estimates requested of the responding Italian producers, the production of flanges in Italy accounts for approximately 29 percent of overall production of flanges in Italy. Six Italian producers/exporters were present on AMLs provided to Staff during these final-phase investigations.[10] Table VII-6 presents summary data on responding producers in Italy by firm in 2016.

Table VII-6
Flanges: Summary data on firms in Italy, 2016

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)
Forgital Italy[1]	***	***	***	***	***	***
Officine Ambrogio Melesi[2]	***	***	***	***	***	***
Officine Santafede	***	***	***	***	***	***
Siderforgerossi Group	***	***	***	***	***	***
Valvitalia (Tecnoforge)	***	***	***	***	***	***
Total	***	100.0	***	100.0	***	21.9

[1] Forgital Italy ***.
[2] Officine Ambrogio Melesi ***.

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

[8] These firms were identified through a review of information submitted in the petition and contained in proprietary Customs data.

[9] In the preliminary-phase investigations, four firms in Italy provided the Commission with a usable questionnaire response. They were: Metalfar, Officine Ambrogio Melesi, Officine Santafede, and Siderforgerossi Group. Of those four, three also provided a usable questionnaire response in these final-phase investigations.

[10] Of the six Italian firms identified on AMLs, three provided a questionnaire response in these final-phase investigations: ***. Forgital Italy stated that is it is not present on any AMLs. Hearing transcript, p. 138 (Spezzapria).

Producers were asked to report any changes in operations since January 2014. Table VII-7 presents Italian producer responses. There was one reported expansion, and one reported technology upgrade. No firm reported any anticipated changes in operations.

Table VII-7
Flanges: Reported changes in operations for producers in Italy, since January 1, 2014

* * * * * * *

Table VII-8 presents information on the flange operations of the responding producers and exporters in Italy. Capacity increased by *** percent from 2014 to 2016, and is projected to increase by an additional *** percent beginning in 2017. Production decreased by *** percent from 2014 to 2015 before returning to 2014 levels in 2016. Production is projected to remain near 2016 levels in 2017 and 2018. From 2014 to 2016, exports to the United States as a share of total shipments increased by *** percentage points, from *** percent to *** percent, but is projected to decrease *** in 2017 and 2018.

Table VII-8
Flanges: Data on subject industry in Italy, 2014-16 and projection calendar years 2017 and 2018

* * * * * * *

Italian producers were asked to report constraints on their capacity to produce flanges. Firms reported equipment and worker downtime and product weights and diameters as restraints on production and capacity.

All producers reported production of other products on the same machinery as flanges, and all but one firm reported that it is able to switch production (capacity) between flanges and other products, using the same equipment and/or labor. Firms reported being able to switch production to open die forgings, rolled rings, stainless and alloy flanges, butt weld fittings, and customized/specialty products using the same machinery as subject flanges. Firms reported setup costs, die availability, tool consumption, market demand, and machinery limitations as factors impacting their ability to switch production.

Table VII-9 presents data on Italian producers' capacity and production of other products using the same equipment and machinery as subject flanges. Subject flanges as a share of total production on this equipment and machinery declined from *** percent in 2014 to *** percent in 2015 before increasing to *** percent in 2016.

Table VII-9
Flanges: Overall capacity and production on the same equipment as in-scope production for producers in Italy, 2014-16

* * * * * * *

Table VII-10 presents data on Italy's top export markets of iron and steel flanges and forgings from 2014 to 2016. With regards to quantity, the United States was Italy's largest export market in 2016, followed by the United Arab Emirates, Germany, Saudi Arabia, and Spain. The United States' share of exports from Italy decreased by 0.8 percentage points from 2014 to 2015 and increased by 1.7 percentage points from 2015 to 2016.

Table VII-10
Iron and steel flanges and forgings: Exports from Italy by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
Exports from Italy to the United States	50,111	44,330	49,992
Exports from Italy to other major destination markets.--			
United Arab Emirates	22,098	21,335	24,157
Germany	31,300	25,104	24,152
Saudi Arabia	3,568	3,561	20,143
Spain	8,621	10,364	10,100
France	10,644	9,251	9,257
United Kingdom	11,854	8,705	8,549
Kuwait	1,776	3,862	7,823
Malaysia	3,706	2,925	7,382
Turkey	5,127	7,183	7,050
Netherlands	12,242	9,082	6,785
All other destination markets	96,772	93,223	70,799
Total exports from Italy	257,819	238,925	246,189
	Value ($1,000)		
Exports from Italy to the United States	52,365	44,131	42,222
Exports from Italy to other major destination markets.--			
United Arab Emirates	47,892	33,326	37,332
Germany	34,265	24,441	19,671
Saudi Arabia	7,719	7,939	24,351
Spain	11,105	12,249	10,843
France	15,978	12,523	10,988
United Kingdom	27,060	20,412	19,039
Kuwait	4,526	2,772	8,583
Malaysia	27,344	6,110	8,882
Turkey	9,435	9,644	9,002
Netherlands	34,989	19,481	11,346
All other destination markets	191,451	157,320	107,856
Total exports from Italy	464,129	350,349	310,116

Table continued on next page.

