Silica Bricks and Shapes from China

Investigation No. 731-TA-1205 (Final)

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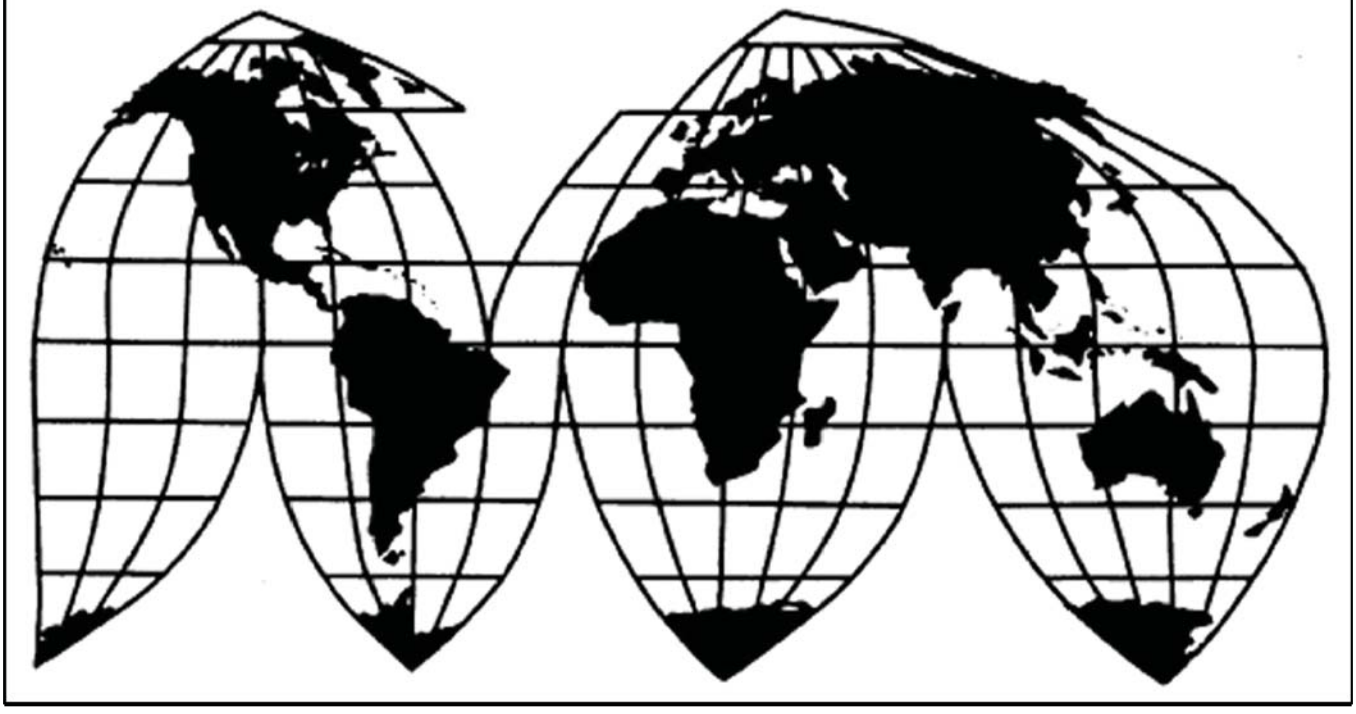
U.S. International Trade Commission



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U.S. International Trade Commission

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Note.–Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report.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

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-1205 (Final)

SILICA BRICKS AND SHAPES FROM CHINA

DETERMINATION

On the basis of the record[1] developed in the subject investigation, the United States International Trade Commission (Commission) determines, pursuant to section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) (the Act), that an industry in the United States is not materially injured or threatened with material injury, and the establishment of an industry in the United States is not materially retarded, by reason of imports from China of silica bricks and shapes, provided for in subheadings 6902.20.10 (statistical reporting number 6902.20.1020), 6902.20.50 (statistical reporting number 6902.20.5020), and 6909.19.50 (statistical reporting number 6909.19.5095) of the Harmonized Tariff Schedule of the United States, that have been found by the Department of Commerce (Commerce) to be sold in the United States at less than fair value (LTFV).

BACKGROUND

The Commission instituted this investigation effective November 15, 2012, following receipt of a petition filed with the Commission and Commerce by Utah Refractories Corp., Lehi, UT. The final phase of the investigation was scheduled by the Commission following notification of a preliminary determination by Commerce that imports of silica bricks and shapes from China were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. § 1673b(b)). Notice of the scheduling of the final phase of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* of July 30, 2013 (78 FR 45968). The hearing was held in Washington, DC, on November 21, 2013, 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)).

Views of the Commission

Based on the record in the final phase of this investigation, we find that an industry in the United States is neither materially injured nor threatened with material injury by reason of imports of silica bricks and shapes from China found by the U.S. Department of Commerce ("Commerce") to be sold in the United States at less than fair value ("LTFV").

I. Background

Parties to the Investigation. The petition in this investigation was filed by Utah Refractories Corporation ("Utah Refractories" or "Petitioner"), the sole domestic producer of silica bricks and shapes in the United States. Representatives and counsel for Utah Refractories appeared at the hearing and submitted prehearing and posthearing briefs.[1] Representatives and counsel for SunCoke Energy, Inc., an importer of the subject merchandise, and Tianjin New Century Refractories Company, Inc. ("TNCR"), a Chinese producer/exporter of the subject merchandise (collectively "Respondents"), appeared at the hearing and jointly submitted prehearing and posthearing briefs.

Data Coverage. U.S. industry data are based on the questionnaire response of the sole U.S. producer that accounted for all U.S. production of silica bricks and shapes in 2012.[2] U.S. import data are based on questionnaire responses from 13 importers of silica bricks and shapes from all sources over the period of investigation ("POI"), which encompasses the period January 1, 2010 through June 30, 2013.[3] These importers accounted for a majority of total U.S. imports of silica bricks and shapes from all sources during the POI.[4] The Commission also received questionnaire responses from one Chinese producer/exporter of the subject merchandise that accounted for an estimated *** percent of total production of silica bricks and shapes in China and for *** percent of reported U.S. imports to the United States of the subject merchandise in 2012.[5]

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[1] Utah Refractories' Final Comments, submitted on December 11, 2013, contained new factual information at Exhibit 2 in violation of 19 U.S.C. § 1677m(g) and 19 U.S.C. § 207.30(b). Accordingly, we have disregarded this new factual information.

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

[3] According to Commerce's scope, the Harmonized Tariff Schedule ("HTS") statistical reporting numbers under which subject silica bricks and shapes are imported into the United States are HTS 6902.20.1020, 6902.20.5020, and 6909.19.5095. *See Final Determination of Sales at Less Than Fair value: Silica Bricks and Shapes From the People's Republic of China*, 78 Fed. Reg. 70918, 70919 (November 27, 2013). Because these HTS numbers are relatively large basket categories that include substantial volumes of out-of-scope merchandise, the Commission has relied only on import data from questionnaire responses submitted in this investigation in making its determinations.

[4] CR at IV-1, PR at IV-1.

[5] CR at VII-5 to VII-6, PR at VII-5.

II. Domestic Like Product And Domestic Industry

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."[6] 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."[7] In turn, the Tariff Act defines "domestic like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation."[8]

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.[9] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[10] The Commission looks for clear dividing lines among possible like products and disregards minor variations.[11] Although the Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized or

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[6] 19 U.S.C. § 1677(4)(A).

[7] 19 U.S.C. § 1677(4)(A).

[8] 19 U.S.C. § 1677(10).

[9] *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).

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

[11] *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.").

sold at less than fair value,[12] the Commission determines what domestic product is like the imported articles Commerce has identified.[13]

B. Product Description

In its final determination, Commerce defined the imported merchandise within the scope of this investigation as follows:

> {R}efractory bricks and shapes, regardless of size, containing at least 90 percent silica (SiO_2), where at least 50 percent of the silica content, by weight, is crystalline silica, regardless of other materials in the bricks and shapes. Refractory refers to nonmetallic materials having those chemical and physical properties that make them applicable for structures, or as components of systems, that are exposed to environments above 1000 degrees Fahrenheit (598 degrees Celsius). ….
>
> The scope of this investigation does not cover refractory bricks and shapes, regardless of size, that are made, in part, from non-crystalline silica (commonly referred to as fused silica) where the silica content is less than 50 percent, by weight, crystalline silica.[14]

Silica bricks and shapes are refractory products made from silica rock that contain at least 90 percent silicon dioxide (silica). Silica bricks and shapes provide a high temperature resistant and non-reactive lining and are used primarily in coke ovens and glass furnaces.[15] The majority of silica bricks and shapes are used to line coke oven walls and to construct glass furnace domes and regenerators.[16]

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[12] *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).

[13] *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).

[14] *Final Determination of Sales at Less Than Fair value: Silica Bricks and Shapes From the People's Republic of China*, 78 Fed. Reg. 70918, 70919 (November 27, 2013).

[15] Silica bricks and shapes are also used in other applications, such as glass tank walls, acid practice electric furnaces, tunnel kilns, and regenerators. CR at I-9, PR at I-7.

[16] CR at I-10, PR at I-7.

Despite different end uses, the method of production and chemical characteristics of silica bricks and shapes for coke ovens and glass furnaces are similar.[17] All silica bricks and shapes are manufactured using similar inputs and are formed using the same processes. For coke oven silica bricks and shapes, the chemistry is altered slightly by the addition of aluminum dioxide.[18] Silica bricks and shapes for use in glass furnaces require a higher silica purity level and are commonly referred to as "Type A" brick.[19]

After being placed in molds, the silica bricks and shapes are fired in kilns. The firing process is similar regardless of whether they are intended for use in a coke oven or a glass furnace.[20] Silica bricks and shapes are held together in their end use applications by either a silica-based or chrome-based mortar.[21] Because the design of a coke oven or glass furnace is unique to the purchaser, each sale may require hundreds of shapes and, as a consequence, silica bricks and shapes are made to order and little or no inventory is held.[22]

Coke oven silica bricks and shapes are more labor intensive to produce than glass furnace silica bricks and shapes because they are either molded by impact press or hand-formed, whereas glass furnace silica bricks and shapes are almost entirely machine-made. The quality of the final product is determined by the input material, namely the amount of silica present in the mined siliceous rock, and the process of screening and testing before the inclusion of selected additives.[23]

C. Domestic Like Product Analysis

In the preliminary determination, the Commission found a single domestic like product that was coextensive with the scope of the investigation.[24] In terms of physical characteristics and end uses, it found that all silica bricks and shapes are made from a minimum of 90 percent silica and are used primarily for lining coke ovens and glass furnace crowns. Silica bricks and shapes are valued for their load bearing capabilities and resistance to spalling at high temperatures. The Commission observed that they retain their rigidity, are lightweight, have good resistance to most fluxes present in coke ovens, offer high resistance to abrasion, and

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[17] CR at I-18, PR at I-13.

[18] CR at I-18, PR at I-13.

[19] CR at II-2, PR at II-1. According to the American Society of Testing Materials, Type A bricks and shapes have very little alumina and alkalies and therefore have less chance of cracking or spalling during temperature changes. Type A bricks and shapes also have less of a risk of fluxing (*i.e.*, having a reaction with other components and the silica to turn into glass in the brick). CR at II-2 n.9, PR at II-1 n.9.

[20] Bricks and shapes for coke ovens and glass furnaces require different firing curves involving different temperatures and timing in the kiln. Hearing Transcript at 190 (Dai).

[21] CR at I-18, PR at I-14.

[22] CR at I-18 to I-19, PR at I-14.

[23] CR at I-15, PR at I-11 to I-12.

