Cast Iron Soil Pipe Fittings from China

Investigation Nos. 701-TA-583 and 731-TA-1381 (Final)

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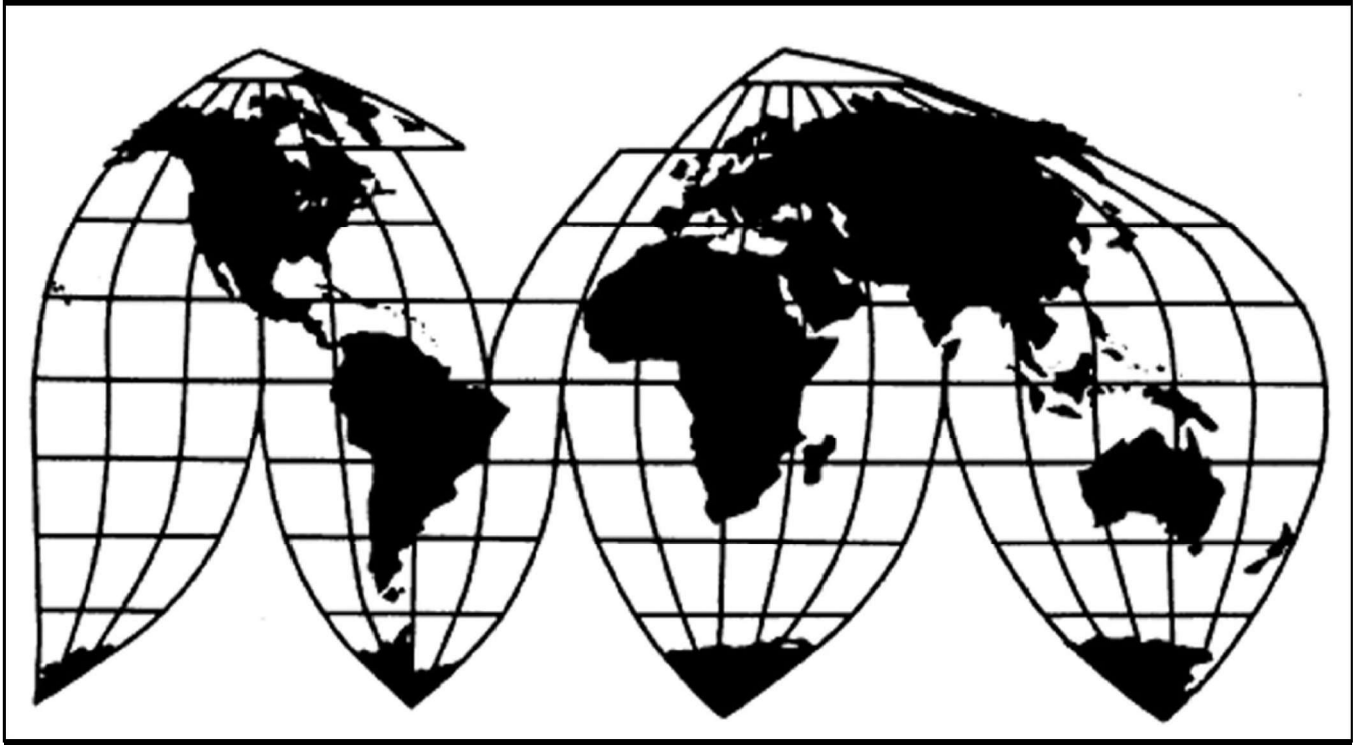
U.S. International Trade Commission



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

U.S. International Trade Commission

Washington, DC 20436
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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-583 and 731-TA-1381 (Final)

Cast Iron Soil Pipe Fittings from China

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that an industry in the United States is materially injured by reason of imports of cast iron soil pipe fittings, excluding drain bodies, from China, provided for in subheading 7307.11.00 of the Harmonized Tariff Schedule of the United States, that have been found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV") and to be subsidized by the government of China.[2] The Commission also determines that an industry in the United States is not materially injured or threatened with material injury by reason of imports of drain bodies from China that are sold in the United States at LTFV and subsidized by the government of China.

BACKGROUND

The Commission, pursuant to sections 705(b) and 735(b) of the Act (19 U.S.C. 1671d(b) and 19 U.S.C. 1673d(b)), instituted these investigations effective July 13, 2017, following receipt of a petition filed with the Commission and Commerce by the Cast Iron Soil Pipe Institute, Mundelein, Illinois. The final phase of the investigations was scheduled by the Commission following notification of preliminary determinations by Commerce that imports of cast iron soil pipe fittings from China were subsidized within the meaning of section 703(b) of the Act (19 U.S.C. 1671b(b)) and 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 investigations and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on March 19, 2018 (83 FR 12024). The hearing was held in Washington, DC, on June 26, 2018, and all persons who requested the opportunity were permitted to appear in person or by counsel.

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

[2] The Commission also finds that imports subject to Commerce's affirmative critical circumstances determination are not likely to undermine seriously the remedial effect of the countervailing and antidumping duty orders on cast iron soil pipe fittings from China.

Views of the Commission

Based on the record in the final phase of these investigations, we determine that an industry in the United States is materially injured by reason of imports of cast iron soil pipe fittings ("CISP fittings"), excluding drain bodies, from China that are found by the U.S. Department of Commerce ("Commerce") to be sold in the United states at less than fair value ("LTFV") and subsidized by the government of China. We also determine that an industry in the United States is not materially injured or threatened with material injury by reason of imports of certain CISP fittings, specifically drain bodies, from China found by Commerce to be sold in the United States at LTFV and subsidized by the government of China. We also find that critical circumstances do not exist with respect to imports of CISP fittings from China that are subject to Commerce's final affirmative critical circumstances determination.

I. Background

The petitioner in these investigations is the Cast Iron Soil Pipe Institute ("CISPI"), an industry association of domestic producers of CISP fittings (collectively "Petitioners").[1] Representatives appeared at the hearing accompanied by counsel and submitted prehearing and posthearing briefs.

Three respondent entities (collectively "Respondents") participated in these final phase investigations. These include U.S. importer NewAge Casting ("NewAge"), U.S. producer and importer Zurn Industries, LLC ("Zurn"), and an association of U.S. manufacturers of drainage products, the Plumbing and Drainage Institute ("PDI"). Representatives of Zurn and PDI, accompanied by counsel, appeared at the hearing and submitted prehearing and posthearing briefs. Representatives of NewAge appeared at the hearing and submitted a posthearing brief.

U.S. industry data are based on questionnaire responses from three firms that accounted for all domestic production of CISP fittings excluding drain bodies ("other CISP fittings") in 2017, including one firm that produced drain bodies over the January 2015 to March 2018 period of investigation ("POI"); the coverage for U.S. production of drain bodies in 2017 is not known.[2] U.S. import data are based on official Commerce import statistics and questionnaire responses of 15 U.S. importers of all CISP fittings from China over the POI, including other CISP fittings and drain bodies. The questionnaire responses accounted for over 100 percent of subject imports from China reported in official Commerce import statistics in 2017.[3] Data concerning the subject industry in China are based on questionnaire responses from 12 foreign producers of CISP fittings whose exports accounted for less than half of U.S. imports of CISP fittings from China in 2017.[4]

[1] The member companies are AB&I Foundry ("AB&I"), Tyler Pipe, and Charlotte Pipe & Foundry ("Charlotte Pipe"). Petition at 2. AB&I and Tyler Pipe are subsidiaries of McWane, Inc. ("McWane").

[2] Confidential Staff Report, INV-QQ-085 ("CR") at I-7 n.21; Public Report ("PR") at I-5 n.21.

[3] CR at I-7, PR at I-5.

[4] CR/PR at VII-3.

As stated above, data coverage in the record is not comprehensive for the entire CISP fittings market, particularly with respect to drain bodies. This is due to the manner in which Petitioners presented and argued their case, and in particular due to information in the petition and Petitioners' own admitted "inadvertent oversight" throughout these investigations.[5] In their petition, Petitioners represented themselves as comprising 100 percent of the domestic CISP fittings industry.[6] Petitioners also provided a list of importers that they believed imported or were likely to import the subject merchandise and listed the HTSUS subheadings the subject merchandise may be entered under.[7] Relying on the information provided by Petitioners, the Commission issued questionnaires and collected information from market participants during the preliminary and final phase of these investigations.[8] In these final phase investigations, parties were provided draft questionnaires on December 20, 2017 with a deadline of January 8, 2018 to submit comments.[9] Official questionnaires were sent on March 26, 2018 with a deadline of April 20, 2018 to return completed questionnaires.[10] Throughout this process, no party raised any domestic like product or scope issue that would have prompted the Commission to tailor its questionnaires to collect separate data for drain bodies.

The Commission did not become aware of a scope issue relating to drain bodies until June 7, 2018, when Zurn and PDI raised concerns about the scope of these investigations.[11] Petitioners did not substantively address the drain bodies issue until the hearing on June 26, 2018, but maintained that drains had explicitly been included in the scope since the petitions were filed.[12] It was not until one day before the hearing, however, that domestic producer McWane submitted a U.S. importer questionnaire indicating that it had actually imported drain bodies during the POI.[13] At the hearing, Petitioners stated that the petition intended to include drain bodies but they did not identify certain importers of drain bodies, including their own

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[5] Hearing Tr. at 87 (Schagrin), 107-108 (Lowe).

[6] Petition at 3.

[7] Petition at 9.

[8] *See* Preliminary Phase Investigations Questionnaires, EDIS Doc. No. 617392; Final Phase Investigations Questionnaires, EDIS Doc. No. 639940. Notices regarding these investigations were also posted on the Commission's website and in the Federal Register so any potential interested party would have been on notice of the investigations. *See e.g., Cast Iron Soil Pipe Fittings from China; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*, 82 Fed. Reg. 33515 (July 13, 2017).

[9] EDIS Doc. No. 632351.

[10] EDIS Doc. No. 639940.

[11] EDIS Doc. No. 647214. Zurn and PDI state that they did not learn that drains might be included in these investigations until U.S. Customs and Border Protection ("CBP") suspended entries of certain CISP fittings imports by certain PDI members, after the preliminary determinations and questionnaire comment phase. *Id*. Zurn and PDI also notified Commerce about the scope issue on June 18, 2018 and Commerce reopened its record to gather additional information for its final determination. *Countervailing Duty and Less-Than-Fair-Value Investigations of Cast Iron Soil Pipe Fittings from the People's Republic of China: Final Scope Memorandum* (July 5, 2018) ("Scope Clarification Memo") at 5.

[12] Petitioners' Prehearing Brief at 2 n.3.

[13] McWane's U.S. Importer Questionnaire, EDIS Doc. No. 648601.

related entity due to an apparent oversight. They also did not include certain domestic producers of drain bodies in the petition as part of the domestic industry.[14] As a result, questionnaire data gathered at that point (*i.e.*, well into the final phase of these investigations) did not adequately cover the domestic drain bodies industry and market. After the hearing, based on the newly raised scope, domestic like product, and domestic industry issues, the Commission conducted extensive research and outreach to market participants to gather additional information and data on drain bodies.[15]

The Commission may develop the factual record up until the record closes.[16] Nonetheless, it is a deviation from typical Commission practice to conduct substantive industry research and outreach, such as issuing new questionnaires to entities not previously involved in the pending investigations, during the late stages of final phase investigations, as it was necessary to do here. Nevertheless, the Commission expended the necessary time and resources to ensure that information contained in the final record of these determinations is the best information available, notwithstanding the unique circumstances presented by these investigations. In particular, Petitioners' presentation of their case led to gaps in our dataset that were not resolved until the late stages of these final phase investigations, and this led Commerce to reopen its record to gather additional information regarding the scope of investigation in order to make its final determinations.[17]

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."[18] Section 771(4)(A) of the Tariff Act of 1930, as amended ("the Tariff Act"), defines the relevant domestic industry as the "producers as a whole of a domestic like product, or those producers whose collective output of a domestic like product constitutes a major proportion of the total domestic production of the product."[19] In turn, the Tariff Act defines "domestic like product" as "a product which is like,

[14] *See* Hearing Tr. at 87 (Schagrin), 105-106 (Schagrin), 107-108 (Lowe); McWane's U.S. Importer Questionnaire, EDIS Doc. No. 648601.

[15] *See e.g.,* Email Communications with ***, EDIS Doc. No. 650598, 650579; Email Communication with ***, EDIS Doc. No. 650578; Email Communication with ***, EDIS Doc. No. 650580; Email Communication with ***, EDIS Doc. No. 650581; Email Communication with ***, EDIS Doc. No. 650582; Email Communication with ***, EDIS Doc No. 650586; Email Communication with ***, EDIS Doc. No. 650589; Drain Producers or Importers Research Material, EDIS Doc. No. 651359.

[16] 19 U.S.C. § 1677m(g).

[17] Scope Clarification Memo at 6.

[18] 19 U.S.C. § 1677(4)(A).

[19] 19 U.S.C. § 1677(4)(A).

or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[20]

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.[21] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[22] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[23] Although the Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized or sold at LTFV,[24] the Commission determines what domestic product is like the imported articles Commerce has identified.[25]

[20] 19 U.S.C. § 1677(10).

[21] 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).

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

[23] *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.").

[24] *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).

[25] *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:

> . . . {C}ast iron soil pipe fittings, finished and unfinished, regardless of industry or proprietary specifications, and regardless of size. Cast iron soil pipe fittings are nonmalleable iron castings of various designs and sizes, including, but not limited to, bends, tees, wyes, traps, drains, and other common or special fittings, with or without side inlets.
>
> Cast iron soil pipe fittings are classified into two major types – hubless and hub and spigot. Hubless cast iron soil pipe fittings are manufactured without a hub, generally in compliance with Cast Iron Soil Pipe Institute (CISPI) specification 301 and/or American Society for Testing and Materials (ASTM) specification A888. Hub and spigot pipe fittings have hubs into which the spigot (plain end) of the pipe or fitting is inserted. Cast iron soil pipe fittings are generally distinguished from other types of nonmalleable cast iron fittings by the manner in which they are connected to cast iron soil pipe and other fittings.
>
> The subject imports are normally classified in subheading 7307.11.0045 of the Harmonized Tariff Schedule of the United States (HTSUS): Cast fittings of nonmalleable cast iron for cast iron soil pipe. They may also be entered under HTSUS 7324.29.0000 and 7307.92.3010. The HTSUS subheadings and specifications are provided for convenience and customs purposes only; the written description of the scope of this investigation is dispositive.[26]

CISP fittings are iron castings typically used to connect or plug cast iron soil pipes, primarily in the sanitary and storm drain, waste, and vent ("DWV") piping of buildings. CISP fittings are manufactured by melting scrap iron, steel scrap, and alloys in a cupola furnace and casting the molten metal into the desired shapes.[27]

CISP fittings and the pipes that connect with the fittings generally come in two forms: hubless (or no-hub) and hub and spigot. Hubless fittings are manufactured without a hub and

[26] *Cast Iron Soil Pipe Fittings from the People's Republic of China: Final Affirmative Determination of Sales at Less Than Fair Value and Final Determination of Critical Circumstances, in Part*, 83 Fed. Reg. 33205 (July 17, 2018); Cast Iron Soil Pipe Fittings from the People's Republic of China: Final Affirmative Countervailing Duty Determination, 83 Fed. Reg. 32075 (July 11, 2018).

[27] CR at I-13, 16; PR at I-10, 12.

are joined to a pipe or another fitting using a coupling that fits over the ends. The joint is then sealed by tightening the coupling. Hub and spigot fittings have hubs into which the spigot of the pipe or another fitting is inserted. The joint is then sealed with a compression gasket or lead and oakum.[28] Hubless fittings are produced to CISPI 301 and American Society for Testing and Materials ("ASTM") A888 standards, and hub and spigot fittings are produced to ASTM A74 standard. Hub and spigot fittings meet the CISPI 301 standard in all aspects other than product dimensions and shapes.[29]

C. Scope Issue Relating to Drain Bodies

During the preliminary phase investigations, no respondent party raised any arguments regarding the like product or scope.[30] As discussed above, the issue of drain bodies was raised only when CBP suspended entries of drain-related imports by certain PDI members pursuant to the imposition of preliminary countervailing and antidumping duties in December 2017 and February 2018, respectively.[31] Zurn and PDI notified the Commission and Commerce about this issue on June 7 and June 18, respectively, and Commerce reopened its record between June 22 and June 26 to receive additional comments pertaining to the scope.[32] On July 5, 2018, Commerce issued its final determination regarding the scope in its Scope Clarification Memo.[33]

The issue of whether drain bodies are included in the scope derived from the word "drain" in the scope description. Commerce clarified this term to represent "drain fittings," which is a cast iron "fitting that is a component of a drainage system," and the term does not refer to the entire drainage system and/or drain assembly.[34] Commerce found that "drain fittings" made of cast iron are in-scope products but that a drain system or assembly as a whole is not.[35] Commerce was unable to provide a description of the specific features or examples of a drain fitting. Nonetheless, it found that in certain instances the cast iron component of a drain system and/or drain assembly, otherwise known as the drain body, can be considered a

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[28] Oakum is made from vegetable fiber, cotton, or hemp, and is packed into the joint between the hub and spigot. CR at I-15 n.46, PR at I-12 n.46.

[29] CR at I-15 to 16, PR at I-12.

[30] *See generally*, *Cast Iron Soil Pipe Fittings from China*, Inv. Nos. 701-TA-583 and 731-TA-1381 (Preliminary), USITC Pub. 4722 (September 2017).

[31] Hearing Tr. at 14-15 (Snarr).

[32] Letter Regarding Drains, EDIS Doc. No. 647214; Scope Clarification Memo at 5. As noted above, the deadline for comments on the Commission's draft questionnaires was January 8, 2018. Draft Questionnaires for Comments, EDIS Doc. No. 632351.

[33] *See* Scope Clarification Memo at 7-8.

[34] Scope Clarification Memo at 8-9. Commerce recognized that there were numerous references to the word "drains" within the petition but found that those were in reference to DWV systems as a whole. *Id*. at 7. In Commerce's proceedings, parties and Commerce sometimes used the terms drain fixtures, drainage systems, and drain assemblies interchangeably, but all of these terms refer to the same type of out-of-scope product—the downstream assembly of products that may include a drain fitting or body, strainer, flange, fasteners, and/or collar, some of which are in-scope products. *See e.g.,* Scope Clarification Memo at 2, 4, 8.

[35] Scope Clarification Memo at 8.

drain fitting.[36] [37] Therefore, based on Commerce's Scope Clarification Memo, we consider drain bodies to be within the scope of these investigations.

D. Domestic Like Product Arguments

Petitioners' Arguments. Petitioners argue that the Commission should find a single domestic like product coextensive with the scope.[38] Petitioners argue that drain bodies and other CISP fittings share the same physical characteristics and have the same use of providing a waterway for waste and storm water removal.[39] They further assert that while drain bodies are not interchangeable with other CISP fittings due to their shape, all CISP fittings are made in different shapes depending on their placement within the DWV system.[40]

Petitioners also contend that drain bodies and other CISP fittings share the same manufacturing equipment, facilities, and employees.[41] They also assert that producers and customers perceive both products to be part of the same DWV product category and it is ***.[42] Petitioners claim that both types of products have overlapping channels of distribution because it is also "not uncommon" for drain bodies to be shipped unassembled through distributors like other CISP fittings, while some drain bodies are shipped to equipment manufacturers that

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[36] Scope Clarification Memo at 8-9 (finding that "in *some instances*, a drainage system and/or a drain assembly may include a cast iron 'body' component that could be considered a 'drain fitting'.") (emphasis added). Commerce was unable to "clearly establish or define the universe" of drain fitting products, but notes that examples provided by Zurn and Petitioners may be illustrative. *Id*. at 8. It is within the purview of Commerce, and not the Commission, to interpret the petition's intent and the Commission must accept Commerce's determination as to the scope. *See AMS Assocs. v. United States*, 881 F. Supp. 2d 1374, 1380 (Ct. Int'l Trade 2012), *aff'd*, 737 F. 3d 1338 (Fed. Cir. 2013) ("Commerce retains broad discretion to define and clarify the scope of an antidumping investigation in a manner which reflects the intent of the petition") (citing *Minebea Co. v. United States*, 16 CIT 20, 22, 782 F.Supp. 117, 120 (1992)); *USEC, Inc. V. United States*, Slip OP. 01-1421 (Fed. Cir. April 25, 2002) at 9 ("The ITC may not modify the class or kind of imported merchandise examined by Commerce.").

[37] Toward the end of these investigations, Petitioners identified several other products, such as cleanouts, closet fittings, flanges, and carrier fittings, that may also be considered a drain fitting. Petitioners' Posthearing Brief, Responses to Commission Questions at 25; Petitioners' Final Comments at 1. Due to the uncertainty inherent in Commerce's Scope Clarification Memo regarding what drain fittings are and Respondents' focus on drain bodies, the record in these final phase investigations contains product breakout data, albeit limited, only on drain bodies, and not on other potential drain fittings. Furthermore, Commerce addressed only the possibility of whether drain bodies may be a drain fitting and did not indicate whether other types of products may also be a drain fitting.

[38] Petitioners' Posthearing Brief at 1-5; Hearing Tr. at 21 (Drake). Petitioners' volume, price, and impact arguments are all based on defining the domestic like product as coextensive with the scope.

[39] Petitioners' Posthearing Brief at 2. We note that Petitioners stated at the hearing that "a fittings' only purpose is to connect to pipe." Hearing Tr. at 163 (Wehr).

[40] Petitioners' Posthearing Brief at 2-3.

[41] Petitioners' Posthearing Brief at 3; Hearing Tr. at 90-91, 122 (Leonard).

[42] Petitioners' Posthearing Brief at 3-4.

assemble them into drain fixtures.[43] Petitioners also assert that based on domestic producer questionnaire responses, drain bodies are available in the range of prices offered for other CISP fittings.[44]

Respondents' Arguments. Prior to Commerce's final determinations, Respondents Zurn and PDI argued that drain fixtures are a separate domestic like product from other CISP fittings.[45] As summarized above, Commerce clarified the scope to exclude drain fixtures as the scope covers only drain fittings. Based on this clarification, Zurn and PDI contend that all drain fixture components, which include drain bodies, are no longer part of the scope of these investigations, and thus that the clarification obviates the Commission's duty to consider whether drain bodies constitute a separate domestic like product from other CISP fittings.[46] Nonetheless, they contend that there are significant differences between drain bodies and other cast iron products included in the scope of these investigations.[47]

As discussed above, Commerce explicitly noted that a drain body may be an in-scope CISP fitting.[48] Therefore, we proceed with an analysis on whether drain bodies are a separate domestic like product from other CISP fittings.

E. Domestic Like Product Analysis

1. Whether Drain Bodies are a Separate Domestic Like Product from Other CISP Fittings

Physical Characteristics and Uses. All CISP fittings are made of cast iron.[49] All CISP fittings' strength, corrosion resistance, fire resistance, and noise dampening qualities are the same because of their physical makeup.[50] However, drain bodies and other CISP fittings are subject to different industry standards that have distinct physical requirements.[51] Additionally,

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[43] Petitioners' Posthearing Brief at 3.

[44] Petitioners' Posthearing Brief at 4.

[45] *See* Zurn's Prehearing Brief at 5-14.

[46] *See* Respondents Zurn and PDI's Joint Posthearing Brief ("Respondents' Joint Posthearing Brief") at 1, 4, 9. Neither Zurn nor PDI addresses the part of the Scope Clarification Memo which states that drain bodies in some instances can be a drain fitting, and thus in the scope.

[47] Respondents' Joint Posthearing Brief at 8-9.

[48] Scope Clarification Memo at 8-9.

[49] Hearing Tr. at 37 (Simmons), 40 (Leonard), 121 (Simmons).

[50] CR at I-21 to 22, PR at I-15; Hearing Tr. at 40, 122 (Leonard); Petitioner's Posthearing Brief at 2.

[51] Other CISP fittings are subject to the CISPI and ASTM standards, while drain bodies are subject to the American Society of Mechanical Engineers ("ASME") standards. The CISPI and ASTM standards are mentioned in the scope description and petition, while the ASME standards are not. Furthermore, the CISPI and ASTM standards mirror and adjust to changes in each other accordingly, while the ASME standards do not parallel the CISPI or ASTM standards. Petition at 4, Exh. I-1, I-2; Zurn's Prehearing Brief at 8, Exh. 3, 4, 8, 9; Trip Notes at 5, EDIS Doc. No. 647080.

As indicated by Petitioners, we observe that the standard for drain bodies (ASME A112.6.3) contains a single reference to the industry standards for hubless CISP fittings (ASTM A888 and ASTM A74). Specifically, Section 4.3.4 of the ASME A112.6.3 standard states that, "Spigot (no-hub) outlet (Continued...)

other CISP fittings are limited to DWV systems made of cast iron, while drain bodies may also be connected with systems made of different materials, such as plastic.[52]

In terms of use, drain bodies and other CISP fittings may be used within the same DWV system, but drain bodies and other CISP fittings have different applications and placements. According to Petitioners, drain bodies receive and convey effluent into the DWV system from an inlet fixture.[53] Respondents similarly assert that a drain body "receives horizontal flow from roofs, floors, etc., redirects flow to . . . receiving drain pipe."[54] Other CISP fittings, those that Petitioners primarily produce, however, connect or plug cast iron soil pipe in the DWV system to make a non-leaking system.[55] Therefore, the physical placement and application of a drain body is different from that of other CISP fittings. The placement of a drain body is usually limited to an end or an inlet fixture within a DWV system, while other CISP fittings are primarily placed in between cast iron soil pipes within the DWV system;[56] and drain bodies collect and direct effluent into the pipe system while other CISP fittings generally direct the flow between or among pipes within a pipe system.[57] [58] Furthermore, drain bodies are usually assembled

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(…Continued)
connections shall comply with the dimensions specified in ASTM A74 or ASTM A888." However, the drain body standards have physical requirements such as drain body thickness, bolts and fasteners dimensions, grate-free area dimensions, loading testing requirements, and weather testing requirements that do not apply to hubless CISP fittings standards; and the hubless CISP fittings standards also have requirements such as corrosion resistance, noise, water leakage, and thrust force that may not apply to drain bodies. *Compare* Respondents' Joint Posthearing Brief, Exh. 4, *with* Petition, Exh. I-2. Furthermore, we observe that references to the word "drains" in the hubless CISP fittings standard and manual largely refer to drainage systems as a whole and not fittings. *See generally* Petition, Exh. I-1, I-2; *see also* Scope Clarification Memo at 9. Therefore, while drain bodies and other CISP fittings may be compatible for use within the same system, it does not mean they have the same application or uses.

[52] Petitioners' Posthearing Brief at 2 and Responses to Commission Questions at 24; Hearing Tr. at 139, 177 (Wehr).

[53] Petitioners' Posthearing Brief, Responses to Commission Questions at 24; Hearing Tr. at 56 (Simmons) (stating "{fixtures} collect the effluent and then they drain into any of these {drain} fittings" into the cast iron pipe system). *See also* CR at I-22, PR at I-16; Respondents' Joint Posthearing Brief, Responses to Commission Questions at 4.

[54] Respondents' Joint Posthearing Brief, Responses to Commission Questions at 9.

[55] CR at I-13, PR at I-10; Petition at 4. *See also* Hearing Tr. at 162-63 (Wehr).

[56] CR at I-22, PR at I-16. We observe, however, that there may be some instances in which certain other CISP fittings, such as a closet fitting or plug, can be placed at the ends of the DWV system. Petitioners' Final Comments at 2. However, at least some of these fittings, such as plugs, have a different use than drain bodies—that is, to prevent inflow or outflow of fluids, whereas drain bodies have the opposite purpose. *Id*.

[57] CR at I-21, PR at I-15.

[58] While we recognize Petitioners' argument that CISP fittings come in variety of shapes depending on the placement within a DWV system, the placement of drain bodies and other CISP fittings differ from each other not only because of shape but also because of their respective designed use. *See* CR at I-22, PR at I-16; Petitioners' Posthearing Brief at 2-3.

with non-cast iron parts, such as stainless steel strainers, grates, and bolts, when used, while other CISP fittings are generally not assembled with other non-cast iron components when used.[59] The difference in use is further highlighted by the different standards that cover the respective applications.[60]

Channels of Distribution. The record indicates that domestically produced drain bodies are primarily sold to end users while other CISP fittings are sold *** to distributors.[61] We recognize that *** offers drain bodies to distributors or wholesalers within their catalogue, but the record indicates that the company sells its drain bodies primarily to original equipment manufacturers ("OEM") and not distributors.[62] Furthermore, U.S. producer *** reported that no drain bodies were sold to distributors.[63]

Interchangeability. The record contains limited market participant responses as to the interchangeability between drain bodies and other CISP fittings. Based on the available information in the record, the degree of interchangeability is heavily limited due to their different application within the DWV system. There is also limited interchangeability, however, among other CISP fittings that are differentiated based on size and shape.

Manufacturing Facilities, Production Processes and Employees. The record suggests that the two products can be manufactured using the same manufacturing facilities, production process, and employees, although there may be some differences in the type of machinery used by certain producers.[64] Zurn asserts that the production of other CISP fittings involves large horizontal automatic casting machines while drain bodies are manufactured using smaller vertical casting machines that have a higher rate of output.[65] However, Petitioners contend that the manufacturing processes for all CISP fittings are essentially the same, and Charlotte Pipe reports that it manufactures ***.[66]

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[59] CR at I-20 to 21, PR at I-15.

[60] *Compare* Respondents' Joint Posthearing Brief, Exh. 4, *with* Petition, Exh. I-2. Petitioners argue that certain other CISP fittings, such as closet fittings, cleanouts, or flanges, serve the same function as drain bodies. Petitioners' Final Comments at 2. However, as indicated above, these products and drain bodies are covered by different standards that cover different applications and contain distinct physical requirements. *Compare* Respondents' Joint Posthearing Brief, Exh. 4, *with* Petition, Exh. I-2.

[61] CR at I-22 to 23, PR at I-16.

[62] CR at I-23, PR at I-16; Respondents' Joint Posthearing Brief at 6; Hearing Tr. at 123 (Miller), 123-126 (Dowd), 163 (Wehr).

[63] CR at I-22 to 23, PR at I-16. Although ***, as an importer of drain bodies, reported selling its imports to distributors, the focus of our analysis is on domestically produced drain bodies. CR at I-23, PR at I-16; *** U.S. Importer's Questionnaire at 10, EDIS Doc. No. 650590.

[64] Of the three domestic producers of other CISP fittings, only Charlotte Pipe produces drain bodies, and only a small volume. *See* CR/PR at III-1 n.3, Table III-4.

[65] Respondent Zurn's Prehearing Brief at 12. We note that at least two other domestic firms, ***, produce drain bodies but not other CISP fittings. EDIS Doc. No. 650578, 650579.

[66] CR at I-25 to 26, PR at I-18; Petitioners' Posthearing Brief at 3, Responses to Commission Questions at 43. We note that Charlotte Pipe admits that Zurn approached it to produce drain bodies, but Charlotte declined to submit a quote to Zurn due to technical issues. Hearing Tr. at 70 (Simmons).

Price. The record contains no specific pricing product information for drain bodies,[67] but there are average unit value ("AUV") data for U.S. shipments of both drain bodies and other CISP fittings.[68] The AUV of other CISP fittings was significantly higher than that of drain bodies throughout the POI, and the AUVs for the two product groups did not share similar overall trends over the POI.[69]

Producer and Customer Perceptions. Definitions provided by Petitioners as well as those contained in Petitioners' own publications treat drain bodies and other CISP fittings as separate components. Petitioners define drain bodies as a one-piece fitting designed to receive and convey effluent into the DWV system and it is sometimes also called a sump,[70] which is consistent with Respondents' assertion that drain bodies should more properly be referred to as a sump or a bowl.[71] The petition makes reference to sumps as a separate component from cast iron soil pipe and fittings.[72] Furthermore, Petitioners' own handbook on CISP fittings, the Cast Iron Soil Pipe and Fittings Handbook (the "CISP&F handbook"), has a separate definition for "sumps."[73] Additionally, drain bodies are not mentioned in the CISP&F handbook and only appear in a reference to floor drains and indirect waste receptors as a fixture.[74] Moreover, as mentioned above, drain bodies and other CISP fittings have different applications that are

[67] CR at V-17, PR at V-9.

[68] CR/PR at Table C-2a.

[69] CR/PR at Tables I-4 and C-2a; Supplemental Memorandum, INV-QQ-087, ("Supplemental Memo") at Table SUPP-2b. The AUV of drain bodies ranged between $*** per short ton and $*** per short ton, while the AUV of other CISP fittings ranged between $*** per short ton and $*** per short ton during the POI. In terms of trends, the AUV of drain bodies declined by *** percent from 2015 to 2016, increased by *** percent from 2016 to 2017, and was *** percent higher in interim 2018 than in interim 2017; on the other hand, the AUV of other CISP fittings declined by *** percent from 2015 to 2016, further declined by *** percent from 2016 to 2017, and was *** percent lower in interim 2018 than in interim 2017. CR/PR at Table C-2a; Supplemental Memo at Table SUPP-2b.

[70] Petitioners' Posthearing Brief, Responses to Commission Questions at 24.

[71] Respondents Joint Posthearing Brief, Responses to Questions from the Commission at 9; Hearing Tr. at 134, 172 (Weiss).

[72] Petition at 6 ("{A}n additional use of cast iron soil pipe and fittings . . . is {} for collecting subsoil drains, which are placed around the structure's foundation for connection into a storm drainage system or *into a sump*" (emphasis added)); Petition, Exh. I-1 at 5.

[73] The CISP&F handbook defines a sump as a "tank or pit that receives the discharge from drains or other wastes, located below the normal grade of the gravity system, which must be emptied by mechanical means." Petition, Exh. I-1 at 162. Additionally, we observe that the CISP&F handbook does not contain any separate definition for the different types of drain fittings mentioned by Petitioners, such as cleanouts, closet fittings, and flanges.

[74] CR at I-25, PR at I-18. Petitioners assert that drain bodies are "necessary fixture connections" that are covered by the CISP&F Handbook. Petitioners' Final Comments at 4. However, Petitioners seem to contradict this by agreeing that drain bodies are part of fixtures, rather than merely a fixture connector. *Id*. Additionally, the CISP&F handbook does not define "necessary fixture connection{s}" or what type of products are a "necessary fixture connection."

subject to two different sets of industry standards.[75] Thus, the record indicates that domestic producers perceive drain bodies and other CISP fittings to be separate like products.