Table VII-10—Continued

Iron and steel flanges and forgings: Exports from Italy by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Unit value (dollars per 1,000 pounds)		
Exports from Italy to the United States	1,045	996	845
Exports from Italy to other major destination markets.--			
United Arab Emirates	2,167	1,562	1,545
Germany	1,095	974	814
Saudi Arabia	2,164	2,230	1,209
Spain	1,288	1,182	1,074
France	1,501	1,354	1,187
United Kingdom	2,283	2,345	2,227
Kuwait	2,548	718	1,097
Malaysia	7,378	2,089	1,203
Turkey	1,840	1,343	1,277
Netherlands	2,858	2,145	1,672
All other destination markets	1,978	1,688	1,523
Total exports from Italy	1,800	1,466	1,260
	Share of quantity (percent)		
Exports from Italy to the United States	19.4	18.6	20.3
Exports from Italy to other major destination markets.--			
United Arab Emirates	8.6	8.9	9.8
Germany	12.1	10.5	9.8
Saudi Arabia	1.4	1.5	8.2
Spain	3.3	4.3	4.1
France	4.1	3.9	3.8
United Kingdom	4.6	3.6	3.5
Kuwait	0.7	1.6	3.2
Malaysia	1.4	1.2	3.0
Turkey	2.0	3.0	2.9
Netherlands	4.7	3.8	2.8
All other destination markets	37.5	39.0	28.8
Total exports from Italy	100.0	100.0	100.0

Source: Official exports statistics as reported by EuroStat in the HIS/GTA database under HS subheading 7307.91 (“Pipe or Tube Fittings, Nesoi, Iron or Nonstainless Steel Flanges”), accessed April 4, 2017.

THE INDUSTRY IN SPAIN

The Commission issued foreign producers' or exporters' questionnaires to six firms believed to produce and/or export flanges from Spain.[11] One usable response to the Commission's questionnaire was received from Aleaciones de Metales Sinterizados, S.A. ("AMES").[12] As discussed in *Part I*, AMES' 2016 exports to the United States were equivalent to only a very small percentage of total U.S. imports of flanges from Spain in 2016. AMES estimates that *** of its firm's total sales in its most recent fiscal year was represented by sales of flanges, and that its share of total production of flanges in Spain ***. One Spanish producer/exporter, ***, was present on AMLs provided to Staff during these final-phase investigations.[13]

Table VII-11 presents information on the flange operations of AMES. ***. AMES ***.

Table VII-11

Flanges: Data on capacity and production for AMES of Spain, 2014-16 and projection calendar years 2017 and 2018

* * * * * * *

According to AMES, the only constraint in its production of flanges is ***. AMES reported production of *** on the same machinery as subject flanges. AMES reported that ***. In addition, AMES reported that ***.

Table VII-12 presents data on AMES' capacity and production of other products using the same equipment and machinery as subject flanges. Subject flanges as a share of total production on this equipment and machinery was ***.

Table VII-12

Flanges: Overall capacity and production on the same equipment as in-scope production for producers in Spain, 2014-16

* * * * * * *

Table VII-13 presents data on Spain's top export markets of iron and steel flanges and forgings from 2014 to 2016. With regards to quantity, the United States was Spain's largest export market in 2016, followed by Saudi Arabia, the Netherlands, the United Arab Emirates, and Canada. The United States' share of exports from Spain increased by 10.1 percentage points from 2014 to 2015 and decreased by 0.9 percentage points from 2015 to 2016.

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[11] These firms were identified through a review of information submitted in the petition and contained in proprietary Customs data.

[12] AMES was the only producer/exporter in Spain to submit a usable questionnaire response in the preliminary-phase investigations. According to proprietary Customs data, ***.

[13] ***.

Table VII-13

Iron and steel flanges and forgings: Exports from Spain by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
Exports from Spain to the United States	16,894	28,760	20,179
Exports from Spain to other major destination markets.--			
Saudi Arabia	8,996	12,230	11,452
Netherlands	5,793	6,703	6,443
United Arab Emirates	6,605	4,858	5,922
Canada	13,837	10,966	3,837
Brazil	5,533	3,575	3,205
United Kingdom	3,995	4,138	2,786
Malaysia	298	342	1,772
Italy	984	981	1,453
France	903	1,126	1,402
Germany	1,779	1,609	1,292
All other destination markets	20,717	21,394	10,369
Total exports from Spain	86,334	96,681	70,113
	Value ($1,000)		
Exports from Spain to the United States	21,602	28,052	18,652
Exports from Spain to other major destination markets.--			
Saudi Arabia	12,557	18,272	14,605
Netherlands	8,678	9,287	6,112
United Arab Emirates	7,951	6,114	8,106
Canada	14,923	9,666	3,110
Brazil	8,121	4,442	3,512
United Kingdom	7,844	4,548	3,430
Malaysia	369	512	1,976
Italy	1,370	1,400	2,460
France	1,562	1,390	1,683
Germany	2,041	1,582	1,257
All other destination markets	34,248	29,966	15,344
Total exports from Spain	121,266	115,230	80,245

Table continued on next page.

Table VII-13—Continued

Iron and steel flanges and forgings: Exports from Spain by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Unit value (dollars per 1,000 pounds)		
Exports from Spain to the United States	1,279	975	924
Exports from Spain to other major destination markets.--			
Saudi Arabia	1,396	1,494	1,275
Netherlands	1,498	1,385	949
United Arab Emirates	1,204	1,259	1,369
Canada	1,078	881	810
Brazil	1,468	1,242	1,096
United Kingdom	1,964	1,099	1,231
Malaysia	1,237	1,496	1,115
Italy	1,392	1,427	1,693
France	1,730	1,234	1,200
Germany	1,147	983	973
All other destination markets	1,653	1,401	1,480
Total exports from Spain	1,405	1,192	1,145
	Share of quantity (percent)		
Exports from Spain to the United States	19.6	29.7	28.8
Exports from Spain to other major destination markets.--			
Saudi Arabia	10.4	12.6	16.3
Netherlands	6.7	6.9	9.2
United Arab Emirates	7.7	5.0	8.4
Canada	16.0	11.3	5.5
Brazil	6.4	3.7	4.6
United Kingdom	4.6	4.3	4.0
Malaysia	0.3	0.4	2.5
Italy	1.1	1.0	2.1
France	1.0	1.2	2.0
Germany	2.1	1.7	1.8
All other destination markets	24.0	22.1	14.8
Total exports from Spain	100.0	100.0	100.0

Source: Official exports statistics as reported by EuroStat in the HIS/GTA database under HS subheading 7307.91 (“Pipe or Tube Fittings, Nesoi, Iron or Nonstainless Steel Flanges”), accessed April 4, 2017.