[24] *Silica Bricks and Shapes from China*, Inv. No. 731-TA-1205, USITC Pub. 4369 (Preliminary) (January 2013) ("USITC Pub. 4369") at 6.

have a relatively long lifespan.[25] Silica bricks and shapes are also nonreactive with melted glass, whereas other refractories, such as magnesia brick, could discolor the final glass product.[26]

The Commission observed that there was limited interchangeability between silica bricks and shapes and other types of refractories.[27] The Commission found that all silica bricks and shapes were sold in the same channels of distribution, with virtually all silica bricks and shapes being sold directly to end users, with any remainder being sold to distributors.[28]

The Commission found that all silica bricks and shapes are made in similar manufacturing facilities, using similar production processes and employees. Silica suitable for use in the manufacture of silica bricks and shapes is mined from siliceous rock deposits, such as mica schists, or siliceous sandstone, such as ganister. After mining, the silica material is mechanically crushed and ground to the appropriate size to satisfy the specific requirements of the brick being produced. The crushed silica may then be washed to reduce the alumina content, thereby increasing final silica brick "refractoriness" (ability to withstand greater temperatures). The silica material is screened, and 1.8 to 3.5 percent lime (calcium oxide) is added as a binder. The lime combines with the silica and other impurities of the rock to form a liquid which hardens after firing. This mix is then pressed into customized molds to form bricks. After being sent through driers, the bricks are fired to above 2,700 degrees Fahrenheit in either periodic (batch) kilns or continuous (tunnel) kilns to form the ceramic bond that gives silica brick its refractory properties.[29]

The Commission also found that silica bricks and shapes are perceived by customers as a distinct product.[30] The Commission found that silica bricks and shapes are generally lower priced than certain other types of refractories, such as fused silica or mullite refractories.[31]

On the basis of the above findings and because no party argued to the contrary, the Commission defined one domestic like product that was coextensive with the scope of the investigation in the preliminary phase of the investigation.[32]

The information in the record pertaining to the Commission's domestic like product analysis in this final phase investigation is not materially different from that in the preliminary phase investigation.[33] Moreover, no party has argued that the Commission should revisit its analysis or conclusion in the final phase investigation.[34] Accordingly, we again find one

[25] USITC Pub. 4369 at 5.
[26] USITC Pub. 4369 at 5-6.
[27] USITC Pub. 4369 at 6.
[28] USITC Pub. 4369 at 6.
[29] USITC Pub. 4369 at 6.
[30] USITC Pub. 4369 at 6.
[31] USITC Pub. 4369 at 6.
[32] USITC Pub. 4369 at 6.
[33] *See* CR at I-9 to I-19; PR at I-7 to I-14.
[34] Petitioner again argues that the Commission should define a single domestic like product that is coextensive with the scope of the investigation. Petitioner Posthearing Brief at 8. Respondents have not objected. *See* Respondents Posthearing Brief at 4-6.

domestic like product, silica bricks and shapes, that is coextensive with the scope of investigation.

D. 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."[35] 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. In its preliminary determination, the Commission defined the domestic industry as all producers of silica bricks and shapes.[36]

Based on our definition of the domestic like product, we define the domestic industry to include all U.S. producers of silica bricks and shapes. As previously stated, Utah Refractories is the sole producer of the domestic like product.[37]

III. Legal Standards

A. In General

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.[38] In making this determination, the Commission must consider the volume of subject imports, their effect on prices for the domestic like product, and their impact on domestic producers of the domestic like product, but only in the context of U.S. production operations.[39] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[40] 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.[41] No single factor is dispositive, and all relevant factors are considered "within the

[35] 19 U.S.C. § 1677(4)(A).

[36] USITC Pub. 4369 at 7.

[37] There are no related party issues in this investigation.

[38] 19 U.S.C. §§ 1671d(b), 1673d(b).

[39] 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).

[40] 19 U.S.C. § 1677(7)(A).

[41] 19 U.S.C. § 1677(7)(C)(iii).

context of the business cycle and conditions of competition that are distinctive to the affected industry."[42]

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,[43] 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.[44] 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.[45]

In many investigations, there are other economic factors at work, some or all of which may also be having adverse effects on the domestic industry. Such economic factors might include nonsubject imports; changes in technology, demand, or consumer tastes; competition among domestic producers; or management decisions by domestic producers. The legislative history explains that the Commission must examine factors other than subject imports to ensure that it is not attributing injury from other factors to the subject imports, thereby inflating an otherwise tangential cause of injury into one that satisfies the statutory material injury threshold.[46] In performing its examination, however, the Commission need not isolate

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[42] 19 U.S.C. § 1677(7)(C)(iii).

[43] 19 U.S.C. §§ 1671d(a), 1673d(a).

[44] *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).

[45] 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).

[46] 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,

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the injury caused by other factors from injury caused by unfairly traded imports.[47] 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 non-subject imports, which may be contributing to overall injury to an industry.[48] It is clear that the existence of injury caused by other factors does not compel a negative determination.[49]

Assessment of whether material injury to the domestic industry is "by reason of" subject imports "does not require the Commission to address the causation issue in any particular way" as long as "the injury to the domestic industry can reasonably be attributed to the subject imports" and the Commission "ensure{s} that it is not attributing injury from other sources to the subject imports."[50] [51] Indeed, the Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[52]

(…Continued)
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.

[47] Uruguay Round Agreements Act Statement of Administrative Action ("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.").

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

[49] *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.").

[50] *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.

[51] Commissioner Pinkert does not join this paragraph or the following three paragraphs. He points out that the Federal Circuit, in *Bratsk*, 444 F.3d 1369, and *Mittal Steel*, held that the Commission is *required*, in certain circumstances when considering present material injury, to undertake a particular
(Continued...)

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 non-subject imports.[53] 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.[54] Accordingly, we do not consider ourselves required to apply the replacement/benefit test that was included in Commission opinions subsequent to *Bratsk*.

The progression of *Gerald Metals, Bratsk*, and *Mittal Steel* clarifies that, in cases involving commodity products where price-competitive nonsubject imports are a significant

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(…Continued)
kind of analysis of nonsubject imports, albeit without reliance on presumptions or rigid formulas. *Mittal Steel* explains as follows:

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

542 F.3d at 878.

[52] *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.").

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

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

factor in the U.S. market, the Court will require the Commission to give full consideration, with adequate explanation, to non-attribution issues when it performs its causation analysis.[55]

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. Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[56]

B. Conditions of Competition and the Business Cycle[57]

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

1. Demand Conditions

Silica bricks and shapes are used principally in the construction and repair of coke ovens for the steel industry and furnaces in the glass industry. Silica bricks and shapes are produced to order for a particular furnace or oven lining or for a lining repair. Demand for silica bricks is ultimately derived from general demand for steel and glass, which in turn can be influenced by such factors as general economic trends and the demand for housing, glass containers, appliances, and automobiles.[58]

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

[56] *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.").

[57] Pursuant to section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product that account for less than 3 percent of all such merchandise imported into the United States during the most recent 12 months for which data are available preceding the filing of the petition shall be deemed negligible. 19 U.S.C. §§ 1671b(a),1673b(a), 1677(24)(A)(i),1677(24)(B); *see also* 15 C.F.R. § 2013.1 (developing countries for purposes of 19 U.S.C. § 1677(36)). In the most recent 12-month period preceding the filing of the petition for which are available in the record, October 2011 through September 2012, the volume of subject imports from China accounted for *** percent of total U.S. imports of silica bricks and shapes. CR at IV-8, PR at IV-4. Consequently, the subject imports are not negligible.

[58] CR at II-18 to II-19, PR at II-10 to II-11; Hearing Transcript at 84-88 (Mulholland) and 145 (Morley).

Silica bricks and shapes are produced in a wide variety of sizes and shapes depending on the purchaser's needs. They are largely produced to order due to the specific and varied shapes required for particular projects, which include both initial construction and repair.[59] Coke ovens and glass furnaces require regular repair and maintenance and such maintenance provides baseline demand for silica bricks and shapes. Orders for repair projects can vary greatly in size and in the number of shapes required due to the variations in repair work needed from project to project.[60]

The construction of new coke ovens and glass furnaces, which tend to require much larger orders, can cause demand for silica bricks and shapes to spike for discrete periods and then to decrease significantly once those projects are complete.[61] The one large U.S. construction project during the POI took place in 2011. ***.[62]

During the POI, subject imports were overwhelmingly concentrated in sales to the steel industry for coke oven construction and repair.[63] Sales of the domestic like product were mostly concentrated in sales to the glass industry for use in furnaces. The domestic industry made some sales of coke oven bricks and shapes to the steel industry for repairs and replacement brick in existing coke ovens.[64] [65]

Market participants' perceptions of recent demand trends varied. The domestic producer reported that demand had ***. Responding importers were divided in reporting

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[59] CR at II-1 to II-2, PR at II-1; Conference Transcript at 31 (Wiseman).

[60] CR at II-1 to II-2, PR at II-1. A repair job may be as large as a "pad-up" replacement, which is when an existing facility is basically leveled and rebuilt. The quantity of silica bricks and shapes required for this type of project is equivalent to that for a new construction project. Respondents Posthearing Brief, Responses to Commissioner Questions at 9.

[61] CR at II-15 to II-16, PR at II-9; Respondents Prehearing Brief at 7-8.

[62] CR at IV-4 to IV-5, PR at IV-3.

[63] CR/PR at Table II-1. The percentage of U.S. shipments of subject imports to steel industry end users was *** percent in 2010, *** percent in 2011, and *** percent in 2012. It was *** percent in January-June ("interim") 2012 and *** percent in interim 2013. The percentage of U.S. shipments of subject imports to glass industry end users was *** percent in 2010, *** percent in 2011, and *** percent in 2012. It was *** percent in interim 2012 and *** percent in interim 2013. The remainder of U.S. shipments of subject imports during the period examined went to other end users. CR/PR at Table II-1.

[64] CR at II-7, PR at II-4; and Hearing Transcript at 20 (Williams). The percentage of U.S. shipments by the domestic industry to steel industry end users was *** percent in 2010, *** percent in 2011, and *** percent in 2012. It was *** percent in interim 2012 and *** percent in interim 2013. The percentage of U.S. shipments by the domestic industry to glass industry end users was *** percent in 2010, *** percent in 2011, and *** percent in 2012. It was *** percent in interim 2012 and *** percent in interim 2013. The remainder of U.S. shipments by the domestic industry during the period examined went to other end users. CR/PR at Table II-1.

[65] Most nonsubject imports of silica bricks and shapes were sold to end users in the ***. CR at II-6 n.30, PR at II-4 n.30. Some nonsubject imports were sold to ***, but none were reportedly ***. *See* CR/PR at Table II-1.

either *** or an *** in demand, and responding purchasers reported that demand had either *** or ***.[66] In general, all parties agreed that demand for silica bricks and shapes is "lumpy" and can vary significantly from year to year depending on the number and size of furnace projects going forward.[67]

During the POI, apparent U.S. consumption of silica bricks and shapes increased from *** short tons in 2010 to *** short tons in 2011, then decreased to *** short tons in 2012. Apparent U.S. consumption was *** short tons in interim 2012 and *** short tons in interim 2013.[68]

2. Supply Conditions

During the POI, the U.S. market for silica bricks and shapes was supplied by one domestic producer, Utah Refractories,[69] subject imports, and nonsubject imports. The domestic industry's share of apparent U.S. consumption, by quantity, decreased from *** percent in 2010 to *** percent in 2011, then increased to *** percent in 2012. It was *** percent in interim 2012 and *** percent in interim 2013.[70]

The domestic industry exported a significant quantity of its production. During the POI, the domestic industry's export shipments ranged from *** percent to *** of its total shipments.[71]

During the POI, subject import market share, by quantity, increased from *** percent in 2010 to *** percent in 2011, then decreased to *** percent in 2012. It was *** percent in interim 2012 and *** percent in interim 2013. The market share of nonsubject imports, by quantity, decreased from *** percent in 2010 to *** percent in 2011, then increased to *** percent in 2012. It was *** percent in interim 2012 and *** percent in interim 2013.[72]

During the POI, both the domestic industry and subject imports supplied silica bricks and shapes to ***, although the domestic industry's sales were primarily made to the *** and the subject imports were almost exclusively sold to ***. Chinese producer *** also supplied a ***

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[66] CR/PR at Table II-3; *see also* Hearing Transcript at 84-85, 88 (Mulholland) and 145-146 (Morey).

[67] Hearing Transcript at 32 (Goates).

[68] CR/PR at Tables IV-3 and IV-4.

[69] The production facilities of the sole U.S. producer, Utah Refractories, were built and owned by the Federal Government during World War II as an inland national defense plant to serve Geneva Steel through production of both in-scope silica bricks and shapes as well as other products. This plant was later privatized and changed ownership several times before being acquired by its current owners in 1998. Utah Refractories has been the sole producer of silica bricks and shapes in the United States since 1998, when the only other silica brick plant in the United States, Harbison-Walker, ceased operations. *See* CR at III-1 and III-3, PR at III-1 and III-2; Hearing Transcript at 233-234 (Straight).

[70] CR/PR at Table IV-4.

[71] CR/PR at Table III-2.

[72] CR/PR at Table IV-4. The nonsubject import sources were Germany and the Czech Republic. CR/PR at Table IV-5.

customer with a limited quantity of the Type A silica bricks and shapes that are used in glass furnaces.[73] Nonsubject imports were sold ***.[74]

3. Substitutability

Subject imports and domestically produced silica bricks and shapes are generally substitutable for the same end uses. *** and 4 of 6 responding importers reported that subject imports and the domestic like product are always or frequently interchangeable.[75] The remaining importers reported that subject imports and the domestic like product are sometimes interchangeable.[76] Generally, silica bricks and shapes made for use in coke ovens and those made for use in glass furnaces are not substitutable, due to the higher purity levels of silica required for silica bricks and shapes in glass furnaces.[77] The record indicates that, with respect to the Type A brick used in glass furnaces, there is very little availability of subject imports.[78]

Petitioner contends that it is not uncommon to have several suppliers of silica bricks and shapes for a single coke oven project.[79] We find the evidence on this issue to be mixed. The record shows that it is not common industry practice to source silica bricks and shapes from multiple suppliers for a single oven or furnace project, although there is evidence that purchasers sometimes use a source other than the original supplier for repair work.[80]

4. Other Conditions

Although price is an important factor in purchasing decisions, all purchasers more frequently identified quality that meets industry standards, durability, product consistency, and reliability of supply as very important factors in their purchasing decisions.[81] Six of 10

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[73] *See, e.g.*, Respondent Posthearing Brief, Responses to Commission Questions at 62.