This perception difference is further demonstrated by the approach taken by Petitioners during these investigations. Petitioners had numerous opportunities, from the petition-drafting stage until the late stages of the final phase investigations, to provide drain body data to the Commission, but did not do so because they apparently did not associate drain bodies with other CISP fittings. As emphasized above, Petitioners did not include their own drain body import data during the preliminary phase investigations, and only submitted the data when the issue was raised by PDI and Zurn well into the final phase of these investigations.[76] Petitioners' counsel's only rationale for this was that the sheer variety of their product offerings led them to neglect the drain body data within their own questionnaires.[77] Petitioners also argue that McWane was focusing on their non-drain body CISP fitting-producing subsidiaries (AB&I and Tyler Pipe) and as a result, was "forgetting" their "brother," Wade, which operates the corporation's drainage product line.[78] However, we observe that drain body imports by McWane accounted for an appreciable share of total subject imports between 2015 and 2017, ranging from *** to *** percent.[79] The petition also states that Petitioners are "the only producers in the United States of CISP fittings," even though there are other known domestic drain body manufacturers.[80] Moreover, as discussed above, the petition included standards and HTSUS subheadings relevant to other CISP fittings but not those relevant to drain bodies.

The record relating to customer perception is limited. Of the 25 responding U.S. purchasers of CISP fittings, only three reported purchasing from suppliers who offer drain bodies, and two reportedly included drain body purchases in their questionnaire responses. ***.[81]

2. Conclusion

All CISP fittings are made of cast iron, used within a DWV system, and may share the same manufacturing facilities, processes, and employees. Nevertheless, the difference in the application between drain bodies and other CISP fittings within the DWV system precludes their interchangeability, a conclusion that is further reinforced by the different industry standards that cover the respective applications within the DWV system. Their differences have also led

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[75] *Compare* Respondents' Joint Posthearing Brief, Exh. 4, *with* Petition, Exh. I-2. We note that the there are numerous references and requirements for sumps in the ASME Plumbing Engineering Design Handbook, which also refers to sumps as drain bodies interchangeably throughout. *See* Respondents' Joint Posthearing Brief, Exh. 3. The CISPI 301 standard, on the other hand, does not reference drain bodies or sumps.

[76] *See* Hearing Tr. at 87 (Schagrin), 105-106 (Schagrin); 107-108 (Lowe); Petition at 9, Exh. I-6.

[77] *See* Hearing Tr. at 105-106 (Schagrin).

[78] Hearing Tr. at 107 (Lowe).

[79] Calculated from CR/PR at Tables III-9 and C-1.

[80] CR at I-23 to 24, PR at I-17. ***, which further supports the notion that producers perceive drain bodies and other CISP fittings separately. *Id*. n.97.

[81] CR at I-25, PR at I-18.

to differing producer perceptions, which was demonstrated by Petitioners' presentation of its case throughout most of these investigations. In particular, Petitioners did not provide material data regarding production and importation of drain bodies, including their own substantial related imports of drain bodies. The differences in AUVs and channels of distribution further underscore the differences between drain bodies and other CISP fittings. In light of the foregoing reasons, we define drain bodies and other CISP fittings as separate domestic like products.

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

We must determine whether any producer of the domestic like product should be excluded from the domestic industry pursuant to section 771(4)(B) of the Tariff Act. This provision allows the Commission, if appropriate circumstances exist, to exclude from the domestic industry producers that are related to an exporter or importer of subject merchandise or which are themselves importers.[83] Exclusion of such a producer is within the Commission's discretion based upon the facts presented in each investigation.[84] In the preliminary determinations, the Commission defined the domestic industry to include all U.S. producers of CISP fittings.[85]

These investigations raise the issue of related parties with respect to the domestic industry that produces other CISP fittings. There are no known related party issues with

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[82] 19 U.S.C. § 1677(4)(A).

[83] *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).

[84] 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.

[85] Preliminary Determinations, USITC Pub. 4722 at 8.

respect to the domestic industry producing drain bodies. *** is a domestic producer of other CISP fittings and also imported other CISP fittings during the POI.[86] Consequently, *** is a related party under 19 U.S.C. § 1677(4)(B)(i). We next consider whether appropriate circumstances exist to exclude *** from the domestic industry producing other CISP fittings.

***, which opposes the petition,[87] was by far the *** domestic producer over the POI, accounting for less than *** percent of other CISP fittings production in 2015 and 2016, and it did not have any production in 2017 or January to March ("interim") 2018.[88] Its subject imports are *** than its U.S. production, with an import to production ratio of *** percent in 2015 and *** percent in 2016,[89] and it ceased U.S. production entirely in September 2016,[90] indicating that its principal interest does not lie in domestic production.[91] Accordingly, we find that appropriate circumstances exist to exclude *** from the domestic other CISP fittings industry.

Accordingly, in light of our definition of separate domestic like products, we define the domestic industry producing other CISP fittings as consisting of all U.S. producers of other CISP fittings, excluding ***, and we define the domestic industry producing drain bodies as consisting of all U.S. producers of drain bodies.

IV. Analysis of Material Injury or Threat of Material Injury by Reason of Subject Imports

A. Legal Standards

In the final phase of antidumping and countervailing duty investigations, the Commission determines whether an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[92] 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

[86] *** U.S. Producer Questionnaire, EDIS Doc. No. 651251; *** U.S. Importer Questionnaire, EDIS Doc. No. 651249. We note that *** revised its questionnaire response to remove its data pertaining to drain bodies because it interpreted Commerce's final scope determinations as excluding drain bodies from the scope. *See also* *** correspondence with ITC regarding the removal of drain bodies from its questionnaire response, EDIS Doc. No. 651193.

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

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

[89] First Revision Memo at Table III-9. Because it accounts for such a small share of U.S. production and had no production in 2017, exclusion of *** from the domestic industry has limited impact on the domestic industry data on the record.

[90] *** U.S. Producers Questionnaire at II-2.

[91] *** reported *** net sales value and operating income, *** operating income to net sales ratio from 2015 to 2016. CR/PR at Table VI-3.

[92] 19 U.S.C. §§ 1671d(b), 1673d(b). The Trade Preferences Extension Act of 2015, Pub. L. 114-27, amended the provisions of the Tariff Act pertaining to Commission determinations of material injury and threat of material injury by reason of subject imports in certain respects.

like product, but only in the context of U.S. production operations.[93] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[94] 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.[95] 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."[96]

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,[97] 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.[98] 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.[99]

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

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[93] 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).

[94] 19 U.S.C. § 1677(7)(A).

[95] 19 U.S.C. § 1677(7)(C)(iii).

[96] 19 U.S.C. § 1677(7)(C)(iii).

[97] 19 U.S.C. §§ 1671d(a), 1673d(a).

[98] *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).

[99] 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).

injury threshold.[100] In performing its examination, however, the Commission need not isolate the injury caused by other factors from injury caused by unfairly traded imports.[101] 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.[102] It is clear that the existence of injury caused by other factors does not compel a negative determination.[103]

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

[100] 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.

[101] 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.").

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

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

the subject imports."[104] Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[105]

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.[106] The additional "replacement/benefit" test looked at whether nonsubject imports might have replaced subject imports without any benefit to the U.S. industry. The Commission applied that specific additional test in subsequent cases, including the *Carbon and Certain Alloy Steel Wire Rod from Trinidad and Tobago* determination that underlies the *Mittal Steel* litigation.

Mittal Steel clarifies that the Commission's interpretation of *Bratsk* was too rigid and makes clear that the Federal Circuit does not require the Commission to apply an additional test nor any one specific methodology; instead, the court requires the Commission to have "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and requires that the Commission not attribute injury from nonsubject imports or other factors to subject imports.[107] Accordingly, we do not consider ourselves required to apply the replacement/benefit test that was included in Commission opinions subsequent to *Bratsk*.

The progression of *Gerald Metals, Bratsk*, and *Mittal Steel* clarifies that, in cases involving commodity products where price-competitive nonsubject imports are a significant factor in the U.S. market, the Court will require the Commission to give full consideration, with adequate explanation, to non-attribution issues when it performs its causation analysis.[108]

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[104] *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*.

[105] *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.").

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

[107] *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).

[108] 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 (Continued...)

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.[109] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[110]

B. Conditions of Competition

The following conditions of competition inform our analysis of whether there is material injury by reason of subject imports.[111]

1. Demand Considerations

U.S. demand for CISP fittings is a function of construction spending on public construction, private non-residential construction, and larger private residential buildings.[112] From 2015 to 2017, U.S. construction value generally increased.[113] Most responding market participants reported that demand for CISP fittings in the U.S. market either experienced no change or an increase.[114]

Reflecting the increase in demand, apparent U.S. consumption of other CISP fittings increased from *** short tons in 2015 to *** short tons in 2016, before declining to *** short tons in 2017, for an overall increase of *** percent from 2015 to 2017.[115] Apparent U.S.

(…Continued)
information in the final phase of investigations in which there are substantial levels of nonsubject imports.

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

[110] *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.").

[111] Due to the timing of when the domestic like product issue with respect to drain bodies was raised, the Commission had limited opportunity to collect information on the separate domestic industries from market participants. Thus, information in the record for the conditions of competition largely is for all CISP fittings.

[112] CR at II-13, PR at V-8.

[113] CR at II-13, PR at V-8. During the full years of the POI, U.S. construction by value increased by 5.7 percent for public construction, 32.5 percent for private residential construction, and 20.6 percent for private non-residential construction. Between December 2017 and March 2018, U.S. construction by value continued to increase, with increases for the different construction sectors ranging between 0.3 percent and 2.3 percent. *Id*.

[114] CR/PR at Table II-4. *** U.S. producers reported an increase in demand for CISP fittings while a slight majority of importers (seven out of 13) and a plurality of purchasers (eight out of 19) reported no change in the demand. *Id*.

[115] Supplemental Memo at Table SUPP-2b.

consumption of other CISP fittings was *** short tons in interim 2017 and *** short tons in interim 2018.[116]

Apparent U.S. consumption of drain bodies increased from *** short tons in 2015 to *** short tons in 2016 before declining to *** short tons in 2017, for a *** percent decline over that period. Apparent U.S. consumption of drain bodies was *** short tons in interim 2017 and *** short tons in interim 2018.[117]

2. Supply Considerations

Other CISP Fittings. The domestic industry was the largest source of supply in the U.S. market over the POI.[118] The domestic industry consists of Charlotte Pipe and McWane, which is the parent corporation for AB&I and Tyler Pipe.[119] The domestic industry's U.S. market share declined from *** percent in 2015 to *** percent in 2016, and subsequently increased to *** percent in 2017, for an overall loss of *** percentage points over the 2015 to 2017 period; the domestic industry's market share was *** percent in interim 2017 and *** percent in interim 2018. The market share of subject imports increased from *** percent in 2015 to *** percent in 2016, and then declined to *** percent in 2017, for an overall gain of *** percentage points during the 2015 to 2017 period; its market share was *** percent in interim 2017 and *** percent in interim 2018. Nonsubject imports' market share was minimal, ranging between *** percent and *** percent throughout the POI.[120]

The domestic industry's production capacity increased from *** short tons in 2015 to *** short tons in 2017; the capacity was *** short tons in interim 2017 and *** short tons in interim 2018.[121] The industry's capacity utilization ranged from *** to *** percent throughout the POI.[122]

Drain Bodies. Subject imports from China were the largest source of supply in the U.S. market over the POI. The domestic industry consists of Charlotte Pipe and possibly other producers, including ***.[123] The domestic industry's U.S. market share increased from *** percent in 2015 to *** percent in 2016 and *** percent in 2017, for an overall gain of *** percentage points over the 2015 to 2017 period; the domestic industry's market share was *** percent in interim 2017 and *** percent in interim 2018. Subject imports' market share declined from *** percent in 2015 to *** percent in 2016 and *** percent in 2017, for an overall loss of *** percentage points during the 2015 to 2017 period; its market share was ***

[116] Supplemental Memo at Table SUPP-2b.
[117] CR/PR at Table C-2a.
[118] Supplemental Memo at Table SUPP-2b.
[119] CR/PR at III-1.
[120] Supplemental Memo at Table SUPP-2b.
[121] Supplemental Memo at Table SUPP-2b.
[122] Supplemental Memo at Table SUPP-2b.
[123] CR/PR at III-1 n.2. As discussed above, the Commission issued questionnaires to these producers immediately after the drain bodies like product issue was raised, but the responses resulted in limited data. *Id*.

percent in interim 2017 and *** percent in interim 2018. Nonsubject imports' market share was minimal, ranging between *** percent and *** percent throughout the POI.[124]

The domestic industry's production capacity for drain bodies declined from *** short tons in 2015 to *** short tons in 2017; the capacity was *** short tons in interim 2017 and *** short tons in interim 2018. Capacity utilization was low throughout the POI, ranging from *** to *** percent.[125]

3. Substitutability and Other Conditions

We find that subject imports and domestically produced CISP fittings have a high degree of physical interchangeability but factors such as domestic industry trademarks,[126] sales conditions (such as rebates and loyalty incentive programs), domestic procurement requirements, and building plan requirements may limit the degree to which subject imports and domestically produced products may be used interchangeably.[127] The vast majority of U.S. producers, purchasers, and importers, however, reported that subject imports and domestically produced CISP fittings are always or frequently interchangeable.[128] The record also indicates that price is an important purchasing factor. Price was most frequently cited as one of the top three factors in purchasing decisions, and the vast majority (21 out of 25) of purchasers reported that price is a very important purchasing factor.[129]

The record also indicates that CISP fittings are typically sold from inventory. In 2017, U.S. producers sold *** of their commercial shipments from inventories, while U.S. importers sold 96.1 percent of their shipments from U.S. inventories.[130]

While a majority of domestically produced CISP fittings are sold on the spot market, U.S. producers sell large amounts to firms through *** programs, which are an important part of the U.S. producers' business strategy.[131] These supplier-specific programs incentivize

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

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

[126] Only the members of CISPI, Charlotte Pipe and McWane, are eligible for the CISPI trademarks. CR at II-25 n.29, PR at II-18 n.29. However, non-CISPI members may market themselves as meeting CISPI standards. CR at II-27 n.31, PR at II-19 n.31.

[127] *See generally* CR at II-17 to 32; PR at II-11 to 22; *see also* Zurn's Prehearing Brief at 20. While we recognize that epoxy-coated CISP fittings are supplied only by Chinese subject producers, the majority (13 of 24) of purchasers reported that it was not an important purchasing factor and epoxy-coated CISP fittings accounted for less than *** percent of total U.S. shipments of CISP fittings. *See* CR/PR at Tables II-7, IV-3.

[128] CR/PR at Table II-15.

[129] CR/PR at Tables II-6, 7.

[130] CR at II-17, PR at II-11.

[131] CR at V-6, PR at V-4; CR/PR at Table V-2. In 2017, *** percent of domestic industry sales were spot sales and the remaining *** percent were reported as annual contracts, whereas the vast majority (*** percent) of subject import sales were reported as spot sales. *Id*.

customers into exclusivity agreements through rebates, which vary in term and type.[132] The magnitude of these rebates also varies by domestic producer.[133]

We recognize that there were anticompetitive allegations against the Petitioners that triggered investigations by the Federal Trade Commission ("FTC") and a price-fixing lawsuit by purchasers prior to the POI.[134] However, the majority of responding importers and purchasers reported that these various proceedings had no effect on their respective firms or the market.[135] Furthermore, the majority of responding firms reported experiencing no supply constraints.[136]

C. Material Injury by Reason of Imports of Other CISP fittings[137]

1. 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."[138]

China was the only significant non-domestic source of other CISP fittings in the U.S. market.[139] The absolute volume of subject imports increased overall from 2015 to 2017. The volume increased from *** short tons in 2015 to *** short tons in 2016 and declined to *** short tons in 2017, for an overall increase of 20 percent in volume during the full years of the POI; the volume was *** short tons in interim 2017 and *** short tons in interim 2018.[140] Subject imports' market share increased overall from 2015 to 2017; it was *** percent of

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[132] CR at V-6, 13, PR at V-4, 7.

[133] CR at V-12 to 14, PR at V-7 to 8.

[134] CR at II-10, II-11 n.15, II-28; PR at II-6 to 7 n.15, II-20. Petitioner acknowledges such allegations but emphasizes that no member of the domestic CISP fitting industry has ever been found to have violated U.S. antitrust law. Petitioners' Final Comments at 6.

[135] CR/PR at Table II-12. Nine of 12 importers and 17 of 24 purchasers reported that the FTC investigation had no effect on their firm, while six of 10 importers and 13 of 19 purchasers reported that the investigation had no effect on the market. Eleven of 12 importers and 19 of 25 purchasers reported that the lawsuit had no effect on their firm, while eight of 10 importers and 16 of 19 purchasers reported that the lawsuit had no effect on the market. *Id*.

[136] CR at II-8, PR at II-5.

[137] 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). During the July 2016 to June 2017 period, imports from China of subject other CISP fittings accounted for 99.1 percent of total imports of other CISP fittings. First Revision Memorandum, INV-QQ-086 ("First Revision Memo") at Table IV-7. Because subject imports from China exceed the pertinent statutory negligibility threshold, we find that imports from China are not negligible.

[138] 19 U.S.C. § 1677(7)(C)(i).

[139] *See* CR/PR at Tables IV-9, IV-10, C-3.

[140] CR/PR at Table C-2b.

apparent U.S. consumption in 2015, *** percent in 2016, and *** percent in 2017. Subject imports' market share was *** percent in interim 2017 and *** percent in interim 2018.[141] The decline in subject imports in interim 2018 appears to be due at least in part to the pendency of these investigations.[142]

In light of the foregoing, we find that the volume of subject imports from China was significant in both absolute terms and relative to U.S. consumption.

2. Price Effects of 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.[143]

As explained above, there is a high degree of physical interchangeability between subject imports and domestically produced CISP fittings and price is an important factor in purchasing decisions.[144]

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of six pricing products, all of which are types of other CISP fittings, shipped to unrelated U.S. customers over the POI.[145] U.S. producers (***) and five importers provided usable pricing data for the requested products, but not all firms reported pricing for all products for all quarters.[146] The pricing data account for approximately ***

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[141] Supplemental Memo at Table SUPP-2b.

[142] Petitioners' Prehearing Brief at 13.

[143] 19 U.S.C. § 1677(7)(C)(ii).

[144] CR at II-17, PR at II-11; CR/PR at Tables II-6, 7.

[145] CR at V-16 to 17, PR at V-9. All six pricing products are types of hubless CISP fittings:

Product 1.-- 2" no hub, 1/4 bend cast iron soil pipe fitting, other than epoxy coated
Product 2.-- 2" no hub, 1/8 bend cast iron soil pipe fitting, other than epoxy coated
Product 3.-- 2" no hub, sanitary Tee cast iron soil pipe fitting, other than epoxy coated
Product 4.-- 4" no hub, 1/8 bend cast iron soil pipe fitting, other than epoxy coated
Product 5.-- 6" no hub, 1/8 bend cast iron soil pipe fitting, other than epoxy coated
Product 6.-- 6" no hub, 1/4 bend cast iron soil pipe fitting, other than epoxy coated

[146] CR at V-17, PR at V-10.

percent of U.S. producers' shipments of all CISP fittings and *** percent of U.S. shipments of all subject imports in 2017.[147]

Subject imports of CISP fittings undersold the domestic product in 66 of 78 quarterly price comparisons at margins ranging from 0.6 to 40.6 percent, and oversold the domestic product in the remaining 12 comparisons at margins ranging from 0.2 to 29.1 percent.[148] There were 4.4 million pounds of subject imports in the quarters where they undersold the domestic product and 290,221 pounds of subject imports in the quarters where they oversold.[149] Furthermore, 11 of the 12 responding purchasers who reported purchasing subject imports instead of the domestic product since the beginning of the POI reported that subject import prices were lower than the domestic product.[150] Given the high degree of physical interchangeability and the importance of price in purchasing decisions, we find this pervasive underselling to be significant.

We also examined price trends and find that subject imports depressed domestic prices to a significant degree. Prices for all domestic pricing products declined consistently throughout the POI, narrowing the margins by which subject imports undersold the domestic product.[151] Price declines were the most prominent in the pricing product which by far had the highest volume of U.S. shipments for both the subject imports and domestic product.[152] Additionally, six of 25 responding purchasers reported that U.S. producers reduced prices in order to compete with the subject imports.[153] Consistent with the price declines in the domestic industry's pricing products, we also observe that U.S. producers' net sales AUV declined consistently throughout the POI, with the largest decline from 2016 to 2017.[154]

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[147] CR at V-17, PR at V-10.

[148] CR/PR at Table V-11.

[149] CR/PR at Table V-11.

[150] CR at V-36, PR at V-16; CR/PR Table V-13.

[151] CR/PR at Table V-10. Five of the six domestic pricing products had their peak prices at the beginning of the POI in the first quarter of 2015, and all six domestic pricing products had their lowest prices in the fourth quarter of 2017. Pricing product 1, which had the highest volume by far of U.S. shipments of the domestic product, declined consistently from $*** per pound to $***, a decline of *** percent; pricing product 2, which had the second highest volume of U.S. shipments of the domestic product, declined from $*** per pound to a $*** per pound, a decline of *** percent; pricing product 3 declined from $*** per pound to $*** per pound, a decline of *** percent; pricing product 4 declined from $*** per pound to $*** per pound, a decline of *** percent; pricing product 5 experienced peak prices in the third quarter of 2015 at $*** per pound, which was only $*** higher than that of the first quarter of 2015, and declined to $*** per pound, a decline of *** percent; and pricing product 6 declined from $*** per pound to $*** per pound, a decline of *** percent. CR/PR at Tables V-4 to 10.

[152] *Compare* CR/PR at Tables V-4 to 9, *with* CR/PR at Table V-10.

[153] CR/PR at Table V-14. Among the *** reporting purchasers, the estimated U.S. price reduction was 20.7 percent. *Id.*

[154] U.S. producers' net sales AUV declined from $*** per short ton in 2015 to $*** per short ton in 2016, $*** per short ton in 2017, and $*** per short ton in interim 2018. Apparent U.S. consumption declined slightly by *** percent from 2016 to 2017; by contrast, apparent U.S. consumption increased by *** percent from 2015 to 2016, which accounted for the overall increase from 2015 to 2017. Supplemental Memo at Table SUPP-2b.

Although demand was relatively flat between 2016 and 2017, it was strong between 2015 and 2016 and increased overall during the POI.[155] Consequently, we do not find that demand trends explain the persistent price declines. Similarly, the industry's unit cost of goods sold ("COGS") experienced an overall increase during the POI; while it declined from 2015 to 2016, it increased in 2017 and was higher in interim 2018 than in interim 2017.[156] Thus, changes in the industry's costs do not explain the consistent decline in domestic pricing.

Based on the foregoing, we find that subject imports had significant price-depressing effects. They significantly undersold the domestic product, and the domestic producers had to lower their prices to compete with low-priced subject imports throughout the POI.[157] The low-priced subject imports of other CISP fittings consequently had a significant adverse impact on the domestic industry, as described further below.

3. Impact of Subject Imports[158]

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."[159] These factors include output, sales, inventories, capacity

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[155] Supplemental Memo at Table SUPP-2b.

[156] Unit COGS initially declined from $*** per short ton in 2015 to $*** per short ton in 2016 and subsequently increased to $*** per short ton in 2017, for an overall increase of *** percent, and then was higher at $*** in interim 2018 than $*** in interim 2017. Supplemental Memo at Table SUPP-2b.

[157] We have also considered whether factors such as intra-industry competition through loyalty incentive programs may have caused the domestic price declines. We recognize that a plurality of purchasers reported that rebates and competition among U.S. producers have a substantial effect on prices. CR/PR at Table II-9. However, these responses do not negate the price depression caused by subject imports as the domestic industry, as a whole, lowered its prices and gained market share at the expense of subject imports from 2016 to 2017.

[158] 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 antidumping duty determinations, Commerce found weight-average dumping margins of 22.11 percent to 360.39 percent. *Cast Iron Soil Pipe Fittings from the People's Republic of China: Final Affirmative Determination of Sales at Less Than Fair Value and Final Determination of Critical Circumstances, in Part*, 83 Fed. Reg. 33205 (July 17, 2018). We take into account in our analysis the fact that Commerce has made final findings that all subject producers in China are selling subject imports in the United States at LTFV. In addition to this consideration, our impact analysis has considered other factors affecting domestic prices. Our analysis of the significant underselling and 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.

[159] 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.").

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."[160]

As apparent U.S. consumption increased overall, the domestic industry's production and shipments experienced annual increases between 2015 and 2017, and there were minimal changes when comparing interim periods. Production of other CISP fittings increased from *** short tons in 2015 to *** short tons in 2015 and *** short tons in 2017; production was *** short tons in interim 2017 and *** short tons in interim 2018.[161] The domestic industry's capacity increased from *** short tons in 2015 to *** short tons in 2016 and *** short tons in 2017; capacity was *** short tons in interim 2017 and *** short tons in interim 2018.[162] Capacity utilization was *** percent in 2015 to *** percent in 2016 and *** percent in 2017; capacity utilization was *** percent in interim 2017 and *** percent in interim 2018.[163] As explained above, the domestic industry's U.S. market share declined from *** percent in 2015 to *** percent in 2016, and then increased to *** percent in 2017; its market share was *** percent in interim 2017 compared with *** percent in interim 2018.[164] The industry's end-of-period inventories declined from *** short tons in 2015 to *** short tons in 2016 and subsequently increased to *** short tons in 2017; the end-of-period inventories were *** short tons in interim 2017 and *** short tons in interim 2018.[165]

The number of production and related workers ("PRWs"), hours worked per PRW, wages paid, and hourly wages all increased from 2015 to 2017, while the figures were generally the same during interim periods.[166] By contrast, productivity declined slightly from 2015 to

[160] 19 U.S.C. § 1677(7)(C)(iii). This provision was amended by the Trade Preferences Extension Act of 2015, Pub. L. 114-27.

[161] Supplemental Memo at table SUPP-2b.

[162] Supplemental Memo at Table SUPP-2b.

[163] Supplemental Memo at Table SUPP-2b.

[164] Supplemental Memo at Table SUPP-2b.

[165] Supplemental Memo at Table SUPP-2b.

[166] Supplemental Memo at Table SUPP-2b. Number of PRWs increased from *** in 2015 to *** in 2016 and *** in 2018; the number of PRWs was *** in interim 2017 *** in interim 2018. Total hours worked increased from *** in 2015 to *** in 2016 and *** in 2017; total hours worked was *** in interim 2017 and *** in interim 2018. Wages paid increased from $*** in 2015 to $*** in 2016 and $*** in 2017; wages paid were $*** in interim 2017 and $*** in interim 2018. Hourly wages increased from $*** in 2015 to $*** in 2016 and $*** in 2018; hourly wages was $*** in interim 2017 and $*** in interim 2016. *Id*.

2017 and was lower in interim 2018 than in interim 2017.[167] Unit labor costs increased annually from 2015 to 2017, and were higher in interim 2018 than in interim 2017.[168]

The domestic industry's financial indicators deteriorated between 2015 and 2017, with almost all of the declines occurring during the 2016 to 2017 period, and the indicators in interim 2018 were at lower levels than in interim 2017. Net sales revenue increased from $*** in 2015 to $*** in 2016 and subsequently declined to $*** in 2017; the net sales revenue was $*** in interim 2017 and $*** in interim 2018.[169] The industry's COGS increased from $*** in 2015 to $*** in 2016 and $*** in 2017; COGS were $*** in interim 2017 and $*** in interim 2018. Gross profit increased from $*** in 2015 to $*** in 2016 before declining to $*** in 2017; gross profit was $*** in interim 2017 and $*** in interim 2018. Operating income increased from $*** in 2015 to $*** million in 2016, and declined to $*** in 2017; operating income was $*** in interim 2017 and reflected *** in interim 2018. Similarly, the industry's operating income margin increased from *** percent in 2015 to *** percent in 2016, and subsequently declined to *** percent in 2017; the margin was *** percent in interim 2017 and *** percent in interim 2018. Net income declined annually and substantially from $*** in 2015 to $*** in 2016 and $*** in 2017; it was $*** in interim 2017 and was *** in interim 2018.[170] Capital expenditures increased annually from 2015 to 2017, and were higher in interim 2018 than in interim 2017.[171]

As discussed above, we find that the subject imports of other CISP fittings significantly undersold the domestic like product and had significant price-depressing effects. From 2015 to 2016, low-priced subject imports of other CISP fittings gained market share at the expense of the domestic product. The market share gain during this period occurred while domestic prices continued to decline despite an increase in demand. From 2016 to 2017 and into interim 2018, during a period of slowing demand but increasing costs, domestic producers continued to lower their prices to compete with the low prices of subject imports, which enabled them to regain some of the market share that they had lost from 2015 to 2016. The domestic industry's financial performance deteriorated, with precipitous declines from 2016 to 2017 and into interim 2018 as it further lowered its prices despite market conditions.

We have also considered the role of other factors so as not to attribute injury from other factors to the subject imports. As stated, apparent U.S. consumption for other CISP fittings increased overall from 2015 to 2017, so the declines in the domestic industry's condition during that period cannot be explained by declines in consumption.[172] Nonsubject imports had only a minimal and consistently declining presence in the U.S. market, and thus

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[167] Supplemental Memo at Table SUPP-2b. Productivity, in short tons per thousand hours, increased slightly from *** in 2015 to *** in 2016, and declined to *** in 2016; it was *** in interim 2017 and *** in interim 2018. *Id*.

[168] Supplemental Memo at Table SUPP-2b. Unit labor costs per short ton increased from $*** in 2015 to $*** in 2016, and $*** in 2017; they were $*** in interim 2017 and $*** in interim 2018. *Id*.

[169] Supplemental Memo at Table SUPP-2b.

[170] Supplemental Memo at Table SUPP-2b.

[171] Capital expenses were $*** in 2015, $*** in 2016, $*** in 2017, $*** in interim 2017, and $*** in interim 2018. Supplemental Memo at Table SUPP-2b.

[172] Supplemental Memo at Table SUPP-2b.

cannot explain the market share shifts between the domestic product and subject imports.[173] [174]

We therefore find that imports of other CISP fittings from China had a significant adverse impact on the domestic industry.

D. No Critical Circumstances With Respect to Other CISP Fittings Imports from China

1. Legal Standards

In its final antidumping duty determinations concerning CISP fittings from China, Commerce found that critical circumstances exist with respect to certain subject producers/exporters.[175] Because we have determined that the domestic industry producing other CISP fittings is materially injured by reason of subject imports from China, we must further determine "whether the imports subject to the affirmative {Commerce critical circumstances} determination ... are likely to undermine seriously the remedial effect of the antidumping {and/or countervailing duty} order{s} to be issued."[176] The SAA indicates that the Commission is to determine "whether, by massively increasing imports prior to the effective date of relief, the importers have seriously undermined the remedial effect of the order" and specifically "whether the surge in imports prior to the suspension of liquidation, rather than the failure to provide retroactive relief, is likely to seriously undermine the remedial effect of the order."[177] The legislative history for the critical circumstances provision indicates that the provision was designed "to deter exporters whose merchandise is subject to an investigation from circumventing the intent of the law by increasing their exports to the United States during the period between initiation of an investigation and a preliminary determination by

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[173] Supplemental Memo at Table SUPP-2b.

[174] We are not persuaded by Zurn's claim that *** explain the financial state of the domestic industry. Zurn's Prehearing Brief at 24. While we recognize that the domestic industry experienced increases in COGS, SG&A expenses, and capital expenses over the POI, these do not explain the price reductions the domestic industry was compelled to make due to low-priced subject imports. Furthermore, the litigation expenses and capital expenses do not have an impact on the operating income of the domestic industry. CR/PR at VI-13. Moreover, ***. Supplemental Memo at Table SUPP-2b.

Respondents also claim that *** placed its customers on allocation and declined to work with certain distributors due to technical and business reasons. Zurn's Prehearing Brief at 24; NewAge's Posthearing Brief at 15; Respondents' Joint Posthearing Brief at 6. However, as mentioned above, the majority of responding firms (nine of 14 importers and 20 of 25 purchasers) reported experiencing no supply constraints. CR at II-8, PR at II-5.

[175] *Cast Iron Soil Pipe Fittings from the People's Republic of China: Final Affirmative Determination of Sales at Less Than Fair Value and Final Determination of Critical Circumstances, in Part*, 83 Fed. Reg. 33205 (July 17, 2018).

[176] 19 U.S.C. §§ 1671d(b)(4)(A)(ii), 1673d(b)(4)(A)(ii).

[177] SAA at 877.

{Commerce}."[178] An affirmative critical circumstances determination by the Commission, in conjunction with an affirmative determination of material injury by reason of subject imports, would normally result in the retroactive imposition of duties for those imports subject to the affirmative Commerce critical circumstances determination for a period 90 days prior to the suspension of liquidation.[179]

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

> (I) the timing and the volume of the imports,
>
> (II) a rapid increase in inventories of the imports, and
>
> (III) any other circumstances indicating that the remedial effect of the {order} will be seriously undermined.[180]

In considering the timing and volume of subject imports, the Commission's practice is to consider import quantities prior to the filing of the petition with those subsequent to the filing of the petition using monthly statistics on the record regarding those firms for which Commerce has made an affirmative critical circumstances determination.[181]

2. Analysis[182]

We first consider the appropriate period for comparison of pre-petition and post-petition levels of subject imports. The Commission is not required to analyze the same period that Commerce examined.[183] Unless the industry under investigation involves seasonality or the Commission decides that circumstances warrant otherwise,[184] the Commission generally compares six months of data gathered from the periods immediately preceding and following the petitions' filing, with the earlier period including the month in which the petitions were

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

[179] 19 U.S.C. §§ 1673d(c)(4)(A), 1671d(e)(2)(A).

[180] 19 U.S.C. §§ 1671d(b)(4)(A)(ii), 1673d(b)(4)(A)(ii).

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

[182] No party made any argument with respect to the existence of critical circumstances.

[183] *Certain Polyester Staple Fiber from China*, Inv. No. 731-TA-1104 (Final), USITC Pub. 3922 at 35 (June 2007); *Steel Concrete Reinforcing Bars from Turkey*, Inv. No. 731-TA-745 (Final), USITC Pub. 3034 at 34 (Apr. 1997).

[184] *See 1,1,1,2--Tetrafluoroethane (R-134a) from China*, Inv. No. 731-TA-1313 (Final), USITC Pub. 4679 at 25 (April 2017) (seasonal product).

filed.[185] We have determined to compare the volume of subject imports for the six-month period prior to and after the filing of the petition.[186]

The monthly data for subject import volume from China for the six-month periods before and after the filing of the petition show an increase of *** short tons, or *** percent, from *** short tons in the pre-petition period to *** short tons in the post-petition period.[187] U.S. importers' end-of-period inventories of imports from China subject to Commerce's final critical circumstances determination were *** short tons in 2016 and *** short tons in 2017, a decrease of *** short tons, and were *** short tons lower in interim 2018 than in interim 2017.[188] Although subject import volume levels increased in the post-petition period, U.S. importers' inventories declined and were at relatively low levels. Under these circumstances, and in the context of the *** short ton other CISP fittings market in 2017, we do not find that the increased import volume was sufficiently large to undermine seriously the remedial effect of the order.