THE INDUSTRIES IN THE SUBJECT COUNTRIES (COMBINED)

Table VII-14 presents information on the flange operations of the responding producers and exporters in India, Italy, and Spain combined. Combined capacity increased slightly from 2014 to 2016, while production decreased by 15.7 percent and capacity utilization decreased by 8.1 percentage points. Export shipments quantities to the United States decreased by 24.3 percent and by 6.4 percent points as a share of total shipments over the same period.

Table VII-14

Flanges: Data on all subject industries, 2014-16 and projection calendar years 2017 and 2018

Item	Actual experience			Projections	
	Calendar year			Calendar year	
	2014	2015	2016	2017	2018
	Quantity (1,000 pounds)				
Capacity	356,925	362,923	362,921	368,924	368,922
Production	169,402	163,594	142,856	139,083	142,196
End-of-period inventories	9,679	8,767	8,806	8,880	8,928
Shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Commercial shipments	***	***	***	***	***
Subtotal, home market shipments	18,034	15,742	13,336	16,576	17,213
Export shipments to:					
United States	89,159	84,782	67,510	43,292	43,994
All other markets	58,328	63,306	61,384	78,609	80,088
Total exports	147,487	148,088	128,894	121,901	124,082
Total shipments	165,521	163,830	142,230	138,477	141,295
	Ratios and shares (percent)				
Capacity utilization	47.5	45.1	39.4	37.7	38.5
Inventories/production	5.7	5.4	6.2	6.4	6.3
Inventories/total shipments	5.8	5.4	6.2	6.4	6.3
Share of shipments:					
Home market shipments:					
Internal consumption/ transfers	***	***	***	***	***
Home market shipments	***	***	***	***	***
Subtotal, home market shipments	10.9	9.6	9.4	12.0	12.2
Export shipments to:					
United States	53.9	51.7	47.5	31.3	31.1
All other markets	35.2	38.6	43.2	56.8	56.7
Total exports	89.1	90.4	90.6	88.0	87.8
Total shipments	100.0	100.0	100.0	100.0	100.0

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

Table VII-15 presents data on subject producers' capacity and production of other products using the same equipment and machinery as subject flanges. Subject flanges as a share of total production on this equipment and machinery declined from 26.0 percent in 2014 to 24.4 percent in 2016.

Table VII-15

Flanges: Overall capacity and production on the same equipment as in-scope production for producers in subject industries, 2014-16

Item	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
Overall capacity	840,504	861,011	858,015
Production:			
Flanges	169,402	163,594	142,856
Fittings other than flanges	***	***	***
All other products	***	***	***
Out-of-scope production	483,201	491,363	443,293
Total production on same machinery	652,603	654,957	586,149
	Ratios and shares (percent)		
Overall capacity utilization	77.6	76.1	68.3
Share of production:			
Flanges	26.0	25.0	24.4
Fittings other than flanges	***	***	***
All other products	***	***	***
Out-of-scope production	74.0	75.0	75.6
Total production on same machinery	100.0	100.0	100.0

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

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-16 presents data on U.S. importers' reported inventories of flanges. Inventories from India and Spain increased from 2014 to 2015 before declining from 2015 to 2016, while inventories from Italy increased slightly in each year. ***. *** stated that it keeps three to four months of inventory on hand for both "approved" and "generic" import stocks.[14]

[14] Staff telephone interview with ***. Further information regarding ***.

Table VII-16
Flanges: U.S. importers' end-of-period inventories of imports by source, 2014-16

Item	Calendar year		
	2014	2015	2016
	Inventories (1,000 pounds); Ratios (percent)		
Imports from India			
Inventories	27,212	44,075	29,556
Ratio to U.S. imports	26.0	42.5	51.7
Ratio to U.S. shipments of imports	26.3	49.6	40.7
Ratio to total shipments of imports	26.2	49.4	40.7
Imports from Italy:			
Inventories	***	***	***
Ratio to U.S. imports	***	***	***
Ratio to U.S. shipments of imports	***	***	***
Ratio to total shipments of imports	***	***	***
Imports from Spain:			
Inventories	***	***	***
Ratio to U.S. imports	***	***	***
Ratio to U.S. shipments of imports	***	***	***
Ratio to total shipments of imports	***	***	***
Imports from subject sources:			
Inventories	43,882	63,329	44,735
Ratio to U.S. imports	33.0	45.8	62.0
Ratio to U.S. shipments of imports	31.9	52.4	49.0
Ratio to total shipments of imports	31.7	52.2	48.9
Imports from nonsubject sources:			
Inventories	8,489	7,627	7,666
Ratio to U.S. imports	39.6	40.0	52.1
Ratio to U.S. shipments of imports	32.8	35.1	43.5
Ratio to total shipments of imports	32.5	34.9	42.8
Imports from all import sources:			
Inventories	52,371	70,956	52,401
Ratio to U.S. imports	34.0	45.1	60.3
Ratio to U.S. shipments of imports	32.0	49.8	48.1
Ratio to total shipments of imports	31.8	49.6	47.9

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

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they imported or arranged for the importation of flanges from India, Italy, and Spain after December 31, 2016. Eighteen responding importers reported that they arranged such shipments. Table VII-17 presents data reported by U.S. importers concerning their arranged imports of flanges.

Table VII-17

Flanges: Arranged imports, January through December 2017

Item	Period				
	Jan-Mar 2017	Apr-Jun 2017	Jul-Sept 2017	Oct-Dec 2017	Total
U.S. imports from.--					
India	5,806	***	***	***	13,945
Italy	2,954	***	***	***	3,144
Spain	2,933	***	***	***	3,234
Subject sources	11,693	***	***	***	20,323
Nonsubject sources	14,329	***	***	***	26,591
All import sources	26,022	***	***	***	46,914

Source: Compiled from official U.S. import statistics using HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050, accessed May 8, 2017 (January-March), and data submitted in response to Commission questionnaires (April-December).

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

There are no known trade remedy actions on flanges in third-country markets.