[74] CR at II-6 n.30, PR at II-4 n.30. As noted above, reported nonsubject imports of silica bricks and shapes were ***. *See* CR at II-6 n.30, PR at II-4 n.30; CR/PR at Table II-1.

[75] CR/PR at Table II-9.

[76] CR/PR at Table II-9.

[77] *See, e.g.*, CR at II-2 to II-3, PR at II-1 to II-2; Hearing Transcript at 155 (Dai).

[78] *See* discussion *infra* Section IV.B. and n.136; *see also* CR/PR at Table II-1.

[79] Hearing Transcript at 42-43 (Mulholland).

[80] CR at II-32 to II-34, PR at II-19 to II-20; Hearing Transcript at 65-66 (Mulholland). Importer and purchaser *** reported that it is not common industry practice to mix silica bricks and shapes from multiple sources when rebuilding an entire wall of an oven, but it might seek alternative sources if only 30 to 40 percent of the wall was to be replaced and that it would then select the supplier based on quality, delivery, and price. CR at II-34, nn.94 and 95, PR at II-19 to II-20, nn.94 and 95; *see also* Hearing Transcript at 66 (Mulholland) (mixing suppliers is "not best practice").

[81] CR/PR at Table II-6.

responding purchasers reported that quality was the most important purchasing factor, and only one indicated that price was the most important.[82]

Silica bricks and shapes are typically priced and sold on a per-project basis.[83] The record shows that end user customer loyalty to a particular supplier can be very high and that, as a result, often only one favored supplier is contacted to bid on an oven or furnace construction, replacement, or repair project.[84]

A majority of purchasers reported that they require their suppliers to become certified or qualified for all purchases of silica bricks and shapes. Purchasers reported that, when qualifying a supplier, they examine various quality characteristics, including chemical composition, mineralogical and dimensional tolerances, consistency, strength tolerance, and thermal expansion and contraction parameters. Several purchasers reported examining a supplier's reliability and its ability to meet delivery schedules. The record indicates that supplier qualification or certification can take from one month to one year, with purchasers reporting that the process can take from two to three years in some cases.[85]

The main raw material input for silica bricks and shapes is silica rock, specifically ganister. Petitioner owns a quartzite mine located near its plant and sources all of its requirements for the silica rock used in the production of silica bricks and shapes from this mine. Petitioner also reported that the prices of other raw materials , including ***.[86]

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Act provides that the Commission shall consider whether the volume of imports of the merchandise, or an increase in that volume, either in absolute terms or relative to production or consumption the United States, is significant."[87]

Consistent with the "lumpy" nature of demand, discussed above, the volume of subject imports, by quantity, increased from *** short tons in 2010 to *** short tons in 2011,[88] then decreased to *** short tons in 2012. It was *** short tons in interim 2012 and *** short tons in interim 2013.[89]

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

[83] CR at V-7, PR at V-4.

[84] CR at V-12, PR at V-6. Eight purchasers reported purchasing silica bricks and shapes from one source even though a comparable product was available from another source at a lower price. CR at II-24, PR at II-14.

[85] CR at II-26 to II-27, PR at II-15 to II-16. One purchaser, ***, reported that two *** failed to certify or qualify since 2010 due to quality issues. CR at II-28, PR at II-16.

[86] CR at V-1, PR at V-1.

[87] 19 U.S.C. § 1677(7)(C)(i).

[88] The substantial increase in subject imports in 2011 is primarily attributable to the importation of subject silica bricks and shapes by ***. CR at IV-4 to IV-5, PR at IV-3; and CR/PR at Table IV-2. ***. CR at V-26 to V-27, PR at V-8.

[89] CR/PR at Table IV-2.

Notwithstanding the increase in the absolute volume of subject imports, their market share changed little from 2010 to 2012 and from interim 2012 to interim 2013. It was *** percent in 2010, *** percent in 2011, and *** percent in 2012, and was *** percent in interim 2012 and *** percent in interim 2013. The domestic industry's market share was *** percent in 2010, *** percent in 2011, and *** percent in 2012. Its market share in interim 2013 (*** percent) was higher than its share in interim 2012 (*** percent).[90]

In view of the foregoing, we find the consistently large volume of subject imports in the U.S. market to be significant in absolute terms. However, we do not find a significant increase in shipments of subject imports relative to consumption over the POI. Moreover, for the reasons discussed below, we do not find significant price effects or a significant impact on the domestic industry by reason of subject imports.

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that 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.[91]

As discussed above, silica bricks and shapes are largely produced and sold on a project-by-project basis. Therefore, in the final phase of this investigation, the Commission requested that purchasers submit information on all bids received for each of their firms' purchases since January 1, 2010.[92] Ten purchasers provided data on their purchases of silica bricks and shapes,

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[90] CR/PR at Table IV-4. The share of apparent U.S. consumption held by shipments of nonsubject imports was *** percent in 2010, *** percent in 2011, and *** percent in 2012. It was *** percent in interim 2012 and *** percent in interim 2013. *Id.*

[91] 19 U.S.C. § 1677(7)(C)(ii).

[92] In the preliminary phase of the investigation, the Commission collected quarterly pricing data on two products: silica bricks and shapes with at least 90 percent silica sold to the steel industry and silica bricks and shapes with at least 90 percent silica content sold to the glass industry. Pricing comparisons were only possible for silica bricks and shapes sold to the steel industry because no importers reported data for silica bricks and shapes sold to the glass industry. USITC Pub. 4369 at 13. At Petitioner's suggestion, the Commission requested purchasers to submit bid data in the final phase of this investigation instead of quarterly pricing data. *See* Petitioner Comments on Draft Questionnaires (July 23, 2013) at 3-4.

and eight of these purchasers reported contacting only one supplier for a price quotation.[93] Only two purchasers reported receiving bids from competing suppliers.[94]

Of the *** reported projects, the domestic industry was selected as the supplier in *** instances.[95] A subject producer was selected in the remaining *** instances. According to the reported bid data, the average size of an order purchased from the domestic industry was approximately *** short tons, while the average size of an order purchased from a subject supplier was approximately *** short tons.[96] The bid data indicate very little head-to-head competition between the subject imports and the domestic like product.[97] Moreover, the bid data show that, although price is an important consideration, the lowest price does not always win a sale and other factors weigh more heavily when purchasers are making their determinations regarding a potential supplier.[98] With little evidence of head-to-head competition between subject imports and the domestic like product and even less evidence that customers choose suppliers based mostly on price, we cannot find that there has been significant price underselling by subject imports.[99]

We also find that the subject imports did not have significant price-depressing effects during the POI.[100] The unit value of U.S. shipments of the domestically produced silica bricks and shapes increased steadily from $*** per short ton in 2010 to $*** per short ton in 2012.[101] The unit value of U.S. shipments of subject imports decreased over the POI, from $*** per

[93] CR at V-10, PR at V-6. These purchasers reported longstanding working relationships with their suppliers and specific knowledge of their suppliers' product quality as the reasons for not seeking additional suppliers before making a purchase. CR at V-12, PR at V-6; and CR/PR at Table V-1.

[94] CR at V-11, PR at V-6.

[95] CR at V-11, PR at V-6.

[96] CR at V-11, PR at V-6. This calculation does not include the ***, discussed above, *** short tons. CR at V-11 n.44, PR at V-6 n.44.

[97] The domestic industry was selected for ***. CR at V-11 n.42, PR at V-6 n.42; and CR/PR at Table V-1. A subject producer was selected for ***. CR at V-11 n.43, PR at V-6 n.43 and CR/PR at Table V-1. In particular, we note that ***. CR at V-26 to V-27, PR at V-8.

[98] CR/PR at Table V-2. Quality and delivery were the most often cited reasons a particular bid was selected, followed by price. CR/PR at Table V-2.

[99] We have not relied upon data in the record regarding average unit values ("AUVs") of the subject imports and the domestic like product as a basis for making pricing comparisons because of product mix issues present in this market; thus, the AUVs may reflect differences in types of silica bricks and shapes rather than differences in prices for comparable types.

[100] Although AUV data are not probative for making price comparisons, the parties to this proceeding agree that the AUVs collected for the subject imports and the domestic like product are the most useful data on the record for examining price trends. *See* Petitioner Posthearing Brief, Exhibit 1 at 5 and Exhibit 2 at 8; Respondents Prehearing Brief at 16-17 and Attachment B at B-13.

[101] Unit values for the domestic industry's U.S. shipments were $*** per short ton in interim 2012 and $*** per short ton in interim 2013. CR/PR at Table C-1.

short ton in 2010 to $*** per short ton in 2012.[102] Thus, although the AUVs of subject imports decreased over the POI, the AUVs of the domestic industry's U.S. shipments increased steadily, indicating that the subject imports did not have significant price-depressing effects on the domestic like product. In addition, no purchaser identified the subject Chinese producers of silica bricks and shapes as price leaders in the U.S. market.[103]

Moreover, subject imports did not have significant price-suppressing effects during the POI. The domestic industry's COGS/net sales ratio increased somewhat from 2010 to 2012, but was lower in interim 2013 than in interim 2012.[104] In light of the importance of non-price factors in purchasing decisions and the lack of head-to-head competition between subject imports and the domestic like product, there is no indication in the record that any adverse changes in the domestic industry's COGS/net sales ratio were affected by competition with subject imports.

We also find no confirmed instances of lost sales or lost revenues by the domestic industry during the POI.[105] All four of the responding purchasers named in the domestic industry's lost sales and lost revenues allegations indicated that they had not switched from a U.S. supplier of silica bricks and shapes to a subject supplier since January 2009. Moreover, no purchaser reported that the domestic industry had reduced its price for silica bricks and shapes to compete with subject imports since January 2009.[106]

In view of the foregoing, we do not find underselling to be significant, nor do we find significant price-depressing or price-suppressing effects by the subject imports. Accordingly, we find that the subject imports did not have significant price effects.

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[102] Unit values for the U.S. shipments of subject imports were $*** per short ton in 2010, $*** per short ton in 2011, and $*** per short ton in 2012. They were $*** per short ton in interim 2012 and $*** per short ton in interim 2013. CR/PR at Table C-1.

[103] CR at V-6, PR at V-4. One purchaser identified the Petitioner as a price leader in the U.S. market, and one purchaser identified a nonsubject German producer as a price leader. *Id*.

[104] CR/PR at Table VI-1. The domestic industry's COGS/sales ratio was *** percent in 2010, *** percent in 2011, and *** percent in 2013. It was *** percent in interim 2012 and *** percent in interim 2013. *Id.*

[105] The domestic industry's eight lost sales allegation totaled $*** and involved *** short tons, and its 10 lost revenue allegations totaled $*** and involved *** short tons. CR at V-30 to V-31, PR at V-8. A number of the lost sales and lost revenue allegations made by the domestic industry contained insufficient detail to be verified or had insufficient background information to be corroborated. *See* CR at V-31 n.60 and V-34 to V-35, PR at V-9 n.60 and V-9 to V-10.

[106] CR at V-31, PR at V-9.

F. Impact of the Subject Imports[107]

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."[108] These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, 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."[109]

Many of the domestic industry's trade and employment indicators improved during the POI, despite the increase in subject import volume.[110] The domestic industry's U.S. shipments, by quantity and value, increased from 2010 to 2012 and were significantly higher in interim 2013 than in interim 2012 as the industry's market share fluctuated.[111] The domestic industry's production decreased in 2012 by *** percent, but this appears largely to be due to the sharp decrease in the domestic industry's export shipments in that same year, which fell by ***

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[107] The statute instructs the Commission to consider the "magnitude of the dumping margin" in an antidumping proceeding as part of its consideration of the impact of imports. 19 U.S.C. § 1677(7)(C)(iii)(V). In its final determination of sales at less value, Commerce found antidumping duty margins of 63.81 percent for Dengfeng Yuzhong Refractories Company, Ltd. (producer), and Tianjin New Century (exporter), and 73.10 percent for the PRC-wide Entity (including Shandong Daqiao Company, Ltd.). *Final Determination of Sales at Less Than Fair value: Silica Bricks and Shapes From the People's Republic of China*, 78 Fed. Reg. 70918, 70919 (November 27, 2013).

[108] 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.").

[109] 19 U.S.C. § 1677(7)(C)(iii); *see also* SAA at 851, 885; *Live Cattle from Canada and Mexico*, Inv. Nos. 701-TA-386, 731-TA-812-813 (Preliminary), USITC Pub. 3155 (February 1999), at 25 n.148.

[110] The record does not indicate that the filing of the petition had any effects sufficient to warrant discounting post-petition data. Notably, subject import volume was higher in interim 2013 than in interim 2012, and there were insufficient changes in sales patterns or price trends to justify such discounting.