Taken as a whole, the data on the record do not show a sudden and significant increase in imports or inventories subject to Commerce's affirmative critical circumstances determination subsequent to the filing of the petition that would seriously undermine the remedial effect of the antidumping duty order to be issued on other CISP fittings from China. Consequently, we make a negative critical circumstances determination with regard to subject imports in the antidumping duty investigation of other CISP fittings from China.

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[185] The Commission has relied on a shorter comparison period when Commerce's preliminary determination applicable to the country at issue fell within the six-month post-petition period the Commission typically considers. *See Biodiesel from Argentina and Indonesia*, Inv. Nos. 731-TA-1347-1348 (Final), USITC Pub. 4775 at 6-7 (April 2018); *Softwood Lumber Products from Canada,* Inv. Nos. 701-TA-566 and 731-TA-1342 (Final), USITC Pub. 4749 at 44-45 (Dec. 2017); *Certain Hot-Rolled Steel Flat Products from Australia, Brazil, Japan, Korea, the Netherlands, Turkey, and the United Kingdom,* Inv. Nos. 701-TA-545-547, 731-TA-1291-1297 (Final), USITC Pub. 4638 at 49-50 (Sept. 2016); *Certain Corrosion-Resistant Steel Products from China, India, Italy, Korea, and Taiwan,* Inv. Nos. 701-TA-534-537 and 731-TA-1274-1278 (Final), USITC Pub. 4620 at 35-36 (July 2016); *Polyethylene Terephthalate (PET) Resin from Canada, China, India, and Oman,* Inv. Nos. 701-TA-531-532 and 731-TA-1270-1273 (Final), USITC Pub. 4604 at 31-32 (Apr. 2016); *Carbon and Certain Steel Wire Rod from China*, Inv. Nos. 701-TA-512, 731-TA-1248 (Final), USITC Pub. 4509 at 25-26 (Jan. 2015).

[186] The six-month periods considered are January 2017 through June 2017 and July 2017 through December 2017. CR/PR at table IV-6. Commerce made its preliminary countervailing duty determination on CISP fittings from China on December 19, 2017. *Cast Iron Soil Pipe Fittings from the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination and Alignment of Final Determination with Final Antidumping Duty Determination*, 82 Fed. Reg. 60178 (December 19, 2017). Thus, Commerce's preliminary determination applicable to subject imports from China fell within the six-month post-petition period the Commission typically considers. However, because the determination was made well-into the sixth month after filing of the petition, we find that it would still be appropriate to use a six-month post-petition period for our critical circumstances analysis. Nonetheless, our negative critical circumstances determination would not change if we considered five-month periods.

[187] CR/PR at Table IV-6.

[188] CR at IV-16, PR at I-8.

E. No Material Injury by Reason of Imports of Drain Bodies[189]

1. Volume of Subject Imports

As with other CISP fittings, China was the only significant non-domestic source of drain bodies in the U.S. market.[190] The absolute volume of subject imports of drain bodies declined overall from 2015 to 2017. The volume increased somewhat from *** short tons in 2015 to *** short tons in 2016 and declined to *** short tons in 2017; the volume of subject imports was *** short tons in interim 2017 and *** short tons in interim 2018.[191] Subject imports' market share also declined overall from 2015 to 2017, from *** percent in 2015 to *** percent in 2016 and *** percent in 2017; it was *** percent in interim 2017 and *** percent in interim 2018.[192]

Accordingly, we find that the volume of subject imports of drain bodies from China was significant in both absolute terms and relative to U.S. consumption. However, we also find that domestically produced drain bodies gained market share at the expense of subject imports during the POI.[193]

2. Price Effects of Subject Imports

Due to the late timing of when the drain body issue was raised, the record contains no pricing product information for drain bodies as all of the pricing comparisons pertain to other CISP fittings.[194] Based on AUVs, subject imports of drain bodies were valued substantially higher than domestically produced drain bodies throughout the POI.[195] The record shows that

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[189] 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). During the July 2016 to June 2017 period, imports from China of drain bodies accounted for 100.0 percent of total imports of drain bodies. First Revision Memo at Table IV-7. Because subject imports from China exceed the pertinent statutory negligibility threshold, we find that imports from China are not negligible.

[190] *See* CR/PR at Table C-2a; First Revision Memo at Table IV-7.

[191] CR/PR at Table C-2a.

[192] CR/PR at Table C-2a.

[193] The domestic industry's U.S. market share increased from *** percent in 2015 to *** percent in 2016 and *** percent in 2017, for an overall gain of *** percentage points; the domestic industry's market share was *** percent in interim 2017 and *** percent in interim 2018. CR/PR at Table C-2a.

[194] CR at V-16 to 17, PR at V-9.

[195] While product mix issues may arise for certain products when considering AUVs for price comparisons, drain bodies appear to be a sufficiently narrow product category such that AUVs have some probative value for our price analysis. The AUV of subject imports was $*** per short ton in 2015, $*** per short ton in 2016, $*** per short ton in 2017, $*** per short ton in interim 2017, and $*** per short ton in interim 2018. The domestic industry's net sales AUV for drain bodies was $*** per short (Continued...)

the net sales AUV for domestically produced drain bodies declined by *** percent from 2015 to 2016 before increasing by *** percent in 2017, for an overall decline of *** percent during the full years of the POI; the domestic industry's AUV in interim 2018 was *** percent higher than that in interim 2017.[196] Conversely, the AUV for subject imports of drain bodies increased by *** percent from 2015 to 2016 before declining by *** percent in 2017, for an overall increase of *** percent during the full years of the POI; subject imports' AUV in interim 2018 was *** percent lower than interim 2017.[197] Consequently, there does not appear to be any correlation in the AUV movements of the subject imports and the domestic industry. The record also shows that the domestic industry's COGS to net sales ratio declined by *** percentage points from 2015 to 2016 before rising by *** percentage points in 2017, for an overall decline of *** percentage points during that period; the COGS to net sales ratio in interim 2018 was *** percentage points higher than in interim 2017.[198]

Based on available information, we find no indication that subject imports were priced below domestically produced drain bodies; in fact, the evidence demonstrates that the imports were valued substantially higher than the domestic product throughout the POI. We also find no price effects with respect to subject imports of drain bodies. Over the full years of the POI, the AUV of subject imports increased as the net sales AUV for the domestic industry declined, and these trends reversed in the interim period. Thus, there is no indication that higher-valued subject imports depressed prices for the domestic like product. The record also shows that the domestic industry's COGS to net sales ratio was lower in 2017 than in 2015, indicating that the industry did not experience a cost-price squeeze. While the ratio increased between 2016 and 2017, apparent U.S. consumption declined, and the record contains no indication that the industry could realistically expect to institute price increases over that period. Consequently, we do not find that the subject imports suppressed the domestic industry's prices. For these reasons, we do not find that subject imports of drain bodies had significant price effects on domestically produced drain bodies.

3. Impact of Subject Imports

The domestic industry's production and shipments increased during the POI. Production of drain bodies increased from *** short tons in 2015 to *** short tons in 2016 and declined to *** short tons in 2017; production was *** short tons in interim 2017 and *** short tons in interim 2017. The domestic industry's capacity declined from *** short tons in 2015 to *** short tons in 2016 and *** short tons in 2017; capacity was *** short tons in interim 2017 and *** short tons in interim 2018.[199] Capacity utilization, which was low throughout the POI,

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(…Continued)
ton in 2015, $*** per short ton in 2016, $*** per short ton in 2017, $*** per short ton in interim 2017, and $*** per short ton in interim 2018. CR/PR at Table C-2a.

[196] CR/PR at Table C-2a.

[197] CR/PR at Table C-2a.

[198] CR/PR at Table C-2a. The COGS to net sales ratio was *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in interim 2017, and *** percent in interim 2018. *Id*.

[199] CR/PR at Table C-2a.

increased from *** percent in 2015 to *** percent in 2016 and *** percent in 2017; capacity utilization was *** percent in interim 2017 compared with *** percent in interim 2018.[200] As stated above, the domestic industry's market share increased annually from 2015 to 2017, from *** percent of apparent U.S. consumption in 2015 to *** percent in 2016 and *** percent in 2017; its market share was *** percent in interim 2017 and *** percent in interim 2018.[201] The domestic industry's end-of-period inventories declined from *** short tons in 2015 to *** short tons in 2016 and *** short tons in 2017; the end-of-period inventories were *** short tons in interim 2017 and *** short tons in interim 2018.[202]

The number of production and related workers ("PRWs"), hours worked per PRW, wages paid, and hourly wages were mixed during the POI.[203] Productivity increased somewhat overall from 2015 to 2017 and was higher in interim 2018 than in interim 2017.[204] Unit labor costs increased overall from 2015 to 2017, but were lower in interim 2018 than interim 2017.[205]

The domestic industry's net sales revenue increased from $*** in 2015 to $*** in 2016 and declined to $*** in 2017; the net sales revenue was $*** in interim 2017 and $*** in interim 2018. The industry's total COGS increased from $*** in 2015 to $*** in 2016 and 2017; COGS were relatively level at $*** in interim 2017 and $*** in interim 2018. Gross profit almost doubled from $*** in 2015 to $*** in 2016 before declining to $*** in 2017; gross profit was $*** in interim 2017 and $*** in interim 2018. Operating income also increased from $*** in 2015 to $*** in 2016, and subsequently declined to $*** in 2017; operating income was $*** in interim 2017 and $*** in interim 2018. Similarly, the industry's operating income margin increased from *** percent in 2015 to *** percent in 2016, and subsequently declined to *** percent in 2017; the margin was *** percent in interim 2017 and *** percent in interim 2018. Net income increased from $*** in 2015 to $*** in 2016 before declining to $*** in 2017; it was $*** in interim 2017 and $*** in interim 2018.[206]

With overall falling demand during the POI, the domestic drain body industry's production and shipments increased overall, and it gained market share at the expense of subject imports. The industry's profitability also improved over the 2015 to 2017 period. As discussed above, we found that subject imports of drain bodies were valued substantially

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[200] CR/PR at Table C-2a.

[201] CR/PR at Table C-2a.

[202] CR/PR at Table C-2a.

[203] CR/PR at Table C-2a. Number of PRWs remained level throughout the POI at ***, and it was *** during interim 2018. Total hours worked increased slightly from *** hours to *** hours in 2016 and 2017; total hours worked was *** in interim 2017 and *** in interim 2018. Wages paid increased from $*** in 2015 to $*** in 2016 and $*** in 2017; wages paid were $*** in interim 2017 and $*** in interim 2018. Hourly wages fluctuated narrowly from $*** in 2015 to $*** in 2016 and $*** in 2017; hourly wages were $*** in interim 2017 and $*** in interim 2018. *Id*.

[204] CR/PR at Table C-2a. Productivity, in short tons per thousand hours, increased slightly from *** in 2015 to *** in 2016, and declined to *** in 2016; it was *** in interim 2017 and *** in interim 2018. *Id*.

[205] CR/PR at Table C-2a. Unit labor costs per short ton increased from $*** in 2015 to $*** in 2016, and then to $*** in 2017; they were $*** in interim 2017 and $*** in interim 2018. *Id*.

[206] CR/PR at Table C-2a.

higher than domestically produced drain bodies throughout the POI. Consequently, we found that there was no significant underselling or price effects by subject imports. Given the domestic industry's overall gain in market share during the POI, the lack of evidence of underselling by the subject imports, and the absence of price effects by the subject imports, we do not find that there is a correlation between subject imports of drain bodies and the condition of the domestic industry.[207]

In view of the foregoing, we find that subject imports have not had a significant impact on the domestic industry producing drain bodies.

F. No Threat of Material Injury by Reason of Subject Drain Body Imports

1. Legal Standard

Section 771(7)(F) of the Tariff Act directs the Commission to determine whether the U.S. industry is threatened with material injury by reason of the subject imports by analyzing 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."[208] The Commission may not make such a determination "on the basis of mere conjecture or supposition," and considers the threat factors "as a whole" in making its determination whether dumped or subsidized imports are imminent and whether material injury by reason of subject imports would occur unless an order is issued.[209] In making our determination, we consider all statutory threat factors that are relevant to these investigations.[210]

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[207] We recognize that Zurn was eligible for Trade Adjustment Assistance ("TAA") as a result of moving certain iron casting production to China. Petitioners' Posthearing Brief, Response to Commission Questions at 1. However, there is no evidence to demonstrate that the TAA eligibility was with respect to drain body production as the certification was with reference to "iron casting products for water management applications," and so it may pertain to out-of-scope iron casting products. Petitioners' Posthearing Brief, Exh. 5. Further, the Department of Labor's conclusion under the TAA standards, based on the record before it, cannot substitute for our analysis, based on our record and the applicable law, which show no causal nexus between the domestic industry's condition and the volume of subject imports of drain bodies from China.

[208] 19 U.S.C. § 1677(7)(F)(ii).

[209] 19 U.S.C. § 1677(7)(F)(ii).

[210] These factors are as follows:

(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,

(Continued...)

2. Analysis

a) Likely Volume

In section IV.E.1. above, while we found the absolute volume and market share of subject imports to be significant during the POI, we did not find a significant increase in subject import volume during the POI. Indeed, the absolute volume of subject imports of drain bodies fluctuated during the POI, and domestically produced drain bodies gained market share at the expense of subject imports during the POI.[211] While the absolute volume of subject imports in interim 2018 was higher than interim 2017, importers' inventories were lower in interim 2018 than in interim 2017.[212] [213] As stated above, the record does not indicate that there has been a significant rate of increase in the volume or market penetration of imports of the subject merchandise during the POI. Although the volume of subject imports was somewhat larger in interim 2018 as compared to interim 2017, these data only cover a three-month period. Additionally, the record shows that the subject import volume fluctuated during the full years of the POI. Thus, we do not find this apparent increase in the interim period to be indicative of

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(…Continued)

(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,

(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,

…

(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).

19 U.S.C. § 1677(7)(F)(i). To organize our analysis, we discuss the applicable statutory threat factors using the same volume/price/impact framework that applies to our material injury analysis. Statutory threat factors (I), (II), (III), (V), and (VI) are discussed in the analysis of subject import volume. Statutory threat factor (IV) is discussed in the analysis of subject import price effects. Statutory factors (VIII) and (IX) are discussed in the analysis of impact. Statutory factor (VII) concerning agricultural products is inapplicable to this investigation.

[211] CR/PR at Table C-2a.

[212] CR/PR at Table C-2a. End-of-period inventories were *** short tons in interim 2017 and *** short tons in interim 2018. *Id*.

[213] As discussed above, due to the time that the drain bodies issue was raised, information pertaining to the subject drain body industry is not available. Therefore, we have no basis to make any observations pertaining to the foreign industry.

a significant change in subject import volume or trends. Moreover, even if this quarterly volume were sustained throughout the year, subject imports would reach 3,284 short tons, which would still be below the subject import volume at the beginning of the POI. We consequently find that there is not a likelihood of substantially increased imports in the imminent future.

b) Likely Price Effects

In section IV.E.2. above, we found that subject imports of drain bodies were consistently valued substantially higher than domestically produced drain bodies. Although the gap between AUVs narrowed somewhat between interim periods, the difference remained large, and there is no indication that subject imports had any appreciable effects on prices for the domestic like product in interim 2018.[214] Given the substantially higher values of the subject imports and opposite movements in the AUVs of the subject imports and domestic product, we did not find that the subject imports had depressed or suppressed the domestic industry's prices. There is nothing on the record to indicate that this is likely to change in the imminent future. We consequently find that imports of drain bodies from China are not likely to enter at prices that would be likely to have a significant depressing or suppressing effect on domestic prices or that would be likely to increase demand for further subject imports.

c) Likely Impact

We found in section IV.E.3. above that during the POI, the domestic drain body industry increased output and shipments and gained market share at the expense of subject imports. We further found that its financial performance was not affected by subject imports of drain bodies, as there was no apparent correlation between subject imports and the domestic industry's performance.[215] In light of our findings that there is not likely to be a significant increase in subject import volume during the imminent future and that subject imports will not likely have significant price effects, the record does not indicate a probability that material injury by reason of subject imports is imminent. Furthermore, even if the volume of subject imports increases in the imminent future, there is no indication that the increase would be due to price because subject imports are valued substantially higher than the domestic product.

[214] We note that in interim 2017, the AUV for subject imports of drain bodies was *** percent higher than that for the domestic product, and in interim 2018, the difference remained large, at *** percent. CR/PR at Table C-2a.

[215] The domestic industry's profitability started to decline in 2017, as the volume of subject imports also declined and the domestic industry gained market share; the industry's performance continued to decline into interim 2018, as the volume of subject imports increased but at a significantly higher AUV. Despite the increase in the volume of subject imports in interim 2018, the domestic industry's AUV actually increased. *See* CR/PR at Table C-2a.

V. Conclusion

For the reasons stated above, we determine that an industry in the United States is materially injured by reason of imports of other CISP fittings from China that are sold in the United States at LTFV and subsidized by the government of China. We also determine that an industry in the United States is not materially injured or threatened with material injury by reason of imports of drain bodies from China that are sold in the United States at LTFV and subsidized by the government of China.

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 the Cast Iron Soil Pipe Institute ("CISPI"), Mundelein, Illinois, on July 13, 2017, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized and less-than-fair-value ("LTFV") imports of cast iron soil pipe fittings ("CISP fittings")[1] from China. The following tabulation provides information relating to the background of these investigations.[2] [3]

Effective date	Action
July 13, 2017	Petitions filed with Commerce and the Commission; institution of the Commission's investigations (82 FR 33515, July 20, 2017)
August 2, 2017	Commerce's notices of initiation of countervailing duty investigation (82 FR 37048, August 8, 2017) and antidumping duty investigation (82 FR 37053, August 8, 2017)
August 28, 2017	Commission's preliminary determination (82 FR 42113, September 6, 2017)
December 19, 2017; February 20, 2018	Commerce's preliminary countervailing duty determination (82 FR 60178, December 19, 2017) and preliminary antidumping duty determination (83 FR 7145, February 20, 2018); scheduling of final phase of Commission investigations (83 FR 12024, March 19, 2018)
June 26, 2018	Commission's hearing
July 11, 2018	Commerce's final affirmative countervailing duty determination (83 FR 32075)
July 17, 2018	Commerce's final affirmative sales at less than fair value determination and critical circumstances, in part (83 FR 33205)
August 3, 2018	Commission's vote
August 22, 2018	Commission's views

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

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

[3] A list of witnesses appearing at the hearing is presented in appendix B of this report.

STATUTORY CRITERIA AND ORGANIZATION OF THE REPORT

Statutory criteria

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

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

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

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

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

effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and (V) in {an antidumping investigation}, the magnitude of the margin of dumping.

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

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

Organization of report

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

MARKET SUMMARY

CISP fittings are generally used in sanitary and storm drain, waste, and vent pipe systems ("DWV systems") of buildings to connect lengths of cast iron soil pipe. They include various designs and sizes, including bends, tees, wyes, traps, drains, and other common or special fittings. CISP fittings are non-malleable and can be classified as hub and spigot or hubless/no-hub. The petition identified Charlotte Pipe & Foundry ("Charlotte Pipe" or "Charlotte") and McWane, Inc. ("McWane") [6] as the only two known U.S. producers. Since January 2015, at least two additional firms have been identified as U.S. producers of CISP fittings:[7] ***[8] and Zurn Industries ("Zurn").[9] China is the only major source of imported CISP fittings to the United States. ***, [10] *** are leading producer/exporters of CISP fittings in China. The leading U.S. importer of CISP fittings from China is *** and the leading U.S. importer of CISP fittings excluding drain bodies is ***. U.S. imports from nonsubject sources in 2017

[5] Amended by PL 114-27 (as signed, June 29, 2015), Trade Preferences Extension Act of 2015.
[6] AB&I and Tyler Pipe are wholly owned by McWane, Inc.
[7] ***.
[8] ***.
[9] ***.
[10] ***.

accounted for less than two percent of all imports. U.S. purchasers of CISP fittings are mainly distributors of commercial plumbing supplies that in turn sell to mechanical and plumbing contractors. The leading purchaser of CISP fittings by both volume and value is ***. It was the petitioner's largest customer ***.

Apparent U.S. consumption of CISP fittings totaled approximately 52,570 short tons ($146.6 million) in 2017. Currently, only Charlotte and McWane are known to produce CISP fittings in the United States, though other domestic foundries may produce in-scope products.[11] U.S. producers' U.S. shipments of CISP fittings totaled *** short tons (***) in 2017, and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from China totaled *** short tons (***) in 2017 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from nonsubject sources totaled *** short tons (***) in 2017 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value.

Since 2012, within the cast iron soil pipe and fittings industry, there have been two Federal Trade Commission ("FTC") investigations[12] and one class action antitrust suit by purchasers of CISP fittings.[13] [14] The first investigation regarded allegations of price-fixing between Charlotte Pipe and McWane, Inc.[15] The FTC initiated the second investigation on April 2, 2013 on products that include the domestic like product and was in relation to allegations of anticompetitive behavior by Charlotte regarding its acquisition of Star Pipe Products, Inc. resulting in a consent decree by Charlotte.[16] [17] In July 2016, purchasers of CISP fittings initiated

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[11] ***.

[12] Petitioner's posthearing brief, p. 9.

[13] Petitioner's posthearing brief, pp. 10-11.

[14] In addition, in January 2012, FTC filed an administrative complaint against, McWane, Star Pipe Products, Ltd., and Sigma Corporation charging them for illegally conspiring to set and maintain prices for ductile iron pipe fittings (a product not within the scope of the current investigations) and that McWane illegally maintained its monopoly power in the U.S. market for domestic ductile iron pipe fittings through "an exclusive dealing policy." Star Pipe Products, Ltd. and Sigma Corporation settled the charges prior to litigation in February 2012 and May 2012, respectively. In May 2013, the administrative law judge dismissed the price conspiracy charges with respect to McWane but found that it violated antitrust law when it excluded competitors from the market for domestically made ductile iron pipe fittings. The circuit court upheld the FTC's order in April 2015. "McWane, Inc., and Star Pipe Products, Ltd., In the Matter of," *Federal Trade Commission*, https://www.ftc.gov/enforcement/cases-proceedings/101-0080b/mcwane-inc-star-pipe-products-ltd-matter, retrieved on June 1, 2018. See also, Petitioner's posthearing brief, Responses to Commission Questions, pp. 9-12.

[15] The investigation closed without making any findings. Petitioner's posthearing brief, p. 9, Exh. 8.

[16] Petitioner's postconference brief, pp. 5-6. See also, Letter from Donald S. Clark, Secretary, Federal Trade Commission to Mark W. Merritt, Esq., Counsel, Charlotte Pipe and Foundry Company, Re: Charlotte Pipe and Foundry Company, File No. 111 0033, April 1, 2013; and Letter from Donald S. Clark, Secretary, Federal Trade Commission to Joseph Ostoyich, Esq., Counsel, McWane, Inc., Re: McWane, Inc., File No. 111 0033, April 1, 2013.

[17] In May 2013, the FTC issued an order prohibiting Charlotte from enforcing any provisions of the "Confidentiality and Non-competition Agreement" made during the acquisition, ensuring that all prior

(*continued*...)

a class action antitrust suit against Charlotte and McWane alleging price fixing.[18] In October 2016, the case ended with a $30 million settlement.[19] This settlement is reflected in the financial data reported by the petitioner.

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 three firms[20] that accounted for 100 percent of U.S. production of CISP fittings excluding certain drain fittings and an unknown percent of U.S. production of all CISP fittings during 2017.[21] U.S. imports are based on official import statistics and questionnaire responses of fifteen firms that accounted for over 100 percent of CISP fitting imports from China and from all sources. Foreign industry data are based on questionnaire responses of twelve firms in China whose exports accounted for *** percent of U.S. imports of CISP fittings from China in 2017.

PREVIOUS AND RELATED INVESTIGATIONS

CISP fittings have been the subject of one prior import relief investigation in the United States with several investigations covering similar merchandise. Table I-1 presents data on previous and related investigations. Cast iron soil pipe, a related product, is also currently subject to antidumping and countervailing duty investigations.[22]

(…*continued*)
acquisitions of other CISP importers be disclosed and requiring notification on any future acquisitions in the industry. In the Matter of Charlotte Pipe and Foundry Company, a corporation, and Randolf Holding Company LLC: Decision and Order, Federal Trade Commission, Docket No. C-4403, p. 4. See also "Charlotte Pipe and Foundry Company, et al.," *Federal Trade Commission*, https://www.ftc.gov/enforcement/cases-proceedings/1110034/charlotte-pipe-foundry-company-et-al, retrieved on June 11, 2018; and respondents' postconference brief, exh. 1a.

[18] Respondents' postconference brief, exh. 1b. See also, "Cast Iron Soil Pipe and Fittings Antitrust Litigation," *Cohen Milstein*, https://www.cohenmilstein.com/case-study/cast-iron-soil-pipe-and-fittings-antitrust-litigation, retrieved June 11, 2018.

[19] Conference transcript, p. 12 (Levinson). See also Respondents postconference brief, exh. 1.

[20] At the request of USITC staff, McWane submitted a single U.S. producer questionnaire response on the behalf of AB&I and Tyler.

[21] The petitioner states that its members comprise 100 percent of the industry, however drain bodies that are considered in-scope drain fittings may be cast by many gray and ductile iron foundries. Furthermore, a domestic like product issue pertaining to drain bodies was raised late during the final phase of investigations on June 7, several months after the deadline for comments on the questionnaires. As such, staff had limited time to conduct comprehensive research on the drain industry; therefore, data pertaining to drain bodies is correspondingly limited. Letter Regarding Drains, EDIS Doc. No. 647214. Further discussion is explained in the domestic like product issues section of Part I and in Part III of this report.

[22] *Cast Iron Soil Pipe from China, Determinations*, 83 FR 12025, March 19, 2018.

Table I-1
CISP fittings: Previous and related investigations, 1972 to 2003

Product	Inv. No.	Year	Country	Original determination
Cast iron soil pipe fittings[1]	AA1921-100	1972	Poland	Negative
Malleable Cast Iron Pipe and Tube[2]	TA-201-26	1977	Global Safeguard	Negative
Cast iron pipe fittings[3]	701-TA-221	1984	Brazil	Negative
Cast iron pipe fittings[4]	701-TA-222	1984	India	Terminated
Malleable cast iron pipe fittings[5]	731-TA-278	1984	Brazil	Affirmative
Malleable cast iron pipe fittings[5]	731-TA-279	1984	Korea	Affirmative
Malleable cast iron pipe fittings[5]	731-TA-280	1984	Taiwan	Affirmative
Non-Malleable Cast Iron Pipe Fittings[6]	731-TA-281	1984	Taiwan	ITA Negative
Cast iron pipe fittings[7]	731-TA-347	1985	Japan	Affirmative
Cast iron pipe fittings[8]	731-TA-348	1985	Thailand	Affirmative
Non-malleable cast iron pipe fittings[9]	731-TA-990	2003	China	Affirmative
Malleable cast iron pipe fittings[10]	731-TA-1021	2003	China	Affirmative

[1] *Cast Iron Soil Pipe Fittings from Poland, Inv. No. AA1921-100*, USITC Publication 515, September 1972.
[2] *Import Injury Investigations Case Statistics (FY 1980-2008*), USITC, February 2010, p. 106.
[3] *Cast Iron Pipe Fittings from Brazil, Inv. No. 701-TA-221 (Final)*, USITC Publication 1681, April 1985.
[4] 50 FR 16173.
[5] *Cast Iron Pipe Fittings from Brazil, Korea and Taiwan, Inv. Nos. 731-TA-278-280 (Final)*, USITC Publication 1845, May 1985.
[6] *Import Injury Investigations Case Statistics (FY 1980-2008*), USITC, February 2010, p. 43.
[7] *Certain Malleable Cast Iron Pipe Fittings from Japan, Inv. No. 731-TA-347*, USITC Publication 1987, June 1987.
[8] *Certain Malleable Cast Iron Pipe Fittings from Thailand, Inv. No. 731-TA-348 (Final)*, USITC Publication 2004, August 1987.
[9] *Non-Malleable Cast Iron Pipe Fittings from China, Inv. No. 731-TA-990 (Final)*, USITC Publication 3586, April 2002.
[10] *Malleable Iron Pipe Fittings from China, Inv. 731-TA-1021 (Final)*, USITC Publication 3649, December 2003.

NATURE AND EXTENT OF SUBSIDIES AND SALES AT LTFV

Subsidies

On July 11, 2018, Commerce published a notice in the *Federal Register* of its final determination of countervailable subsidies for producers and exporters of CISP fittings from China.[23]

Commerce determined the following to be countervailable:[24]

- Policy loans to the cast iron soil pipe fittings industry
- Provision of ferrous scrap for less-than-adequate-renumeration ("LTAR")
- Provision of pig iron for LTAR
- Provision of electricity for LTAR
- Provision of metallurgical coke for LTAR
- Provision of iron ore for LTAR
- Other subsidies including grants and preferential tax benefits

Only July 11, 2018, Commerce published a notice in the *Federal Register* of its final affirmative determinations of countervailable subsidies for producers and exporters of CISP fittings from China. Table I-2 presents Commerce's findings of subsidization of CISP fittings from China. [25]

Table I-2
CISP fittings: Commerce's subsidy determination with respect to imports from China

Entity	Subsidy rate (*percent*)
Shanxi Xuanshi Industrial Group Co., Ltd	34.87
Wor-Biz International Trading Co., Ltd. (Anhui)	7.37
Shijiazhuang Chengmei Import & Export Co., Ltd	133.94
All others	23.28

Source: 83 FR 32075, July 11, 2018.

Sales at LTFV

On August 8, 2017, Commerce published a notice in the Federal Register of the initiation of its antidumping duty investigations on CISP fittings from China.[26] On July 17, 2018, Commerce published a notice in the Federal Register of its final affirmative determination of

[23] *Cast Iron Soil Pipe Fittings from the People's Republic of China: Final Affirmative Countervailing Duty Determination,* 83 FR 32075, July 11, 2018.

[24] Issues and Decision Memorandum for the Final Affirmative Determination of the Countervailing Duty Investigation of Cast Iron Soil Pipe Fittings from the People's Republic of China (July 5, 2018) at 6-9.

[25] *Cast Iron Soil Pipe Fittings from the People's Republic of China: Final Affirmative Countervailing Duty Determination,* 83 FR 32075, July 11, 2018.

[26] *Cast Iron Soil Pipe Fittings From the People's Republic of China: Initiation of Less-Than-Fair Value Investigation*, 82 FR 37048, August 8, 2017.

Table I-3
CISP fittings: Commerce's estimated weighted-average LTFV margins with respect to imports from China

Producer	Exporter	Estimated weighted-average dumping margin (*percent*)	Cash deposit rate (adjusted for subsidy offsets) (*percent*)
Shanxi Xuanshi Industrial Group Co., Ltd.	Shanxi Xuanshi Industrial Group Co., Ltd.	27.18	27.09
Guang Zhou Premier & Pinan Foundry Co., Ltd./Botou Chenyuan Foundry Co., Ltd./Wuhu Best Machines Co., Ltd.	Wor-Biz Trading Co., Ltd. (Anhui)	22.11	21.88
Shijiazhuang Asia Casting Co., Ltd.	Shijiazhuang Asia Casting Co., Ltd.	24.65	24.49
Qinshui Shunshida Casting Co., Ltd./Xinle Xinye Metal Products Co., Ltd.	Shanxi Zhongrui Tianyue Trading Co., Ltd.	24.65	24.49
Qinshui Shunshida Casting Co., Ltd./Xinle Rishuo Casting Factory/ Shijiazhuang Shunjinguangao Trade Co., Ltd./Xinle Tang Rong Fa Lan Pan Co., Ltd.	Dalian Lino F.T.Z. Co., Ltd.	24.65	24.49
Xinle City Zhile Pipeline Industry Co., Ltd./Qinshui Shunshida Casting Co., Ltd./Foshan City Deying Metal Products Co., Ltd.	Dinggin Hardware (Dalian) Co., Ltd.	24.65	24.49
Xinle Rishuo Casting Factory/Qinshui Shunshida Casting Co., Ltd.	Dalian Metal I/E Co., Ltd.	24.65	24.49
Qinshui County Xinwei Precision Co., Ltd.	Qinshui Shunshida Casting Co., Ltd.	24.65	24.49
Shanxi Guruiwei Casting Co., Ltd.	Richang Qiaoshan Trade Co., Ltd	24.65	24.49
Shijiazhuang Jingruisheng Metal Products Co., Ltd./Qinshui Shunshida Casting Co., Ltd./Xinle City Zhile Pipe Co., Ltd.	Hebei Metals & Engineering Products Trading Co., Ltd.	24.65	24.49
China-wide entity		360.39	360.30

Source: 83 FR 33205, July 17, 2018.

sales at less than fair value ("LTFV") with respect to imports from China.[27] Table I-3 presents Commerce's dumping margins with respect to imports of CISP fittings from China.

[27] *Cast Iron Soil Pipe Fittings From the People's Republic of China: Final Affirmative Determination of Sales at Less Than Fair Value and Final Determination of Critical Circumstances, in Part,* 83 FR 33205, July 17, 2018.

THE SUBJECT MERCHANDISE

COMMERCE'S SCOPE

Commerce has defined the revised scope of these investigations as follows:

The merchandise covered by this investigation is cast iron soil pipe fittings, finished and unfinished, regardless of industry or proprietary specifications, and regardless of size. Cast iron soil pipe fittings are nonmalleable iron castings of various designs and sizes, including, but not limited to, bends, tees, wyes, traps, drains, and other common or special fittings, with or without side inlets.

Cast iron soil pipe fittings are classified into two major types—hubless and hub and spigot. Hubless cast iron soil pipe fittings are manufactured without a hub, generally in compliance with Cast Iron Soil Pipe Institute (CISPI) specification 301 and/or American Society for Testing and Materials (ASTM) specification A888. Hub and spigot pipe fittings have hubs into which the spigot (plain end) of the pipe or fitting is inserted. Cast iron soil pipe fittings are generally distinguished from other types of nonmalleable cast iron fittings by the manner in which they are connected to cast iron soil pipe and other fittings.