INFORMATION ON NONSUBJECT COUNTRIES

Table VII-18 presents the ten largest exporting countries of iron and steel flanges and forgings from 2013 to 2015.[15] Total world exports decreased by 30.1 percent, by value, from 2013 to 2015. China accounted for the largest share of global exports, by value, in 2015 (27.2 percent), followed by India (17.2 percent), Italy (8.4 percent), and Korea (7.1 percent).

[15] As of the issuance of this report, GTA export data for a number of countries was unavailable for calendar year 2016. In addition, countries reported quantities using different units of measure.

Table VII-18

Iron and steel flanges and forgings: Global exports by exporter, 2013-15

Exporter	Calendar year		
	2013	2014	2015
	Value (1,000 dollars)		
United States	152,719	181,331	132,832
Subject exporters.-- India	197,280	204,989	171,355
Italy	520,553	464,129	350,349
Spain	148,660	121,266	115,230
All other major reporting exporters.-- China	652,877	656,144	552,568
Korea	230,362	219,563	143,537
Germany	165,621	157,436	121,298
Netherlands	34,298	38,268	34,660
Romania	33,221	34,527	25,784
Poland	28,566	32,415	23,794
Turkey	14,106	16,034	21,543
Belgium	26,147	21,712	15,332
Taiwan	22,157	22,589	14,656
Belarus	7,313	7,086	6,057
All other exporters	411,493	447,730	304,329
Total global exports	2,645,371	2,625,220	2,033,323
	Share of value (percent)		
United States	5.8	6.9	6.5
Subject exporters.-- India	19.7	17.7	17.2
Italy	7.5	7.8	8.4
Spain	5.6	4.6	5.7
All other major reporting exporters.-- China	24.7	25.0	27.2
Korea	8.7	8.4	7.1
Germany	6.3	6.0	6.0
Netherlands	1.3	1.5	1.7
Romania	1.3	1.3	1.3
Poland	1.1	1.2	1.2
Turkey	0.5	0.6	1.1
Belgium	1.0	0.8	0.8
Taiwan	0.8	0.9	0.7
Belarus	0.3	0.3	0.3
All other exporters	15.6	17.1	15.0
Total global exports	100.0	100.0	100.0

Note.--As of February 24, 2017, GTA export data for a number of countries was unavailable for calendar year 2016.

Source: Official exports statistics of various statistical reporting authorities in the GTIS/GTA database under HS subheading 7307.91 (“Pipe or Tube Fittings, Nesoi, Iron or Nonstainless Steel Flanges”), accessed February 24, 2017.

Table VII-19 presents data on China's top export markets of iron and steel flanges and forgings from 2014 to 2016. Korea was China's largest export market in 2016, followed by Japan, Germany, the United States, and Italy. From 2014 to 2016, the United States' share of exports by quantity from China decreased by 1.8 percentage points.

Table VII-19
Iron and steel flanges and forgings: Exports from China by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Quantity (1,000 pounds)		
Exports from China to the United States	58,320	51,518	39,702
Exports from China to subject countries.--			
India	3,346	2,192	3,647
Italy	40,940	36,001	38,572
Spain	19,191	24,971	20,665
Exports from China to other major destination markets.--			
Korea	134,781	139,483	134,862
Japan	102,042	101,209	111,409
Germany	45,080	39,771	43,831
Malaysia	35,705	27,143	33,414
South Africa	30,209	30,977	32,053
Russia	50,935	24,692	31,048
Netherlands	33,219	28,090	28,636
All other destination markets	379,543	363,369	378,483
Total exports from China	933,311	869,418	896,321
	Value (1,000 dollars)		
Exports from China to the United States	64,286	52,927	39,050
Exports from China to subject countries.--			
India	5,507	1,785	3,324
Italy	25,998	20,163	18,968
Spain	10,511	12,550	9,024
Exports from China to other major destination markets.--			
Korea	77,347	71,009	57,674
Japan	68,033	61,782	61,588
Germany	37,762	29,590	28,733
Malaysia	18,709	13,498	14,246
South Africa	16,104	15,096	13,983
Russia	27,665	13,122	12,443
Netherlands	20,763	15,250	13,414
All other destination markets	283,458	245,796	213,856
Total exports from China	656,144	552,568	486,303

Table continued on next page.

Table VII-19—Continued

Iron and steel flanges and forgings: Exports from China by destination market, 2014-16

Destination market	Calendar year		
	2014	2015	2016
	Unit value (dollars per 1,000 pounds)		
Exports from China to the United States	1,102	1,027	984
Exports from China to subject countries.--			
India	1,646	814	911
Italy	635	560	492
Spain	548	503	437
Exports from China to other major destination markets.--			
Korea	574	509	428
Japan	667	610	553
Germany	838	744	656
Malaysia	524	497	426
South Africa	533	487	436
Russia	543	531	401
Netherlands	625	543	468
All other destination markets	747	676	565
Total exports from China	703	636	543
	Share of quantity (percent)		
Exports from China to the United States	6.2	5.9	4.4
Exports from China to subject countries.--			
India	0.4	0.3	0.4
Italy	4.4	4.1	4.3
Spain	2.1	2.9	2.3
Exports from China to other major destination markets.--			
Korea	14.4	16.0	15.0
Japan	10.9	11.6	12.4
Germany	4.8	4.6	4.9
Malaysia	3.8	3.1	3.7
South Africa	3.2	3.6	3.6
Russia	5.5	2.8	3.5
Netherlands	3.6	3.2	3.2
All other destination markets	40.7	41.8	42.2
Total exports from China	100.0	100.0	100.0

Source: Official exports statistics as reported by China Customs in the HIS/GTA database under HS subheading 7307.91 (“Pipe or Tube Fittings, Nesoi, Iron or Nonstainless Steel Flanges”), accessed February 27, 2017.