[111] The domestic industry's U.S. shipments, by quantity, were *** short tons in 2010, *** short tons in 2011, and *** short tons in 2012. They were *** short tons in interim 2012 and *** short tons in interim 2013. The domestic industry's U.S. shipments, by value, were $*** in 2010, $*** in 2011, and $*** in 2013. They were $*** in interim 2012 and $*** in interim 2013. CR/PR at Table III-2. The domestic industry did not maintain inventories at any time during the POI. CR at III-7, PR at III-3.

The increases in U.S. shipments from 2010 to 2012 coincided with a *** percentage point loss in market share. However, the domestic industry's market share was *** percentage points higher in interim 2013 than in interim 2012. CR/PR at Table IV-4.

percent. U.S. shipments declined by a much smaller volume (*** percent).[112] Production was higher in interim 2013 than in interim 2012.[113] Production capacity was unchanged over the entire period examined.[114] Capacity utilization decreased from 2010 to 2012, but was higher in interim 2013 than in interim 2012.[115]

The number of production and related workers increased steadily from 2010 to 2012, but there were fewer workers in interim 2013 than in interim 2012.[116] Hours worked followed the same trend,[117] as did wages paid.[118] Productivity decreased steadily from 2010 to 2012, but was higher in interim 2013 than in interim 2012.[119]

The record shows no correlation between subject import volumes and any worsening in the financial condition of the domestic industry during the POI.[120] Despite the increase in subject imports, the domestic industry's operating income increased overall during the POI,[121]

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[112] Production was *** short tons in 2010 and *** short tons in 2011, before decreasing to *** short tons in 2012. It was *** short tons in interim 2012 and *** short tons in interim 2013. CR/PR at Table III-1. Export shipments decreased from *** short tons in 2010 to *** short tons in 2011 and *** short tons in 2012. They were *** short tons in interim 2012 and *** short tons in interim 2013. CR/PR at Table III-2.

[113] Production was *** short tons in 2012 and *** short tons in interim 2013. CR/PR at Table III-1.

[114] Production capacity was *** short tons in 2010, 2011, and 2012, and *** short tons in each interim period. CR/PR at Table III-1.

[115] Capacity utilization increased from *** percent in 2010 to *** percent in 2011, before decreasing to *** percent in 2013. It was *** percent in interim 2012 and *** percent in interim 2013. CR/PR at Table III-1. We note that, according to the Petitioner, Utah Refractories' plant has not operated at full capacity for over 20 years. Hearing Transcript at 51 (Worthen).

[116] The number of production and related workers increased from *** in 2010 to *** in 2011 and *** in 2012. It was *** in interim 2012 and *** in interim 2013. CR/PR at Table III-3.

[117] The number of hours worked increased from *** in 2010 to *** in 2011 and *** in 2012. It was *** in interim 2012 and *** in interim 2013. CR/PR at Table III-3.

[118] Wages paid increased from $*** in 2010 to $*** in 2011 and $*** in 2012. They totaled $*** in interim 2012 and $*** in interim 2013. CR/PR at Table III-3.

[119] Productivity decreased from *** short tons per 1,000 hours in 2010 to *** short tons per 1,000 hours in 2011 and *** short tons per 1,000 hours in 2012. It was *** short tons per 1,000 hours in interim 2012 and *** short tons per 1,000 hours in interim 2013. CR/PR at Table III-3.

[120] Staff made several adjustments to Petitioner's reported financial data. *See* CR at VI-4 to VI-7, PR at VI-2 (detailing five principal adjustments). Staff declined to make additional adjustments that were advocated by Respondents. *See* CR at VI-7 to VI-9, PR at VI-2; and Respondents Prehearing Brief at 21, 22. We agree with the staff's analysis concerning these adjustments and have relied upon the Petitioner's financial data as adjusted by the staff in making our determinations.

[121] The domestic industry's operating income was $*** in 2010, $*** in 2011, and $*** in 2012. It was $*** in interim 2012 and $*** in interim 2013. CR/PR at Table VI-1.

as did its operating income as a ratio of net sales.[122] The lack of correlation is best illustrated by the data for 2011, when subject imports increased substantially in volume and market share. During that year, the domestic industry's condition did not deteriorate; instead, its operating income was the highest of the three full years of the POI. Moreover, although the Petitioner argues that subject imports prevented critical development efforts, it did not provide details regarding any specific investments or capital expenditures that it had to forego, stating only that it could increase productive capacity by adding kilns for a modest capital expense.[123]

We also note that the domestic producer is ***.[124] Despite reporting substantial excess capacity and having a reputation for producing a high quality product, Utah Refractories has not sold silica bricks or shapes for a new coke oven construction project since at least 1998.[125] Comments from several purchasers indicated that ***.[126] Thus, while Utah Refractories is able to compete for coke oven repair projects, the weight of the record evidence indicates that it has not competed over the POI (or for many years before the POI) with subject imports for new coke oven construction projects.

Thus, despite a significant volume of subject imports, most of the industry's trade, employment, and financial indicators either improved or did not deteriorate over the period of investigation. Notably, many of the domestic industry's trade and financial indicators were at their peak annual levels in 2011, the year subject import volumes and market share were also at their highest during the POI. Therefore, we do not find that the record shows a significant correlation between subject imports and any worsening in the domestic industry's condition, much less a causal relationship.

Consequently, we find that the subject imports have not had a significant adverse impact on the domestic industry.

IV. Threat of Material Injury by Reason of Subject Imports

A. Legal Standard

Section 771(7)(F) of the Tariff Act directs the Commission to determine whether the domestic industry is threatened with material injury by reason of the subject imports by

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[122] The domestic industry's operating income ratio was *** percent in 2010, *** percent in 2011, and *** percent in 2012. It was *** percent in interim 2012 and *** percent in interim 2013. CR/PR at Table VI-1.

[123] Petitioner Prehearing Brief at 6, 40-41 and Posthearing Brief at Exhibit 2 at 6; Hearing Transcript at 108-109 (Goates). Capital expenditures were $*** in 2010, $*** in 2011, and $*** in 2012. There were *** capital expenditures in interim 2012 or interim 2013. CR/PR at VI-11, PR at VI-3.

[124] CR at II-11 to II-12 and V-26 to V-27, PR at II-6 to II-7 and PR at V-8; Hearing Transcript at 138-145 (Morey); Respondent Posthearing Brief at 3-6.

[125] CR at II-7, PR at II-4.

[126] *See, e.g.,* CR at II-11 to II-12 and V-26 to V-27, PR at II-6 to II-7 and PR at V-8; Hearing Transcript at 138-145 (Morey); Respondent Posthearing Brief at 3-6.

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."[127] 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.[128] In making our determination, we consider all statutory threat factors that are relevant to these investigations.[129]

[127] 19 U.S.C. § 1677(7)(F)(ii).

[128] 19 U.S.C. § 1677(7)(F)(ii).

[129] These factors are as follows:

> . . .,
>
> (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,
>
> (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 (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 factors (I) concerning countervailable subsidies and (VII) concerning agricultural products are not applicable in this investigation.

B. Analysis

Likely Subject Import Volume. As discussed above, subject import market share was relatively flat from 2010 to 2012, notwithstanding the increases in 2011 due to the large one-time sale to ***. Subject import volume and market share trends during the POI do not support a finding that there is a likelihood of substantially increased imports in the imminent future. As discussed above, the increases in subject import volume and market share in 2011 are attributable to *** and are not evidence of a trend of increasing subject import market penetration.

In fact, the domestic industry's U.S. shipments increased from 2010 to 2012 notwithstanding increasing volumes of subject imports, and its production, U.S. shipments, and market share were all higher in interim 2013 than in interim 2012, corresponding to a coincident increase in apparent U.S. consumption.[130] The record does not indicate any imminent change that would result in subject imports substantially increasing their market share at the expense of the domestic industry in the near future.[131]

We also find that the data in the record concerning capacity in China do not indicate a substantial likelihood of major increases in imports of subject merchandise.[132] We agree with the Petitioner that the record evidence indicates that the industry in China has substantial capacity and may possess excess capacity. Moreover, China is a substantial exporter of silica bricks and shapes.[133] As discussed herein, however, under the conditions of competition in this market, we do not find that subject imports are likely to increase substantially in the imminent future. Notwithstanding unused Chinese capacity and export orientation over the POI, the only significant increase in subject imports or market share during the POI was the increase in 2011 reflecting the single large sale to ***.[134] In addition, Chinese producers' sales in the United States are concentrated in the coke oven market, and the record shows that Chinese-produced silica bricks and shapes generally are unsuitable, and are likely to remain unsuitable, for use in the U.S. glass furnace market in the imminent future.[135] Although there is evidence that there were limited subject imports of Type A silica bricks and shapes during the POI, the record shows

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[130] CR/PR at Tables III-1, III-2, and IV-3.

[131] CR at II-18 to II-19, PR at II-10 to II-11; Hearing Transcript at 84-88 (Mulholland) (housing starts/glass) and 145 (Morley) (appliances/automobiles).

[132] The data obtained from the Chinese producer in this investigation accounted for approximately *** percent of total Chinese production of silica bricks and shapes in 2012, *** percent of the total exports of subject merchandise to the United States during 2012, and *** percent of reported U.S. imports from China during January 2010-June 2013. CR at VII-5 to VII-6, PR at VII-5. ***. Foreign Producer Questionnaire Response, Section 1-2. We have relied on the facts on the record for this investigation, which include the questionnaire data and the limited public data from Global Trade Information Services contained in the Staff Report. *See, e.g.*, CR at VII-1 to VII-5, PR at VII-1 to VII-3.

[133] CR/PR at Tables VII-1 and VII-3.

[134] CR at IV-4 to IV-5 and V-26 to V-27, PR at IV-3 and V-8.

[135] CR at VII-8 to VII-9, PR at VII-5 to VII-6.

that Chinese producers' ability to produce high-purity Type A silica bricks and shapes for the U.S. market is very limited.[136] Moreover, contrary to the domestic industry's assertion,[137] there is no evidence that domestic purchasers in the glass industry are moving away from high purity Type A silica bricks to lesser purity silica bricks and shapes for glass furnaces.[138] Thus, the record does not support a finding that the limited participation by subject imports in the U.S. glass furnace market is likely to change in the imminent future.

Given the domestic industry's concentration in the glass furnace market segment and the concentration of subject imports sales in the coke oven market segment, combined with the high level of loyalty to particular suppliers exhibited by purchasers in both parts of the market and the general stability of subject import volume (notwithstanding the one-year spike in 2011), we find an increase in subject import volumes in the imminent future to be unlikely. Consequently, the record demonstrates that the subject import level at the end of the POI is unlikely to increase substantially in the imminent future.[139]

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[136] TNCR (which is ***) reported that it is the only Chinese manufacturer that can produce Type A silica bricks and shapes that meet U.S. or European standards because TNCR licensed the necessary technology from ANH (formerly Harbison-Walker) and because it has a nearby supply of the high purity silica rock that is a necessary raw material for such products. Respondents Posthearing Brief, Exhibit 1 at 5. Other Chinese silica brick producers are located primarily in regions of China where there is no high purity silica rock; such rock reportedly is available in China, but located in remote areas with high transportation costs per short ton. CR at VII-9, PR at VII-6; Hearing Transcript at 189-90 (Dai).

TNCR reports that there is no interest by Chinese producers in competing in the U.S. market for silica bricks used in glass furnaces because U.S. glass producers require Type A silica bricks and shapes. Chinese glass producers reportedly have a higher tolerance for impurities in their silica bricks and shapes and they provide more demand than foreign glass producers. Hearing Transcript at 158-159 (Dai). China is a net importer of Type A glass tank silica brick, which is predominantly sourced from European manufacturers. Hearing Transcript 161 and 174 (Dai).

***. ***. *See* ***. These, however, are the only known instances of Chinese silica bricks and shapes sold to U.S. glass industry purchasers during the POI and they account for a very small share of total subject imports from China.

[137] CR at VII-10, PR at VII-7; Hearing Transcript at 23 (Mulholland).

[138] Petitioner attached an exhibit to its posthearing brief that was intended to show that domestic purchasers of silica bricks and shapes are moving away from high-purity Type A brick and shapes to bricks and shapes of lesser purity for end use in glass furnaces. *See* Petitioner Posthearing Brief, Exhibit 11A. Exhibit 11A is a ***. Therefore, the exhibit provided by Petitioner does not demonstrate that domestic purchasers of silica bricks and shapes are moving to bricks and shapes of lesser purity for use in glass furnaces.

[139] CR at VII-6 and VII-8, PR at VII-5. There is no evidence that product shifting is likely to occur, and inventories are minimal or nonexistent. CR at VII-10 to VII-11, PR at VII-7. The record shows that U.S. importers of silica bricks and shapes typically maintain relatively low levels of U.S. inventories of the imported product. CR/PR at Table VII-4 and Conference Transcript at 31 (Wiseman). *** reported holding inventories of subject imports during the period examined. *** reported *** short tons of subject silica bricks and shapes in inventory ***. The firm reported that ***. CR at VII-11, PR at VII-7.