The subject imports are normally classified in subheading 7307.11.0045 of the Harmonized Tariff Schedule of the United States (HTSUS): Cast fittings of nonmalleable cast iron for cast iron soil pipe. They may also be entered under HTSUS 7324.29.0000 and 7307.92.3010. The HTSUS subheading and specifications are provided for convenience and customs purposes only; the written description of the scope of this investigation is dispositive.[28]

Tariff treatment

Based on the scope set forth by the Department of Commerce, information available to the Commission indicates that the merchandise subject to these investigations is classifiable in subheading 7307.11.00 of the 2018 Harmonized Tariff Schedule ("HTS") (statistical reporting number 7307.11.0045). Imports classifiable in HTS 7307.11.00 are subject to a 4.8 percent ad valorem rate of duty when they are the product of normal trade relations (NTR) countries, including China.[29]

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[28] *Cast Iron Soil Pipe Fittings From the People's Republic of China: Final Affirmative Countervailing Duty Determination*, 83 FR 32077, July 11, 2018.

[29] 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

CISP fittings are iron castings used for connecting or plugging cast iron soil pipe, primarily in sanitary and storm drain piping, waste piping, and vent piping systems of buildings,[30] and are intended for gravity flow non-pressure applications.[31] The scope of these investigations includes non-malleable finished and unfinished CISP fittings, regardless of industry or proprietary specifications. CISP fittings are produced in various designs and sizes, consisting of bends, tees, wyes, traps, drains,[32] and other common or special fittings, with or without side inlets.[33] [34] Figure I-1 displays examples of subject cast iron soil pipe fitting products. Finished CISP fittings are coated, while unfinished CISP fittings are uncoated.[35] The coating is generally an asphaltic or black paint coating, but epoxy-coated CISP fittings are also available.[36] The coatings provide a smooth, glossy, hard but not brittle finish that is free of blisters and blemishes.[37]

[30] Petition, p. 4.

[31] CISPI Designation: 301-12, Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications, p. 1.

[32] Commerce clarified that the term "drain" in the scope language of these investigations means that *drain fittings* are covered by the scope of the investigation. Commerce did not define what products could be classified as drain fittings and stated that the petition does not clearly establish or define the universe of products that constitute a drain fitting. Based on examples provided by the petitioner, CISPI, and respondents, Plumbing and Drainage Institute ("PDI") and Zurn Industries, LLC ("Zurn"), Commerce stated that, at least in some instances, a drainage system and/or a drain assembly may include a cast iron "body" component that could be considered a "drain fitting." Whether such a fitting would be covered by the scope of the investigations would depend on a variety of factors, such as whether it is imported on its own or whether it undergoes substantial transformation by incorporation into a downstream product. Department of Commerce, Final Scope Memorandum, July 5, 2018, pp. 4, 8–9.

[33] A side inlet is an opening in a fitting that is typically perpendicular to the run (the direction of the flow) of the piping system. Email from ***, August 8, 2017.

[34] Petition, p. 4.

[35] Cast Iron Soil Pipe Institute, *Cast Iron Soil Pipe and Fittings Handbook*, 2006, p. 24.

[36] One importer, NewAge Casting, was known to sell epoxy-coated CISP fittings. Domestic producers only reported offering asphaltic or black paint coating to the U.S. market. Conference transcript, p. 51 (Simmons) and p. 99 (Singh).

[37] Cast Iron Soil Pipe Institute, *Cast Iron Soil Pipe and Fittings Handbook*, 2006, p. 24.

Figure I-1
Cast iron soil pipe fittings: Images of cast iron soil pipe fittings

			
Bend	Tee	Wye	Trap

Source: Lowe's Companies, Inc., https://www.lowes.com/pl/Cast-iron-fittings-Cast-iron-pipe-fittings-Pipe-fittings-Plumbing/4294822000, (Accessed August 4, 2017).

The material from which CISP fittings are made, cast iron, is an alloy primarily composed of iron, carbon, and silicon. The carbon content of cast iron is greater than 2 percent, while steel contains less than 2 percent carbon. In comparison with steel, the carbon and silicon content of cast iron gives it characteristics that are beneficial to casting, such as a lower melting temperature, more fluidity in a molten state, less reactivity with molding materials, and less change in volume during the conversion from a liquid to a solid.[38]

The scope of these investigations contains only non-malleable cast iron, which includes gray iron and ductile iron.[39] Gray iron contains interconnected graphite flakes which form during solidification of the iron[40] and ductile iron contains graphite that occurs as spheroids owing to the addition of a small amount of magnesium to the molten iron.[41] Malleable cast iron, which is not included in the scope of these investigations, contains graphite which occurs as irregularly shaped nodules of graphite as a result of heat treatment after the castings are formed.[42] The form in which the graphite occurs in the cast iron determines a range of properties in the cast iron. Malleable cast iron is not used to produce CISP fittings and does not meet CISPI or ASTM standards for CISP fittings.[43]

CISP fittings are classified as either hub and spigot fittings or hubless fittings.[44] Hub and spigot fittings have hubs into which the spigot (plain end) of the pipe or of another fitting is

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[38] Atlas Foundry Company, *Understanding Cast Irons*, http://www.atlasfdry.com/cast-irons.htm.

[39] CISPI Designation: 301-12, Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications, p. 4.

[40] Atlas Foundry Company, *Understanding Cast Irons - Gray Iron*, http://www.atlasfdry.com/gray-iron.htm.

[41] Atlas Foundry Company, *Understanding Cast Irons - Ductile Iron*, http://www.atlasfdry.com/ductile-iron.htm.

[42] Atlas Foundry Company, *Understanding Cast Irons - Malleable Iron*, http://www.atlasfdry.com/malleable-iron.htm.

[43] Conference transcript, p. 80 (Simmons).

[44] Petition, p. 4.

inserted. The joint is sealed with a compression gasket[45] or lead and oakum.[46] Hubless fittings are manufactured without a hub and are joined to pipe or another fitting using a hubless coupling that fits over the ends of the pipe and fittings and is tightened to seal the joint.[47] Hubless fittings are produced to CISPI 301 and ASTM A888 standards and hub and spigot fittings are produced to ASTM A74 standards. Hub and spigot fittings meet the CISPI 301 standard in all aspects other than product dimensions and shapes.[48]

Manufacturing processes

CISP fittings are manufactured by melting scrap iron, steel scrap,[49] and alloys in a cupola furnace[50] and casting[51] the metal into the desired shapes.[52] The first step in producing CISP fittings is to screen all scrap metal for radiation and to remove any contaminated materials. The scrap metal is then transferred to a storage area until it is time to melt the metal in the cupola furnace.

In a vertically erected, cylindrical cupola furnace, an initial layer of coke is ignited and then the scrap and alloys, coke, and limestone (which helps remove coke ash and other impurities) are loaded in alternating layers. Generally, the raw material inputs consist of eight to ten parts of metal by weight to one part of coke. Alloys added to the melt include ferrosilicon, and silicon carbide, among others, although alloys only account for 1 or 2 percent of the total volume of metal.[53] Tuyeres[54] inject combustion air or blast air heated up to 1,200 degrees Fahrenheit, and as the initial inputs are reduced, additional scrap, coke, and limestone are added to the furnace, resulting in a melting process that is usually continuous. The molten metal is discharged through a taphole near the bottom of the furnace and is either stored in a holding furnace or is taken directly to the casting area in refractory-lined ladles.

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[45] A compression gasket is made of rubber or another material and fits in between the inside of the hub and the outside of the spigot to create a seal. Cast Iron Soil Pipe Institute, *Cast Iron Soil Pipe and Fittings Handbook*, 2006, pp. 8, 46.

[46] Oakum is made from vegetable fiber, cotton, or hemp, and is packed into the joint between the hub and spigot. Molten lead is then poured into the joint and allowed to solidify and the joint is caulked with a caulking iron to seal the joint. Cast Iron Soil Pipe Institute, *Cast Iron Soil Pipe and Fittings Handbook*, 2006, p. 49.

[47] Petition, p. 4.

[48] Conference transcript, p. 81 (Simmons).

[49] ***.

[50] Electric melting equipment can be used as well, but the cupola furnace is the primary production method.

[51] Casting is the process of pouring molten metal into a mold and allowing it to solidify.

[52] Chinese manufacturers reportedly use a high percentage of pig iron in the production of CISP fittings owing to the lack of availability of scrap iron and steel scrap. Conference transcript, p. 58 (Simmons, Dowd).

[53] Conference transcript, pp. 82 and 90 (Simmons).

[54] Tuyeres are nozzles through which hot combustion air or blast air is directed into the furnace.

The molten metal from the cupola furnace is cast into the desired CISP fitting shape using either sand molds or permanent metal molds. When using sand molds, the molten iron is poured from a ladle into the sand molds which contain sand cores; both are produced on site. The molds provide the exterior shape of the fitting while the cores are used to produce the hollow space inside the fitting. The molten iron cools inside the mold until it solidifies, at which point the castings are removed from the molds and moved to a grate, where sand from the used molds and cores is collected and the fittings are allowed to further cool in the open air. Once fully cool, the castings are still covered with a small amount of sand that must be removed. The sand from the used molds and cores is then recycled.

When permanent metal molds are used, the interior of a reusable, two-piece, water- or air-cooled metal mold is coated with soot from burning acetylene to prevent the mold from chilling the molten iron and to prevent the casting from sticking to the mold. A ladle pours the molten iron into the molds which are water- or air-cooled and contain sand cores and the metal is allowed to solidify. The fittings are then removed from the mold to finish cooling and to be cleaned. The used molds are cleaned and reused.

Cleaning the fittings after they are removed from the molds involves removing not only sand, but imperfections such as gates, fins, and risers. This is accomplished using such methods as shot blast, tumbling machines, reamers, and grinding equipment. After the fittings are cleaned, they are inspected and tested before they receive any finishing they might need, including asphaltic, black paint, and epoxy finishes. Domestic producers generally finish CISP fittings by dipping them into a bath of asphaltic coating material. Alternatively, one domestic producer reported using "e-coating" to finish a small amount of its CISP production.[55] [56] One foreign producer reported using an epoxy finish which is applied to CISP fittings using a proprietary process.[57] The coatings provide a smooth, glossy, hard but not brittle finish that is free of blisters and blemishes. The epoxy coating reportedly also provides additional protection against corrosion.[58]

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[55] *Cast Iron Soil Pipe from China, Inv. Nos. 701-TA-597 and 731-TA-1407 (Preliminary)*, USITC Publication 4769, March 2018, p. I-10.

[56] ***.

[57] Conference transcript, p. 139 (Singh).

[58] ***. NewAge claims that its epoxy-coated CISP fittings can resist pH levels of 2 to 12, while traditionally coated CISP fittings can resist pH levels of only 4.3 and above. Conference transcript, pp. 99-100 (Singh). The Cast Iron Soil Pipe Institute claims that 95% of the soils in the United States are not corrosive to cast iron and that, in soils which may cause corrosion, a loose wrap of polyethylene film can be used to protect CISP fittings coated with asphaltic coating and black paint coating. Cast Iron Soil Pipe Institute, *Cast Iron Soil Pipe and Fittings Handbook*, 2006, p. 7.

DOMESTIC LIKE PRODUCT ISSUES

During the preliminary phase of the investigations, the petitioner proposed a single domestic like product consisting of all CISP fittings covered by the scope. As only CISP fittings can connect cast iron soil pipe to construct a complete plumbing system,[59] these fittings conformed to industry specifications and thus are CISP fittings. For the purposes of the preliminary phase of these investigations, respondents agreed with the domestic like product definition set forth in the petition.[60] No further issues with respect to domestic like product were raised in the preliminary phase of these investigations.[61]

During the final phase of these investigations and after the questionnaire commenting phase, respondents raised a separate domestic like product argument regarding drain bodies which may be considered drain fittings.[62] The petitioner notes that it was their express intent to include drain fittings within the investigations as it is noted in the scope language.[63] The petitioner defines drain fittings as cleanouts, closet flanges, carriers, and drain bodies.[64] Respondents contend that drain bodies cannot "function independently of the drain assembly as a whole nor as a CISP fitting that merely connects pipe."[65]

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 presented in table I-6 and discussed as follows.

Physical characteristics and uses

Drain bodies and CISP fittings other than drain bodies ("other CISP fittings") are both made of cast iron and serve specific purposes in a drain, waste, and vent system ("DWV system"). However, drain bodies and CISP fittings differ in four ways: (1) appearance, (2) coatings, (3) uses, and (4) purpose in a DWV system. First, unlike other CISP fittings, typical

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[59] ***.

[60] Conference transcript, p. 119 (Levinson).

[61] Conference transcript, p. 43 (Schagrin), p. 119 (Koenig, Levinson).

[62] *See* Letter Regarding Drains, EDIS Doc. No. 647214. See also Department of Commerce, Final Scope Memorandum, July 5, 2018. The deadline for comments on the draft questionnaires was January 8, 2018, but respondents did not notify the Commission about the domestic like product issue until June 22, 2018. Due to this late development, staff was only able to collect limited information pertaining to drain bodies, which partly explains the unknown size of the domestic CISP fittings industry and the limited coverage of U.S. importers and purchasers of in-scope drain bodies. Furthermore, ***.

[63] Hearing transcript, p. 13 (Cloutier), p. 18 (Drake), p. 40 (Leonard).

[64] Email communication with ***.

[65] Respondents Zurn and PDI's posthearing brief, p. 9.

drain bodies have only one side that connects to a pipe or fitting.[66] Respondents note that they are not classified as either hubless or hub and spigot as other CISP fittings are.[67] [68] Second, while other CISP fittings are coated in asphaltic material, black paint, or epoxy,[69] drain bodies may be painted differently according to the end use.[70] [71] Third, unlike other CISP fittings, drain bodies often require assembly with attachments (cast iron or non-cast iron) such as stainless steel strainers, grates, and bolts to be a drain fixture ready for use.[72] [73] The combinations to these assemblies are project-specific, resulting in over 17,000 SKUs for drains.[74] Fourth, within a DWV system, these drain fixtures' purpose is "to collect and carry away liquid or water, including wastewater," while other CISP fittings' purpose is to connect pipe and fittings.[75] [76] Drain bodies used in drains are "the beginning element of a drainage system."[77] Drain bodies may be used with other systems and are not limited to cast iron soil pipes or fittings.[78] ***.[79] Because drain bodies are composed of the same cast iron as other CISP fittings and are designed to attach to cast iron soil pipe or fittings, strength, corrosion resistance, fire resistance, and noise dampening qualities, as well as outlet dimensions, are the same for drain bodies and other CISP fittings.[80]

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[66] Petitioner's posthearing brief, p. 23. Respondents Zurn and PDI's posthearing brief, Responses to questions from the Commission, p. 4.

[67] Respondents Zurn and PDI's posthearing brief, p. 9.

[68] Petition, p. 4.

[69] Conference transcript, p. 51 (Simmons) and p. 99 (Singh).

[70] Drains are offered in dura-coated and acid-resistant epoxy coated finishes. Respondent Zurn's prehearing brief, Exh. 1.

[71] ***. Staff telephone interview with ***.

[72] Hearing transcript, p. 149 (Tharp). See also Respondent Zurn's prehearing brief, p. 11.

[73] "So the body is as important as the strainer, as a component." Hearing transcript, p. 171 (Wehr).

"A drain is the beginning element of a drainage system. One of its functions is to control the solids content of the water entering the drainage system. Therefore, a drain must have other components (e.g., a strainer)." Respondents Zurn and PDI's posthearing brief, Responses to Commissioner's Questions, p. 12.

The petitioner states that drain bodies can be used without additional parts as "an indirect waste receptor may be installed without additional components such as a grate or strainer assembly to convey condensate from equipment such as ice machines, compartment sinks, dishwashers, etc." Petitioner's posthearing brief, p. 25.

[74] Hearing transcript, p. 149 (Tharp), p. 171 (Wehr).

[75] Department of Commerce, Final Scope Memorandum, July 5, 2018, p. 2.

[76] "The fittings' only purpose is to connect pipe together to make a non-leaking system." Hearing transcript, pp. 162-163 (Wehr).

[77] Respondents Zurn and PDI's posthearing brief, Responses to Questions from the Commission, p. 12.

[78] Hearing transcript, p. 15 (Snarr).

[79] ***.

[80] Hearing transcript, pp. 40, 122 (Leonard). Petitioner's posthearing brief, p. 2.

Interchangeability

The petitioner states that drain bodies are not interchangeable with other CISP fittings, while noting that each of CISP fitting shape cannot be interchanged for another. [81] Drain bodies are connected at one end of a DWV system as part of a drain to collect fluid and direct it into a DWV system,[82] whereas other CISP fittings connect two or more cast iron soil pipes and fittings within that system.[83] Drain bodies are not present in the industry specifications CISPI 301 designation, ASTM A888, or ASTM A74 provided by the petition.[84]

Channels of distribution

Respondent party Tharp Plumbing Systems, Inc. stated that purchasers of drain bodies are separate from purchasers of CISP fittings and that they are invoiced separately.[85] Producers of drain bodies repeatedly to sell to different customers and to OEMs as intermediate products rather than as finished products.[86] For other CISP fittings, U.S. producers reported selling *** to distributors. The petitioner stated that "it is not uncommon for drain bodies to be shipped unassembled through distributors like all other {CISP fittings}," and that the channels of distribution overlap.[87] [88] For ***, a domestic producer of drain bodies, drain bodies were sold to "other end users" and no drain bodies were sold to distributors.[89] [90] ***.[91]

Customer and producer perceptions

The petitioner states that "producers and customers perceive drain bodies to be part of the same DWV product category as all other CISPF,"[92] adding that drain bodies and other CISP fittings are offered in the same catalogues by producers. They further mention that drain bodies, not finished drain fixtures, are shipped to the construction site with other CISP fittings

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[81] Petitioner's posthearing brief, p. 3.

[82] Drain bodies in drain assemblies may be used in other DWV systems not limited to cast iron soil pipes such as plastic systems. Hearing transcript, p. 139 (Wehr).

[83] "The fittings' only purpose is to connect pipe together to make a non-leaking system." Hearing transcript, p. 162 (Wehr).

[84] Petition, p. 4.

[85] Hearing transcript, pp. 148-149 (Tharp). See also Respondents Zurn and PDI's posthearing brief, Exh. 8.

[86] Hearing transcript, p. 123 (Miller) and p. 124 (Dowd).

[87] Petitioner's posthearing brief, p. 3.

[88] Hearing transcript, p. 40 (Leonard).

[89] Producer questionnaire responses and email communication with ***, and email communication with ***.

[90] ***. See also, hearing transcript, p. 123.

[91] ***.

[92] Petitioner's posthearing brief, p. 3.

during the construction of the "skeleton" of the building.[93] Respondents stated that producers perceive drain bodies to be different products since members of the U.S. drain body industry were excluded from the petition in numerous ways, including, but not limited to the petition's description of the industry, importers, import data, and HTS classifications.[94] Furthermore, the petition stated that AB&I, Charlotte, and Tyler were the only producers of the domestic like product,[95] though Atlas Foundry and Viking Pump are two known domestic manufacturers of drain bodies.[96] [97] ***.[98] Respondents note that members of CISPI are not members of the PDI which deals with drain bodies and vice versa.[99] Conversely, the membership of CISPI consists solely of AB&I, Charlotte Pipe, and Tyler.[100]

In its clarifications addressing of "drains" in the scope language, Commerce also noted that the petitioner (CISPI) identified in the petition its three members as the sole producers of the domestic like product, CISP fittings, and failed to report that Wade (a subsidiary of McWane),[101] Zurn (one of the largest known importers),[102] or members of the PDI are part of the domestic industry, or as importers of CISP fittings.[103] Furthermore, Commerce states that the petitioner relied upon HTSUS subheading 7307.11.0045 in the scope and to report import volumes of CISP fittings—not the HTSUS subheading used for certain entries of "drains" (i.e. 7326.90.8688).[104] As such, Commerce concludes that these are all indicators that the petitioner, producers of CISP fittings, did not intend to include "drains" that are not cast iron soil pipe fittings within the scope of the investigations.[105] Respondents argue that the same analysis applies to drain bodies.[106] Commerce further states that "{w}hether such a fitting would be covered by the scope of the investigations would depend on a variety of factors, such as whether it is imported on its own or whether it undergoes substantial transformation by incorporation into a downstream product."[107]

Additionally, of the 25 purchasers responding to questionnaires in these investigations, three reported purchasing CISP fittings from suppliers who publicly offer drain bodies and two

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[93] Petitioner's posthearing brief, p. 4.

[94] Respondents Zurn and PDI's posthearing brief, p. 2 and email communication with ***.

[95] Petition, p. 2.

[96] Hearing transcript, p. 163 (Wehr).

[97] ***

[98] ***.

[99] Respondent Zurn's prehearing brief, p. 12. See also Petitioner's posthearing brief, Responses to Commission Questions, p. 21.

[100] Petition, p. 2.

[101] ***. See also hearing transcript, p. 80 (Leonard), pp. 86-87, 104-108 (Schagrin).

[102] Hearing transcript, p. 229 (O'Brien).

[103] Department of Commerce, Final Scope Memorandum, July 5, 2018, pp. 4-10.

[104] Respondents Zurn and PDI's posthearing brief, p. 3.

[105] Department of Commerce, Final Scope Memorandum, July 5, 2018, p. 7.

[106] Respondents Zurn and PDI's posthearing brief, pp. 8-9.

[107] Department of Commerce, Final Scope Memorandum, July 5, 2018, pp. 8-9.

included purchases of drain bodies in their responses.[108] ***.[109] Moreover, drain bodies are not mentioned in the CISP&F handbook and only appear in a reference to floor drains and indirect waste receptors as a fixture.[110]

Manufacturing facilities and production employees

According to the petitioner, drain bodies and other CISP fittings are produced "on the same equipment, in the same facilities, through the same processes, and by the same employees."[111] Respondent Zurn notes that the production of other CISP fittings relies on the use of cores, making some of the suppliers of drain bodies unable to produce other CISP fittings.[112] Most foundries which produce drain bodies do not produce other CISP fittings and vice versa.[113] Foreign producers of other CISP fittings identified in importer questionnaire responses do not overlap with those of drain bodies.

Price

Quarterly pricing data were not collected for drain bodies since no drain body part was suggested as a pricing product by the petitioner or respondents in either the preliminary or final phases of these investigations. Respondent Zurn states that drain bodies are priced differently than other CISP fittings.[114] Other CISP fittings are priced as final goods while drain bodies are either priced as pieces of an assembly or have another different pricing structure.[115] [116] ***.[117] Table I-4 displays average unit values of U.S. producers' U.S. shipments of drain bodies and other CISP fittings.[118] Average unit values of U.S. producers' U.S. shipments of drain bodies ranged from *** to *** per short ton during 2015-17. Average unit values for other CISP fittings ranged from *** to *** per short ton during 2015-17. For drain bodies, average unit values decreased by *** percent in 2016 and later increased by *** percent in 2017 for a total decrease of *** percent between 2015 and 2017. For other CISP fittings, average unit values

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[108] Purchaser questionnaires, email communication with ***; email communication with ***; and email communication with ***.

[109] Petitioner's posthearing brief, Responses to Commission Questions, p. 30.

[110] In the CISP&F Handbook, the recommended size of roof drains, the connection caulking material, and trap recommendations for fixtures are discussed in relation to drain fixtures. CISP&F Handbook, pp. 32-37, p. 53, and p. 62.

[111] Petitioner's posthearing brief, p. 3.

[112] Respondent Zurn's prehearing brief, p. 12.

[113] *** also manufactures ***. Petitioner's posthearing brief, Responses to Commission Questions, p. 34; email communication with ***, email communication with ***, and Respondent Zurn's prehearing brief, p. 5.

[114] Respondent Zurn's prehearing brief, p. 13.

[115] Hearing transcript, pp. 166, 174 (Wehr).

[116] ***.

[117] ***.

[118] ***.

Table I-4
CISP fittings: U.S. producers' average unit values, by product type, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

decreased overall by *** percent between 2015 and 2017. Average unit values for drain bodies were higher in interim 2018 by *** percent compared with interim 2017 and were lower in interim 2018 by *** percent compared with interim 2017 for other CISP fittings. Though producers of other CISP fittings reported decreasing prices during the January 2015 to March 2018, respondent Zurn testified that prices for drain bodies have increased each year since 2015.[119]

[119] Hearing transcript, p. 174 (Wehr). See also Respondents Zurn and PDI's posthearing brief, Exh. 11.

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

U.S. MARKET CHARACTERISTICS

Cast iron soil pipe fittings ("CISP fittings") are non-malleable iron castings of varying shapes and sizes that are used as connecting components in sanitary, waste, and water and vent piping systems. They are used in conjunction with other cast iron products such as pipes, and sometimes also drainplates, drain assembly components, couplings, rubber gaskets, and connecting pieces, and are frequently sold and shipped as part of a system that includes at least cast iron pipe and sometimes other materials. They are most often used in large commercial and residential buildings, such as medical or industrial buildings, offices, schools, and multi-unit apartment buildings, but may also be used for storm drainage. Commercial building construction is typically the primary driver of demand for cast iron soil pipe and fittings.

The U.S. market is primarily served by two domestic producers (that produce both pipe and fittings)[1] and by imports from China, with limited nonsubject imports. CISP fittings sold in the United States are typically manufactured to particular specifications and standards set by organizations such as ASTM and The Cast Iron Soil Pipe Institute ("CISPI"). Domestic manufacturers Charlotte Pipe and McWane subsidiaries AB&I and Tyler make up the members of CISPI, and CISPI is highly involved in setting standards. CISP fittings are primarily sold to distributors, who often partner with one sole supplier on a long-term basis. Much of the CISP fittings market involves exclusive purchasing arrangements, in which purchasers buy only from one supplier on an annual basis, with little to no mixing of suppliers.

Overall, apparent U.S. consumption of CISP fittings increased during 2015-17, with an increase of 7.9 percent between 2015 and 2017.

U.S. PURCHASERS

The Commission received 25 usable questionnaire responses from firms that bought CISP fittings during January 2015-March 2018.[2] [3] [4] Twenty-four of the responding purchasers

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[1] A third domestic producer of CISP fittings, Zurn Cast Metals, discontinued production operations in September 2016, and is currently an importer only. As detailed in part I, "Market Summary," there is at least one other producer of drain fittings, ***.

[2] Of the 25 responding purchasers, 14 purchased the domestic CISP fittings, 5 purchased imports of the subject merchandise from China, and one purchased imports of CISP fittings from other sources.

[3] At the hearing, SOLCO testified on behalf of petitioner and Tharp Plumbing Supply testified on behalf of respondents. ***.

[4] Due to timing and resource constraints, questionnaires were not sent to firms that may purchase only cast iron drain bodies that may be considered drain fittings but not other CISP fittings. As such, the responding purchasers may not represent the universe of such purchasers. Among the responding purchasers, *** firms (***) did report purchasing CISP fittings from suppliers that also supply cast iron drain bodies that may be considered drain fittings. *** indicated that they included cast iron drains and/or drain bodies in their questionnaire responses. Due to time constraints, however, separate data

(*continued*...)

are distributors, with the vast majority identifying their customers as plumbing and mechanical contractors. The remaining firm is a plumbing retail store. In addition, one firm indicated that it sold to municipalities. Responding U.S. purchasers were located in all geographic regions of the United States, with a plurality of firms located in either the Midwest or Pacific Coast regions (six firms each).[5] The largest responding purchasers of CISP fittings by quantity during 2015-17 were ***; *** accounted for *** percent of reported purchases in 2017, *** accounted for *** percent, and *** accounted for *** percent. The largest purchasers by value were ***. ***'s purchases accounted for *** of the total reported value in 2017, *** accounted for *** percent, and *** accounted for *** percent.

CHANNELS OF DISTRIBUTION

Most CISP fittings sold in the domestic market are sold to distributors (table II-1). U.S. producers sold the vast majority to distributors, ***.[6] Importers also sold the large majority of their product to distributors, ***.

Table II-1
CISP fittings: U.S. producers' and importers' U.S. commercial shipments, by source and channel of distribution, January 2015-March 2018

* * * * * * *

GEOGRAPHIC DISTRIBUTION

*** U.S. producers reported selling CISP fittings to all regions in the contiguous United States, while most importers reported selling to the Northeast (table II-2). For U.S. producers, *** percent of sales were within 100 miles of their production facilities, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Importers sold 44.0 percent within 100 miles of their U.S. points of shipment, 14.0 percent between 101 and 1,000 miles, and 41.9 percent over 1,000 miles.

(…*continued*)
for drain bodies that may be considered drain fittings based off of these questionnaire responses are not available.

[5] The Midwest region consists of the states of Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. The Pacific Coast region consists of the states of California, Oregon, and Washington.

[6] ***, email message to USITC staff, July 16, 2018.

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

Region	U.S. producers	Importers
Northeast	***	8
Midwest	***	2
Southeast	***	1
Central Southwest	***	1
Mountain	***	1
Pacific Coast	***	1
Other[1]	***	1
All regions (except Other)	***	9
Reporting firms	***	9

[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

U.S. supply

Table II-3 provides a summary of the supply factors regarding CISP fittings from U.S. producers and Chinese producers.

Table II-3
CISP fittings: Supply factors that affect the ability to increase shipments to the U.S. market

	Capacity (short tons)		Capacity utilization (*percent*)		Ratio of inventories to total shipments (*percent*)		Shipments by market, 2017 (*percent*)		Able to shift to alternate products
Country	2015	2017	2015	2017	2015	2017	Home market shipments	Exports to non-U.S. markets	No. of firms reporting "yes"
United States[1]	***	***	***	***	***	***	***	***	2 of 3
China	***	***	***	***	***	***	***	***	1 of 4

[1] Zurn Cast Metals discontinued production operations in September 2016, ***.

Note.--Responding U.S. producers accounted for all U.S. production of CISP fittings excluding certain drain fittings, and an unknown amount of U.S. production of CISP fittings that includes certain drain fittings in 2017. Responding foreign producer/exporter firms accounted for approximately one-half of U.S. imports of CISP fittings from China during 2017. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to part I, "Summary Data and Data Sources."

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

Domestic production

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

Domestic producers' capacity utilization increased by almost *** percentage points between 2015 and 2017, but remained at below 50 percent throughout 2015-17. The increase in capacity utilization was driven mostly by an increase in production of *** percent.[7] U.S. producers reported very little export shipments during 2015-17; overall, U.S. producers' export shipments declined from *** percent of total shipments in 2015 to *** percent in 2017. U.S. producers' inventory levels relative to total shipments was relatively high, ranging from *** during 2015-17, increasing by *** percentage points during this time.[8] *** U.S. producers reported being able to shift production from CISP fittings to other products using the same equipment and/or labor. *** and ***. The percentage of overall production on the same equipment that was dedicated to these other products ranged from *** for *** and from *** for ***.

*** U.S. producers reported limitations on their abilities to shift production to other products. Charlotte Pipe stated that ***. McWane reported that ***.

Subject imports from China

Based on available information, producers of CISP fittings from China have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of CISP fittings to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and the ability to shift shipments from alternate markets. Factors mitigating this responsiveness of supply are reportedly decreasing capacity and limited inventories.[9]

Responding Chinese producers' reported capacity decreased *** percent from 2015 to 2017, while reported capacity utilization increased from *** percent to *** percent. Inventories as a ratio to total shipments were reportedly low, at between *** and ***. Chinese producers' exports to non-U.S. markets was equivalent to *** percent of their total shipments in 2017. Only one of four responding Chinese producers reported being able to shift production to or from other products, though that firm (***) did not elaborate, nor did it report any production of out-of-scope material on the same equipment as CISP fittings. Two firms reported that their mold patterns affected their ability to switch production to other products.

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[7] Charlotte Pipe's overall production *** from 2015 to 2017, while McWane's production *** during this time. Zurn's production stopped entirely. Charlotte Pipe also reported *** from 2015 to 2017, while McWane's reported capacity ***.

[8] *** domestic CISP fittings are reportedly sold from inventory. In general, *** reported higher inventory levels than *** during 2015-17; ***'s inventory levels relative to total shipments ranged from ***, while ***'s inventory levels *** ranged from ***, and ***.

[9] Petitioner argues that Chinese producers have the ability to respond to changes in demand with large changes in the quantity of shipments of CISP fittings to the U.S. market. Petitioner's prehearing brief, pp. 4, 27-37, Exhs. 5, 6, 8-15.

Respondents Zurn and NewAge argue that Chinese environmental regulations are increasingly becoming a barrier to supply and export potential of Chinese producers. Respondent Zurn's prehearing brief, p. 26; Hearing transcript, p. 158 (Singh).

Imports from nonsubject sources

Nonsubject imports account for a very small share of total U.S. imports of CISP fittings. During 2017, nonsubject imports accounted for 1.7 percent of all CISP fittings imports.[10] The largest individual source of nonsubject imports in 2017 was Canada, followed by India. Canada accounted 79.1 percent of all nonsubject imports that year, and India accounted for 20.5 percent.

Supply constraints

While a majority of responding firms reported experiencing no supply problems since January 2015, 5 of 14 importers and 5 of 25 purchasers did. Among importers, one firm (***) reported that domestic product is "off limits" to some markets due to "false information spread by domestic manufacturers," while four firms reported experiencing constraints in the supply of Chinese product. *** reported that it was unable to get all items in an order and sometimes the entire order from China, and *** reported that shutdowns in China due to environmental regulations created supply constraints in 2017.[11] *** stated that the Chinese government began shutting down many foundries in China at the end of 2016 due to unfulfilled upgrades to their pollution control equipment, and that items outside the 1½"-4" diameter range, specialty items such as reduction fittings and threaded fittings, and complex base fittings such as the vented closet tree were unavailable in 2017. ***, reported experiencing supply constraints "due to {a} factory shutdown," but did not elaborate.

Among responding purchasers, one firm reported experiencing a supply shortage of imported product due to the preliminary tariffs on CISP fittings, and four firms (***) reported experiencing supply constraints from domestic producers due to their refusal to supply some customers. Specifically, *** indicated that Charlotte and McWane (via AB&I and Tyler) refused to sell CISP fittings to them unless they agreed not to purchase imported product. *** reported that Charlotte Pipe also refused to sell plastic fittings to the firm as a result of purchasing imported CISP fittings from NewAge.[12]

New suppliers

Only one of 24 responding purchasers indicated that a new supplier had entered the U.S. market since January 1, 2015. *** reported NewAge as a new market entrant.

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[10] Official U.S. import statistics for HTS statistical reporting number 7307.11.0045, accessed May 8, 2018. See also table IV-2.

[11] ***. See NewAge posthearing brief, p. 4; Petitioner's posthearing brief, Response to Commission question 27.

[12] Charlotte Pipe stated that it may decline to work with a new distributor if they believe there to be adequate market distribution, a new distributor may endanger current business relationships, the distributor has poor credit, or it has a prior negative relationship with Charlotte Pipe. Staff field trip report, Charlotte Pipe, May 23, 2018.