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
81 FR 44328 July 7, 2016	*Finished Carbon Steel Flanges From India, Italy, and Spain; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.federalregister.gov/d/2016-16057
81 FR 49619 July 28, 2016	*Finished Carbon Steel Flanges From India, Italy, and Spain: Initiation of Less-Than-Fair-Value Investigations*	https://federalregister.gov/a/2016-17931
81 FR 49625 July 28, 2016	*Finished Carbon Steel Flanges From India: Initiation of Countervailing Duty Investigation*	https://federalregister.gov/a/2016-17929
81 FR 55482 August 19, 2016	*Finished Carbon Steel Flanges From India, Italy, and Spain; Determinations*	https://www.federalregister.gov/d/2016-19816
81 FR 85928 November 29, 2016	*Finished Carbon Steel Flanges From India: Preliminary Affirmative Countervailing Duty Determination*	https://www.federalregister.gov/d/2016-28704
82 FR 9711 February 8, 2017	*Finished Carbon Steel Flanges From Italy: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination*	https://www.federalregister.gov/d/2017-02605

Citation	Title	Link
82 FR 9719 February 8, 2017	*Finished Carbon Steel Flanges From India: Preliminary Determination of Sales at Less Than Fair Value and Postponement of Final Determination*	https://www.federalregister.gov/d/2017-02607
82 FR 9723 February 8, 2017	*Finished Carbon Steel Flanges From Spain: Preliminary Determination of Sales at Less Than Fair Value*	https://www.federalregister.gov/d/2017-02606
82 FR 11056 February 17, 2017	*Finished Carbon Steel Flanges From India, Italy and Spain; Scheduling of the Final Phase of Countervailing Duty and Antidumping Duty Investigations*	https://www.federalregister.gov/d/2017-03150
82 FR 18108 April 17, 2017	*Finished Carbon Steel Flanges From Spain: Final Determination of Sales at Less Than Fair Value*	https://www.federalregister.gov/d/2017-07680

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared as witnesses at the United States International Trade Commission's hearing:

Subject: Finished Carbon Steel Flanges from India, Italy, and Spain

Inv. Nos.: 701-TA-563 and 731-TA-1331-1333 (Final)

Date and Time: April 25, 2017 - 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 (**Matthew J. McConkey**, Mayer Brown LLP)
Respondents (**Lawrence W. Hanson**, The Law Office of Lawrence W. Hanson P.C.)

In Support of the Imposition of Antidumping and Countervailing Duty Orders:

Mayer Brown LLP
Washington, DC
on behalf of

Weldbend Corporation
Boltex Mfg. Co., L.P.

James J. Coulas, Jr., President, Weldbend Corporation

Frank Bernobich, President, Boltex Mfg. Co., L.P.

Carlyn Mattox, President, Mattsco Supply Company

Kevin Coulas, Vice President of Production, Weldbend Corporation

Fabian P. Rivelis, Sr., International Trade Advisor, Mayer Brown LLP

Dan Klett, Principal, Capital Trade, Inc.

Matthew J. McConkey)
) – OF COUNSEL
Simeon M. Kriesberg)

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders:

The Law Office of Lawrence W. Hanson P.C.
Houston, TX
on behalf of

Forgital USA, Inc.
Forgital Italy S.p.A.

Leo Spezzapria, Vice President, Forgital USA, Inc.

Lawrence W. Hanson) – OF COUNSEL

REBUTTAL/CLOSING REMARKS:

Petitioners (**Matthew J. McConkey**, Mayer Brown LLP)
Respondents (**Lawrence J. Hanson**, The Law Office of Lawrence W. Hanson P.C.)

-END-

APPENDIX C

SUMMARY DATA

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Page

All U.S. producers

Table C-1
Flanges: Summary data concerning the U.S. market, 2014-16
(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per 1,000 pounds; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2014	2015	2016	2014-16	2014-15	2015-16
U.S. consumption quantity:						
Amount	385,646	363,214	256,704	(33.4)	(5.8)	(29.3)
Producers' share (fn1)	43.3	30.2	34.8	(8.5)	(13.1)	4.6
Importers' share (fn1):						
India	31.7	40.9	32.0	0.3	9.2	(9.0)
Italy	6.8	8.6	12.3	5.5	1.7	3.7
Spain	4.0	7.2	7.3	3.3	3.2	0.1
Subject sources	42.5	56.7	51.6	9.0	14.2	(5.1)
Nonsubject sources	14.1	13.0	13.6	(0.5)	(1.1)	0.6
All import sources	56.7	69.8	65.2	8.5	13.1	(4.6)
U.S. consumption value:						
Amount	484,422	405,107	253,318	(47.7)	(16.4)	(37.5)
Producers' share (fn1)	55.0	44.8	46.3	(8.7)	(10.1)	1.5
Importers' share (fn1):						
India	17.2	24.2	17.4	0.2	7.1	(6.9)
Italy	7.0	8.7	12.9	5.9	1.7	4.2
Spain	4.4	7.1	7.1	2.7	2.7	(0.0)
Subject sources	28.6	40.1	37.4	8.8	11.5	(2.7)
Nonsubject sources	16.4	15.1	16.3	(0.1)	(1.3)	1.2
All import sources	45.0	55.2	53.7	8.7	10.1	(1.5)
U.S. imports from:						
India						
Quantity	122,354	148,691	82,111	(32.9)	21.5	(44.8)
Value	83,090	98,213	44,016	(47.0)	18.2	(55.2)
Unit value	$679	$661	$536	(21.1)	(2.7)	(18.8)
Ending inventory quantity	27,212	44,075	29,556	8.6	62.0	(32.9)
Italy						
Quantity	26,332	31,100	31,599	20.0	18.1	1.6
Value	34,060	35,259	32,765	(3.8)	3.5	(7.1)
Unit value	$1,293	$1,134	$1,037	(19.8)	(12.4)	(8.5)
Ending inventory quantity	***	***	***	***	***	***
Spain						
Quantity	15,377	26,270	18,727	21.8	70.8	(28.7)
Value	21,280	28,788	17,951	(15.6)	35.3	(37.6)
Unit value	$1,384	$1,096	$959	(30.7)	(20.8)	(12.5)
Ending inventory quantity	***	***	***	***	***	***
Subject sources:						
Quantity	164,063	206,061	132,437	(19.3)	25.6	(35.7)
Value	138,430	162,259	94,731	(31.6)	17.2	(41.6)
Unit value	$844	$787	$715	(15.2)	(6.7)	(9.2)
Ending inventory quantity	43,882	63,329	44,735	1.9	44.3	(29.4)
Nonsubject sources:						
Quantity	54,421	47,304	34,860	(35.9)	(13.1)	(26.3)
Value	79,669	61,202	41,306	(48.2)	(23.2)	(32.5)
Unit value	$1,464	$1,294	$1,185	(19.1)	(11.6)	(8.4)
Ending inventory quantity	8,489	7,627	7,666	(9.7)	(10.2)	0.5
All import sources:						
Quantity	218,484	253,365	167,297	(23.4)	16.0	(34.0)
Value	218,099	223,461	136,037	(37.6)	2.5	(39.1)
Unit value	$998	$882	$813	(18.5)	(11.6)	(7.8)
Ending inventory quantity	52,371	70,956	52,401	0.1	35.5	(26.2)
U.S. producers':						
Average capacity quantity	240,005	236,162	242,775	1.2	(1.6)	2.8
Production quantity	157,681	108,404	88,047	(44.2)	(31.3)	(18.8)
Capacity utilization (fn1)	65.7	45.9	36.3	(29.4)	(19.8)	(9.6)
U.S. shipments:						
Quantity	167,162	109,849	89,407	(46.5)	(34.3)	(18.6)
Value	266,323	181,646	117,281	(56.0)	(31.8)	(35.4)
Unit value	$1,593	$1,654	$1,312	(17.7)	3.8	(20.7)
Export shipments:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***
Ending inventory quantity	56,326	53,636	51,367	(8.8)	(4.8)	(4.2)
Inventories/total shipments (fn1)	***	***	***	***	***	***