(Continued...)

Likely Price Effects of Subject Imports. We find that imports of subject merchandise are not entering at prices that are likely to have a significant depressing or suppressing effect on domestic prices. As detailed above, the record evidence does not indicate significant underselling by subject imports during the POI or significant price depression or suppression of domestic like product prices by subject imports. There is no evidence in the record of imminent changes in the conditions of competition that would make significant price effects from subject imports likely in the imminent future, particularly given that these conditions were not present during the POI.

Likely Impact of the Subject Imports. As we discussed above, most indicators of the condition of the domestic industry improved or remained steady during the period of investigation. Moreover, we found no significant causal relationship between the subject imports and any decreases in the domestic industry's performance during the period of investigation. Nothing in the record of these investigations gives us reason to believe that subject imports would likely cause the condition of the domestic industry to deteriorate to a significant degree in the imminent future.

We further find that subject imports are not having any significant actual or 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. In fact, the industry's inability to describe any investments it did not undertake during the POI because of the subject imports supports a finding of the lack of actual potential negative effects on development and production efforts.[140]

There is also no evidence that subject imports from China would likely have significant negative effects on the performance of the domestic industry. There is no indication that the conditions of competition prevailing during the POI are likely to change significantly in the imminent future. Given our conclusion that subject imports from China are not likely to increase substantially in the imminent future and are not likely to have significant price effects, we find that subject imports from China will not likely have a significant impact on the performance of the domestic industry.

In view of the foregoing, we conclude that the domestic industry is not threatened with material injury by reason of subject imports from China.

(…Continued)

Moreover, there is no evidence on this record that there are any outstanding antidumping or countervailing duty orders or investigations on silica bricks and shapes from China in other countries that would restrict China's exports generally or that would deter growth in its established export markets. CR at VII-13, PR at VII-8.

[140] *See* CR at VI-13, PR at VI-4; and Hearing Transcript at 109 (Straight).

V. Conclusion

For the reasons stated above, we determine that an industry in the United States is not materially injured or threatened with material injury by reason of subject imports of silica bricks and shapes from China that are sold in the United States at less than fair value.

PART I: INTRODUCTION

BACKGROUND

This investigation results from a petition filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by counsel on behalf of Utah Refractories Corp., Lehi, UT, on November 15, 2012, alleging that an industry in the United States is materially injured and threatened with material injury by reason of less-than-fair-value ("LTFV") imports of silica bricks and shapes[1] from China. Information relating to the background of the investigation is provided below.[2]

Effective date	Action
November 15, 2012	Petition filed with Commerce and the Commission; institution of Commission investigation (77 FR 70185, November 23, 2012)
December 12, 2012	Commerce's notice of initiation (77 FR 73982, December 12, 2012)
January 10, 2013	Commission's preliminary determination (78 FR 3449, January 16, 2013)
June 20, 2013	Commerce's preliminary determination and postponement of final determination (78 FR 37203, June 20, 2013); Commission's institution of final phase of an investigation (78 FR 45968, July 30, 2013)
October 23, 2013	Commission's revised schedule for the subject investigation (78 FR 64533)
November 27, 2013	Commerce's final determination (78 FR 70918, November 27, 2013)
November 21, 2013	Commission's hearing[1]
December 12, 2013	Commission's vote
January 9, 2014	Commission determination and views

[1] App. B is the list of witnesses who appeared at the hearing.

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

[2] *Federal Register* notices cited in the tabulation are presented in app. A.

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--

> *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 declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual*

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

Organization of the Report

Part I of this report presents information on the subject merchandise, alleged 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 the U.S. producer. *Part VII* presents the statutory requirements and information obtained for use in the Commission's consideration of the question of threat of material injury as well as information regarding nonsubject countries.

U.S. MARKET SUMMARY

Silica bricks and shapes generally are used to line coke oven walls and construct glass furnace domes and regenerators. The petitioner, Utah Refractories Corp., is the sole domestic producer of silica bricks and shapes in the United States. Leading producers of silica bricks and shapes in China named by petitioner are Zhengzhou Chengtong Refractory Co., Ltd.; Zibo Tashan Refractory Material Factory; Zibo Hitech Material Co., Ltd.; Zhengzhou Sunrise Technology, Co., Ltd.; Luoyang Zhongte Refractories, Co., Ltd.; Yangquan Rising Commercials Ltd.; Zibo Xindi Refractory Material, Co., Ltd.; Zibo Tashan Refractory Material Factory; Smetal Group Co., Ltd.; and Zibo Yonganda Industry and Trade Co., Ltd. The only foreign producer of silica bricks and shapes from China that responded to the Commission's questionnaire is ***. The leading U.S. importers of silica bricks and shapes from China that responded to the Commission's questionnaire, are ***, while the leading importer of silica bricks and shapes from nonsubject countries (i.e., Germany) is ***.[3]

Apparent U.S. consumption of silica bricks and shapes totaled $*** in 2012. The U.S. producer's U.S. shipments of silica bricks and shapes totaled $*** in 2012, and accounted for *** percent of apparent U.S. consumption by quantity (in short tons) and *** percent by value. Subject U.S. shipments of subject imports from China totaled $*** in 2012 and accounted for *** percent of apparent U.S. consumption by quantity (in short tons) and *** percent by value. U.S. shipments of imports from nonsubject sources totaled $*** in 2012 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value.

[3] In addition, certain companies *** are believed to be U.S. importers of silica bricks and shapes from nonsubject countries (primarily from the Czech Republic, Hungary, and Germany).

SUMMARY DATA AND DATA SOURCES

A summary of data collected in the investigation is presented in appendix C, table C-1. U.S. industry data are based on the questionnaire response of petitioner Utah Refractories Corp. U.S. imports are based on the questionnaire responses of 13 firms that are believed to account for the majority of total U.S. imports of silica bricks and shapes from all sources during January 2010-June 2013.[4]

PREVIOUS AND RELATED INVESTIGATIONS

Silica bricks and shapes have not been the subject of any prior antidumping or countervailing duty investigations in the United States.

NATURE AND EXTENT OF ALLEGED SALES AT LTFV

On November 27, 2013, Commerce published a notice in the *Federal Register* of the final determination of its antidumping duty investigation on silica bricks and shapes from China.[5]

[4] The data submitted by one additional firm reported U.S. imports of within scope items *** and are not included in the aggregate presentation of import data in the report. According to the Commerce's scope, the Harmonized Tariff Schedule ("HTS") statistical reporting numbers under which subject silica bricks and shapes are imported into the United States are HTS 6902.20.1020, 6902.20.5020, and 6909.19.5095. Based on individual importer information provided by Customs, staff estimates that roughly one-half of the items entered into the United States under HTS statistical reporting number 6902.20.1020 during the period examined in this investigation are silica bricks and shapes that meet the scope language definition, with the other HTS statistical reporting numbers accounting for smaller portions. Because these HTS numbers are relatively large basket categories, the import data presented in this report are based on Commission questionnaire responses.

[5] *Final Determination of Sales at Less Than Fair Value: Silica Bricks and Shapes From the People's Republic of China*, 78 FR 70918, November 27, 2013.

Table I-1
Silica bricks: Commerce's final dumping margins, by sources

Exporter	Producer and weighted-average dumping margin (*percent ad valorem*)
Tianjin New Century Refractories Co., Ltd.; Tianjin New World Import & Export Trading Co., Ltd.; XinYi American Advanced Material Co., Ltd.	Denfeng Yuzhong Refractories Co. Ltd. 63.81
PRC-wide entity[1]	PRC-wide entity[1] 73.10

[1] The PRC-wide entity includes Shandong Daqiao Co., Ltd.

Source: 78 FR 70918, November 27, 2013.

THE SUBJECT MERCHANDISE

Commerce's Scope

In its final determination, Commerce defined the scope of this investigation as:[6]

The products covered by the scope of this investigation are refractory bricks and shapes, regardless of size, that contain at least 90 percent silica (SiO_2), where at least 50 percent of the silica content, by weight, is crystalline silica, regardless of other materials contained in the bricks and shapes. Refractory refers to nonmetallic materials having those chemical and physical properties that make them applicable for structures, or as components of systems, that are exposed to environments above 1000 degrees Fahrenheit (538 degrees Celsius). The products covered by the scope of this investigation are currently classified under Harmonized Tariff Schedule of the United States ("HTSUS") numbers 6902.20.1020 and 6902.20.5020. Because the definition of "refractory" in the HTSUS differs from that in the scope of this investigation, products covered by the scope of this investigation may also enter under HTSUS number 6909.19.5095. Although the HTSUS subheadings are provided for convenience and customs purposes, the written description of the scope of this proceeding is dispositive.

The scope of this investigation does not cover refractory bricks and shapes, regardless of size, that are made, in part, from non-crystalline silica (commonly referred to as fused silica) where the silica content is less than 50 percent, by weight, crystalline silica.

[6] 78 FR 70918, November 27, 2013.

U.S. Tariff Treatment

The products subject to this petition are classifiable in HTS subheadings 6902.20.10 (statistical reporting number 6902.20.1020), 6902.20.50 (statistical reporting number 6902.20.5020), and 6909.19.50 (statistical reporting number (6909.19.5095). Merchandise enters the United States under 6902.20.10 and 6902.20.50 at a general duty rate of "Free;" whereas merchandise entering the United States under 6909.19.50 has a general duty rate of four percent ad valorem (table I-2).

Table I-2
Silica Refractory Brick: U.S. tariff treatment, 2012

HTS provision	Article description	General [1]	Special [2]	Column 2 [3]
		Rates (*percent ad valorem*)		
6902	Refractory bricks, blocks, tiles and similar refractory ceramic constructional goods, other than those of siliceous fossil meals or similar siliceous earths:			
6902.20	Containing by weight more than 50 percent of alumina (Al_2O_3), of silica (SiO_2) or of a mixture or compound of these products:	Free	([4])	25%
6902.20.10	Bricks……	Free	([4])	30%
6902.20.1010	Alumina……			
6902.20.1020	Other……			
6902.20.50	Other……			
6902.20.5010	Alumina……			
6902.20.5020	Other……			
6909	Ceramic wares for laboratory, chemical or other technical uses; ceramic troughs, tubs and similar receptacles of a kind used in agriculture; ceramic pots, jars and similar articles of a kind used for the conveyance or package of goods:			
	Ceramic wares for laboratory, chemical or other technical uses:			
	Other:			
6909.19	Other:	4%	Free(A. AU, BH, CA, CL, CO, E, IL, J, JO, KR, MA, MX, OM, P, PA, PE, SG)	45%
6909.19.50	Other:			
6909.19.5095				

[1] *Normal trade relations, formerly known as the most-favored-nation duty rate.*
[2] *Special rates not applicable when General rate is free.*
[3] *Applies to imports from a small number of countries that do not enjoy normal trade relations duty status.*
[4] *General note 3(c)(I) to the HTS lists the programs related to the enumerated special duty rate symbols. No special duty rate applies to products of China.*

Source: Harmonized Tariff Schedule of the United States (2013) revision 1.

THE DOMESTIC LIKE PRODUCT

Description and Applications

Silica refractory bricks and shapes are light yellow refractory products made from silica rock and contain at minimum 90 percent silicon dioxide (silica).[7] This refractory provides a high temperature resistant and non-reactive lining primarily in coke ovens and in glass furnaces. Silica refractories, the most widely used refractories,[8] are produced in different types. The type included in the scope of this investigation is formed objects, commonly referred to as "bricks and shapes." These in-scope bricks and shapes are kiln-fired and mortared together into various constructions,[9] unlike fused silica bricks and shapes that are not fired.[10]

The majority of silica bricks and shapes are used to line coke oven walls (figure I-1) and construct glass furnace domes and regenerators[11] (figure I-2).[12] They are used in these

---

[7] Silica bricks and shapes are defined by ASTM classification C416. This standard designates silica bricks have an aluminum oxide content of less than 1.5 percent, a titanium oxide content of less than 0.2 percent, an iron oxide content of less than 2.5 percent, and a calcium oxide content of less than 4 percent. The presence of these impurities can have an effect on the resulting refractoriness of the silica bricks and therefore different industries have different specifications for their brick. For example, the glass industry requires a very high-purity silica brick with a lower alumina content, whereas the coke industry requests higher alumina content in their brick to increase the brick's thermal shock resistance. http://www.astm.org/Standards/C416.htm, downloaded by Thomas Mullholland, Utah Refractories Corp., September 19, 2013; (pursuant to license).

[8] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, p. 23.

[9] Some bricks and shapes may be produced from fused, non-crystalline silica mixed with a cement binding agent and dried without the same heat treatment. The petitioner testified that these items are not intended to be included in the scope of this investigation. Conference transcript, pp. 52-53 (Mulholland); petitioner's postconference brief, Responses to Questions Posed to Petitioner, no. 1.