U.S. demand

Based on available information, the overall demand for CISP fittings is likely to experience small changes in response to changes in price. The main contributing factors are the limited use of substitute products for most end-use applications and the small cost share of CISP fittings in the overall cost of the building or construction project in which they are used.

End uses and cost share

U.S. demand for CISP fittings depends on the demand for piping systems in residential, commercial, industrial, and public buildings. CISP fittings account for a moderate share of the cost of these piping systems, generally ranging from one-fifth to one-third of the cost,[13] but a very small portion of the overall cost of the building/construction project.[14]

Business cycles

Two of 14 importers and 5 of 24 purchasers indicated that the market was subject to business cycles. *** reported that it was. Reported business cycles reflected seasonal variations in construction and changes in construction trends over the economic cycle.

*** U.S. producers, 2 of 14 importers, and 4 of 24 purchasers indicated that the market was subject to distinctive conditions of competition. *** reported that imports have created an oversupplied market. Among importers and purchasers, several firms described instances of allegedly anticompetitive behavior by firms that produce CISP fittings. *** reported that Charlotte Pipe and McWane have engaged in persistent anticompetitive behavior and price fixing, citing the FTC investigation into Charlotte Pipe's acquisition and subsequent shuttering of Star Pipe, the antitrust settlement involving Charlotte Pipe and McWane (i.e., AB&I and Tyler), and the manipulation of standards by CISPI that limits opportunities for importers to sell to markets that require them.[15] *** reported that U.S. manufacturers will not sell to independent

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[13] Among the firms reporting the cost share in piping systems of CISP fittings, *** reported cost shares of 21 percent, one importer each reported 30 and 33 percent, and one importer reported 40 percent.

[14] *** reported that CISP fittings account for 2 percent of the cost of buildings, one importer reported that they account for 3 percent, and another importer estimated the figure to be 5 to 10 percent. Other firms reported cost shares of between 50 and 98 percent, but this is likely due to misunderstanding the question.

[15] According to Federal Trade Commission ("FTC") documents, Star Pipe entered the domestic cast iron soil pipe market in 2007 and expanded its sales base throughout the United States between 2007 and 2010. In 2010, Charlotte Pipe purchased Star Pipe's CISP business for approximately $19 million, and, "after the acquisition, Charlotte Pipe destroyed Star Pipe's CISP production equipment {and} entered into an agreement under which Star Pipe and its employees kept the acquisition secret and agreed not to compete with Charlotte Pipe in the CISP market for six years." In May 2013, the FTC issued an order requiring Charlotte Pipe "to inform industry participants of its prior confidential acquisitions as well as its role in Star Pipe's exit from the CISP market… to notify the FTC before making similar

(*continued*...)

distributors, *** stated that the market has been dominated by two U.S. producers that restrict trade, whereas imports provide healthy competition, and *** reported that CISPI members "lie to engineers to instill fear of {imported} product" and keep profits high.

Changes in conditions of competition were reported by one producer, three importers, and ten purchasers. *** reiterated that more firms are importing Chinese CISP fittings. *** reported that there was more competition, especially by domestic manufacturers, and *** reported that construction spending increased, and that domestic producers offered lower prices to customers without publishing these lower prices on their price lists. *** also reported that domestic suppliers cut their prices, *** reported an increase in the use of plastic substitutes, and *** reported that it had sold more epoxy-coated product (a product which is not offered by domestic producers). *** also stated that importers allow independent firms to offer the full range of plumbing materials, and *** added that importers allow firms to compete with the domestic producers.

Demand trends

Most firms reported that demand for CISP fittings in the United States was either consistent or increasing (table II-4). More firms reported that there has been no change in U.S. demand for CISP fittings since January 1, 2015 than any other response. The second-most

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(…*continued*)
acquisitions in the United States…" and prohibiting Charlotte Pipe from "enforcing any provision of a confidentiality and non-compete agreement with Star Pipe." See https://www.ftc.gov/news-events/press-releases/2013/04/charlotte-pipe-and-foundry-settles-charges-its-2010-purchase-star, accessed June 28, 2018. Charlotte Pipe testified that it shut down operations on Star Pipe's affiliated Chinese producer because it "discovered that this foundry was significantly polluting the air and water and had no safety standards in place for its workers." Hearing transcript, p. 28 (Dowd).

With respect to a different iron pipe product, in January 2012 "{t}he FTC charged that three companies, McWane, Inc., Star Pipe Products, Ltd., and Sigma Corporation, illegally conspired to set and maintain prices for {ductile iron} pipe fittings, and that McWane illegally maintained its monopoly power in the market for U.S.-made pipe fittings by implementing an exclusive dealing policy." Sigma and Star Pipe settled during or prior to the litigation, and in May 2013 the presiding judge "dismissed charges that McWane illegally conspired with its competitors to raise and stabilize DIPF prices but found that McWane violated the antitrust laws when it excluded competitors from the market for U.S. made ductile iron pipe fittings." The decision was appealed, but on February 6, 2014, the FTC issued a decision finding that "McWane unlawfully maintained its monopoly in the domestic fittings market through its 'Full Support Program,' which foreclosed potential entrants from accessing distributors. The FTC's order bars McWane from requiring exclusivity from its customers. On April 17, 2015, the Eleventh Circuit upheld the Commission's order." See https://www.ftc.gov/enforcement/cases-proceedings/101-0080b/mcwane-inc-star-pipe-products-ltd-matter, accessed June 28, 2018.

In August 2014, a complaint was filed in district court alleging that Charlotte Pipe, McWane, and CISPI "conspired to fix, raise, maintain and stabilize the prices of cast iron soil pipe from at least January 1, 2006 through December 31, 2013." In May 2017, final approval was granted to a $30 million settlement between direct purchasers and the defendants. See https://www.cohenmilstein.com/case-study/cast-iron-soil-pipe-and-fittings-antitrust-litigation, accessed June 28, 2018.

Table II-4
CISP fittings: Firms' responses regarding U.S. demand and demand outside the United States

Item	Increase	No change	Decrease	Fluctuate
Demand in the United States				
U.S. producers	***	***	***	***
Importers	4	7	1	1
Purchasers	3	8	3	5
Demand outside the United States				
U.S. producers	***	***	***	***
Importers	2	4	1	---
Purchasers	1	2	---	1

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

frequent response was that demand was increasing, as reported by *** U.S. producers, four importers, and three purchasers. Firms typically reported demand was increasing because of increased commercial construction. Among the firms reporting a decrease in demand, reasons cited included the increased use of plastic pipe, particularly in Minnesota and the New York Metro area, where changes had been made in the building codes to allow greater use of plastic pipe systems.[16]

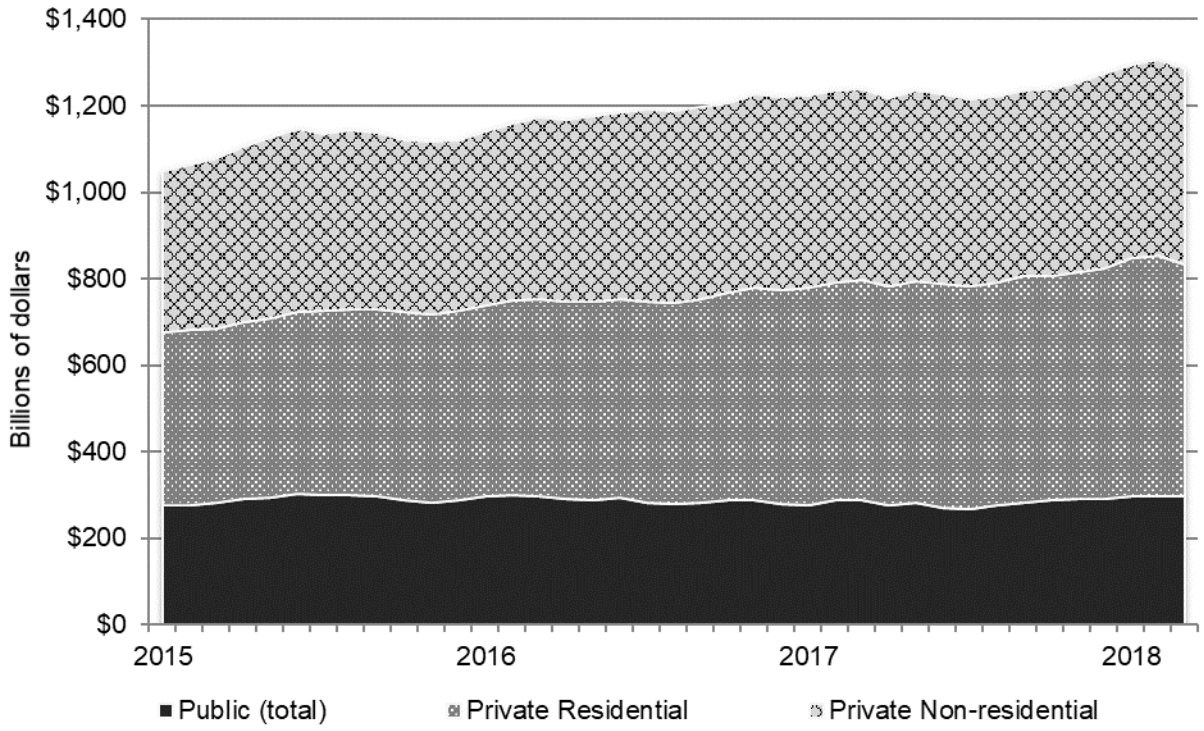
Demand for CISP fittings in the United States is driven by construction spending on public, private non-residential (commercial), and larger private residential buildings. As can be seen in figure II-1, the value of construction put in place in the United States grew from January 2015 to March 2018. Overall, the value of public construction, private residential construction, and private non-residential (including commercial) construction put in place increased between January 2015 and December 2017 by 5.7 percent, 32.5 percent, and 20.6 percent, respectively. Between December 2017 and March 2018, the value of public, private residential, and private non-residential construction put in place increased by 2.3 percent, 0.8 percent, and 0.3 percent, respectively.

[16] The 2015 Minnesota Plumbing Code, which took effect on January 23, 2016, "allows plastic pipe, solvent cemented Schedule 40 PVC and ABS drain-waste-vent (DWV) pipe to have hanger spacing of 4-foot intervals for all pipe sizes in horizontal installation" and removed "{t}he long-standing 35-foot rule limitation for plastic pipe used in DWV installation." See Minnesota Department of Labor and Industry website at http://www.dli.mn.gov/ccld/plumbing2015.asp, accessed June 7, 2018.

According to the New York City plumbing construction code, "{p}lastic piping and fittings may be used in residential buildings five stories or less in height." See https://www1.nyc.gov/assets/buildings/apps/pdf_viewer/viewer.html?file=2014CC_PC_Chapter7_Sanitary_Drainage.pdf&section=conscode_2014, retrieved June 7, 2018.

Figure II-1

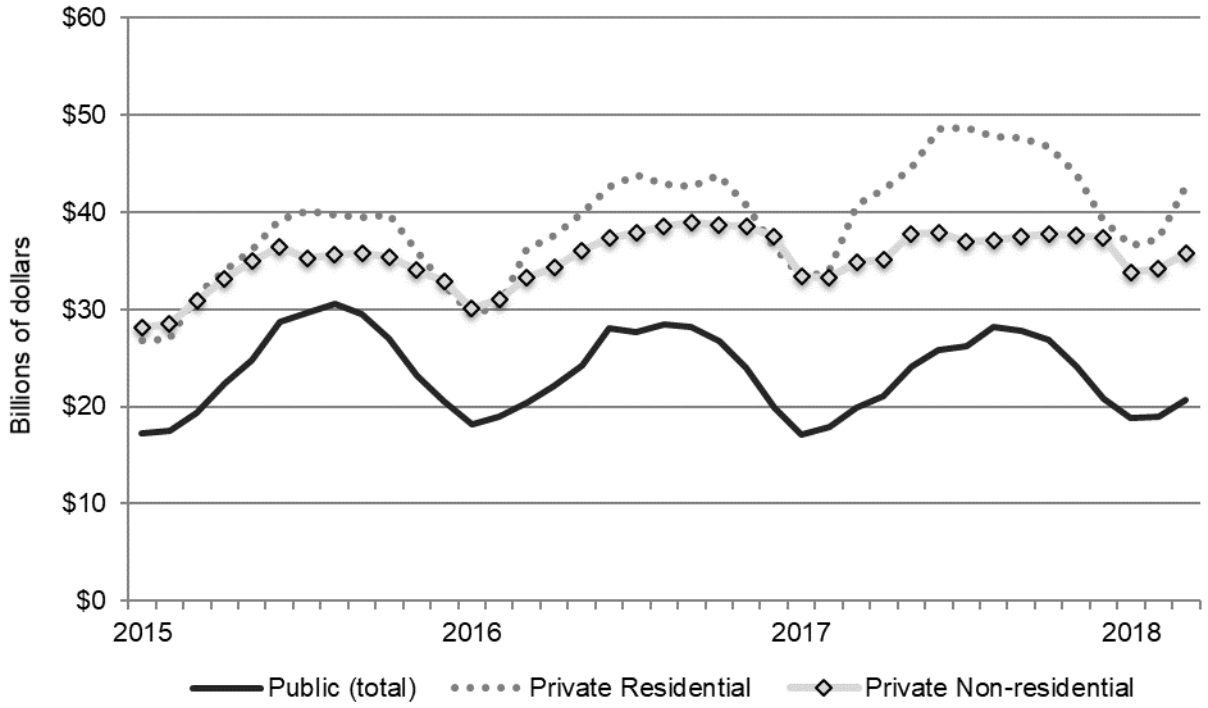
Construction spending: Total public, private residential, and private non-residential construction spending, annual value of construction put in place, seasonally adjusted, monthly, January 2015-March 2018



Source: https://www.census.gov/construction/c30/historical_data.html, retrieved May 29, 2018.

As shown in figure II-2, construction spending is highly seasonal. Non-seasonally adjusted construction spending was typically lowest each January and then generally increased through the summer months and remaining at elevated levels through October before falling in the final months of the year. Public construction spending had the most seasonal variation, while private residential construction spending had the least seasonal variation.

Figure II-2
Construction spending: Total public, private residential, and private non-residential construction spending, annual value of construction put in place, not seasonally adjusted, monthly, January 2015-March 2018



Source: https://www.census.gov/construction/c30/historical_data.html, retrieved May 29, 2018

According to Dodge Data & Analytics, construction demand will continue to increase in 2018, albeit at a significantly slower rate than demand increased in 2016.[17]

Substitute products

*** U.S. producers (***), 4 of 10 importers, and 17 of 19 purchasers reported that there are substitutes for CISP fittings. Plastic fittings (including PVC and ABS fittings[18]) can be used in some of the same applications as CISP fittings, but CISP fittings tend to be used in commercial buildings, while plastic fittings tend to be used in residential buildings.[19] The petitioner

[17] Dodge Data & Analytics is a third-party "provider of analytics and software-based workflow integration solutions" that does forecasting and general market research and analysis for the construction industry. See https://www.construction.com/company/about, retrieved July 10, 2018. See also Petitioner's prehearing brief, Exh 2; Petitioner's prehearing brief, Response to Commission question 17.

[18] PVC stands for polyvinyl chloride. ABS stands for Acrylonitrile-Butadiene-Styrene. Both are thermoplastics.

[19] Petitioner's postconference brief, p. 10.

indicated that CISP fittings perform better than plastic in fire resistance and noise abatement. Some localities' plumbing codes also mandate the use of cast-iron pipe.[20] *** reported that some building codes have changed to allow plastic pipe and fittings.[21] According to NewAge, plastic fittings have been increasingly used in commercial construction in the last 3 to 5 years, particularly in underground piping systems and in residential buildings with five or fewer stories.[22] *** reported that it is either specified or driven by the building code as to whether plastic or cast iron is used. Several firms noted that the cost of plastic fittings was less than the cost of CISP fittings, with NewAge stating that plastic fittings are much less expensive, easier to handle, lighter weight and faster to assemble, thus saving labor costs.[23] Most firms (including *** U.S. producers, 2 of 6 importers, and all 19 responding purchasers) reported that the price of plastic fittings did not affect the price of CISP fittings. Four importers reported that the lower cost of plastic fittings decreased the price of cast iron soil pipe fittings.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported CISP fittings depends upon such factors as relative prices, quality (e.g., grade standards, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, reliability of supply, product services, etc.). Based on available data, staff believes that domestic and imported CISP fittings are highly physically interchangeable, though building requirements and preferences for domestic product may limit the degree of substitutability.

Lead times

CISP fittings are typically sold from inventory. U.S. producers reported that *** of their commercial shipments were from inventories, while importers sold 96.1 percent of their shipments from U.S. inventories. Lead times for shipments from inventories averaged just under 5 days for U.S. producers and just over 3 days for importers.[24] Importers also reported that *** percent of their sales were produced to order with an average lead time of 81 days, and *** percent were from foreign inventories with a lead time of *** days.

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[20] Petitioner's postconference brief, p. 10.

[21] It stated that in the New York metro area, building codes now allow PVC pipe and fittings to be used in buildings up to six floors.

[22] Conference transcript, pp. 109-110, p. 141 (Singh).

[23] Respondent NewAge's postconference brief, p. 2.

[24] Importers reported *** percent of sales were produced to order with lead times of 81 days, and *** were from foreign inventories with a lead time of *** days.

Knowledge of country sources

Twenty-one purchasers indicated they had marketing/pricing knowledge of domestic product, 12 of Chinese product, and 2 of product from nonsubject countries.[25]

As shown in table II-5, a plurality of responding purchasers reported that they "always" make purchasing decisions based on the producer and/or country of origin, while a majority reported that their customers "sometimes" make purchasing decisions based on producer and/or country of origin. For the purchasers that reported "always" making decisions based on the manufacturer or country of origin, firms generally cited loyalty agreements, engineer and/or ASTM specifications, and a preference for domestic product as the reasons. Regarding decisions based on country of origin, *** cited liability and quality issues with subject imports, and *** stated that domestic producers will not allow firms to sell both domestic and Chinese product simultaneously. Among the firms reporting "never" making decisions based on the manufacturer, *** stated that distributors generally make alliances with only one manufacturer.

Table II-5
CISP fittings: Purchasing decisions based on producer and country of origin

Purchasing decisions (purchaser/customer)	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	11	---	5	8
Purchaser's customers make decision based on producer	2	2	14	2
Purchaser makes decision based on country	11	---	3	9
Purchaser's customers make decision based on country	2	4	10	3

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 CISP fittings were price or total cost (16 firms), quality (14 firms), and availability (6 firms) (table II-6). Quality was the most frequently cited first-most important factor (cited by 8 firms), followed by price or total cost (6 firms). Quality was the most frequently reported second-most important factor (cited by 6 firms), and price or total cost was the most frequently reported third-most important factor (5 firms). Four firms also mentioned domestic product as their first-most important factor, and five firms mentioned rebates among their top three factors.

[25] *** reported having marketing/pricing knowledge of product from Europe.

Table II-6
CISP fittings: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Quality	8	6	---	14
Price / total cost	6	5	5	16
Domestic	4	---	---	4
Availability	1	3	2	6
Rebates	1	2	2	5
Other[1]	8	6	9	23

[1] Other factors included service/support (four firms); relationships and customer acceptance or preference (three firms each); range of product line (two firms), and certifications, buying requirements, local supplier requirement, job specifications, market acceptance, country of origin, integrity, stands behind products, acceptability, offering of epoxy-coated product, and corporate competition (one firm each).

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

A plurality of purchasers (10 of 24) reported that they "never" purchase the lowest-priced product. Eight reported that they "sometimes" do, four reported that they "usually" do, and two reported that they "always" do.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 23 factors in their purchasing decisions (table II-7). Factors associated with overall availability (e.g. availability, delivery time, and reliability of supply), product characteristics (e.g. product quality, consistency, and range), and price were leading purchase factors. The factors rated as very important by more than half of responding purchasers were quality meets industry standards (24 firms); overall availability and product consistency (23 firms); product range and reliability of supply (22 firms each); delivery time and price (21 firms each); delivery terms, discounts offered, technical support/service, and quality exceeds industry standards (17 firms each); extension of credit and bundled iron and pipe products (16 firms each), and U.S. transportation costs (12 firms). The availability of epoxy-coated product, bundled plastic pipe and fittings products, and rebates to the firms' customers were rated as not important by the majority of responding purchasers.

Table II-7
CISP fittings: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Very important	Somewhat important	Not important
Quality meets industry standards	24	1	---
Availability	23	2	---
Product consistency	23	2	---
Product range	22	2	1
Reliability of supply	22	3	---
Delivery time	21	4	---
Price	21	4	---
Delivery terms	17	8	---
Discounts offered	17	8	---
Technical support/service	17	8	---
Quality exceeds industry standards	17	6	1
Extension of credit	16	5	4
Bundled products – iron pipe	16	4	5
U.S. transportation costs	12	8	3
Promotional incentives, non-rebate	3	17	5
Packaging	9	15	1
Minimum quantity requirements	7	13	5
Traditional supplier	12	8	4
Rebates – to your firm	11	9	5
CISPI certified	8	8	8
Availability of epoxy-coated product	9	2	13
Bundled products – plastic pipe & fittings	5	2	17
Rebates – to your customers	---	8	17

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

Purchasers were also asked whether different types of customers they sell to have different requirements for the CISP fittings they purchase. Twelve of the 23 responding firms reported that they did, and 11 reported that they did not. Among the firms reporting customer requirements, three stated that some customers require epoxy-coated pipe and fittings; three stated that some prefer certain vendors, with two indicating that some require domestic product; and two stated that some require certain specifications, such as ASTM A888, CISPI standard 301, or CISPI generally.

Promotional activities

Purchasers were also asked about the importance of certain promotional activities on their purchasing decisions. As shown in table II-8, purchasers overwhelmingly rated direct

Table II-8
CISP fittings: Purchasers' ratings of the importance of various promotional activities, by number of responding firms

	None[1]	Minimal[2]	Moderate[3]	Substantial[4]
CISP fittings from U.S. producers				
Direct rebate	4	1	1	12
Indirect rebate	5	3	4	4
Rebates to your customers	6	6	4	1
Promotional allowances	3	10	4	1
Bonus packs	5	4	5	4
Bonus couplings/gaskets	7	9	1	---
Other incentives	11	2	1	---
Cumulative impact of all incentives	2	1	6	4
CISP fittings from Chinese producers				
Direct rebate	10	1	1	1
Indirect rebate	11	---	---	1
Rebates to your customers	11	2	---	---
Promotional allowances	9	4	---	---
Bonus packs	13	---	---	---
Bonus couplings/gaskets	9	4	---	---
Other incentives	12	1	---	---
Cumulative impact of all incentives	8	3	---	---

[1] Not offered.
[2] Offered, minimal impact on purchasing decisions.
[3] Offered, moderate impact on purchasing decisions.
[4] Offered, substantial impact on purchasing decisions.

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

rebates as the most important incentive in their decision to purchase domestic CISP fittings.[26] Indirect rebates and bonus packs had varied impacts on purchasing decisions, with relatively similar numbers of firms rating these factors across levels of importance. Rebates to purchasers' customers, promotional allowances, and bonus couplings generally had either a minimal impact or no impact on the decision to purchase domestic product. The vast majority of responding firms reported that the specified promotional activities were not offered by suppliers of subject imported product.

In additional comments, purchasers described relationship-building activities and events (identified by 4 firms) and advertising and marketing (2 firms) as important promotional activities as well.

Purchasers were also asked to rate and describe the effect of several factors on the prices they pay for CISP fittings. As shown in table II-9, responses varied greatly. Generally speaking, rebates, domestic requirements and/or preferences, and competition among U.S. producers were reported to have the most substantial impact on prices of CISP fittings, while competition from subject imports was reported to have the least impact. Competition from substitute products (e.g. plastic pipe/fittings) was generally reported as having some impact on

[26] Further information regarding rebates in this industry can be found in part V, "Rebates."

Table II-9
CISP fittings: Purchasers' ratings of various factors on the prices it pays for CISP fittings, by number of responding firms

Factor	No role	Rating of the factor				
		Minimal effect				Substantial effect
		1	2	3	4	5
Rebates	5	3	3	3	5	6
Domestic requirements and/or preferences	3	3	3	2	6	7
Competition from substitute products	6	3	---	7	3	5
Competition among U.S. producers	2	5	3	4	4	7
Competition from subject imports	4	7	3	6	5	---
Other[1]	2	2	---	---	---	---

[1] Two purchasers each reported that "other" factors had either no role or a minimal impact, though what these factors were was not specified by either purchaser.

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

the price of CISP fittings, although more so than competition from subject imports and less so than all the other factors.

Purchasers were also asked a series of questions relating to their purchase histories. The majority of firms (18 of 25 firms, all of which were distributors) indicated that they only purchase from one supplier, with one firm reporting that it purchases from two suppliers, four reporting that they purchase from three suppliers, and two reporting that they purchase from four suppliers. A majority of responding firms (14) indicated that that they had been sourcing from their supplier(s) for at least 10 years, with six reporting that they had been sourcing from the same supplier(s) for 30 years or more.[27] When asked which firms they consider to be the main competitors with their current suppliers, firms named Charlotte Pipe (17 of 22 responding firms), McWane or one of its subsidiaries (16 firms), NewAge (4 firms), Wentworth, and Jumbo (1 firm each). Generally speaking, the firms that listed domestic producers as their suppliers tended to identify other domestic suppliers as the main competitors, with ten firms responding in this way. Another ten firms that identified an import source as either its sole or its main supplier also listed domestic suppliers as the primary competitors. Only three firms that identified a domestic producer as one of its main suppliers (along with an import source) listed an import source as one of the main competitors, with two of those firms also listing the import source as its primary supplier. Only one firm that identified a domestic producer as its main supplier (***) listed an import source as a competitor, with the firm also listing other domestic producers as competitors.

Eight of 23 responding purchasers reported that they had changed suppliers since January 1, 2015, while 15 reported that they had not. Five firms reported dropping a domestic manufacturer (two of which named AB&I) and adding a Chinese supplier (all five named

[27] The average time with one supplier was over 15 years.

Table II-10
CISP fittings: Likelihood of changing suppliers in 2018 and 2019, by number of responding purchasers

Likelihood of changing suppliers in:	Extremely	Very	Somewhat	Slightly	Not at all
2018	---	1	1	5	18
2019	---	1	1	7	16

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

NewAge).[28] Two firms reported dropping NewAge and adding a domestic supplier (one of which named AB&I and the other named Tyler). One firm also reported dropping one domestic supplier (AB&I) and adding another (Charlotte). When asked how likely they were to change suppliers of CISP fittings in 2018 and 2019, the large majority of responding purchasers reported being "not at all" likely to change suppliers in 2018, with only two more firms being "slightly" likely to change suppliers in 2019 (table II-10).

The firm reporting that it was "very" likely to switch suppliers in 2018 and 2019 (***) reported purchasing exclusively Chinese product from ***, but did not elaborate. The firm reporting that it was "somewhat" likely to switch suppliers in 2018 and 2019 (***) reported purchasing decreasing amounts of domestic product during 2015-17 (from ***) due to "poor quality" and began purchasing imported product from NewAge in 2017 because it was a "better product."

Supplier certification

Three of 21 responding purchasers require their suppliers to become certified or qualified to sell CISP fittings to their firm. Purchasers reported that the time to qualify a new supplier ranged from 1 day (***) to 90 days (***). *** reported that they require their supplier to have certifications, with *** stating that it considers quality and inventory when qualifying a new supplier and *** adding that the manufacturers (and not the distributors) are the firms that obtain necessary certifications required by most mechanical engineers. *** reported that its suppliers need to meet industry standards and codes, and it requires a supplier to have a full line of sizes and configurations in order to be qualified. *** noted that there are a number of different certifications, with *** listing UPC, NSF, IAPMO, and ASTM specifically, and *** stating that CISPI is one of the entities that sets certification standards.[29] Only 1 of 18 responding

[28] *** reported adding NewAge for reasons of price, shipping, allowances, superior quality, exclusive (epoxy) product, and better packaging. *** reported adding NewAge because its customers wanted a better quality product. *** reported adding NewAge due to monopoly pricing by domestic CISPI member firms.

[29] UPC (Uniform Plumbing Code) is a model code in the plumbing industry set by the IAPMO (International Association of Plumbing and Mechanical Officials) that governs the installation and inspection of plumbing systems. See http://www.iapmo.org/Pages/IAPMOgroup.aspx and http://codes.iapmo.org/home.aspx?code=UPC, accessed May 21, 2018.

(*continued*...)

purchasers reported that a supplier had failed in its attempt to become qualified or approved status since 2015: *** reported that NewAge lost its NSF listing.[30]

CISPI trademark

U.S. producers, importers, and purchasers were asked a series of questions about the role of the CISPI trademark, including the share of the product their firm sells or purchases that carry the trademark and the proportion of their product that could be used in a building that required the trademark. Purchasers were also asked about the difficulty or ease in substituting CISP fittings that do not carry the trademark if the building plans require it.

As shown in table II-11, two U.S. producers reported that more than 99 percent of their CISP fittings bear the CISPI trademark, while one (***) reported that less than 1 percent did. Eleven of 12 importers reported that less than 1 percent of their product contain the CISPI trademark. Among purchasers, most (13 of 23) reported that more than 99 percent of the product they purchase contains the CISPI trademark, while six reported that less than 1 percent did. This is consistent with reported purchase sources, as 12 firms reported only purchasing domestic product during 2017, while nine reported purchasing only Chinese product, and four firms reported purchasing both. Firms' responses regarding the amount of their product that

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(…*continued*)

ASTM is an international standards organization that develops and publishes technical standards for a wide variety of products, including CISP fittings and other plumbing products. See https://www.astm.org/, accessed May 21, 2018.

NSF is a third-party certification organization that offers "a wide range of testing, certification and technical services as well as human health risk assessments" for plumbing products and fixtures for both potable and non-potable water use, including for wastewater, venting, radiant floor heating and geothermal applications. NSF-certified CISP fittings typically carry the "NSF-DWV" (drain, waste, and vent) mark. See http://www.nsf.org/, accessed June 7, 2018.

CISPI (the Cast Iron Soil Pipe Institute) is a domestic industrial advocacy and trade group that "seek{s} to advance interest in the manufacture, use and distribution of cast iron soil pipe and fittings, and through a program of research and the cooperative effort of soil pipe manufacturers, strive{s} to improve the industry's products, achieve standardization of cast iron soil pipe and fittings, and provide a continuous program of product testing, evaluation and development." It offers trademarks such as Ç® or CI NO-HUB® that are only available to its members. See https://www.cispi.org/, accessed June 1, 2018.

Charlotte Pipe indicated that only domestic producers with at least 90 percent of their production in the United States and undergo rigorous regular inspections are eligible for CISPI membership. Currently, petitioning parties Charlotte Pipe and McWane subsidiaries AB&I and Tyler are the only members of CISPI. Staff field trip report, Charlotte Pipe, May 23, 2018.

[30] In April 2016, in the Eastern District of Michigan, after NSF initiated litigation accusing NewAge of "marketing, advertising, offering for sale and/or selling goods and products bearing counterfeit reproductions of NSF's federally registered certification marks," NewAge agreed to a preliminary injunction order barring it from infringing or misappropriating any of the NSF marks or otherwise claiming NSF certification in connection with its products, utilizing the NSF mark in its promotional materials, and utilizing any designation which is confusingly similar to any of the NSF marks. See https://www.leagle.com/decision/infdco20160428a46, retrieved June 7, 2018.

Table II-11
CISP fittings: U.S. producers', importers', and purchasers' responses regarding CISPI trademark issues, by number of responding firms

Item	0-1 %	2-10 %	11-50 %	50-90 %	91-98 %	99-100 %
	Number of firms responding					
Sales/purchases containing CISP trademark						
U.S. producers	1	---	---	---	---	2
Importers	11	1	---	---	---	---
Purchasers	6	1	1	1	1	13
Amount of product that can be used in building that requires CISPI trademark						
U.S. producers	1	---	---	---	---	---
Importers	8	---	---	---	---	1
Purchasers	6	---	1	1	1	12

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

could be used in a building that required fittings with the CISPI trademark generally mirrored their responses regarding the amount of CISPI product they sold or purchased.

Purchasers were also asked about the steps required to substitute CISP fittings that do not carry the trademark if the building plans require it, as well as how long it would take to authorize such a substitution and how much it would cost a contractor that decided to make such a change. *** reported that most jobs do not specify CISPI-trademarked product, and the only step involved is to question whether it is required. *** stated generally that they would have to negotiate with contractors and/or engineers in order to get it approved. *** reported that it would be necessary to educate a design engineer on the difference between a CISPI trademarked product and a product that was made to the same standards, but that doing so is not an easy task. *** reported that it would only require an engineers' approval, and that all its products carry the "CISPI 301" stamp.[31] *** stated that a CISPI manufacturing standard could be met by another manufacturer without being a CISPI trademarked product, and that most engineering specifications stipulate such a standard, such as ASTM A888 or CISPI 301, but that it has never attempted to substitute a non-trademarked product in a project that called for one.

Regarding the number of days to obtain an authorization to change, two firms (***) estimated 1 and 2 days, respectively, while one firm (***) estimated 30 days, another (***) 30-120 days, and one firm (***) estimated that it would take one year. Only one firm (***) estimated the cost of switching, estimating a "ballpark" of 10 percent, and stated that this was

[31] While the CISPI trademark is only available to its members (Charlotte Pipe and McWane), there are specifications such as CISPI 301 or CISPI 310 that define the standard and characteristics for such designations, and non-CISPI members, including foreign producers, can identify products they offer as meeting such specifications. See http://www.mgcoupling.com/files/CISPI%20Designation%20310-12.pdf.

NewAge stated that several of its bids have been rejected by engineering firms that specify that the pipe and fittings in a building's CISP system must carry the CISPI trademark. Hearing transcript, p. 155 (McQuillan); NewAge's posthearing brief, pp. 6-8, Exhs. 1 and 2.

not typically a contractor's decision but an engineer's, and the engineer "would need an incentive."

Anticompetitive allegations

U.S. producers, importers, and purchasers were also asked a series of questions about whether the Federal Trade Commission's ("FTC") inquiry and 2013 consent order regarding Charlotte Pipe's acquisition of Star Pipe and the litigation regarding alleged anti-competitive behavior filed in 2013 and settled in 2016 have affected their firm and the market for CISP fittings since January 2015.

As shown in table II-12, most firms reported that neither the FTC's action nor the district court litigation regarding Charlotte Pipe's acquisition and subsequent shuttering of Star Pipe had any effect on their firm or the market.