Table continued on next page.

Table C-1--continued
Flanges: Summary data concerning the U.S. market, 2014-16
(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per 1,000 pounds; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2014	2015	2016	2014-16	2014-15	2015-16
U.S. producers':--Continued						
Production workers	539	500	421	(21.9)	(7.2)	(15.8)
Hours worked (1,000s)	1,329	1,158	946	(28.8)	(12.9)	(18.3)
Wages paid ($1,000)	26,231	22,731	17,652	(32.7)	(13.3)	(22.3)
Hourly wages (dollars)	$19.74	$19.63	$18.66	(5.5)	(0.5)	(4.9)
Productivity (pounds per hour)	118.6	93.6	93.1	(21.6)	(21.1)	(0.6)
Unit labor costs	$166.35	$209.69	$200.48	20.5	26.0	(4.4)
Net sales:						
Quantity	131,084	94,559	79,421	(39.4)	(27.9)	(16.0)
Value	222,866	162,622	104,677	(53.0)	(27.0)	(35.6)
Unit value	1,700	1,720	1,318	(22.5)	1.2	(23.4)
Cost of goods sold (COGS)	153,207	116,694	88,569	(42.2)	(23.8)	(24.1)
Gross profit or (loss)	69,659	45,928	16,108	(76.9)	(34.1)	(64.9)
SG&A expenses	32,731	26,148	19,947	(39.1)	(20.1)	(23.7)
Operating income or (loss)	36,928	19,780	(3,839)	fn2	(46.4)	fn2
Net income or (loss)	37,226	20,106	(4,119)	fn2	(46.0)	fn2
Capital expenditures	***	***	***	***	***	***
Unit COGS	$1,169	$1,234	$1,115	(4.6)	5.6	(9.6)
Unit SG&A expenses	$250	$277	$251	0.6	10.7	(9.2)
Unit operating income or (loss)	$282	$209	($48)	fn2	(25.7)	fn2
Unit net income or (loss)	$284	$213	($52)	fn2	(25.1)	fn2
COGS/sales (fn1)	68.7	71.8	84.6	15.9	3.0	12.9
Operating income or (loss)/sales (fn1)	16.6	12.2	(3.7)	(20.2)	(4.4)	(15.8)
Net income or (loss)/sales (fn1)	16.7	12.4	(3.9)	(20.6)	(4.3)	(16.3)

Notes:

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Official U.S. import statistics for HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050 and compiled from data submitted in response to Commission