[10] Other out-of-scope silica refractories include "monolithics." Monolithic silica refractories, which include gunning mixes, castables, and ramming mixes, among others, may be installed and cured in place without being first fired and are frequently used to repair operating furnaces. Environmental Protection Agency, "Refractory Manufacturing," AP 42, Fifth Edition, v.1, January 1995 p. 5-1, http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s05.pdf, retrieved December 10, 2012; Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, p. 90.

[11] Regenerative furnaces are fired on one side and the gases exit the opposite side to heat the checkerboard brick of the side regenerator. This reduces heat lost through the exhaust and heats the new wave of gas as the airflow is reversed. Silica bricks are excellent for this application as they do not risk spalling despite the periodic change in temperature because the regenerative furnace range is never below 1,200 degrees Fahrenheit. http://gpi.org/glassresources/education/manufacturing/section-33-furnace-operations.html, retrieved December 4, 2012; Norton, Frederick, Refractories, McGraw-Hill, 1931, pp. 340-341. Typically the glass produced in these furnaces is for downstream products, including flat glass for building and automotive windows, glass bottles and containers, fluorescent light bulb tubes, fiberglass, and niche markets, such as stained glass. Conference transcript, pp. 36 and 53 (Mulholland).

[12] Conference transcript, p. 10 (Straight). Silica bricks and shapes used for these purposes generally need to be dense rather than lightweight. Dense silica bricks typically contain at least 95 percent silica. http://www.pd-refractories.com/en/products/silica-products/dense-silica-products, retrieved December

continue...

Figure I-1
Silica refractory brick use: Otto coke oven

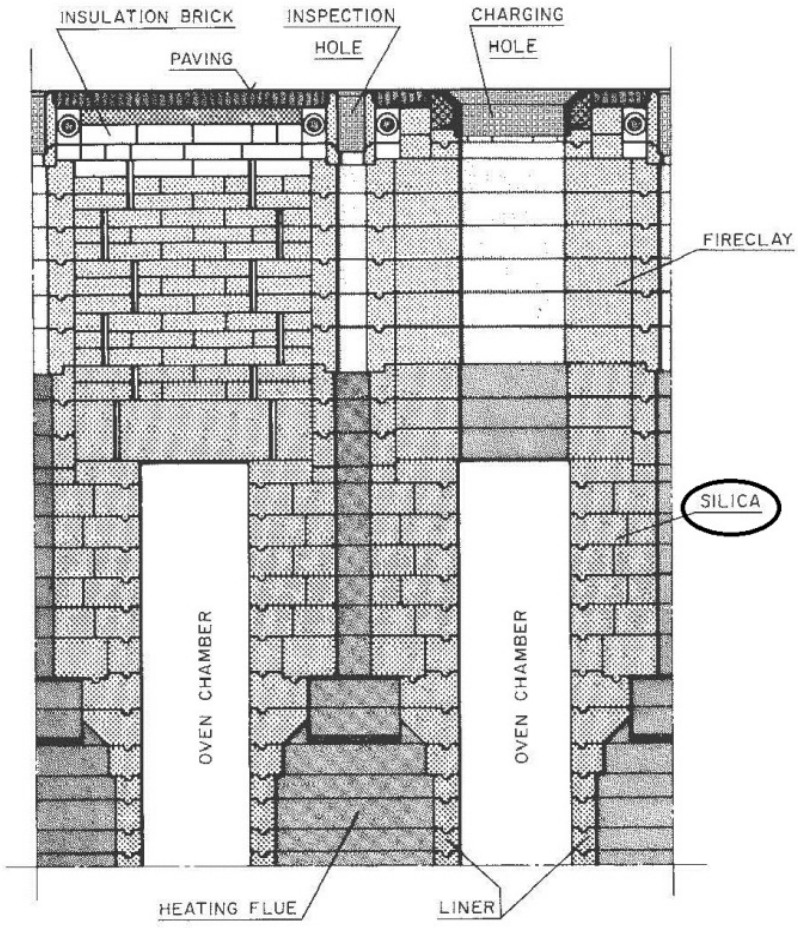
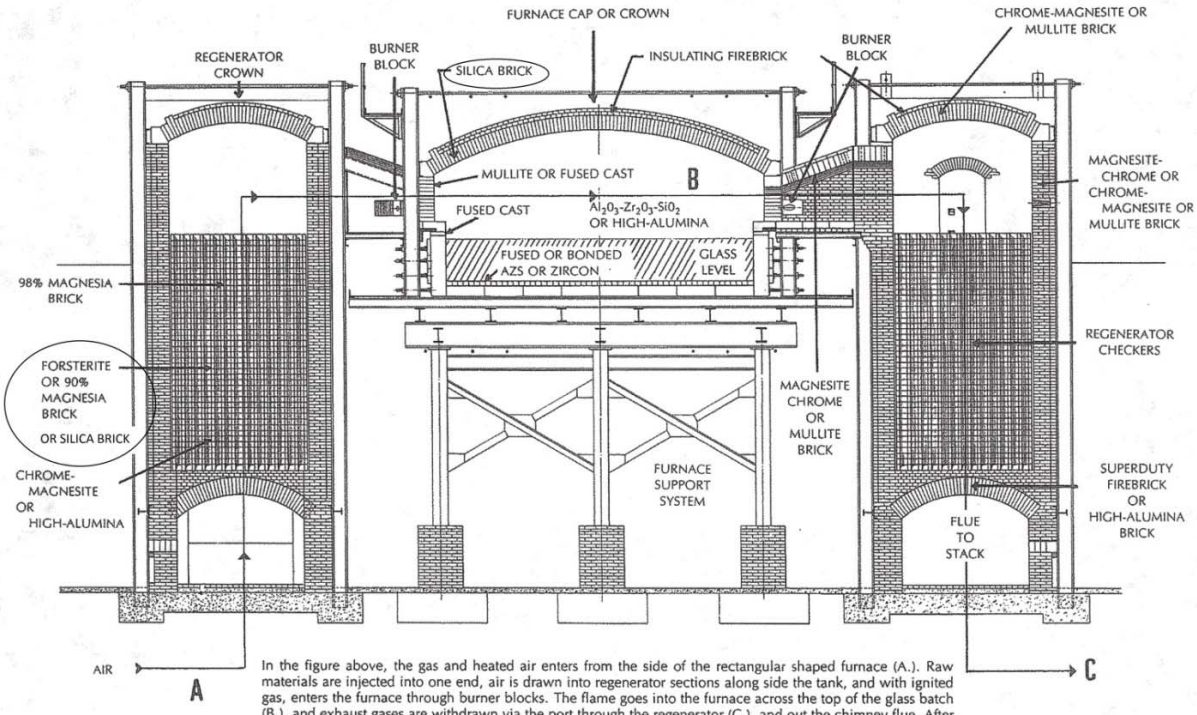


FIG. 4—61. Cross-section of battery brickwork in an Otto underjet oven. (Courtesy Dr. C. Otto and Company.)

Source: United States Steel, The Making, Shaping and Treating of Steel, 10th ed., 1984, p. 214.

[12] ...continue
11, 2012.

Figure I-2
Silica refractory brick use: Glass regenerative furnace



In the figure above, the gas and heated air enters from the side of the rectangular shaped furnace (A.). Raw materials are injected into one end, air is drawn into regenerator sections along side the tank, and with ignited gas, enters the furnace through burner blocks. The flame goes into the furnace across the top of the glass batch (B.), and exhaust gases are withdrawn via the port through the regenerator (C.), and out the chimney flue. After about 15-20 minutes of this cycle, the direction of the gas and air is renewed in the opposite direction. The cycle continues to repeat itself, and the alternating burning cycles keep the air mixture heated, allowing more efficient use of the gas in the furnace.

CROSS-SECTION OF A TYPICAL
REGENERATIVE SIDEPORT GLASS TANK MELTING FURNACE

Source: Petition, exh. III-33.

applications because of their unique properties. Silica bricks and shapes are excellent for load bearing situations, even near their melting point of 3,000 degrees Fahrenheit. Besides their load bearing capabilities at high temperatures, silica bricks and shapes may also be heated rapidly (i.e., after first being heated past 1,200 degrees Fahrenheit) and have low spalling[13] at temperatures between 1,200 and 3,000 degrees Fahrenheit. This is particularly important for structural applications, as spalling could cause walls or domes to fail.[14] Silica bricks and shapes retain their rigidity, are light weight, have a good resistance to most fluxes present in coke ovens,[15] and offer high resistance to abrasion.[16] Silica bricks and shapes have a relatively long lifespan, which is especially important for glass furnace domes and crowns, as those sections determine the lifespan of the glass furnace.[17] Silica bricks and shapes have a lifespan of 20-40 years in a coke oven[18] and 2 to 20 years in a glass furnace.[19] Silica brick is also nonreactive with the melted glass, whereas other refractories, such as magnesia brick, could discolor the final product.[20]

The refractory brick market reportedly is a mature industry, as there have not been any significant changes in silica brick production or markets in recent years.[21] Substitutes for silica bricks and shapes may include cast silica blocks and fused silica shapes which are used to repair hot coke ovens and glass furnaces, fused cast mullite based brick (alumina-silica crystalline compound typically used at door flues and in the fiberglass industry),[22] and alumina brick for glass furnace crowns. Magnesia bricks may also be used in glass regenerator furnaces in the place of silica bricks and shapes, as shown in figure I-2.[23] Fused bricks are produced differently than the silica bricks and shapes produced by the petitioner, being first melted in an electric arc furnace and then poured into sand-forming molds without a final firing,[24] and are not used extensively due to expensive re-engineering requirements for coke ovens and the cost of the

[13] Spalling is the tendency to crack, chip, or flake.

[14] Conference transcript, p. 10 (Straight).

[15] Conference transcript, p. 10 (Straight).

[16] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, pp. 22 and 88.

[17] Norton, Frederick, Refractories, McGraw-Hill, 1931, pp. 340-341.

[18] Conference transcript, p. 10 (Straight); petition, p. 7.

[19] Hearing transcript, p. 99 (Mulholland).

[20] Petition, p. 7.

[21] Conference transcript, p. 74 (Worthen). It was noted that Utah Refractories has not significantly changed its production process since the 1940s when the manufacturing plant was opened.

[22] Conference transcript, pp. 25-26, 53 (Mulholland); http://intersource.com/coke.shtml, retrieved December 10, 2012.

[23] Conference transcript, p. 62 (Mulholland).

[24] Environmental Protection Agency, "Refractory Manufacturing," AP 42, Fifth Edition, v.1, January 1995, p. 5-1, http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s05.pdf, retrieved December 10, 2012.

products for glass furnaces.[25] Other refractories serve similar purposes and are also used in other sections of coke ovens and glass furnaces (see figures I-1 and I-2), but these refractories do not have the same physical and chemical characteristics and therefore are not used interchangeably with the subject silica bricks and shapes.[26]

Manufacturing Process

Silica suitable for use in silica bricks and shapes is mined from quartzite, siliceous rock deposits, such as mica schists,[27] or siliceous sandstone,[28] such as ganister.[29] In the United States, ganister has historically been mined in Wisconsin, Pennsylvania, Alabama, Ohio, North Dakota, Montana, Colorado, California, and Utah.[30] Currently, ganister is mined by Utah Refractories for use in the production of silica bricks and shapes in Utah.[31]

After mining, the silica material must be mechanically crushed and ground to the appropriate size to satisfy the specific requirements of the brick being produced. The crushed ganister may then be washed to reduce the alumina content, thereby increasing final silica brick "refractoriness" (ability to withstand greater temperatures).[32] In any case, the silica material is screened, and subsequently, 1.8 to 3.5 percent lime (calcium oxide) is added as a binder.[33] The lime combines with the silica and impurities of the rock to form a liquid which hardens after firing.[34] This mix is then pressed into customized molds, which are typically made of either tool steel or carbides for large pieces.[35] According to the petitioner, coke oven refractory bricks are more labor intensive to produce as they are either molded by impact press or hand-formed,

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[25] Petition, p. 22. Estimates are that fused cast bricks are six to eight times the cost of the silica brick the petitioner produces and mullite alumina bricks are approximately three to four times the cost. Conference transcript, pp. 52-53 (Mulholland).

[26] Conference transcript, p. 13 (Straight).

[27] Sinha, R.K., Industrial Minerals, 2nd ed, India, 1986, p. 311.

[28] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, pp. 303-304. The quartz rock used typically contains 1.0 to 1.3 percent alumina (aluminum oxide), titania (titanium oxide), alkali (potassium oxide), and 0.8 percent ferric oxide.

[29] Ganister is a hard, dense, fine-grained, unmetamorphosed sandstone with a high silica content. Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, p. 260.

[30] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, p. 22; and conference transcript, p. 9 (Wiseman).

[31] Conference transcript, p. 9 (Wiseman).

[32] Norton, Frederick, Refractories, McGraw-Hill, 1931, p. 29.