Table II-12
CISP fittings: Effect of anti-competitive actions and allegations, by number of responding firms

Item	No	Yes
	Number of firms (number)	
FTC 2013 action: Had effect on firm.--		
U.S. producers	2	---
U.S. importers	9	3
U.S. purchasers	17	7
FTC 2013 action: Had effect on market.--		
U.S. producers	2	---
U.S. importers	6	4
U.S. purchasers	13	6
Litigation 2013: Had effect on firm.--		
U.S. producers	2	---
U.S. importers	11	1
U.S. purchasers	19	6
Litigation 2013: Had effect on market.--		
U.S. producers	2	---
U.S. importers	8	2
U.S. purchasers	16	3

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

Among the importers reporting that the FTC action had an effect, *** stated that it led to price increases. *** also reported that it made it difficult for imported product to be awarded building projects due to Star Pipe's prominent role in the market, and *** reported that while it was able to take over supplying some of Star Pipe's previous customers, many began purchasing only domestic product for fear of other suppliers of imported product being "eliminated" from the market for the same reason. *** added that while the FTC ruled against Charlotte Pipe, the elimination of Star Pipe still gave Charlotte and McWane control of the market, leading to price increases of up to 40 percent in some market segments.
Among purchasers, *** reported that due to Charlotte Pipe and Tyler's prohibitive buying programs, the shutting down of Star Pipe took a key option out of the market place, and that it consequently had to go without a supplier for a short time. *** reported that it took up to a year to get a new supplier's product line filled out and their marketing efforts up to speed. ***

*** stated that it believes Charlotte and McWane buy good competitors and shut them down as a strategy to protect their market share and maintain high profit margins. *** stated that the removal of Star Pipe from the market eliminated a major competitor and that Charlotte Pipe controls the market, while *** stated that NewAge now gives the market choice that had been restricted by Charlotte and McWane. *** reported that it had been purchasing Star Pipe's products until 2010, but that it switched in 2011 to only purchasing from AB&I. *** reported that market prices were artificially raised as a result, and noted that it filed a claim to recover a portion of the amount it was overcharged by Charlotte Pipe.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2015 (table II-13). Aside from the firms reporting that they did not purchase CISP fittings from the identified source, most responding firms reported constant purchases of domestic product and half of responding firms reported increasing purchases of Chinese product. Among the firms reporting an increase in domestic product, one firm cited a growth in business and one firm cited an increase in the commercial plumbing market. The third firm (***) reported increasing domestic purchases and decreasing subject import purchases, stating that it changed its sourcing from NewAge (China) to AB&I (U.S.) due to an increase in the number of engineering firms requiring NSF approvals.[32] The firms that reported decreasing domestic purchases cited a brand change, a switch in manufacturer, and poor quality. Among the firms that reported increasing purchases of Chinese product, one firm cited better quality, and one firm indicated that a domestic manufacturer refused to sell its product to them.

Table II-13
CISP fittings: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	2	5	3	10	1
China	10	1	7	6	---
All other sources	13	---	---	3	---
Sources unknown	12	---	---	2	---

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

Importance of purchasing domestic product

Based on questionnaire responses, a plurality of the CISP fittings purchased in the United States by quantity are not required to be domestic by law or regulation, but by customers. By number of responding firms, 7 of 13 reported that their purchases were required to be domestic by their customers (for 39.3 percent of their purchases), while nine firms

[32] As noted above, *** reported that NewAge lost its NSF listing. *** stated that NewAge explained its NSF status as "a documentation error and that would be resolved shortly," but that after more than a year of being without NSF certification, *** "decided to no longer support NewAge."

reported that purchasing U.S.-produced product was not an important factor in their purchasing decisions (for 30.5 percent of their purchases). Four responding purchasers reported that their purchases were required to be domestic by federal law (for 7.4 percent of their purchases); three reported that their purchases were required to be domestic by state or local law (for 2.0 percent of their purchases); three firms reported their purchases were required to be domestic by other organizations (for 20.3 percent of their purchases); and two firms reported that they purchases were required to be domestic for other reasons (for 0.4 percent of their purchases). One purchaser reported that inspectors may give push-back in certain areas, and one stated that CISPI members "coerce and intimidate" engineers to only accept product manufactured by CISPI members.

Purchasers were asked how frequently the building projects for which they supply CISP fittings have a variance in the building plans that changes the manufacturer or source of the CISP fittings to be used in that project. The large majority of firms reported that they "sometimes" or "never" do (9 firms each), while three reported that they "usually" do. No firm reported that they "always" do.

Comparisons of domestic product, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing CISP fittings produced in the United States, China, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 22 factors (table II-14). In general, purchasers rated U.S. product as either superior or comparable to Chinese product for most factors. A majority of firms rated U.S. product as inferior to Chinese product on the availability of epoxy-coated product (12 of 16 firms) and price (10 of 18 firms). For the factors that a majority of purchasers rated as "very important" in table II-7, U.S. product was generally rated as either superior or comparable to Chinese product, with the exception of price.

Purchasers were asked if certain grades, types, or sizes of CISP fittings were available only from certain country sources; 11 of 22 firms responded affirmatively. Eight firms reported that epoxy-coated CISP fittings were only available from China (and/or specifically NewAge), with two stating that they were also available from Europe. One firm stated that epoxy-coated was not available from domestic producers, while another stated that at least one U.S. producer makes epoxy-coated product but does not offer it for sale in the United States. Two of six responding importers also reported that domestic manufacturers make certain grades, types, or sizes of CISP fittings that they do not offer for sale in the United States, with *** stating that McWane has a coating facility in the United Arab Emirates that imports Chinese product and coats it to the EN 877 standards for the Middle Eastern and European markets.[33] *** U.S. producers reported that ***.

[33] McWane reports offering hubless cast iron soil pipe and fittings to the ISO 6594/EN 877 standards. *See* McWane International website, Soil Pipe and Accessories, available at http://www.mcwaneinternational.com/products/catalog/commercial-construction-plumbing/iso-en-standard-2/soil-pipe-and-accessories-2/, retrieved May 31, 2018.

(*continued*...)

Table II-14
CISP fittings: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. China			U.S. vs. nonsubject			China vs. nonsubject		
	S	C	I	S	C	I	S	C	I
Availability	9	8	1	5	2	---	3	3	3
Availability of epoxy-coated product	3	1	12	3	---	4	7	1	1
Bundled products – iron pipe	7	7	1	5	2	---	5	2	2
Bundled products – plastic pipe & fittings	10	1	---	5	1	---	---	1	3
Delivery terms	9	6	2	4	3	---	1	4	3
Delivery time	9	7	1	4	3	---	1	4	3
Discounts offered	6	4	5	4	3	---	2	4	1
Extension of credit	8	8	1	5	2	---	---	7	1
Minimum quantity requirements	7	4	5	4	3	---	3	3	1
Packaging	7	5	4	5	2	---	5	2	1
Price[1]	5	3	10	3	2	2	6	2	1
Product consistency	10	4	3	5	2	---	3	3	2
Product range	10	5	1	4	3	---	2	4	3
Promotional incentives, non-rebate	9	6	1	5	2	---	---	2	6
Quality meets industry standards	9	8	1	5	2	---	3	4	2
Quality exceeds industry standards	9	6	2	5	2	---	2	3	3
Rebates – to your firm	11	3	---	6	1	---	---	2	4
Rebates – to your customers	7	6	---	4	3	---	---	1	5
Reliability of supply	9	7	---	4	3	---	---	4	4
Technical support/service	9	6	1	5	2	---	1	4	3
Traditional supplier	10	5	---	5	2	---	---	4	3
U.S. transportation costs[1]	8	7	2	4	3	---	---	6	1

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

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

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

(…*continued*)

CSN EN 877 is a European standard for cast iron pipes, fittings, and their joints and accessories. It "specifies the requirements for the materials, dimensions and tolerances, mechanical properties, appearance, standard coatings and quality assurance for cast iron pipes, fittings and accessories… and indicates performance requirements for all components, including joints." See https://www.en-standard.eu/csn-en-877-cast-iron-pipes-and-fittings-their-joints-and-accessories-for-the-evacuation-of-water-from-buildings-requirements-test-methods-and-quality-assurance/?gclid=CjwKCAjw3cPYBRB7EiwAsrc-ufjas6XmB33Ts80hg4bbuqUhLLDgNchsdiFVRz7sSLqMdNrPIajnxhoCygEQAvD_BwE, accessed June 1, 2018.

Charlotte Pipe indicated that standards in the European Union have historically been more stringent than in the United States, and that they have different length/diameter requirements and more extensive epoxy coatings that are designed for increased corrosion resistance. Staff field trip report, Charlotte Pipe, May 23, 2018.

Comparison of U.S.-produced and imported CISP fittings

In order to determine whether U.S.-produced CISP fittings can generally be used in the same applications as imports from China, 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-15, two U.S. producers and a majority of responding importers and purchasers reported that U.S. and Chinese CISP fittings can "always" be used interchangeably. Importers' responses varied the most, with three firms reporting that U.S. and Chinese product could "frequently" be used interchangeably, two reporting that they "sometimes" could, and one (***) reporting that they "never" could.

Table II-15
CISP fittings: Interchangeability between CISP fittings produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. China	2	1	---	---	7	3	2	1	10	4	---	---
Nonsubject countries comparisons:												
China vs. nonsubject	1	---	---	---	1	1	1	1	4	1	---	---
U.S. vs. nonsubject	1	1	---	---	1	1	---	---	3	1	---	---

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

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

Among firms reporting that U.S. and Chinese product was either "always" or "frequently" interchangeable, *** stated that all cast iron soil pipe and fittings that are made to the same standard and meet appropriate classifications (such as ASTM A888 classifications or UPC) could be used interchangeably. Among firms reporting that they were "sometimes" or "never" interchangeable, *** stated that using product with the CISPI trademark is sometimes a requirement for the architects and engineers, and that in such instances imported product is not interchangeable with domestic product since only domestic product carries the CISPI trademark. *** stated that warranty policies for Charlotte Pipe and Tyler do not allow pipe and fittings from other manufacturers to be used in the same project along with their product, and that Charlotte Pipe will even refuse to sell cast iron pipe and fittings to wholesalers that also sell and stock imported cast iron pipe and fittings. *** added that CISPI (which includes Charlotte Pipe, Tyler, and AB&I) "fabricates requirements to the ASTM A888 standards that are not in standards of other countries in an attempt to differentiate domestic fittings from fittings produced in other countries," leading to a segmented market between domestic and imported product.

As can be seen from table II-16, the majority of responding purchasers reported that domestically produced CISP fittings "always" met minimum quality specifications. An equal number of purchasers reported that CISP fittings from China "always" and "usually" met minimum quality specifications. Relatively few firms reported that domestic or Chinese product

Table II-16
CISP fittings: Ability to meet minimum quality specifications, by source[1]

Source	Always	Usually	Sometimes	Rarely or never	Don't Know
United States	13	8	2	---	---
China	6	6	1	---	9
Other	---	1	---	---	11

[1] Purchasers were asked how often domestically produced or imported CISP fittings meets minimum quality specifications for their own or their customers' uses.

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

only "sometimes" met minimum quality specifications, and no firm reported that either source "rarely or never" did.

In addition, producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of CISP fittings from the United States, China, or nonsubject countries. As seen in table II-17, U.S. producers' responses were mixed, with *** reporting that they were "always" significant, *** reporting that they "sometimes" were, and *** reporting that they "never" were. Pluralities of importers and purchasers reported that differences other than price were "always" significant.

Table II-17
CISP fittings: Perceived importance of factors other than price between CISP fittings produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. China	1	---	1	1	5	2	3	1	9	3	4	3
Nonsubject countries comparisons:												
U.S. vs. nonsubject	---	---	---	1	1	1	1	1	6	---	---	1
China vs. nonsubject	---	---	---	1	---	1	---	1	4	---	1	1

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

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

In additional comments, *** stated that imported fittings are not allowed on the vast majority of large government projects, private jobs, or projects employing union labor, since these typically require CISP fittings with the CISPI trademark. *** reported that "Buy America" products are sometimes specified.[34] *** also reported several additional non-price factors as always significant, including the domestic producers' warranty limitations, refusal to sell to certain distributors unless they are the exclusive dealer, requirement for distributors to stock

[34] Email communication with ***.

both pipe and fittings, the limited range and long lead times (90-150 days) for imported product, and high transportation costs. *** also reported that availability, quality, technical support, lead time, and product breadth are all significant non-price factors in product selection and application. *** added that the packaging of its fittings by floor or section of project, direct delivery to job sites, its indoor storage facility, and the offering of corrosion-resistant product such as epoxy- and zinc-coated product that adheres to the EN 877 standard are significant non-price factors.[35]

ELASTICITY ESTIMATES[36]

U.S. supply elasticity

The domestic supply elasticity[37] for CISP fittings measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of CISP fittings. 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 CISP fittings. Due to the relatively low level of reported capacity utilization and high levels of inventory, the U.S. industry appears to have the ability to greatly increase or decrease shipments to the U.S. market. While domestic producers may have the ability to supply large amounts to the domestic market, the responsiveness of supply may be mitigated by their willingness to do so, at least in the short term. A supply elasticity estimate in the range of 3 to 7 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for CISP fittings measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of CISP fittings. 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 CISP fittings in the production of any downstream products. Based on the limited use of substitutes in the most common end uses and the small cost share of CISP fittings in the overall cost of building projects, the aggregate demand for CISP fittings is likely to be relatively inelastic; a range of -0.1 to -0.5 is suggested.

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[35] NewAge argues that its epoxy-coated product, designed to meet the EN 877 standard, provides better protection against corrosion than "commodity asphalt CISP products," and that increased environmental standards and reduced water-flow in CISP systems in recent years make this product superior. Hearing transcript, pp. 184-186 (Quillen); NewAge's posthearing brief, pp. 10-15.

[36] No party commented on elasticity estimates in their prehearing or posthearing briefs.

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

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[38] 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.). While the products appear to be highly physically interchangeable, building requirements, rebate structure, and/or preferences for domestic CISP fittings may limit their substitutability in practice. Based on available information, the elasticity of substitution between U.S.-produced CISP fittings and imported CISP fittings is likely to be in the range of 2 to 4.

[38] 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 *Parts IV* and *V* present the volume of subject imports and pricing of domestic and imported products, respectively. 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 three firms with two firms accounting for all of U.S. production of CISP fittings excluding drain bodies that may be considered drain fittings during 2017.

U.S. PRODUCERS

The Commission issued a U.S. producer questionnaire to two firms based on information contained in the petition[1] and an additional six possible producers of drain bodies that may be considered drain fittings.[2] After consolidation, three firms provided usable data on their productive operations. Staff believes that these responses represent all U.S. production of CISP fittings other than drain bodies during 2017.[3]

Table III-1 lists U.S. producers of CISP fittings, their production locations, positions on the petition, and shares of total production.

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

As indicated in table III-2, *** related to foreign producers of the subject merchandise *** and *** related to U.S. importers of the subject merchandise.[4] In addition, as discussed in greater detail below, *** reported directly importing the subject merchandise and *** purchase the subject merchandise from U.S. importers.

Table III-3 presents U.S. producers' reported changes in operations since January 1, 2015.

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[1] In the preliminary phases of these investigations, ***.

[2] The Commission issued U.S. producer questionnaires to ***. ***.

[3] ***. Petition p. 16. Given the timing of when the drain bodies issue was raised, staff had limited time to conduct a comprehensive research of the drain industry, and therefore, U.S. producer data pertaining to drain bodies is correspondingly limited. Based on U.S. producer questionnaire responses, only one firm, ***, provided usable in-scope drain body production data, which is reflected separately in Appendix C.

[4] Wade, a U.S. importer of drain fittings, is a publicly recognized subsidiary of McWane. As a result, its data is combined with McWane for the purposes of this report.

Table III-1
CISP fittings: U.S. producers of CISP fittings, their positions on the petition, production locations, and shares of reported production, 2017

Firm	Position on petition	Production location(s)	Share of production (percent)
Charlotte	Support	Charlotte, NC	***
McWane[1]	Support	Oakland, CA Tyler, TX	***
Zurn	Oppose	Erie, PA	***
Total			***

[1] Tyler and AB&I are both subsidiaries of McWane.

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

Table III-2
CISP fittings: U.S. producers' ownership, related and/or affiliated firms

* * * * * * *

Table III-3
CISP fittings: U.S. producers' reported changes in operations, since January 1, 2015

* * * * * * *

U.S. PRODUCTION, CAPACITY, AND CAPACITY UTILIZATION

Table III-4 and figure III-1 present U.S. producers' production, capacity, and capacity utilization. Reported capacity decreased during 2015-17 and was higher in interim 2018 than in interim 2017. ***. ***. ***. *** production increased for in 2016 and 2017 by *** percent and *** percent, respectively. Production was *** percent lower in interim 2018 compared with interim 2017. Their capacity remained relatively stable. Capacity utilization increased from *** percent in 2015 to *** percent in 2017, but was *** percentage points lower in the first quarter of 2018 (*** percent) compared with the first quarter of 2017 (*** percent).

Table III-4
CISP fittings: U.S. producers' capacity, production, and capacity utilization, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Figure III-1
CISP fittings: U.S. producers' production, capacity, and capacity utilization, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Alternative products

As shown in table III-5, *** percent of the items manufactured on the same equipment during 2017 by U.S. producers was of product subject to these investigations. *** reported producing out-of-scope goods using the same equipment used to produce CISP fittings. Charlotte and McWane stated that CISP fittings were their preferred products due to training costs and profit margins.[5] The share of out-of-scope production to total production decreased from *** percent in 2015 to *** percent in 2017.[6]

Table III-5
CISP fittings: U.S. producers' overall plant capacity and production on the same equipment as subject products, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

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

Table III-6 presents data regarding U.S. producers' U.S. shipments, export shipments, and total shipments. U.S. producers' shipments increased from *** short tons in 2015 to *** short tons in 2017, while overall value and unit value decreased during this time, from *** to *** and from *** to *** per short ton, respectively. Export shipments accounted for a decreasing share of total shipments, declining from *** percent in 2015 to *** percent in 2017 on a quantity basis.

Table III-6
CISP fittings: U.S. producers' U.S. shipments, exports shipments, and total shipments, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Table III-7
CISP fittings: U.S. producers' U.S. shipments by region and product type, 2017

* * * * * * *

[5] Conference transcript, pp. 30-31 (Lowe, Simmons). ***.
[6] ***.

Table III-7 presents U.S. producers' U.S. shipments by region and product type in 2017. The products include both hubless and hub and spigot types in both standard and epoxy-coated varieties. U.S. producers' shipments of epoxy-coated fittings totaled *** short tons. The largest geographical areas for shipments of domestically produced CISP fittings in 2017 were the *** (*** short tons and ***) and the *** (*** short tons and ***). The regions with the highest unit values were *** at *** per short ton for hubless CISP fittings and the *** at *** per short ton for hub and spigot CISP fittings. Conversely, the regions with the lowest unit values for hubless CISP fittings were those with the highest volume of U.S. shipments: the *** at *** per short ton and the *** at *** per short ton. In total, *** percent and *** percent of domestically produced CISP fittings are shipped to the *** and ***, respectively, followed by the *** at *** percent and the *** at *** percent.

Further analysis of the product types in table III-7 demonstrates that U.S. producers' U.S. shipments consist of *** percent hubless fittings and *** percent hub and spigot fittings. In the high-volume geographical areas, hubless fittings are the most common type, and comprised of *** percent and *** percent of U.S. producers' U.S. shipments for the *** regions, respectively. The *** is the only region in which hub and spigot CISP fittings are a majority of shipments (*** percent).

U.S. PRODUCERS' INVENTORIES

Table III-8 presents U.S. producers' end-of-period inventories and the ratio of these inventories to U.S. producers' production, U.S. shipments, and total shipments**.** End-of-period inventories increased by *** short tons between 2015 and 2017. Inventories were slightly lower in interim 2018 (*** short tons) compared with interim 2017 (*** short tons). The ratio of inventories to U.S. production, shipments, and total shipments was lowest in 2016 at ***, ***, and *** percent, respectively. The ratios of inventories relative to U.S. production, shipments, and total shipments increased by *** percentage points from 2015 to 2017. Inventories relative to U.S. shipments and total shipments were lower in interim 2018 compared with interim 2017 by *** and *** percentage points, respectively, while the share of inventories to U.S. production was higher in interim 2018 compared with interim 2017 by *** percentage points.

Table III-8
CISP fittings: U.S. producers' inventories, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

U.S. PRODUCERS' IMPORTS AND PURCHASES

Two U.S. producers, ***, purchased CISP fittings during 2015-18. ***. ***.[7]

U.S. producers' imports of CISP fittings are presented in table III-9. *** imported CISP fittings *** during 2015-17. *** reported that its reason for importing was due to ***.[8] The ratio of imports to production for ***. ***.[9] ***.

Table III-9
CISP fittings: U.S. producers' imports, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Table III-10 shows U.S. producers' employment-related data from 2015 to 2017 and the interim periods, January to March 2017, and January to March 2018. The number of production and related workers (PRWs) decreased during 2015-17, with *** fewer PRWs in 2017 compared to 2015. Total hours worked decreased from 2015, with *** less total hours worked in 2016, but increased by *** total hours worked in 2017. Hours worked per PRW increased each year since 2015, from 2015 to 2016 by *** hours worked per PRW in and an additional *** hours worked per PRW in 2017. Similarly, hourly wages increased during 2015-17 by *** per hour. Total wages paid decreased from *** in 2015 to *** in 2016, but then increased by *** in 2017 to ***. Productivity moderately increased during 2015-17, from *** to *** short tons per 1,000 hours and unit labor costs decreased from *** per short ton to *** per short ton during this time.

Between the interim periods, the number of PRWs was slightly higher in the first quarter of 2018 compared with the first quarter of 2017, while total hours worked and hours per PRW were lower. Total wages paid also were lower, though hourly wages were higher, at *** per hour in interim 2018 compared with *** per hour in interim 2017. Productivity was lower by *** short tons per 1,000 hours in interim 2018 compared with interim 2017. Coupled with the rising hourly wages, this contributed to unit labor costs which were *** per short ton higher in interim 2018 than in interim 2017.

Table III-10
CISP fittings: Average number of production and related workers, hours worked, wages paid to such employees, hourly wages, productivity, and unit labor costs, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

[7] ***. ***.
[8] ***.
[9] ***.

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

U.S. IMPORTERS

The Commission issued importer questionnaires to 48 firms believed to be importers of subject CISP fittings, as well as to all U.S. producers of CISP fittings.[1] Of the 17 responding firms,[2] usable questionnaire responses were received from 15 companies,[3] representing over 100 percent of U.S. imports from China in 2017 under HTS statistical reporting number 7307.11.0045. Table IV-1 lists all responding U.S. importers of CISP fittings, their locations, and their shares of U.S. imports, in 2017.[4]

The leading importer of CISP fittings was ***, which accounted for *** percent of all imports of CISP fittings from China by quantity in 2017. The leading importer of CISP fittings other than drain bodies was ***, which accounted for *** percent of all imports of CISP fittings from China by quantity in 2017, followed by *** accounting for *** percent of imports. The top three importers of CISP fittings from China accounted for *** percent of subject imports according to official import statistics. ***.[5] ***.[6]

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[1] The Commission issued 41 questionnaires to those firms identified in the petition, along with firms that, based on a review of data provided by U.S. Customs and Border Protection ("Customs"), may have accounted for more than one percent of total imports under HTS subheading 7307.11.0045 in 2017. The Commission also issued seven questionnaires to potential drain fittings importers based on their public product listings. Given the timing of when the drain bodies issue was raised, staff had limited time to conduct a comprehensive research of the drain industry, and therefore, import data pertaining to drain bodies is correspondingly limited.

[2] The Commission did not receive responses from the following U.S. importers who submitted responses in the preliminary phase of investigations: ***.

[3] Data from two importers of drain bodies, ***, are included in this report, which is reflected separately in Appendix C. One drain body importer's response, (***), is omitted and is not included in this report because ***. Another drain body importer (***) provided an incomplete questionnaire response ***. ***. An additional CISP fittings importer's response, (***), is omitted in this section due to ***, but is included in part III of this report. ***. ***.

[4] One responding importer (***) reported imports of CISP fittings from nonsubject sources during January 2015 to March 2018.

[5] ***.

[6] ***.

Table IV-1
CISP fittings: U.S. importers by source, 2017

Firm	Headquarters	Share of imports by source (percent)		
		China	Nonsubject sources	All import sources
Asa Plumbing	Burbank, CA	***	***	***
Bay Supply	San Jose, CA	***	***	***
CAB Inc	Buford, GA	***	***	***
Glendale	Glendale, CA	***	***	***
J. R. Smith	Montgomery, AL	***	***	***
LC Supply	Brookyln, NY	***	***	***
Leo	Brooklyn, NY	***	***	***
Max Supply	College Pont, NY	***	***	***
McWane	Birmingham, AL	***	***	***
NewAge	Sugar Land, TX	***	***	***
Shin Da	Philadelphia, PA	***	***	***
Steve's Wholesale	Jamaica, NY	***	***	***
Thermatix	Hicksville, NY	***	***	***
Wells	Chicago, IL	***	***	***
Zurn	Milwaukee, WI	***	***	***
Total		***	***	***

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

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

U.S. IMPORTS

Table IV-2 and figure IV-1 present data for U.S. imports of CISP fittings from China and all other sources. Between January 2015 and March 2018, China was the largest source of imports of CISP fittings, contributing over *** percent by both quantity and value. Compared with the first quarter of 2017, U.S. imports from China as a share of total imports of CISP fittings were lower by *** percentage points in quantity terms and value terms in the first quarter of

Table IV-2
CISP fittings: U.S. imports by source, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Figure IV-1
CISP fittings: U.S. imports volumes and prices, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

2018. Between 2015 and 2017, U.S. imports increased overall from *** to *** short tons, with imports from China increasing by *** percent and imports from nonsubject sources decreasing by *** percent in quantity terms. From 2015 to 2016, U.S. imports from China increased by *** short tons (***) and from 2016 to 2017, U.S. imports from China decreased by *** shorts tons (***). In that same period, the average unit value of imports from China fluctuated, decreasing from *** dollars per short ton in 2015 to *** dollars per short ton in 2016. By 2017, the value and unit value of imports from China decreased to *** per short ton. Although imports from China were greatest in 2016 in terms of quantity and value, unit value was the lowest. Imports from nonsubject sources were at their period lows during 2016 as well for both quantity and value.

The quantity and value of imports from China in the first quarter of 2018 were lower than in the first quarter of 2017 by *** short tons (***) and *** (*** percent). Similarly, though lower in magnitude, the quantity and value of imports from nonsubject sources were lower by *** short tons and *** in interim 2018 compared to interim 2017. Average unit values from all import sources were higher in the first quarter of 2018 compared with the first quarter of 2017 at *** per short ton compared to *** per short ton.

In relation to U.S. production, during 2015-17, imports from China and nonsubject imports declined overall with an inflection in 2016. U.S. imports of CISP fittings from China as a ratio to U.S. production were lower by *** percentage points in interim 2018 compared with interim 2017. Nonsubject import ratios remained the same in interim 2018 compared to interim 2017.

Table IV-3 presents data for U.S. producers' and U.S. importers' U.S. shipments by product type and coatings in 2017. U.S. shipments by product type are divided into hubless and hub and spigot fitting varieties,[7] while coatings are divided into epoxy-coated or standard (i.e., asphalt-based or other coating technology)[8] fittings.[9] [10] For U.S. producers and U.S. importers, hubless, standard coated fittings comprised the largest shipments at *** percent of total U.S. shipments of CISP fittings, with U.S. importers' shipments of hubless, standard coated fittings at *** percent of total U.S. shipments. As presented in Part III, U.S. producers reported *** of epoxy-coated fittings. Epoxy-coated fittings accounted for *** percent of the quantity of total U.S. shipments and *** percent of U.S. importer shipments of CISP fittings from China. In general, hubless CISP fittings accounted for *** percent of all U.S. shipments. Epoxy-coated fittings were *** percent of the quantity of U.S. shipments for the most common type of fittings, hubless fittings, and *** percent of U.S. importers' shipments. For standard coated

[7] CISP fittings firms could not identify some products as hubless and hub and spigot varieties, such as couplings and certain drain fittings are not reported in table IV-3.

[8] ***.

[9] ***.

[10] Respondent NewAge claims that its epoxy-coated fittings are qualitatively superior to the asphalt-coated CISP fittings offered by the domestic industry. According to NewAge's questionnaire response, epoxy coatings offer greater heat resistance, corrosion resistance and noise reduction. Respondent NewAge's postconference brief, pp. 15-16.

Table IV-3
CISP fittings: U.S. producers' and U.S. importers' commercial U.S. shipments by product type, 2017

* * * * * * *

products, U.S. importers' shipments represented less than *** percent of all shipments, with hub and spigot types comprising the smallest shipments at *** percent of U.S. shipments of hub and spigot types.

During the course of the investigations, cast iron soil pipe couplings were requested to be included in the scope.[11] Cast iron soil pipe couplings connect pipe with standard fitting shapes.[12] No U.S. producers of CISP fittings produce cast iron soil pipe couplings.[13] ***. *** of the responding U.S. importers, ***, imports solely cast iron soil pipe couplings, and accounted for *** percent of imports of CISP fittings from China in 2017.

Geographical markets

Table IV-4 presents data for U.S. imports of CISP fittings from China and all other sources by region of border of entry.[14] In 2017, 42.2 percent of all subject imports entered in

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[11] Though not explicitly defined in the scope, ITA deferred to petitioners, which requested to include cast iron soil pipe couplings in the scope. ***. ***. On July 5, 2018, in a final scope memo, Commerce included cast iron sleeves (couplings) upon the request of the petitioners. Department of Commerce, Final Scope Memorandum, July 5, 2018.

[12] CISPI standards mention the use of stainless steel couplings with rubber sleeves as the typical coupling. Cast Iron Soil Pipe Institute, *CISPI Designation: 301-12, Standard Specification for Hubless Cast Iron Soil Pipe and Fittings for Sanitary and Storm Drain, Waste, and Vent Piping Applications*, 2012, p. 66.

Cast iron couplings provide increased corrosion resistance, while stainless steel couplings are more flexible in plumbing systems. "Stainless steel couplings were found to corrode if:

- Soil conditions were adverse, aggressive, or had unbalanced pH levels.
- One part of the coupling was exposed to a different oxygen concentration.
- Corrosion-induced conditions moved into crevices shaped during coupling fabrication.
- Salt-water intrusion occurs."

MG Coupling webpage, http://www.mgcoupling.com/about.php, retrieved June 8, 2018. See also ***.

[13] ***.

[14] Border of entry is defined by Customs and depicts geographic region. For imports of CISP fittings, East consists of Boston, Massachusetts; Buffalo, New York; Charlotte, North Carolina; New York, New York; Ogdensburg, New York; Philadelphia, Pennsylvania; and St. Albans, Vermont. North consists of Chicago, Illinois; Cleveland, Ohio; and Detroit, Michigan. South consists of Houston-Galveston, Texas; Mobile, Alabama; and New Orleans, Louisiana. West consists of Los Angeles, California and San Francisco, California.

Table IV-4
CISP fittings: U.S. imports by border of entry, 2017

Item	Border of entry				
	East	North	South	West	Total
	Quantity (short tons)				
U.S. imports from.--					
China	2,841	189	1,315	2,295	6,640
Nonsubject sources	35	56	23	---	114
All import sources	2,876	245	1,338	2,295	6,754
	Share across (percent)				
U.S. imports from.--					
China	42.8	2.8	19.8	34.6	100.0
Nonsubject sources	30.7	48.7	20.6	0.0	100.0
All import sources	42.6	3.6	19.8	34.0	100.0
	Share down (percent)				
U.S. imports from.--					
China	98.8	77.2	98.3	100.0	98.3
Nonsubject sources	1.2	22.8	1.7	---	1.7
All import sources	100.0	100.0	100.0	100.0	100.0

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

Source: Official U.S. import statistics for HTS statistical reporting number 7307.11.0045, accessed June 4, 2018.

Table IV-5
CISP fittings: U.S. importers' U.S. shipments of imports from China by region and product type, 2017

* * * * * * *

New York, New York, followed by Los Angeles, California (22.7 percent), Houston-Galveston, Texas (19.6 percent), and San Francisco, California (11.9 percent). Other districts of entry for subject imports include Chicago, Illinois; Philadelphia, Pennsylvania; New Orleans, Louisiana; Ogdensburg, New York; St. Albans, Vermont; Charlotte, North Carolina; Boston, Massachusetts; Cleveland, Ohio; and Mobile, Alabama. For nonsubject imports, the major district of entry is Detroit, Michigan at 48.5 percent of all nonsubject imports, followed by Ogdensburg, New York (30.5 percent) and Mobile, Alabama (20.5 percent).

Table IV-5 further breaks out U.S. importers' shipments from China by region of entry and product type. The products include both hubless and hub and spigot types in both epoxy-coated and standard coated varieties. The largest geographical area for CISP fittings in 2017 at *** percent of U.S. importers' shipments was the *** (*** short tons and ***). The majority (*** percent) of epoxy-coated CISP fittings were shipped to the *** region and the majority (*** percent) of standard coated CISP fittings were shipped to the *** in 2017. In 2017, total average unit values for epoxy-coated CISP fittings (*** dollars per short ton) were greater than standard coated CISP fittings (***). Regardless of region, average unit values are not highly variable across regions for standard coated hubless fittings (about ***) and for epoxy-coated

hubless fittings (about ***). Average unit values for hubless fittings are the lowest in the ***, the region with the ***. There were not large shipments of CISP fittings in the *** (*** percent), *** (*** percent), or the *** (*** percent).

CRITICAL CIRCUMSTANCES

On July 17, 2018, Commerce issued its final affirmative determination that "critical circumstances, in part" exist with regard to imports of cast iron soil pipe fittings from China for the China-wide entity, but do not exist for Shanxi Xuanshi Industrial Group Co., Ltd. ("Shanxi Xuanshi"), Wor-Biz Trading Co., Ltd ("Wor-Biz") and the non-selected separate rate respondents.[15] In these investigations, if both Commerce and the Commission make affirmative final critical circumstances determinations, certain subject imports may be subject to antidumping duties retroactive by 90 days from February 20, 2018, the effective date of Commerce's preliminary affirmative LTFV determination. In assessing critical circumstances, the Commission shall consider, among other factors it considers relevant,

> (I) the timing and the volume of the imports,
> (II) a rapid increase in inventories of the imports, and
> (III) any other circumstances indicating that the remedial effect of the {order} will be seriously undermined.[16]

Information regarding the timing and volume of imports subject to Commerce's final affirmative critical circumstances determination, as well as the volume of inventories of such imports, is presented below.