Related Party Exclusion

Table C-2
Flanges: Summary data concerning the U.S. market, excluding U.S. producer *, 2014-16**
(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per 1,000 pounds; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year				Calendar year	
	2014	2015	2016	2014-16	2014-15	2015-16
U.S. consumption quantity:						
Amount	385,646	363,214	256,704	(33.4)	(5.8)	(29.3)
Producers' share (fn1)						
Included producers	***	***	***	***	***	***
Excluded producers	***	***	***	***	***	***
All U.S. producers	43.3	30.2	34.8	(8.5)	(13.1)	4.6
Importers' share (fn1):						
India	31.7	40.9	32.0	0.3	9.2	(9.0)
Italy	6.8	8.6	12.3	5.5	1.7	3.7
Spain	4.0	7.2	7.3	3.3	3.2	0.1
Subject sources	42.5	56.7	51.6	9.0	14.2	(5.1)
Nonsubject sources	14.1	13.0	13.6	(0.5)	(1.1)	0.6
All import sources	56.7	69.8	65.2	8.5	13.1	(4.6)
U.S. consumption value:						
Amount	484,422	405,107	253,318	(47.7)	(16.4)	(37.5)
Producers' share (fn1)						
Included producers	***	***	***	***	***	***
Excluded producers	***	***	***	***	***	***
All U.S. producers	55.0	44.8	46.3	(8.7)	(10.1)	1.5
Importers' share (fn1):						
India	17.2	24.2	17.4	0.2	7.1	(6.9)
Italy	7.0	8.7	12.9	5.9	1.7	4.2
Spain	4.4	7.1	7.1	2.7	2.7	(0.0)
Subject sources	28.6	40.1	37.4	8.8	11.5	(2.7)
Nonsubject sources	16.4	15.1	16.3	(0.1)	(1.3)	1.2
All import sources	45.0	55.2	53.7	8.7	10.1	(1.5)
U.S. imports from:						
India						
Quantity	122,354	148,691	82,111	(32.9)	21.5	(44.8)
Value	83,090	98,213	44,016	(47.0)	18.2	(55.2)
Unit value	$679	$661	$536	(21.1)	(2.7)	(18.8)
Ending inventory quantity	27,212	44,075	29,556	8.6	62.0	(32.9)
Italy						
Quantity	26,332	31,100	31,599	20.0	18.1	1.6
Value	34,060	35,259	32,765	(3.8)	3.5	(7.1)
Unit value	$1,293	$1,134	$1,037	(19.8)	(12.4)	(8.5)
Ending inventory quantity	***	***	***	***	***	***
Spain						
Quantity	15,377	26,270	18,727	21.8	70.8	(28.7)
Value	21,280	28,788	17,951	(15.6)	35.3	(37.6)
Unit value	$1,384	$1,096	$959	(30.7)	(20.8)	(12.5)
Ending inventory quantity	***	***	***	***	***	***
Subject sources:						
Quantity	164,063	206,061	132,437	(19.3)	25.6	(35.7)
Value	138,430	162,259	94,731	(31.6)	17.2	(41.6)
Unit value	$844	$787	$715	(15.2)	(6.7)	(9.2)
Ending inventory quantity	43,882	63,329	44,735	1.9	44.3	(29.4)
Nonsubject sources:						
Quantity	54,421	47,304	34,860	(35.9)	(13.1)	(26.3)
Value	79,669	61,202	41,306	(48.2)	(23.2)	(32.5)
Unit value	$1,464	$1,294	$1,185	(19.1)	(11.6)	(8.4)
Ending inventory quantity	8,489	7,627	7,666	(9.7)	(10.2)	0.5
All import sources:						
Quantity	218,484	253,365	167,297	(23.4)	16.0	(34.0)
Value	218,099	223,461	136,037	(37.6)	2.5	(39.1)
Unit value	$998	$882	$813	(18.5)	(11.6)	(7.8)
Ending inventory quantity	52,371	70,956	52,401	0.1	35.5	(26.2)
U.S. producers' (excluding ***):						
Average capacity quantity	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***
Capacity utilization (fn1)	***	***	***	***	***	***
U.S. shipments:						
Quantity	***	***	***	***	***	***
Value	***	***	***	***	***	***
Unit value	***	***	***	***	***	***

Table continued on next page.

Table C-2--continued
Flanges: Summary data concerning the U.S. market, excluding U.S. producer *, 2014-16**
(Quantity=1,000 pounds; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per 1,000 pounds; Period changes=percent--exceptions noted)

	Reported data			Period changes		
	Calendar year			Calendar year		
	2014	2015	2016	2014-16	2014-15	2015-16
U.S. producers' (excluding ***):--Continued						
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)	***	***	***	***	***	***
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.—This table presents the performance of the domestic industry exclusive of ***. While U.S. producers' market shares and trade data differ from those presented in table C-1 as a result of this exclusion, U.S. producers' financial data ***.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Official U.S. import statistics for HTS statistical reporting numbers 7307.91.5010 and 7307.91.5050 and compiled from data submitted in response to Commission

APPENDIX D

Manufacturers listed on AMLs

Table D-1
Flanges: Manufacturers listed on AMLs for carbon steel flanges, source identified as United States

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Table D-2
Flanges: Manufacturers listed on AMLs for carbon steel flanges, source identified as subject countries

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Table D-3
Flanges: Manufacturers listed on AMLs for carbon steel flanges, source identified as nonsubject countries

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Table D-4
Flanges: Manufacturers listed on AMLs for carbon steel flanges, source not identified

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APPENDIX E

NONSUBJECT COUNTRY PRICE DATA

Two importers reported price data for products 1-6 from China, the largest nonsubject source of imported flanges. Price data reported by these firms accounted for less than 0.1 percent of the value of U.S. commercial shipments from nonsubject countries during January 2014-December 2016. These price items and accompanying data are comparable to those presented in tables V-3 to V-8. Price and quantity data for China are shown in tables E-1 to E-6 and in figures E-1 to E-6 (with domestic and subject sources).

In comparing nonsubject country pricing data with U.S. producer pricing data, prices for product imported from China were lower than prices for U.S.-produced product in most (17 of 18) instances. In comparing nonsubject country pricing data with subject country pricing data, prices for product imported from China were lower than prices for flanges imported from subject countries in 36 instances and higher in 18 instances. More specifically, prices of product from China were generally lower than those from Italy and Spain, but were on par or slightly higher than those from India. A summary of price differentials is presented in table E-7.

Table E-1
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 1,[1] by quarter, January 2014-December 2016

Period	United States		China	
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*
2014:				
Jan.-Mar.	$14.43	83,924	--	0
Apr.-June	14.18	95,191	--	0
July-Sept.	14.07	99,784	***	***
Oct.-Dec.	14.23	69,294	***	***
2015:				
Jan.-Mar.	12.30	56,459	***	***
Apr.-June	14.08	43,543	***	***
July-Sept.	14.03	40,199	--	0
Oct.-Dec.	14.79	34,616	--	0
2016:				
Jan.-Mar.	12.61	36,911	--	0
Apr.-June	10.89	25,411	--	0
July-Sept.	9.72	36,243	--	0
Oct.-Dec.	9.15	44,965	--	0

[1] Product 1: 3 inch, 150 class, Raised Face, Weld neck standard flange (3 150 RF WN STD).