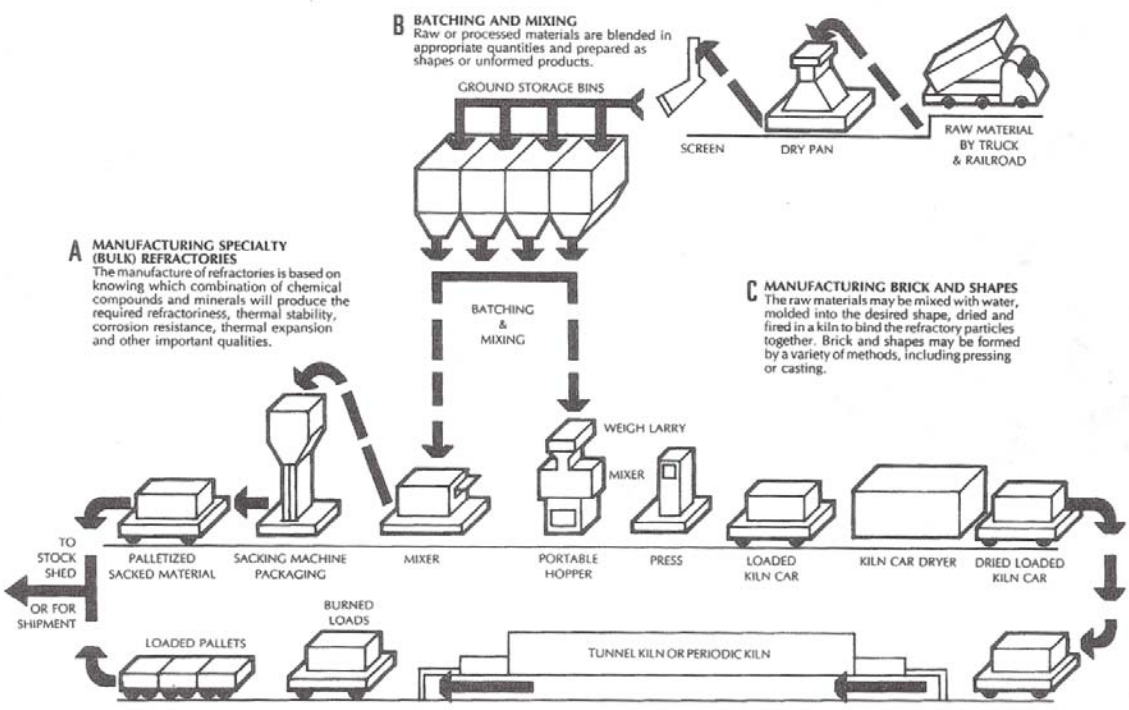
[33] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, p. 295.

[34] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, pp. 303-304.

[35] Conference transcript, p. 78 (Worthen). Petitioner also notes that they have over 30,000 molds at their manufacturing plant to produce customized silica brick and shapes. Conference transcript, p. 32 (Wiseman).

whereas silica bricks and shapes for glass furnaces are almost entirely machine-made.[36] Next, the bricks are sent through driers and are finally fired to above 2,700 degrees Fahrenheit in either periodic (batch) kilns or continuous (tunnel) kilns to form the ceramic bond that gives silica brick its refractory properties.[37] In the United States, silica bricks and shapes are manually loaded and unloaded into periodic beehive kilns (figure I-3).[38] Varying amounts of silica bricks and shapes are stacked within these kilns; ***.[39]

Figure I-3
Silica refractory brick: Manufacturing process



Appendix 6
Typical Refractory Manufacturing Flow Sheet

Source: Petition, exh. III-44.

[36] Petitioner's postconference brief, p. 9.

[37] Environmental Protection Agency, "Refractory Manufacturing," AP 42, Fifth Edition, v. 1, January 1995, p. 5-1, http://www.epa.gov/ttn/chief/ap42/ch11/final/c11s05.pdf, retrieved December 10, 2012.

[38] Conference transcript, p. 78 (Worthen).

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

Firing up to 1,200 degrees Fahrenheit transforms the quartz, first from alpha to beta quartz, during which time there is a sharp increase in volume and, therefore, risk of spalling, and then to the more stable high temperature crystalline phases of silica after firing above 1,200 degrees Fahrenheit.[40] Once fired, there is very low residual quartz as it has been transformed into the more stable high temperature crystalline phase of silica, mostly tridymite and cristobalite.[41] Silica bricks and shapes usually contain 45 to 60 percent tridymite, 30 to 40 percent cristobalite, and up to 5 percent residual quartz. The remainder consists of a highly siliceous glass, either with or without finely crystalline material.[42] Altogether, production of silica bricks and shapes in the United States takes *** on average, from receipt of the order to shipping of the final product. The time sequence is broken down as follows: ***.[43]

The ultimate quality of the silica bricks and shapes is determined by the input material, namely the amount of silica present in the mined siliceous rock and the process of screening and testing before the inclusion of carefully selected additives.[44] The strength of the ceramic bond is dependent upon the character of the brick mix as well as upon the time and temperature of firing.[45]

According to petitioners, despite the different end users of silica bricks and shapes, the method of production and chemical characteristics remain nearly identical for both end uses. Regardless of end use, silica bricks and shapes are manufactured using virtually identical inputs, are formed using the same processes, and they are fired in the same kilns at the same temperatures.[46] All silica bricks start with high-silica rock or sand, which is crushed, and mixed with additives totaling less than five percent of the volume of the silica bricks and shapes.[47] For end users in the coke industry, the chemistry is altered slightly by also adding aluminum dioxide, which comprises a maximum volume input of 1.5 percent of the silica bricks and shapes. The mixture is then placed in molds which are fired in kilns at 2700 degrees Fahrenheit for approximately 28 days. The firing process is the same regardless of the intended end use of the silica bricks and shapes, and silica bricks and shapes for both end uses can be and are often fired simultaneously in the same kiln.[48] All things being equal there is no difference between

[40] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, p. 260; Remmey Jr., G. Bickley, Firing Ceramics, 1994, pp. 12-13.

[41] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, p. 295.

[42] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, p. 306.

[43] Email from ***, December 7, 2012.

[44] Conference transcript, p. 76 (Worthen).

[45] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, p. 295.

[46] Petitioner's posthearing brief, exh. 8, p.1.

[47] Ibid.

[48] Ibid.

the lifespan of silica bricks and shapes designed for end-users in the steel industry and the lifespan of silica bricks and shapes designed for end-users in the glass industry.[49]

Silica bricks and shapes can be sold individually or in packages produced-to-order for different applications. Some items might even be pre-assembled at the kiln and then shipped to the customer. Silica bricks are held together for their end use in furnaces or other applications by either a silica- or chrome-based mortar.[50] Because coke ovens and glass furnaces are company-specific and may each require hundreds of shapes, silica bricks are generally made on a per order basis and little inventory is held.[51] Completed individual silica bricks and shapes are palletized (stacked on shipping pallets) for transportation by truck or ocean freight container to their final destination.[52]

DOMESTIC LIKE PRODUCT ISSUES

No issues with respect to domestic like product and domestic industry have been raised by parties in this investigation concerning silica bricks and shapes from China. The petitioner proposes that the domestic like product should be defined to include only silica bricks and shapes coextensive with the scope of the investigation.[53]

[49] Ibid., pp 1-2.

[50] Harbison-Walker Refractories Co., Modern Refractory Practice, Silica Refractories, 1950, p. 90.

[51] Conference transcript, pp. 31-33 (Wiseman). Petitioner notes that Utah Refractories has over 30,000 molds in stock to customize silica bricks and shapes for orders.

[52] Conference transcript, p. 78 (Worthen).

[53] Petitioner's prehearing brief, p. 8.

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

U.S. MARKET CHARACTERISTICS

Silica bricks and shapes are produced and sold for individual projects that have a unique bill of materials which specifies the physical and chemical characteristics and the number and size of shapes for each project. The major applications for silica bricks and shapes are coke ovens and glass furnace crowns. U.S. producers and importers generally sell silica bricks and shapes directly to the end user for use in new construction or repair of furnaces used in the steel and glass industries (see figures I-1 and I-2 in Part 1 of this report).[1] [2] Minor applications include, but are not limited to, glass tank walls, acid practice electric furnaces, tunnel kilns, and regenerators.[3]

Silica bricks and shapes are produced in a wide variety of sizes and shapes depending on the purchaser's needs.[4] Silica bricks and shapes are largely produced-to-order due to the very specific and varied shapes required for a particular project, which includes both initial construction and repair.[5] New construction projects tend to be much larger orders, while orders for repair projects can vary greatly in size and number of shapes required due to the variations in repair work needed from project-to-project.[6] Pricing for silica bricks and shapes depends on a number of factors, including complexity of the shapes, quantity of shapes, total number of bricks, quality of the silica, delivery deadlines, and availability of the molds required to produce the product.[7] Therefore, silica bricks and shapes are priced and sold on a per-project basis. Most purchasers reported that they typically work with a single supplier and contact that supplier when they need silica bricks and shapes.

Generally, silica bricks and shapes used in the glass industry are not interchangeable with silica bricks and shapes used in the coke industry.[8] Firms reported that the two end use types require different chemical compositions and shape requirements. Many also noted that glass furnaces require a higher grade silica or Type A brick.[9] Utah Refractories stated that silica

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[1] Petitioner's prehearing brief, p. 9.

[2] Utah Refractories and responding importers reported that ***.

[3] Petition, p. 6.

[4] Petition, exhibit 1, p. 2.

[5] Conference transcript, p. 31 (Wiseman).

[6] Respondents report that a repair job may involve a "pad-up" replacement, which is when an existing facility is basically leveled and rebuilt. The quantity of silica bricks and shapes required for this type of project is equivalent to a new construction project. Respondents' posthearing brief, Responses to Commissioner Questions, p. 9.

[7] Email from ***, December 7, 2012, and petitioner's postconference brief, p. 9.

[8] ***, nine responding importers, and all ten purchasers reported that silica bricks and shapes used in the glass industry are not interchangeable with the silica bricks and shapes used in the coke industry.

[9] According to the American Society of Testing Materials (ASTM), Type A brick has very little alumina and alkalies and have less chance of cracking or spalling during temperature changes. Type A brick also have less of a risk of fluxing (i.e. having a reaction with other components and the silica to turn into glass

(*continued*...)

bricks and shapes for glass furnaces have the highest level of silica, and that to make silica bricks and shapes for coke ovens it mixes in additives to reduce the silica level.[10] Respondents stated that products intended for the coke and glass industries are manufactured differently, use different material inputs, and cannot be substituted once produced.[11]

Molds for silica bricks and shapes

Silica bricks and shapes used in the glass industry are often standard sizes and can be machine-made;[12] however, silica bricks and shapes used in coke oven applications often require hundreds of shapes, many of which are hand molded by impact press or hand-formed.[13] [14] Molds for each type of silica brick or shape are similar in composition as well as similarly made with the only difference being the shape of the brick it will form.[15] Molds are made from several different types of steel depending on the volume of silica bricks and shapes that the mold will be used to produce.[16] Petitioner reported that it has more than 30,000 molds in stock to manufacture different shapes and it reuses molds for different projects.[17] Utah Refractories reported that this stock of molds allows it to satisfy most domestic customers, and if a mold is not available, Utah Refractories produces one in its in-house machine shop.[18] Utah Refractories reported that it can make a mold in three to four days depending on the intricacy of the mold. Respondent TNCR reported that it uses the same mold-making process for silica bricks and shapes for use in both glass furnaces and coke ovens, and that the molds vary by shape and size depending on the final end use of the silica bricks and shapes (i.e., glass furnace or coke oven). TNCR reported that all silica bricks and shapes are made to customer specification and that it makes molds for each customer.[19] Therefore, the molds that TNCR makes are owned by its

(…*continued*)
in the brick). Harbison-Walker Refractories Company, *Harbison-Walker Handbook of Refractory Practice,* 2005, p. CR-12, http://www.ce-fire.com/uploads/2005_Handbook__.pdf.

[10] Hearing transcript, p. 61 (Wiseman).

[11] Respondents' prehearing brief, p. 5, and Respondents' posthearing brief, Responses to Commissioner Questions, p. 13. See also, hearing transcript, p. 149 (Klett).

[12] ***. Staff field trip report, Utah Refractories, October 30, 2013.

[13] Conference transcript, p. 48 (Mulholland), and petitioner's postconference brief, p. 9.

[14] Petitioner reported that a glass order may contain 30 different shapes while a coke oven order may have 500 shapes, and both require the same quantity (tonnage) of silica bricks and shapes. Hearing transcript, pp. 47-48 (Worthen).

[15] Hearing transcript, pp. 100-101 (Worthen) and p. 177 (Dai).

[16] Hearing transcript, pp. 86-87 (Worthen). Respondents reported that ***. Respondents' posthearing brief, Responses to Commissioner Questions, p. 19.