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[15] *Cast Iron Soil Pipe Fittings From the People's Republic of China: Final Affirmative Determination of Sales at Less Than Fair Value and Final Determination of Critical Circumstances, in Part*, 83 FR 33205, July 17, 2018, referenced in app. A. When petitioners file timely allegations of critical circumstances, Commerce examines whether there is a reasonable basis to believe or suspect that (1) either there is a history of dumping and material injury by reason of dumped imports in the United States or elsewhere of the subject merchandise, or the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the subject merchandise at LTFV and that there was likely to be material injury by the reason of such sales; and (2) there have been massive imports of the subject merchandise over a relatively short period.

Non-selected separate rate respondents include: Guang Zhou Premier & Pinan Foundry Co., Ltd/Botou Chenyuan Foundry Co., Ltd/Wuhu Best Machines Co., Ltd., Shanxi Zhongrui Tianyue Trading Co., Ltd, Dalian Lino F.T.Z. Co., Ltd, Dinggin Hardware (Dalian) Co., Ltd; Dalian Metal I/E Co., Ltd; Qinshui Shunshida Casting Co., Ltd;

[16] 19 U.S.C. §§ 1671d(b)(4)(A)(ii), 1673d(b)(4)(A)(ii).

Timing and volume of imports

Table IV-6 and figure IV-2 present data concerning timing and volume of imports.

Table IV-6
CISP fittings: U.S. importers' U.S. imports from China subject to Commerce's final critical circumstances finding, January 2017 through December 2017

* * * * * * *

Figure IV-2
CISP fittings: U.S. imports subject to Commerce's final critical circumstances findings, January through December 2017

* * * * * * *

Inventories of imports

Based on U.S. importer questionnaire responses, U.S. inventories of imported CISP fittings subject to Commerce's final critical circumstances findings were *** short tons in 2015, *** short tons in 2016, and *** short tons in 2017. [17] Compared with interim 2017, inventories were lower in interim 2018 by *** short tons. Between 2015 and 2017, subject inventories decline as a ratio to U.S. imports, yet was markedly higher in interim 2018 (*** percent) compared with interim 2017 (*** percent). Both as a ratio to U.S. shipments of imports and as a ratio to total shipments of imports, subject inventories had a slight increase between 2015 and 2016, before declining by *** in 2017. Interim 2018 was slightly lower (***) than interim 2017 for inventories as a ratio to U.S. shipments of imports and as a ratio to total shipments of imports.

[17] Subject inventories of U.S. importers were identified using questionnaire responses and proprietary Customs records using HTS statistical reporting number 7307.11.0045, accessed June 5, 2018. The following U.S. importers' inventories were excluded ***.

NEGLIGIBILITY

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[18] Negligible imports are generally defined in the Act, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then imports from such countries are deemed not to be negligible.[19] Imports from China accounted for 98.7 percent of total imports of CISP fittings by quantity during 2017, as stated below in table IV-7.

Table IV-7
CISP fittings: U.S. imports by source, July 2016 to June 2017

Item	July 2016 through June 2017	
	Quantity (short tons)	Share of quantity (percent)
U.S. imports from.--		
China	7,743	98.7
Nonsubject sources	101	1.3
All import sources	7,844	100.0

Source: Official U.S. import statistics for HTS statistical reporting number 7307.11.0045, June 4, 2018.

Presence in the market

Table IV-8 and figure IV-3 portray monthly imports by source and month of entry over January 2015 to March 2018. Imports from China were highest in September 2017 (1,215 short tons), November 2016 (1,054 short tons) and May 2016 (886 short tons). Since September 2017, imports of CISP fittings from China have generally declined with the three lowest-volume months since January 2015 all occurring in the first quarter of 2018.

[18] 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)).

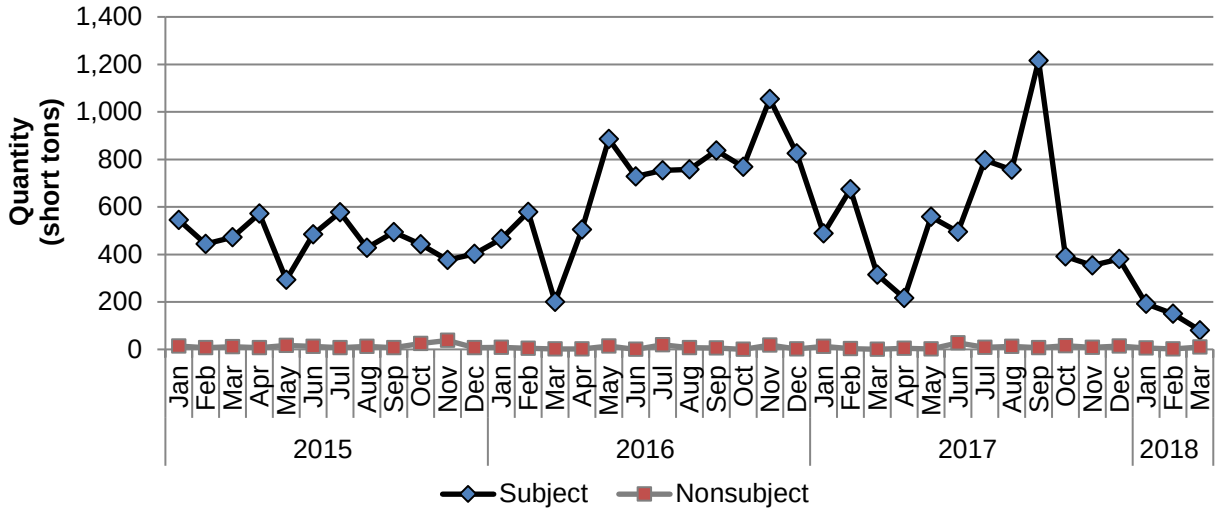
[19] Section 771 (24) of the Act (19 U.S.C § 1677(24)).

Table IV-8
CISP fittings: U.S. imports, by source and month of entry, January 2015 to March 2018

Month of entry	China	Nonsubject sources	Total U.S. imports
	Quantity (short tons)		
2015.--			
January	545	15	560
February	443	7	451
March	472	11	483
April	571	7	578
May	294	17	310
June	485	12	497
July	577	7	584
August	428	13	441
September	494	7	502
October	443	25	468
November	377	38	414
December	403	7	409
2016.--			
January	466	8	474
February	578	4	582
March	200	2	202
April	505	3	508
May	886	14	900
June	728	---	728
July	754	19	773
August	757	7	765
September	838	6	843
October	769	---	769
November	1,054	18	1,071
December	825	2	828
2017.--			
January	488	13	501
February	674	3	676
March	315	0	315
April	217	4	221
May	559	2	560
June	495	27	522
July	797	9	806
August	757	13	769
September	1,215	7	1,222
October	391	15	406
November	353	8	362
December	381	14	394
2018.--			
January	191	6	198
February	150	2	152
March	81	10	91

Source: Official U.S. import statistics for HTS statistical reporting number 7307.11.0045, accessed June 4, 2018.

Figure IV-3
CISP fittings: U.S. import volumes, January 2015 to March 2018



Source: Official U.S. import statistics for HTS statistical reporting number 7307.11.0045, accessed June 4, 2018.

APPARENT U.S. CONSUMPTION

Table IV-9 presents data on apparent U.S. consumption of CISP fittings constructed by U.S. producers' U.S. shipments and U.S. imports. By quantity, apparent U.S. consumption increased overall by 7.3 percent from 2015 to 2017. It increased from 49,016 short tons in 2015 to 54,024 short tons in 2016, and subsequently decreased to 52,570 short tons in 2017. Apparent consumption was lower in the first quarter of 2018 than in the first quarter of 2017 in both quantity and value terms: 12,102 short tons ($34.3 million) in 2018 compared with 12,734 short tons ($35.5 million) in the first quarter of 2017.

Following 2016, U.S. imports from China fell by *** short tons (***) in 2017, while U.S. producers' shipments increased by *** short tons that same year. Overall, U.S. imports increased slightly in quantity and value terms from 2015 to 2017, by *** percent and *** percent, respectively. Similarly, U.S. producers' U.S. shipments increased by *** percent from 2015 to 2017 in quantity terms, their shipments declined by *** percent in value terms. U.S. imports from China in the first quarter of 2018 were lower than during that period in 2017, by *** percent in quantity terms and *** percent in value terms. In a like manner, U.S. producers' shipments were *** short tons (***) lower in interim 2018 compared with interim 2017.

Table IV-9
CISP fittings: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, 2015-2017, January to March 2017, and January to March 2018

Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Quantity (short tons)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. imports from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
Apparent U.S. consumption	49,016	54,024	52,570	12,734	12,102
	Value (1,000 dollars)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. imports from.--					
China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
Apparent U.S. consumption	150,911	158,722	146,593	35,552	34,341

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting number 7307.11.0045, accessed June 4, 2018.

MARKET SHARES

Table IV-10 and figure IV-4 present data on the market share of CISP fittings. U.S. producers' market share displayed a slight increase of *** in quantity terms and decrease of *** in value terms during 2015-17, but were higher during the first quarter of 2018 compared to that of 2017, by *** percentage points in quantity terms and *** percentage points in value terms. Alternatively, the market share of subject imports from China decreased slightly from *** in 2015 to *** percent in 2017 in quantity terms and increased from *** in 2015 to *** percent in 2017 in value terms, but was *** percentage points lower in quantity terms and *** percentage points lower in value terms in the first quarter 2018 when compared with the first quarter of 2017. During this time, nonsubject import market shares remained rather consistent, at *** percent in both quantity and value terms.

Table IV-10
CISP fittings: U.S. market share, 2015-2017, January to March 2017, and January to March 2018

Item	Calendar year			January to March	
	2015	2016	2017	2017	2018
	Quantity (short tons)				
Apparent U.S. consumption	49,016	54,024	52,570	12,734	12,102
	Share of quantity (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***
	Value (1,000 dollars)				
Apparent U.S. consumption	150,911	158,722	146,593	35,552	34,341
	Share of value (percent)				
U.S. producers' U.S. shipments	***	***	***	***	***
U.S. importers' U.S. shipments from.--China	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics for HTS statistical reporting number 7307.11.0045, accessed June 4, 2018.

Figure IV-4
CISP fittings: Apparent U.S. consumption, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

The main raw materials used in the domestic production of CISP fittings are cupola cast scrap (*** percent) and shredded auto scrap (*** percent).[1] Chinese producers primarily produce CISP fittings using pig iron.[2] Producers then mold the cast iron into a variety of shapes to produce fittings. CISP fittings are also typically coated with asphalt, black paint, zinc phosphate, or epoxy resin for added corrosion resistance, handling, and aesthetic appeal.[3] Overall, raw material costs account for a not insubstantial portion of the final cost of CISP fittings. For domestic producers, raw materials as a share of the cost of goods sold ("COGS") decreased from *** percent in 2015 to *** percent in 2017.

In general, the prices of cupola cast scrap, shredded auto scrap, and Chinese pig iron all followed similar trends, with cupola cast scrap and shredded auto scrap prices tracking closely (figure V-1). Prices for cupola cast scrap and shredded auto scrap generally decreased throughout 2015 before recovering irregularly throughout 2016 and 2017 (***), and increasing *** in early 2018.[4] The price of pig iron decreased through early 2016 before irregularly increasing through February 2018.[5]

Figure V-1
Raw material costs: Prices of cupola cast scrap and shredded auto scrap, monthly, January 2015-March 2018, and pig iron (China),[1] monthly, January 2015-February 2018

* * * * * * *

[1] Telephone interview with ***, July 24, 2017. Charlotte Pipe indicated that roughly *** percent of its scrap metal raw material is made up of steel and *** percent is cast iron. ***.

[2] Conference transcript, pp. 60-61 (Simmons). According to petitioner Charlotte, this is primarily to due to availability and overall cost, as recycled scrap metals are readily available in the United States but largely unavailable in China. Hearing transcript, pp. 98-99 (Simmons). According to U.S. Geological Survey data, China accounted for approximately 61 percent of global pig iron production in 2017. The United States accounted for approximately 2 percent. See USGS Mineral Commodities Summary, Iron and Steel, January 2018, available at https://minerals.usgs.gov/minerals/pubs/commodity/iron_&_steel/mcs-2018-feste.pdf, retrieved May 25, 2018.

[3] Charlotte Pipe stated that ***. ***.

[4] Between January 2015 and December 2017, the prices of cupola cast scrap and shredded auto scrap decreased ***, while the prices of these raw materials increased *** between December 2017 and March 2018.

[5] Between January 2015 and December 2017, the price of Chinese pig iron increased ***, then increased another *** between December 2017 and February 2018.

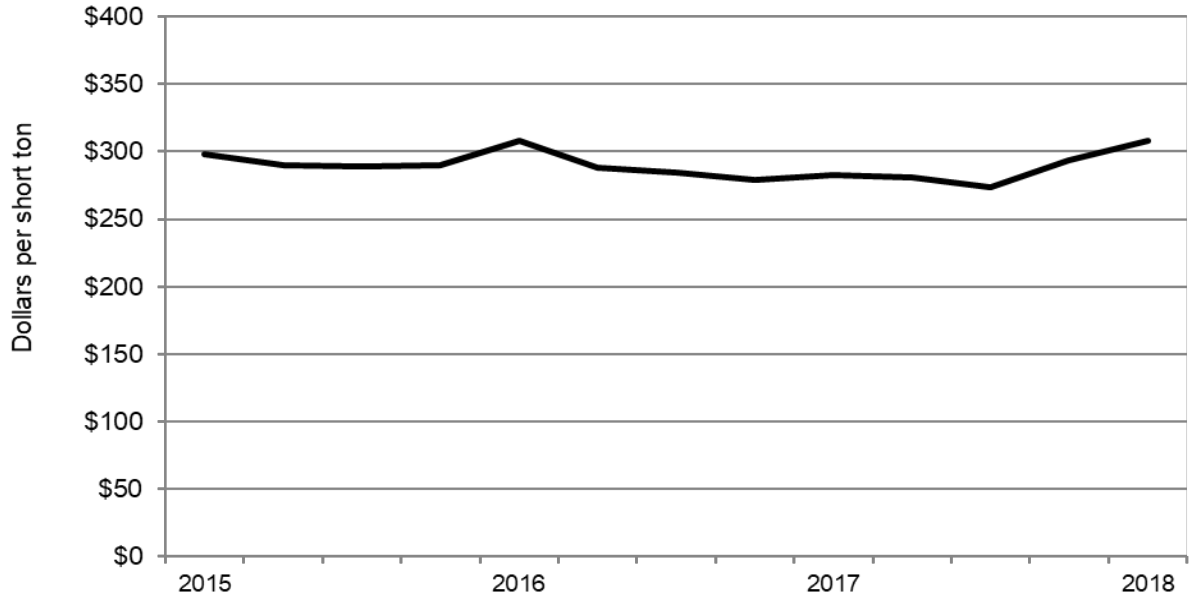
All three U.S. producers reported increasing prices for raw materials since 2015, with *** had not been able to pass through raw material cost increases to the prices they charge for CISP fittings. Eight of 13 responding importers reported increasing raw material prices since 2015, while four reported that raw material prices had not changed, and one reported that raw material prices had decreased.

Energy and other factory costs

In addition to scrap metal, other large input costs in the production of CISP fittings include coke, electricity, and energy. Due to the inefficiency of starting and stopping cupola furnace operations, domestic producers attempt to keep these furnaces burning continuously in order to maximize efficiency.[6] Charlotte Pipe and AB&I also stated that maintaining compliance with environmental and safety regulations is costly and requires large capital expenditures.[7] During 2015-17, U.S. producers "other factory costs" (which include both energy and environmental/safety costs) as a share of COGS remained relatively stable ***.

Between the first quarter of 2015 and the last quarter of 2017, the price of coke decreased by 1.8 percent (figure V-2). Between the last quarter of 2017 and the first quarter of 2018, the price of coke increased by 5.0 percent.

Figure V-2
Coke prices: Prices of metallurgical coke, quarterly, January 2015-March 2018

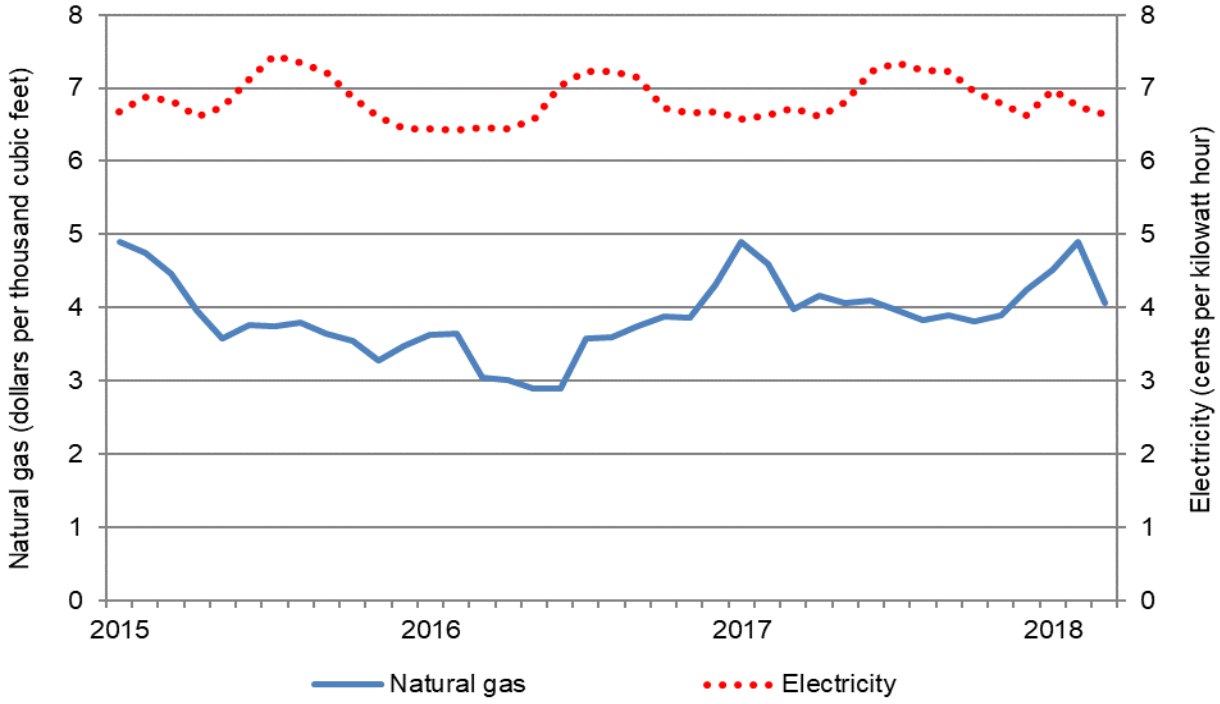


Source: Energy Information Administration, available at https://www.eia.gov/coal/markets/, retrieved July 6, 2018.

[6] Conference transcript, p. 26 (Lowe).
[7] Conference transcript, pp. 20 (Dowd), 35 and 76-77 (Lowe, Simmons).

The price of electricity remained relatively stable during January 2015-March 2018 with seasonal peaks each summer. The price of natural gas generally decreased until mid-2016 but then recovered to beginning-of-period levels in February 2018 before dropping substantially again in March 2018 (figure V-3).[8] This decrease is consistent with natural gas prices in other years, decreasing in late winter and early spring.

Figure V-3
Energy prices: Industrial prices of electricity and natural gas, monthly, January 2015-March 2018



Source: Energy Information Administration, available at https://www.eia.gov/dnav/ng/ng_pri_sum_a_EPG0_PIN_DMcf_a.htm and https://www.eia.gov/electricity/monthly/epm_table_grapher.php?t=epmt_5_6_a, retrieved May July 6, 2018.

[8] The prices of electricity and natural gas were lower in December 2017 than January 2015, by 0.6 percent and 13.3 percent, respectively. Between December 2017 and March 2018 the price of electricity increased by 0.2 percent while between December 2017 and February 2018 the price of natural gas increased by 14.8 percent.

Charlotte Pipe indicated that its negotiated electricity costs are *** per kilowatt hour. ***.

Transportation costs to the U.S. market

Transportation costs for CISP fittings shipped from China to the United States averaged 8.2 percent during 2017. These estimates were derived from official import data and represent the transportation and other charges on imports.[9]

U.S. inland transportation costs

*** U.S. producers and most importers (9 of 12 firms) reported that they typically arrange transportation to their customers. U.S. producers reported that their U.S. inland transportation costs ranged from *** percent, while most importers reported costs ranging from *** percent, for a simple average of 10.6 percent.[10]

PRICING PRACTICES

Pricing methods

According to questionnaire responses, CISP fittings are sold primarily on the spot market, although ***.[11] Loyalty programs are reported to be ***.[12] ***.[13] ***.[14]

U.S. producers and importers both reported using transaction-by-transaction negotiations, contracts, and price lists, though importers sell primarily through transaction-by-transaction negotiations or price lists rather than via contracts (table V-1). *** reported that it relies on industry price lists set by the petitioners. Charlotte Pipe, McWane subsidiaries AB&I and Tyler, and NewAge all publish price lists.[15]

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[9] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2017 and then dividing by the customs value based on the HTS subheading 7303.00.0030.

[10] In addition, one importer (***) reported a transportation cost of 50 percent. Importers' inland transportation costs inclusive of this estimate averaged 14.6 percent.

[11] See Petitioner's posthearing brief, Response to Commission question 26.

[12] "***." Petitioner's Postconference Brief, Exh. 5, p. 135.

[13] ***. Petitioner's Postconference Brief, Exh. 5.

[14] Petitioner's Postconference Brief, Exh. 6.

[15] See Charlotte Pipe website at http://www.charlottepipe.com/price_lists.aspx, AB&I website at http://abifoundry.com/pipe-fitting-couplings/products/price-sheets/, Tyler website at http://www.tylerpipe.com/resources/pricing-literature/price-sheets/, and NewAge website at https://www.newagecasting.com/price-lists.html, retrieved June 8, 2018.

Table V-1
CISP fittings: U.S. producers' and importers' reported price setting methods, by number of responding firms[1]

Method	U.S. producers	U.S. importers
Transaction-by-transaction	***	6
Contract	***	1
Set price list	***	7
Other	***	1
Responding firms	3	13

[1] The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed.

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

*** reported selling *** of its CISP fittings *** in 2017 (see table V-2), but also that it sold ***.[16] *** reported selling ***. *** reported that its ***.[17] Responding importers reported selling the vast majority of their CISP fittings in the spot market in 2017, with the remaining amount via short-term contract.

Table V-2
CISP fittings: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2017

Item	U.S. producers[1]	Subject U.S. importers
	Share (percent)	
Share of commercial U.S. shipments.--		
Long-term contracts	***	---
Annual contract	***	---
Short-term contracts	***	4.7
Spot sales	***	95.3

[1] Zurn Cast Metals discontinued production operations in September 2016, ***.

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

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

Most purchasers (14 of 25) reported that they purchase CISP fittings on a weekly basis, 8 purchasers reported purchasing them on a monthly basis, 2 reported purchasing daily, and 1 reported that the frequency of purchases depends on the project. Nineteen of 25 responding purchasers reported that their purchasing frequency had not changed since 2015. Purchaser *** reported that its purchasing frequency was reduced due to a change in the ***. Most

[16] *** and Petitioner's posthearing brief, Response to Commission question 26. Both Charlotte Pipe and McWane required exclusivity in rebate programs. Petitioner's posthearing brief, Exh. 14. See further discussion in "Rebates" section below.

[17] McWane required exclusivity in rebate programs. Petitioner's posthearing brief, Exh. 15. See further discussion in "Rebates" section below.

purchasers (21 of 25) reported contacting between one and three suppliers before making a purchase, with 18 reporting that they purchase exclusively from one supplier, 1 reporting that it purchases from two suppliers, 4 reporting that they purchase from three suppliers, and 2 reporting that they purchase from four suppliers.

Eleven of 25 purchasers reported that their purchases of CISP fittings usually involve negotiations with the supplier, while 15 reported that they do not.[18] Purchasers indicated that the factors negotiated may include price, terms, programs, project quotations based on the size of the project, and competitive conditions in the market. No purchaser reported quoting prices from competing firms during negotiations. Purchasers were also asked how the prices for their different locations were determined. Most firms (9 of 16) indicated that they were determined regionally, four reported that they were determined by state, one by individual location, and one by job/project size.

As noted in Part II of this report, 8 of 23 responding purchasers reported that they had changed suppliers since January 2015, while 15 reported that they had not. When asked if they had incurred any costs or lost any benefits by purchasing from a different supplier, 2 of 15 firms reported that they had: *** reported that it paid 22.6 percent higher prices (equivalent to ***) to AB&I than it had been paying to NewAge, and *** reported lost profits of approximately $30,000 on jobs that would not accept imported product. When asked if they would have incurred any costs or lost any benefits if they had changed suppliers since January 2015, 5 of 19 firms reported that they would: *** reported that it would have lost as much as $2 million in loyalty rebates; *** reported that it would forfeit a loyalty rebate of approximately 23 percent if it changed vendors in the middle of the year, whereas it would earn the rebate if it stayed with one vendor for an entire year; and *** reported that it would have lost 20-30 percent.

Sales terms and discounts

*** U.S. producers and most importers (9 of 14) reported that they typically quote prices on a delivered basis. *** prices on a delivered basis, while *** on an f.o.b. basis. *** reported sales terms of ***, while ***. Importers reported various sales terms: five of 13 firms reported sales terms of net 30 days; three reported 2/10 net 30 days; three reported cash on delivery ("COD") terms; and one each reported sales terms of net 60 days, 2 percent paid in 30 days, 3 percent 10 days, "pay and go," and job specific terms.

*** reported applying quantity or total volume discounts, with ***. Five of 14 importers reported having no specific discount policy, while four reported offering quantity discounts, two offer total volume discounts, two (***) offer rebates, and one (***) reported using "customer price classes."

[18] *** selected both 'yes' and 'no,' stating that its purchases don't usually involve negotiations, but that "***."

Rebates

U.S. producers, importers, and purchasers were asked to report the types of rebates they or their suppliers offer, and to describe the rebate amounts, payment frequencies, and any requirements involved in their offering or receipt. As shown in table V-3, U.S. producers and importers both reported offering both direct and indirect rebates. Among U.S. producers, *** direct rebates, while *** indirect rebates. Among importers, *** direct rebates, while *** indirect rebates.[19] Purchaser responses followed similar trends, with nine firms reporting direct rebates and one firm reporting indirect rebates from domestic manufacturers, while three firms reported direct rebates and one firm reported indirect rebates from suppliers of imported CISP fittings.

Table V-3
CISP fittings: Rebates offered by U.S. producers and importers and received by U.S. purchasers

Item	Direct rebates	Indirect rebates	Any rebate
	Number of firms (count)		
Rebates offered by:			
U.S. producers	***	***	***
U.S. importers	***	***	***
Rebates received by:			
U.S. purchasers -- domestic	9	1	9
U.S. purchasers -- imported	3	1	4

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

The magnitude of rebates from domestic producers vary; however, *** require exclusivity to receive rebates.[20] [21] Charlotte Pipe reported offering ***.[22] It also offered ***. McWane reported offering ***, as well as ***.[23] It also reported offering ***. McWane estimated that ***. *** reported offering ***. Importer *** reported offering ***. Importer *** reported offering direct rebates to wholesalers, buying groups, and contractors of 2-40 percent, 7.5 percent, and 2-40 percent, respectively.

Purchasers reported being offered rebates from Charlotte Pipe, AB&I, and Tyler in a variety of magnitudes. These include loyalty rebates or loyal distributor incentives of 9 percent annually, 19 percent quarterly, and 23 percent quarterly; volume-based rebates for bonus

[19] A direct rebate is based solely on the purchases of cast iron soil pipe fittings. An indirect rebate is based on the joint purchase of cast iron soil pipe fittings and other products.

[20] Petitioner's posthearing brief, Exhs. 14 and 15.

[21] Respondent NewAge stated that domestic producers also offer rebates directly to contractors of up to 25 percent. Hearing transcript, p. 207 (Singh). *** reported that it offers direct rebates "***…" *** reported that it "***…" Petitioner's posthearing brief, Response to Commission question 25.

[22] Petitioner noted that ***. Petitioner's posthearing brief, Response to Commission question 6, Exhs. 14 and 15.

[23] ***. Petitioner's posthearing brief, Exh. 15.

packs (8 percent), full boxes, truckloads (5 percent each); promotional allowance rebates of 3 percent quarterly; and general rebates from Charlotte Pipe, AB&I, and Tyler of between 5 and 20 percent, with most firms reporting rebates of between 15 and 20 percent. Among the responding purchasers, the total value of domestic rebates reported in 2017 was approximately $16.5 million, which applied to an estimated $86.2 million of domestic CISP fittings purchases in 2017. Four purchasers also reported being offered rebates by importer NewAge. All four firms reported annual rebates of 5 percent, for a total estimated value in 2017 of approximately $164,800, which applied to an estimated $3.1 million of CISP fittings import purchases in 2017.

Sales bundles

U.S. producers, importers, and purchasers were asked if their sales/purchases usually include products other than CISP fittings, such as cast iron soil pipe, couplings, gaskets, and/or plastic pipe and fittings. The vast majority of firms (including *** U.S. producers ***, 10 of 14 importers, and 21 of 25 purchasers) reported that they do. *** stated that *** include cast iron soil pipe.[24] All 10 responding importers reported that they usually include couplings, 9 reported that they include cast iron pipe, 2 firms each reported that they include gaskets and plastic pipe and fittings, and 1 importer each reported that they include pipe hangers and brass plugs. Among purchasers, 13 firms reported that their purchase of CISP fittings usually also involve purchases of couplings, 11 reported that they involve cast iron soil pipe, 10 reported that they involve gaskets, and 2 reported that they involve plastic pipe and/or fittings.

When asked if the CISP fittings were usually invoiced separately or as part of the bundle with other products, responses varied. *** U.S. producers reported that they were typically invoiced separately, with *** adding that if a customer orders fittings and pipe, they will generally ***. Among importers, four of nine firms reported that they were typically invoiced separately, with two reporting that they were invoiced separately and two reporting that they were invoiced with other plumbing products (including pipe, couplings, gaskets, and brass plugs). Among purchasers, 6 of 20 firms reported that they were typically invoiced separately, with most indicating that CISP fittings are often invoiced along with other items in an order, but may be itemized separately.

[24] In response to Commission follow-up questions, petitioner reported that "it is ***."Petitioner's posthearing brief, p. 4, ***, and Exh 18. Pace Supply stated that "***" and that "***." SOLCO stated that it "***." The firm added that it "***.***." Petitioner's posthearing brief, Response to Commission questions 19, 20, and 21.

Tharp Plumbing Supply stated that pipe and fittings are typically purchased together ("always in combination") at the beginning of a job, whereas drains and other devices (such as flush valves, carriers, and other water control products) are purchased together. Hearing transcript, pp. 148-149 (Tharp), Respondents Zurn and PDI's posthearing brief, Responses to Questions from the Commission, p. 2, and Exh. 8.

Price multipliers

Firms were also asked whether CISP fittings are typically sold at different price list multipliers than other products such as pipe, couplings, gaskets, or plastic pipe and fittings. *** reported that the multipliers for CISP fittings and cast soil pipe are the same, while *** its multipliers for other products are different. Three of 7 importers also reported selling CISP fittings at different multipliers than other products, with *** stating that the multiplier was the same for cast iron pipe and fittings, while multipliers for different products such as plastic, couplings, and brass plugs are different. *** elaborated that its multipliers are determined by geographic region and that these are typically revisited annually.

Price leadership

Purchasers reported that Charlotte (reported by 14 purchasers), Tyler (6), and AB&I (3) were price leaders. Many purchasers indicated that domestic producers establish market prices, and that Charlotte announces a price change and Tyler usually follows. No purchasers named any importers as price leaders.[25]

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 CISP fittings products shipped to unrelated U.S. customers during January 2015-March 2018:

Product 1.--2" no hub, 1/4 bend cast iron soil pipe fitting, other than epoxy coated
Product 2.--2" no hub, 1/8 bend cast iron soil pipe fitting, other than epoxy coated
Product 3.--2" no hub, sanitary Tee cast iron soil pipe fitting, other than epoxy coated
Product 4.--4" no hub, 1/8 bend cast iron soil pipe fitting, other than epoxy coated
Product 5.--6" no hub, 1/8 bend cast iron soil pipe fitting, other than epoxy coated
Product 6.--6" no hub, 1/4 bend cast iron soil pipe fitting, other than epoxy coated

[25] At the hearing, purchaser SOLCO testified that "{e}very plumbing and heating distributor in New York would have to agree that Chinese imports have been the price leader in the market." ***. Hearing transcript, p. 43 (Miller).

Two U.S. producers (***) and five importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[26] [27] Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' shipments of CISP fittings and *** percent of U.S. shipments of subject imports from China in 2017.

Price data for products 1-6 are presented in tables V-4 to V-9 and figures V-4 to V-9.

Table V-4
CISP fittings: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter, January 2015-March 2018

* * * * * * *

Table V-5
CISP fittings: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, January 2015-March 2018

* * * * * * *

Table V-6
CISP fittings: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, January 2015-March 2018

* * * * * * *

Table V-7
CISP fittings: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by quarter, January 2015-March 2018

* * * * * * *

Table V-8
CISP fittings: Weighted-average f.o.b. prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), by quarter, January 2015-March 2018

* * * * * * *

[26] 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.

[27] Price data was initially requested in short tons, and reported quantities automatically rounded to the nearest ton. Due to the prevalence of quarterly price data reported in single digit quantities or in quantities of less than one ton, firms were requested to revise their pricing data with the quantities converted to pounds. The Commission received revised price data for all but four importers, ***. ***. ***.

Table V-9
CISP fittings: Weighted-average f.o.b. prices and quantities of domestic and imported product 6 and margins of underselling/(overselling), by quarter, January 2015-March 2018

* * * * * * *

Figure V-4
CISP fittings: Weighted-average prices and quantities of domestic and imported product 1, by quarter, January 2015-March 2018

* * * * * * *

Figure V-5
CISP fittings: Weighted-average prices and quantities of domestic and imported product 2, by quarter, January 2015-March 2018

* * * * * * *

Figure V-6
CISP fittings: Weighted-average prices and quantities of domestic and imported product 3, by quarter, January 2015-March 2018

* * * * * * *

Figure V-7
CISP fittings: Weighted-average prices and quantities of domestic and imported product 4, by quarter, January 2015-March 2018

* * * * * * *

Figure V-8
CISP fittings: Weighted-average prices and quantities of domestic and imported product 5, by quarter, January 2015-March 2018

* * * * * * *

Figure V-9
CISP fittings: Weighted-average prices and quantities of domestic and imported product 6, by quarter, January 2015-March 2018

* * * * * * *

Price trends

In general, prices for domestic producers of CISP fittings decreased during January 2015-March 2018, while prices for products *** imported from China decreased and products *** imported from China increased. Table V-10 summarizes the price trends, by country and by product, and figures V-10 and V-11 show the indexed price changes of each pricing product by source country. As shown in table V-10, domestic price decreases ranged from 11.7 percent (for ***) to 24.5 percent (for ***), while Chinese import prices decreases ranged from 4.8 percent

Table V-10
CISP fittings: Summary of weighted-average f.o.b. prices for products 1-6 from the United States and China

Item	Number of quarters	Low price (per short ton)	High price (per short ton)	Change in price[1] (percent)
Product 1				
United States	13	***	***	***
China	13	***	***	***
Product 2				
United States	13	***	***	***
China	13	***	***	***
Product 3				
United States	13	***	***	***
China	13	***	***	***
Product 4				
United States	13	***	***	***
China	13	***	***	***
Product 5				
United States	13	***	***	***
China	13	***	***	***
Product 6				
United States	13	***	***	***
China	13	***	***	***

[1] Percentage change from the first quarter of 2015 to the first quarter of 2018.