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

Table E-2
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 2,[1] by quarter, January 2014-December 2016

Period	United States		China	
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*
2014:				
Jan.-Mar.	$17.60	88,927	***	***
Apr.-June	17.49	102,197	--	0
July-Sept.	17.26	105,557	***	***
Oct.-Dec.	17.25	75,757	--	0
2015:				
Jan.-Mar.	16.91	57,797	***	***
Apr.-June	17.16	48,339	--	0
July-Sept.	17.03	49,252	--	0
Oct.-Dec.	16.92	41,920	--	0
2016:				
Jan.-Mar.	15.18	37,617	--	0
Apr.-June	13.19	31,539	--	0
July-Sept.	11.65	44,850	--	0
Oct.-Dec.	10.94	58,963	***	***

[1] Product 2: 4 inch, 150 class, Raised Face, Weld neck standard flange (4 150 RF WN STD).

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

Table E-3
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 3,[1] by quarter, January 2014-December 2016

Period	United States		China	
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*
2014:				
Jan.-Mar.	$26.54	50,252	--	0
Apr.-June	26.30	49,087	--	0
July-Sept.	26.28	50,786	--	0
Oct.-Dec.	24.92	47,158	***	***
2015:				
Jan.-Mar.	25.53	34,977	--	0
Apr.-June	24.70	29,889	--	0
July-Sept.	24.26	27,293	--	0
Oct.-Dec.	25.98	21,607	--	0
2016:				
Jan.-Mar.	22.95	24,884	--	0
Apr.-June	20.12	19,841	--	0
July-Sept.	17.69	33,276	--	0
Oct.-Dec.	16.84	32,746	***	***

[1] Product 3: 6 inch, 150 class, Raised Face, Weld neck standard flange (6 150 RF WN STD).

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

Table E-4
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 4,[1] by quarter, January 2014-December 2016

Period	United States		China	
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*
2014:				
Jan.-Mar.	$237.77	1,641	--	0
Apr.-June	236.51	1,596	***	***
July-Sept.	232.94	1,928	--	0
Oct.-Dec.	232.79	1,770	--	0
2015:				
Jan.-Mar.	231.92	1,995	--	0
Apr.-June	225.02	1,180	--	0
July-Sept.	227.14	1,289	--	0
Oct.-Dec.	231.39	1,116	--	0
2016:				
Jan.-Mar.	197.00	1,722	--	0
Apr.-June	175.61	1,083	--	0
July-Sept.	150.28	1,440	--	0
Oct.-Dec.	146.05	1,334	--	0

[1] Product 4: 16 inch, 150 class, Raised Face, Weld neck standard flange (16 150 RF WN STD).

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

Table E-5
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 5,[1] by quarter, January 2014-December 2016

Period	United States		China	
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*
2014:				
Jan.-Mar.	$23.01	18,264	***	***
Apr.-June	22.84	19,889	***	***
July-Sept.	22.89	17,259	***	***
Oct.-Dec.	22.72	14,356	--	0
2015:				
Jan.-Mar.	22.92	13,609	--	0
Apr.-June	22.90	12,979	***	***
July-Sept.	22.94	11,999	--	0
Oct.-Dec.	22.84	11,334	--	0
2016:				
Jan.-Mar.	20.47	9,740	--	0
Apr.-June	17.48	9,326	--	0
July-Sept.	15.85	12,445	***	***
Oct.-Dec.	14.65	13,885	--	0

[1] Product 5: 6 inch, 150 class, Raised Face, Slip on standard flange (6 150 RF Slip on).

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

Table E-6
Flanges: Weighted-average f.o.b. prices and quantities of domestic and imported product 6,[1] by quarter, January 2014-December 2016

Period	United States		China	
	Price *(dollars per flange)*	Quantity *(flanges)*	Price *(dollars per flange)*	Quantity *(flanges)*
2014:				
Jan.-Mar.	$12.31	25,611	--	0
Apr.-June	12.13	27,729	***	***
July-Sept.	12.04	29,505	***	***
Oct.-Dec.	12.04	28,229	--	0
2015:				
Jan.-Mar.	11.92	23,581	--	0
Apr.-June	11.97	15,155	--	0
July-Sept.	11.99	19,186	--	0
Oct.-Dec.	11.81	16,018	--	0
2016:				
Jan.-Mar.	10.86	14,435	--	0
Apr.-June	9.74	13,538	--	0
July-Sept.	8.20	17,216	--	0
Oct.-Dec.	8.10	19,665	--	0

[1] Product 6: 2 inch, 150 class, Raised Face, Threaded standard flange (2 150 RF THD).

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

Figure E-1
Flanges: Weighted-average prices and quantities of domestic and imported product 1,[1] by quarter, January 2014-December 2016

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Figure E-2
Flanges: Weighted-average prices and quantities of domestic and imported product 2,[1] by quarter, January 2014-December 2016

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Figure E-3
Flanges: Weighted-average prices and quantities of domestic and imported product 3,[1] by quarter, January 2014-December 2016

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Figure E-4
Flanges: Weighted-average prices and quantities of domestic and imported product 4,[1] by quarter, January 2014-December 2016

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Figure E-5
Flanges: Weighted-average prices and quantities of domestic and imported product 5,[1] by quarter, January 2014-December 2016

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Figure E-6
Flanges: Weighted-average prices and quantities of domestic and imported product 6,[1] by quarter, January 2014-December 2016

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Table E-7
Flanges: Summary of nonsubject price comparisons, by country, January 2014-December 2016

Comparison	Total number of comparisons	Nonsubject lower than the comparison source		Nonsubject higher than the comparison source	
		Number of quarters	Quantity[1] (flanges)	Number of quarters	Quantity[1] (flanges)
Nonsubject vs. United States:					
China vs. United States	18	17	849	1	5
Nonsubject vs. subject countries:					
China vs. India	18	5	173	13	681
China vs. Italy	18	14	835	4	19
China vs. Spain	18	17	850	1	4

[1] These data include only quarters in which there is a comparison between the nonsubject, U.S., and subject product.

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