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

(for ***) to 16.3 percent (for ***). Chinese import price increases ranged from 1.1 percent (for ***) to 11.6 percent (for ***).

Figure V-10
CISP fittings: U.S. producers' indexed prices, by quarter, January 2015-March 2018

* * * * * * *

Figure V-11
CISP fittings: U.S. importers' indexed prices, by quarter, January 2015-March 2018

* * * * * * *

Charlotte Pipe testified that it had attempted to raise prices four times between 2015 and 2017 through announced price list increases, but that low-priced imports made such price increases untenable.[28] NewAge testified that it also attempted to raise prices, but "because the domestic producers rescinded all of their price increase notifications, {it} had to follow suit."[29] [30]

[28] Hearing transcript, pp. 29 (Dowd), 92 (Biggers); Petitioner's posthearing brief, p. 12, Response to Commission question 24, and Exhs. 21 and 22. Petitioner contends that "while the margins of underselling ***." Petitioner's posthearing brief, p. 9.

[29] Hearing transcript, pp. 154, 201 (Singh).

Price comparisons

As shown in table V-11, prices for product imported from China were below those for U.S.-produced product in 66 of 78 instances (4.4 million pounds); margins of underselling ranged from 0.6 to 40.6 percent. In the remaining 12 instances (290,221 pounds), prices for product from China were between 0.2 and 29.1 percent above prices for the domestic product.

Table V-11
CISP fittings: Instances of underselling/overselling and the range and average of margins, by pricing product, January 2015-March 2018

Source	Underselling				
	Number of quarters	Quantity[1] (pounds)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	12	***	***	***	***
Product 2	13	***	***	***	***
Product 3	12	***	***	***	***
Product 4	12	***	***	***	***
Product 5	10	***	***	***	***
Product 6	7	***	***	***	***
Total, underselling	66	4,437,101	22.5	0.6	40.6
Source	**(Overselling)**				
	Number of quarters	**Quantity[1] (pounds)**	**Average margin (percent)**	**Margin range (percent)**	
				Min	**Max**
Product 1	1	***	***	***	***
Product 2	0	0	---	---	---
Product 3	1	***	***	***	***
Product 4	1	***	***	***	***
Product 5	3	***	***	***	***
Product 6	6	***	***	***	***
Total, overselling	12	290,221	(8.5)	(0.2)	(29.1)

[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.

(…*continued*)

[30] Zurn testified that contrary to price trends for CISP fittings, the list prices for drains show a consistent increase year after year. Hearing transcript, pp. 166, 174, 180, 196 (Wehr); Respondents Zurn and PDI's posthearing brief, Responses to Questions from the Commission, p. 14, and Exh. 11.

LOST SALES AND LOST REVENUE

In the preliminary phase of these investigations, the Commission requested that U.S. producers of CISP fittings provide a list of purchasers with which they experienced instances of lost sales or revenue due to competition from imports of CISP fittings from China during January 2014-June 2017. *** submitted lost sales and lost revenue allegations.[31] The three responding U.S. producers identified 60 firms where they lost sales or revenue (78 consisting lost sales allegations and 25 consisting of lost revenue allegations). The time frame for the allegations ranged from 2014 to 2017, and no method of sale was listed.

In the final phase of these investigations, U.S. producers *** reported that *** had lost sales. *** reported that ***.

Staff contacted 75 purchasers and received responses from 25 purchasers.[32] Purchasers were requested to provide their purchases by quantity and/or value, depending on how the firms maintain their records. Responding purchasers reported purchasing approximately *** short tons of CISP fittings by quantity (table V-12(a)) and $*** of CISP fittings by value (table V-12(b)) during 2015-17.[33]

[31] In the preliminary phase of these investigations, ***.

[32] Three purchasers (***) submitted lost sales lost revenue survey responses in the preliminary phase but did not submit a purchaser questionnaire responses in the final phase.

[33] Of the 25 responding purchasers, 12 were able to provide purchases in both quantity and value terms, though one firm (***) reported value data only for 2017. Four purchasers (***) provided purchase data by quantity only, and nine purchasers (***) provided purchase data by value only. The totals in tables V-12(a) and V-12(b) are therefore not perfectly comparable, as some purchasers reported both quantity and value and some reported one but not the other.

Table V-12(a)
CISP fittings: Purchasers' responses to purchasing patterns, by quantity

Purchaser	Purchases during 2015-17 (short tons)			Change in domestic share[2] (pp, 2015-17)	Change in subject country share[2] (pp, 2015-17)
	Domestic	Subject	All other[1]		
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
Total	120,411	2,102	64	(1.6)	1.8

[1] Includes all other sources and unknown sources.
[2] Percentage points (pp) change: Change in the share of the firm's total purchases of domestic and/or subject country imports between first and last years.

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

Table V-12(b)
CISP fittings: Purchasers' responses to purchasing patterns, by value

Purchaser	Purchases during 2015-17 (value, in dollars)			Change in domestic share[2] (pp, 2015-17)	Change in subject country share[2] (pp, 2015-17)
	Domestic	Subject	All other[1]		
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
Total	143,174,281	10,167,923	243,074	(3.5)	3.8

[1] Includes all other sources and unknown sources.
[2] Percentage points (pp) change: Change in the share of the firm's total purchases of domestic and/or subject country imports between first and last years.

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

Of the 25 responding purchasers, 12 reported that they had purchased imported CISP fittings from China instead of U.S.-produced product since January 2015, and 11 of them reported that subject import prices were lower than U.S.-produced product. Five of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product. Three purchasers estimated the value of CISP fittings from China purchased instead of domestic product; estimates ranged from $*** to $***, for a total of approximately $1.2 million (table V-13).

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

Purchaser	Subject imports purchased instead of domestic (Y/N)	Imports priced lower (Y/N)	If purchased subject imports instead of domestic, was price a primary reason		
			Y/N	If Yes, quantity (dollars)	If No, non-price reason
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
Total	Yes--12; No--12	Yes--11; No--0	Yes--5; No--7	1,245,286	---

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

Some purchasers elaborated on non-price reasons for purchasing imported rather than domestic product. *** stated that epoxy-coated CISP fittings were only available from Chinese producers, with *** adding that it was also a better product. *** reported that domestic producers would not sell directly to it. *** stated that price was a factor, but not the only one; it indicated that domestic producers' buying requirements is what influenced its move away from domestic producers. *** reported that domestic producers sold product to its competitors at lower prices, so it was unable to compete.

Of the 25 responding purchasers, six reported that U.S. producers had reduced prices in order to compete with lower-priced imports from China, seven reported that domestic producers did not reduce prices in order to compete, and 11 reported that they did not know

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

Purchaser	Producers reduced price (Y/N)	If produced reduced prices: Estimated U.S. price reduction (percent)	If produced reduced prices: Additional information, if available
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
***	***	***	***
Total / average	Yes--6; No--7; Don't Know--11	20.7	---

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

(table V-14). The reported estimated price reductions ranged from *** to *** percent, for an average of 20.7 percent.

In describing the price reductions, purchasers generally stated that they depended on the specific job, the geography, the price of imports, and other competitive factors in the market.

In responding to the lost sales/lost revenue survey, some purchasers provided additional information on purchases and market dynamics. Two firms (***) reported that they only offer CISP fittings produced domestically. *** reported that it has been purchasing from NewAge since *** due to pricing, and that since that time NewAge developed its epoxy-coated product and it has developed a strong relationship with the supplier. *** also reported that it

has not looked into prices or available products from other suppliers since 2015 and has not been contacted by other suppliers. *** reported that it no longer sources from NewAge because NewAge lost its NSF International certification.

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

INTRODUCTION

Three U.S. producers, Charlotte Pipe, McWane, and Zurn, provided financial data on their operations on CISP fittings.[1] *** accounted for *** of industry total net sales value in 2017 followed by *** (*** percent). Zurn *** net sales in 2017. Net sales consisted primarily of commercial sales, accounted for by ***; ***.[2] All U.S. producers reported a calendar year-end of December 31 and reported their financial data based on U.S. generally accepted accounting principles. Commission staff verified the U.S. producers' questionnaire response of Charlotte Pipe. No changes resulted from verification.

OPERATIONS ON CISP FITTINGS

Table VI-1 presents aggregated data on U.S. producers' operations in relation to CISP fittings. Table VI-2 shows the changes in average unit values of select financial indicators. Table VI-3 presents selected company-specific financial data.

Table VI-1
CISP fittings: Results of operations of U.S. producers, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

Table VI-2
CISP fittings: Changes in AUVs, between calendar years and between partial year periods

* * * * * * *

Table VI-3
CISP fittings: Selected results of operations of U.S. producers, by company, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

[1] Staff requested that McWane combine data for its two CISP fittings subsidiaries, AB&I (Oakland, California) and Tyler (Houston, Texas), and report on a consolidated basis. In the preliminary phase of these investigations, AB&I and Tyler reported separate financial data that initially included ***.

[2] ***. ***.

Net sales

As shown in table VI-1, the quantity of net sales increased from 2015 to 2017. The net sales value increased from 2015 to 2016, but fell in 2017. The net sales quantity was higher, while the net sales value was lower in January-March 2018 compared to January-March 2017. As shown in table VI-3, ***.[3]

From 2015 to 2017, the average unit net sales value decreased from $*** per short ton in 2015 to $*** per short ton in 2017 and was lower in January-March 2018 compared to January-March 2017. As shown in table VI-3, ***.[4]

Cost of goods sold and gross profit or (loss)

As shown in table VI-3, the average cost of goods sold (COGS) to net sales ratio irregularly increased from *** percent in 2015 to *** percent in 2017, and was higher at *** percent in January-March 2018 compared to *** percent in January-March 2017. On a company-specific basis, ***.

COGS are comprised of raw materials, direct labor, and other factory costs ("OFC"). OFC represented the largest component of COGS, accounting for between *** percent in January-March 2017 and *** percent in January-March 2018.[5] As shown in table VI-3, average unit OFC moved within a relatively narrow range from 2015 to 2017, but was higher in January-March 2018 compared to January-March 2017. ***.[6] [7] ***.

Raw materials accounted for between *** percent in January-March 2018 and *** percent in 2015 of COGS, whereas direct labor accounted for between *** percent in 2015 and *** percent in January-March 2017. As shown in table VI-3, the average unit raw material cost irregularly decreased from 2015 to 2017 and was higher in January-March 2018 compared to January-March 2017. ***.[8] [9] ***. The average unit direct labor cost increased from 2015 to 2017 and was lower in January-March 2018 compared to January-March 2017. ***.[10] ***.[11]

The industry's gross profit decreased by *** percent, from $*** in 2015 to $***, in 2017. Total net sales value decreased while total COGS increased from 2015 to 2017. In addition, the industry's gross profit was lower by *** percent in January-March 2018 ($***) compared to January-March 2017 ($***) as COGS was higher and total net sales value was lower. On a company-specific basis, ***.

---

[3] ***.

[4] ***. ***.

[5] ***. ***.

[6] ***. ***. ***. ***.

[7] ***. Petitioners' posthearing brief, responses to Commission questions, p. 8.

[8] ***. ***. ***. ***.

[9] ***. Petitioners' posthearing brief, responses to Commission questions, pp. 7 and 8.

[10] ***. ***.

[11] ***.

SG&A expenses and operating income or (loss)

As shown in table VI-1, the industry's SG&A expense ratio (i.e., total SG&A expenses divided by total net sales value) moved within a relatively narrow range, but increased from *** percent in 2015 to *** percent in 2017 and January-March 2018. As shown in table VI-3, the average unit SG&A expenses moved within a relatively narrow range from 2015 to 2017 and was lower in January-March 2018 compared to January-March 2017. ***.[12] [13] ***.

The industry's operating income increased from $*** in 2015 to $*** in 2016 before decreasing to $*** in 2017. The industry experienced an operating loss of $*** in January-March 2018 compared to an operating income of $*** in January-March 2017. On a company-specific basis, ***.

Other expenses and net income or (loss)

Classified below the operating income levels are legal fees and expenses, other expense, and other income, which are usually allocated to the product line from high levels in the corporation. Legal fees and expenses primarily reflect ***. ***.[14] [15]

Other expenses decreased from $*** in 2015 to $*** in 2017 and were lower in January-March 2018 compared to January-March 2017. Other income decreased from $*** in 2015 to $*** in 2016, before increasing to $*** in 2017 and was lower in January-March 2018 compared to January-March 2017. The notable decrease from 2015 to 2016 is mainly attributable to ***.[16]

By definition, items classified at this level in the income statement only affect net income or (loss). Net income continually declined from $*** in 2015 to $*** in 2017. The industry reported a net loss of $*** in January-March 2018 compared to a profit of $*** in January-March 2017. On a company-specific basis, ***.

---

[12] ***. ***. ***. ***.

[13] ***. ***. ***. ***.

[14] According to Court documents, an antitrust agreement was reached whereby a total $30 million was ordered as settlement on November 29, 2016, Order and Final Judgement, retrieved August 11, 2017. According to petitioners, ***. Petitioners' postconference brief, footnote 11, p. 6. ***. ***.

[15] ***. ***.

[16] ***. ***.

Variance analysis

The variance analysis presented in table VI-4 is based on the data in table VI-1.[17] The analysis shows that operating income decreased from 2015 to 2017. This is primarily attributable to ***. Operating income was lower in January-March 2018 than in the comparable period one year earlier for the same reasons as between 2015 and 2017.

Table VI-4
CISP fittings: Variance analysis for U.S. producers, calendar years 2015-17, January-March 2017, and January-March 2018

* * * * * * *

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

Table VI-5 presents capital expenditures and research and development ("R&D") expenses by firm. Capital expenditures increased from $*** in 2015 to $*** in 2017 and were higher in January-March 2018 compared to January-March 2017. As shown in table VI-5, ***.[18] ***.[19] ***.[20] ***.[21]

Table VI-5
CISP fittings: Capital expenditures and research and development expenses for U.S. producers, by firm, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

R&D expenses stayed unchanged from 2015 to 2016 and decreased to zero in 2017. There were no reported R&D expenses during the interim periods. ***.[22] ***.

---

[17] The Commission's variance analysis is calculated in three parts: sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost variance is calculated as the change in unit price or unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or unit cost. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A expense variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances.

[18] ***.

[19] ***.

[20] ***.

[21] ***. ***. ***.

[22] ***.

ASSETS AND RETURN ON ASSETS

Table VI-6 presents data on the U.S. producers' total assets and their operating return on assets.[23] Total assets increased from $*** in 2015 to $*** in 2017. The operating return on assets decreased from *** percent in 2015 to *** percent in 2017. ***.[24]

Table VI-6
CISP fittings: Value of assets used in production, warehousing, and sales, and return on assets for U.S. producers by firm, 2015-17

* * * * * * *

CAPITAL AND INVESTMENT

The Commission requested U.S. producers of CISP fittings to describe actual or potential negative effects of imports of CISP fittings from the subject country on their firms' growth, investment, ability to raise capital, development and production efforts, or on the scale of capital investments. Table VI-7 presents U.S. producers' responses in a tabulated format and table VI-8 provides firms' narrative responses.

Table VI-7
CISP fittings: Actual and anticipated negative effects of imports on investment and growth and development

* * * * * * *

Table VI-8
CISP fittings: Narratives relating to actual and anticipated negative effects of imports on investment and growth and development, since January 1, 2015

* * * * * * *

[23] With respect to a company's overall operations, staff notes that a total asset value (i.e., the bottom line number on the asset side of a company's balance sheet) reflects an aggregation of a number of assets which are generally not product-specific. Accordingly, high-level allocation factors were required in order to report a total asset value for CISP fittings.

[24] ***. ***.

PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

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

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

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VI) the potential for product-shifting if production facilities in the foreign country, which can be used to produce the subject merchandise, are currently being used to produce other products,

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

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

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

Information on the nature of the subsidies was presented earlier in this report; information on the volume of subject imports and pricing of domestic and imported products is presented in *Parts IV* and *V*, respectively; 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.

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

THE INDUSTRY IN CHINA

The Commission issued foreign producers' or exporters' questionnaires to 21 firms believed to produce and/or export CISP fittings from China.[3] Usable responses to the Commission's questionnaire were received from twelve firms: ***, [4] ***.[5] These firms' exports to the United States accounted for approximately *** percent of U.S. imports of CISP fittings from China in 2017. Of the twelve responding firms, five reported production of CISP fittings, accounting for at least *** percent of overall production of CISP fittings in China in 2017.[6]

Tables VII-1 and VII-2 present information on the CISP fittings operations of the responding producers and exporters in China.

Table VII-1
CISP fittings: Summary data for producers in China, 2017

* * * * * * *

Table VII-2
CISP fittings: Summary data on resellers exports to United States, 2017

* * * * * * *

Changes in operations

As presented in table VII-3, one producer in China reported operational and organizational changes since January 1, 2015.[7]

Table VII-3
CISP fittings: Reported changes in operations by producers in China, since January 1, 2015

* * * * * * *

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[3] These firms were identified through a review of information submitted in the petition, questionnaires and contained in *** records. As discussed above, given the time constraints, staff were unable to collect additional foreign producer or exporter questionnaire data separately on drain bodies besides ***.

[4] ***.

[5] The following companies which responded in the preliminary phase of investigations did not submit questions in this final phase: ***

[6] ***. Preliminary staff report, p. VII-3.

[7] Since 2017, China has been implementing widespread factory shutdowns due to a national effort to address pollution and other environmental concerns. ***. Nace Trever, "China Shuts Down Tens Of Thousands Of Factories In Widespread Pollution Crackdown," *Forbes*, 24 October 2017, https://www.forbes.com/sites/trevornace/2017/10/24/china-shuts-down-tens-of-thousands-of-factories-in-widespread-pollution-crackdown/, retrieved on June 11, 2018; "China plans tougher goals, beefed-up inspections in war on smog," *Reuters*, 17 March 2018, https://www.reuters.com/article/us-china-parliament-environment/china-plans-tougher-goals-beefed-up-inspections-in-war-on-smog-idUSKCN1GT08H, retrieved on June 11, 2018. ***.

Operations on CISP fittings

Table VII-4 presents information on the CISP fittings operations of the responding producers and exporters in China for 2015-17, interim periods (January-March 2017 and January-March 2018), as well as projections for 2018-19 based on questionnaire responses.[8] Though irregularly, in China overall capacity, end-of-period inventories, and export shipments to all other markets decreased between 2015 and 2017, while production, commercial home market shipments, export shipments to the U.S. and total exports increased over the same time. From 2015 to 2016, production increased by *** short tons (*** percent), end-of-period inventories increased by *** short tons (*** percent), commercial home market shipments increased by *** short tons (*** percent), total shipments increased by *** short tons (*** percent), and capacity utilization increased by *** percentage points. From 2016 to 2017, production, end-of-period inventories, commercial home market shipments, total shipments, and capacity utilization decreased by *** percent, *** percent, *** percent, *** percent and *** percent, respectively. The first quarter of 2018 had higher levels of capacity, production, end-of-period inventories, commercial home market shipments, exports to other markets, and capacity utilization compared with the first quarter of 2017, while export shipments to the United States were lower by *** percent in the first quarter of 2018 compared with the same period in 2017.

Table VII-4
CISP fittings: Data on the industry in China, 2015-17, January to March 2017, and January to March 2018 and projected calendar years 2018 and 2019

* * * * * * *

In relation to actual 2017, the capacity, production, end-period-inventories, and commercial home market shipments for annual year 2018 are projected to increase by *** percent, *** percent, *** percent, and *** percent, respectively. Conversely, compared with actual 2017, export shipments to the United States are projected to decline by *** percent in 2018, while export shipments to all other markets are projected to increase by *** percent. For 2019, capacity, production, end-of-period inventories, commercial home market shipments, and export shipments to the United States are all projected to increase slightly from 2018 levels by *** percent. Export shipments to all other markets are projected to increase by *** percent in 2019 compared to 2018, though total shipments are projected to increase by ***. Similarly, the share of shipments exported to the U.S. is projected to decline from *** percent in actual 2017 to *** percent in 2018 and 2019. Conversely, exports to all other markets are projected to slightly increase from *** percent in actual 2017 to *** percent in 2018 and *** percent in 2019.

[8] ***.

Alternative products

According to responding Chinese producers, *** responding Chinese firms produced other products on the same equipment and machinery used to produce CISP fittings, as shown in table VII-5.

Table VII-5
CISP fittings: Overall capacity and production on the same equipment as in-scope production by producers in China, 2015-17, January to March 2017, January to March 2018

* * * * * * *

Exports

According to GTA, the leading export markets for non-malleable cast iron pipe fittings from China are the United States, Taiwan, Hong Kong, South Korea, Spain, Japan, and the United Arab Emirates (table VII-6). During 2017, the United States was by far the largest export market for non-malleable cast iron pipe fittings from China, accounting for 40.1 percent of China's exports of that product. The next largest export market was Taiwan, which accounted for 4.9 percent.

Table VII-6
Non-malleable cast iron tube or pipe fittings: China's exports by destination market, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Quantity (short tons)		
China's exports to the United States	126,048	129,858	146,440
China's exports to other major destination markets.--			
Taiwan	16,552	14,951	17,890
Hong Kong	14,468	12,492	15,332
South Korea	6,603	6,995	12,209
Spain	11,223	9,174	10,962
Japan	9,717	10,253	10,534
United Arab Emirates	9,053	8,892	10,434
Canada	10,806	9,817	10,327
Australia	6,036	6,714	7,955
All other destination markets	116,997	121,126	123,055
Total China exports	327,504	330,272	365,138
	Value (1,000 dollars)		
China's exports to the United States	241,989	226,899	253,191
China's exports to other major destination markets.--			
Taiwan	19,805	16,584	20,130
Hong Kong	24,794	21,305	27,879
South Korea	13,790	13,379	21,568
Spain	19,601	15,688	18,515
Japan	26,327	25,803	26,968
United Arab Emirates	17,251	15,302	17,098
Canada	21,778	17,935	17,667
Australia	15,595	15,960	18,579
All other destination markets	248,085	240,132	228,747
Total China exports	649,017	608,986	650,343

Table continued on next page.

Table VII-6–Continued
Non-malleable cast iron tube or pipe fittings: China's exports by destination market, 2015-17

Destination market	Calendar year		
	2015	2016	2017
	Unit value (dollars per short ton)		
China's exports to the United States	1,920	1,747	1,729
China's exports to other major destination markets.-- Taiwan	1,197	1,109	1,125
Hong Kong	1,714	1,705	1,818
South Korea	2,088	1,913	1,767
Spain	1,747	1,710	1,689
Japan	2,709	2,517	2,560
United Arab Emirates	1,906	1,721	1,639
Canada	2,015	1,827	1,711
Australia	2,584	2,377	2,335
All other destination markets	2,120	1,982	1,859
Total China exports	1,982	1,844	1,781
	Share of quantity (percent)		
China's exports to the United States	38.5	39.3	40.1
China's exports to other major destination markets.-- Taiwan	5.1	4.5	4.9
Hong Kong	4.4	3.8	4.2
South Korea	2.0	2.1	3.3
Spain	3.4	2.8	3.0
Japan	3.0	3.1	2.9
United Arab Emirates	2.8	2.7	2.9
Canada	3.3	3.0	2.8
Australia	1.8	2.0	2.2
All other destination markets	35.7	36.7	33.7
Total China exports	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 7307.11 as reported by China Customs in the IHS/GTA database, accessed April 5, 2018. These data may be overstated as these HTS subheadings may contain products outside the scope of these investigations.

U.S. INVENTORIES OF IMPORTED MERCHANDISE

Table VII-7 presents data on U.S. importers' reported inventories of CISP fittings.

Table VII-7
CISP fittings: U.S. importers' end-of-period inventories of imports by source, 2015-17, January to March 2017, and January to March 2018

* * * * * * *

U.S. IMPORTERS' OUTSTANDING ORDERS

The Commission requested importers to indicate whether they imported or arranged for the importation of CISP fittings from China after March 31, 2018. Their responses are shown in table VII-8.

Table VII-8
CISP fittings: Arranged imports, April 2018 to March 2019

* * * * * * *

ANTIDUMPING OR COUNTERVAILING DUTY ORDERS IN THIRD-COUNTRY MARKETS

There are no known trade remedy actions on CISP fittings from China in third-country markets.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, *Federal Register* notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
82 FR 33515, July 20, 2017	*Cast Iron Soil Pipe Fittings From China; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.gpo.gov/fdsys/pkg/FR-2017-07-20/pdf/2017-15201.pdf
82 FR 37048, August 2, 2017	*Cast Iron Soil Pipe Fittings From the People's Republic of China: Initiation of Countervailing Duty Investigation*	https://www.gpo.gov/fdsys/pkg/FR-2017-08-08/pdf/2017-16771.pdf
82 FR 37053, August 2, 2017	*Cast Iron Soil Pipe Fittings From the People's Republic of China: Initiation of Less-Than-Fair Value Investigation*	https://www.gpo.gov/fdsys/pkg/FR-2017-08-08/pdf/2017-16770.pdf
82 FR 42113, September 6, 2017	*Investigations: Cast Iron Soil Pipe Fittings From China*	https://www.gpo.gov/fdsys/pkg/FR-2017-09-06/pdf/2017-18508.pdf
82 FR 60178, December 19, 2017	*Cast Iron Soil Pipe Fittings From the People's Republic of China: Preliminary Affirmative Countervailing Duty Determination and Alignment of Final Determination With Final Antidumping Duty Determination*	https://www.gpo.gov/fdsys/pkg/FR-2017-12-19/pdf/2017-27307.pdf
83 FR 7145, February 20, 2018	*Cast Iron Soil Pipe Fittings From the People's Republic of China: Preliminary Affirmative Determination of Sales at Less Than Fair Value, Preliminary Affirmative Determination of Critical Circumstances, in Part, Postponement of Final Determination and Extension of Provisional Measures*	https://www.gpo.gov/fdsys/pkg/FR-2018-02-20/pdf/2018-03404.pdf

Tabulation continued on next page.

Citation	Title	Link
83 FR 12024, March 19, 2018	*Cast Iron Soil Pipe Fittings From China; Scheduling of the Final Phase of Countervailing Duty and Anti-Dumping Duty Investigations*	https://www.gpo.gov/fdsys/pkg/FR-2018-03-19/pdf/2018-05502.pdf
83 FR 32075 July 11, 2018	*Cast Iron Soil Pipe Fittings From the People's Republic of China: Final Affirmative Countervailing Duty Determination*	https://www.gpo.gov/fdsys/pkg/FR-2018-07-11/pdf/2018-14827.pdf
83 FR 33205 July 17, 2018	*Cast Iron Soil Pipe Fittings From the People's Republic of China: Final Affirmative Determination of Sales at Less Than Fair Value and Final Determination of Critical Circumstances, in Part*	https://www.gpo.gov/fdsys/pkg/FR-2018-07-17/pdf/2018-14925.pdf

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

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

Subject: Cast Iron Soil Pipe Fittings from China

Inv. Nos.: 701-TA-583 and 731-TA-1381 (Final)

Date and Time: June 26, 2018 - 9:30 a.m.

Sessions were held in connection with these investigations in the Main Hearing Room (Room 101), 500 E Street, SW., Washington, DC.

OPENING REMARKS:

Petitioners (**Christopher T. Cloutier**, Schagrin Associates)
Respondents (**Michael S. Snarr**, BakerHostetler, LLP)

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

Schagrin Associates
Washington, DC
on behalf of

Cast Iron Soil Pipe Institute

Roddey Dowd, Jr., Chief Executive Officer, Charlotte Pipe and Foundry Company

Hooper Hardison, President, Charlotte Pipe and Foundry Company

Greg Simmons, Senior Vice President, Cast Iron Division, Charlotte Pipe and Foundry Company

John Biggers, Vice President of Sales, Charlotte Pipe and Foundry Company

Michael Lowe, General Manager and Vice President of Sales, AB&I Foundry

Tom Leonard, General Manager, Wade Drains

In Support to the Imposition of
Antidumping and Countervailing Duty Orders (continued):

Jim Bresnahan, Vice President of Sales, Pace Supply

Steve Miller, Vice President, SOLCO

Roger B. Schagrin)
Christopher T. Cloutier) – OF COUNSEL
Elizabeth Drake)

In Opposition to the Imposition of
Antidumping and Countervailing Duty Orders:

Baker & McKenzie LLP
Washington, DC
on behalf of

Zurn Industries, LLC ("Zurn")

Craig G. Wehr, President, Zurn

Scott Burnett, General Manager, Zurn

James W. Tharp, Jr., President, Tharp Plumbing Systems, Inc.

Kevin M. O'Brien)
) – OF COUNSEL
Christine M. Streatfeild)

BakerHostetler LLP
Washington, DC
on behalf of

Plumbing and Drainage Institute

Max Weiss, Executive Director, Plumbing and Drainage Institute

Michael S. Snarr) – OF COUNSEL

Interested Party in Opposition:

New Age Casting LP
Wor-Biz Trading Co., Ltd.
Sugar Land, TX

Bikram Singh, President, New Age Casting LP

Patrick McQuillan, National Sales Manager, New Age Casting LP

REBUTTAL/CLOSING REMARKS:

Petitioners (**Roger B. Schagrin**, Schagrin Associates)
Respondents (**Kevin M. O'Brien**, Baker & McKenzie LLP)

-END-

APPENDIX C

SUMMARY DATA

Single like product: Co-extensive with scope

Table C-1
CISP fittings: Summary data concerning the U.S. market, 2015-17, January to March 2017, and January to March 2018
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year			January to March		Comparison years			Jan-Mar
	2015	2016	2017	2017	2018	2015-17	2015-16	2016-17	2017-18
U.S. consumption quantity:									
Amount	49,016	54,024	52,570	12,734	12,102	7.3	10.2	(2.7)	(5.0)
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	150,911	158,722	146,593	35,552	34,341	(2.9)	5.2	(7.6)	(3.4)
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. imports from:									
China:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Nonsubject sources									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
U.S. producers':									
Average capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization (fn1)	***	***	***	***	***	***	***	***	***
U.S. shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Export shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***	***	***	***	***
Hourly wages (dollars per hour)	***	***	***	***	***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***	***	***	***
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)	***	***	***	***	***	***	***	***	***

Notes:

Note.--This table presents data on all CISP fittings, including the cast-iron components of drains which are included in Commerce's scope. These data do not include final drain assemblies (or fixtures).

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionaires and official U.S. import statistics for HTS statistical reporting number 7307.11.0045, accessed June 8, 2018.

Split like product: Drain bodies

Table C-2a
Drain Bodies: Summary data concerning the U.S. market, 2015-17, January to March 2017, and January to March 2018
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted

	Reported data					Period changes			
	Calendar year			January to March		Comparison years			Jan-Mar
	2015	2016	2017	2017	2018	2015-17	2015-16	2016-17	2017-18
U.S. consumption quantity:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. imports from:									
China:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Nonsubject sources									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
U.S. producers':									
Average capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization (fn1)	***	***	***	***	***	***	***	***	***
U.S. shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Export shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***	***	***	***	***
Hourly wages (dollars per hour)	***	***	***	***	***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***	***	***	***
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)	***	***	***	***	***	***	***	***	***

Notes:

Note.--This table presents data on split like product, drain bodies, which are a subset of Commerce's scope.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionaires and official U.S. import statistics for HTS statistical reporting number 7307.11.0045, accessed June 8, 2018.

Split like product: All fittings except drain bodies

Table C-2b
Other CISP fittings: Summary data concerning the U.S. market, 2015-17, January to March 2017, and January to March 2018
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year			January to March		Comparison years			Jan-Mar
	2015	2016	2017	2017	2018	2015-17	2015-16	2016-17	2017-18
U.S. consumption quantity:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. imports from:									
China:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Nonsubject sources									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
U.S. producers':									
Average capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization (fn1)	***	***	***	***	***	***	***	***	***
U.S. shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Export shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***	***	***	***	***
Hourly wages (dollars per hour)	***	***	***	***	***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***	***	***	***
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)	***	***	***	***	***	***	***	***	***

Notes:

Note.--This table presents data on split like product, all other CISP fittings except drain bodies ("other CISP fittings") which are a subset of Commerce's scope.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionaires and official U.S. import statistics for HTS statistical reporting number 7307.11.0045, accessed June 8, 2018.

Single like product: Co-extensive with scope excluding related party

Table C-3

CISP fittings: Summary data concerning the U.S. market, excluding one U.S. producer *, 2015-17, January to March 2017, and January to March 2018**
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year			January to March		Comparison years			Jan-Mar
	2015	2016	2017	2017	2018	2015-17	2015-16	2016-17	2017-18
U.S. consumption quantity:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)									
Included firms	***	***	***	***	***	***	***	***	***
Excluded firms (fn1)	***	***	***	***	***	***	***	***	***
All U.S. producers	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (fn1)									
Included firms	***	***	***	***	***	***	***	***	***
Excluded firms (fn1)	***	***	***	***	***	***	***	***	***
All U.S. producers	***	***	***	***	***	***	***	***	***
Importers' share (fn1):									
China	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***	***
U.S. imports from:									
China:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Nonsubject sources									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
All import sources:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
U.S. producers':									
Average capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization (fn1)	***	***	***	***	***	***	***	***	***
U.S. shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Export shipments									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***	***	***	***	***
Hourly wages (dollars per hour)	***	***	***	***	***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***	***	***	***
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)	***	***	***	***	***	***	***	***	***

Notes:

Note.--This table presents data on single like products of all CISP fittting including drain bodies which are included in Commerce's scope. These data exclude the domestic operations of ***.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Undefined.

Source: Compiled from data submitted in response to Commission questionaires and official U.S. import statistics for HTS statistical reporting number 7307.11.0045, accessed June 8, 2018