[17] Conference transcript, pp. 32-33 and 49 (Straight and Wiseman), and hearing transcript, p. 46 (Worthen and Williams).

[18] Petitioner added that if there are any scheduling problems, it has a nearby independent machine shop that is able to make molds as well. Hearing transcript, p. 46 (Worthen).

[19] Respondents' posthearing brief, Responses to Commissioner Questions, p. 19.

customers.[20] TNCR also reported that it can make a simple, rectangular mold in four days to a week.[21]

U.S. PURCHASERS

The Commission received ten purchaser questionnaires from firms that have purchased silica bricks and shapes since January 1, 2010. These purchasers reported purchasing more than *** short tons of silica bricks and shapes during 2010-12. Purchasers reported that *** percent of their purchases during 2010-12 were of silica bricks and shapes produced in the United States, and *** percent were of silica bricks and shapes produced in China.[22] [23] Nearly all purchasers reported that their purchases of silica bricks and shapes from 2010-12 were used in rebuilding or repairing an existing coke furnace or glass oven.[24]

The three largest purchasers of silica bricks and shapes during 2010-12 were ***;[25] ***.[26] Four purchasers reported that they were end users in the glass industry, three end users in the steel industry, two construction contractors in the glass industry, and one merchant coke producer.

CHANNELS OF DISTRIBUTION

Silica bricks and shapes are produced and sold for individual projects that have a unique bill of materials, and therefore, are sold ***.[27] As shown in table II-1, approximately *** of Utah Refractories' U.S. shipments of silica bricks and shapes were sold to ***, with the remaining

[20] Hearing transcript, p. 178 (Dai), and Respondents' posthearing brief, Responses to Commissioner Questions, p. 19.

[21] Hearing transcript, p. 177 (Dai).

[22] ***.

[23] ***.

[24] ***.

[25] ***.

[26] ***.

[27] During the POI, *** importers reported *** their imported silica bricks and shapes. Three of these importers reported importing silica bricks and shapes from China and accounted for *** percent of total Chinese imports. Two importers of silica bricks and shapes from China reported that they were ***, and one reported that it was ***. Two importers, that reported internally consuming their imported product, reported importing silica bricks and shapes from nonsubject sources, and accounted for *** percent of total nonsubject imports. Both importers of silica bricks and shapes from nonsubject sources reported that they were ***.

shipments going to *** during the POI.[28] The large majority of importers' shipments from China were shipped to *** during the POI.[29] The majority of nonsubject imports were sold to ***.[30]

Table II-1
Silica bricks and shapes: U.S. producers' and importers' U.S. shipments, by sources and channels of distribution, 2010-12, January-June 2012, and January-June 2013

* * * * * * *

Utah Refractories reported that its sales of silica bricks and shapes to the steel making industry have declined due to the lower priced imports of Chinese silica bricks and shapes and that it has lost its sales in the coke industry almost entirely.[31] It reported that it has shifted its sales of silica bricks and shapes that would otherwise have been made to the steel industry to glass producers.[32] In the glass industry, the vast majority of Utah Refractories' products have been sold as replacement materials for existing facilities and not for new furnace construction since 2009. With respect to the steel industry, all of the products sold by the petitioner since 1998 have been for the replacement of materials in existing facilities.[33]

Utah Refractories asserts that Chinese suppliers are attempting to price them out of selling silica bricks and shapes to the glass industry as well.[34] [35] Respondents assert that while the Chinese industry is capable of producing silica bricks and shapes for the glass industry, the high purity silica rock required to produce silica bricks and shapes for the glass industry (Type A

[28] Utah Refractories identified ***. Petitioner's posthearing brief, exhibit 3, p. 2, and exhibit 8, p. 2.

[29] Two importers of silica bricks and shapes from China reported shipments to *** during the POI. Importer ***, which accounted for almost *** percent of U.S. importers U.S. shipments from China to ***, reported that its imported silica bricks and shapes were used in the production of ***. Importer *** accounted for the remaining *** percent, only shipped to *** in 2010, and did not identify the ***. *** also reported shipments to *** during the POI.

[30] *** was the largest importer of silica bricks and shapes from nonsubject sources over the POI. *** reported that its import shipments from *** were sold to ***. The remainder of nonsubject imports from *** were almost entirely sold to ***, and nonsubject imports from *** were sold to ***.

[31] Conference transcript, pp. 19-21 (Straight), and hearing transcript, pp. 16-17 (Wiseman).

[32] Conference transcript, pp. 19-21 (Straight).

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

[34] Petitioner's prehearing brief, p. 41; and hearing transcript, pp. 22-23 (Mulholland and Williams) and p. 58 (Straight).

[35] According to hearing testimony from Tom Mulholland, Director of Sales and Marketing for Utah Refractories, "…they use Chinese or Chinese-type silica brick in the glass operations in Europe. I'm very concerned that this would happen here in the United States." Hearing transcript, p. 21 (Mulholland). Utah Refractories reported that *** of its glass industry customers (***) are actively seeking to source silica bricks and shapes from China. Hearing transcript, pp. 23-24 (Mulholland) and petitioner's posthearing brief, exhibit 8, p. 2.

brick) is not as readily available in China.[36] Respondents reported that TNCR is the only Chinese producer that can manufacture glass brick that meets the U.S. and European standard which requires a very low level of impurity, and that most Chinese producers are not able to produce silica bricks and shapes to the purity level required by the U.S. glass industry.[37] Respondents stated that the Chinese glass industry accepts the product with higher impurities, but that the Chinese glass furnaces also have a shorter life span. Respondents added that they import silica bricks and shapes for use in glass furnaces.[38]

GEOGRAPHIC DISTRIBUTION

Utah Refractories and five importers of silica bricks and shapes from China identified the regions of the U.S. market in which they sell silica bricks and shapes. Utah Refractories reported selling silica bricks and shapes in *** (table II-2). Importers *** each reported selling silica bricks and shapes to three regions, and importers *** reported to selling to one region each.

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

* * * * * * *

SUPPLY AND DEMAND CONSIDERATIONS

U.S. supply

Domestic production

Based on available information, the U.S. producer has the ability to respond to changes in demand with large changes in the quantity of shipments of U.S. produced silica bricks and shapes to the U.S. market. The main contributing factors to the high degree of responsiveness of supply are unused capacity and alternative markets; supply responsiveness is somewhat constrained due to the fact that silica bricks and shapes are mostly produced-to-order.

Utah Refractories reported that there have been *** in the product range, product mix, or marketing of silica bricks and shapes since January 2010.

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[36] Hearing transcript p. 157 (Klett), and pp. 186-189 (Dai); and Respondents' posthearing brief, Responses to Commissioner Questions, pp. 14-17. Petitioner asserts that Chinese producers are capable of producing silica bricks and shapes for the glass industry. Petitioner's posthearing brief, exhibit 9.

[37] Hearing transcript, p. 157 (Klett), pp. 186-187 (Dai), and p. 222 (Nagarajan).

[38] Hearing transcript, pp. 187-189 (Dai).

Industry capacity

Utah Refractories' capacity utilization decreased from to *** percent in 2010 to *** percent in 2012.[39] U.S. production of silica bricks and shapes decreased from *** short tons in 2010 to *** short tons in 2012 while capacity ***.

Alternative markets

Exports by Utah Refractories, as a share of total shipments of silica bricks and shapes, decreased from *** percent in 2010 to *** percent in 2012.[40] Utah Refractories' principal export markets include ***.[41]

Inventory levels

Utah Refractories reported *** end-of-period inventories of silica bricks and shapes for the entire period of investigation.

Production alternatives

Utah Refractories reported that it also produces bond/cement (***) using the same machinery and equipment used in the production of silica bricks and shapes. This product is used to bond silica bricks together in end-use constructions.[42] Utah Refractories also reported that ***.[43]

Supply constraints

Utah Refractories reported that it ***.[44] Utah Refractories also reported that it has *** during the POI. It also has ***.[45] Utah Refractories stated that it "***."[46] Purchaser *** reported that it was unable to purchase silica bricks and shapes from the U.S. producer because

[39] Capacity utilization was higher in interim 2013 (*** percent) than in interim 2012 (*** percent).

[40] Utah Refractories' exports as a share of total shipments were lower in interim 2013 (*** percent) than in interim 2012 (*** percent).

[41] Utah Refractories reported that it has sold silica bricks and shapes for projects in *** during the POI. Petitioner's posthearing brief, exhibit 3, p. 1.

[42] Conference transcript, pp. 64-65 (Worthen).

[43] Utah Refractories' U.S. producer questionnaire response, section II-4.

[44] Petitioner's prehearing brief, Exhibit 1, p. 2.

[45] At the hearing, Utah Refractories reported that it has not declined a project because it required creating too many new molds, and in its posthearing brief, Utah Refractories stated that it has not refused to submit a bid on a project during the POI. Hearing transcript, p. 80 (Worthen), and petitioner's posthearing brief, p. 7.

[46] Utah Refractories' U.S. producer questionnaire response, section IV-21.

***.[47] Importer SunCoke reported that, in its 20-year history of trying to purchase silica bricks and shapes from Utah Refractories, it has not been able to do so because the company was not capable of serving SunCoke's needs.[48] SunCoke added that ***.[49] SunCoke reported that it has occasionally contacted Utah Refractories to supply a project, but that due to Utah Refractories' small size, it is only able to supply small repair jobs over an extended time frame.[50] SunCoke added that ***.[51] [52]

Subject imports from China

The Commission received *** questionnaire response from Chinese producer, *** in this investigation.[53] [54] Based on available information, Chinese producers have the ability to respond to changes in demand with large changes in the quantity of shipments of silica bricks and shapes to the U.S. market. Responsiveness of supply for Chinese silica bricks and shapes producers is constrained by high levels of reported capacity utilization. However, the volume of Chinese producers' shipments of silica bricks and shapes to all other markets accounted for more than three-fourths of U.S. silica bricks and shapes consumption during the POI.[55]

Industry capacity

*** capacity utilization increased from *** percent in 2010 to *** percent in 2012.[56] Responding Chinese producers' production of silica bricks and shapes increased from *** short tons in 2010 to *** short tons in 2012 while capacity ***.[57]

Alternative markets

*** reported exporting approximately *** to *** percent of its production during 2010 to 2012.[58] The vast majority of *** exports were to ***. *** exports to ***.

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[47] ***. *** is the only purchaser that reported being refused, declined, or unable to purchase silica bricks and shapes since 2010.

[48] Hearing transcript, p. 130 (Husisian) and p. 142 (Morey).

[49] SunCoke reported that ***.

[50] SunCoke added that Utah Refractories' inability to meet its delivery and quantity requirements "means that they're just not an option" for supplying SunCoke's silica bricks and shapes needs. Hearing transcript, pp. 143-144 (Morey).

[51] SunCoke's importer questionnaire response, Statement of SunCoke Energy, Inc., pp. 1-2 and Declaration of ***, pp. 1-2.

[52] *** Utah Refractories asserts that ***. Petitioner's prehearing brief, Exhibit 1, pp. 3 and 6-7.

[53] *** reported that it accounted for approximately *** percent of the total production of silica bricks and shapes in China in 2012. *** foreign producer questionnaire response, section II-10.

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

[55] ***.

[56] Capacity utilization was higher in interim 2013 (*** percent) than in interim 2012 (*** percent).

[57] *** reported that its production capacity ***.

Inventory levels

*** reported *** end-of-period inventories of silica bricks and shapes for the entire period of investigation.

Production alternatives

*** reported that it *** on the same machinery and equipment used in the production of silica bricks and shapes since 2010, and that it *** production between silica bricks and shapes and other products in response to a relative change in price of silica bricks and shapes in relation to the price of other products.

Supply constraints

Seven of nine responding importers reported that their firm did not have any constraints in supplying silica bricks and shapes to their customers during the POI. Importer *** reported that it often does not quote a customer's project due to the lack of a qualified supplier other than ***, and it reported that *** will not sell to silica bricks and shapes to *** if it is going to resell the product.[59] Importer *** reported that it has declined to solicit or quote silica bricks and shapes due to the threat of the duties.

Nonsubject imports

Importers reported importing from nonsubject countries the Czech Republic and Germany. The largest of these nonsubject sources was Germany, which accounted for approximately 44 percent of total imports in 2012.

New suppliers

Three of 10 purchasers indicated that new suppliers have entered the U.S. market since 2010. Two purchasers (*** and ***[60]) did not specifically identify any supplier, but reported that they have been contacted by or received solicitations from Chinese silica bricks and shapes suppliers.[61] One purchaser (***[62]) reported PD Refractories (Czech Republic) and Tata Refractories (India) as new suppliers in the U.S. market.

(…*continued*)

[58] *** reported that *** to *** percent of its total shipments during 2010 to 2012 were to its ***.

[59] ***.

[60] Both purchasers are ***.

[61] Purchaser *** noted that quality of the Chinese silica bricks and shapes is a concern, and *** stated that it had not yet evaluated the Chinese silica bricks and shapes to see if they are the desired quality. *** U.S. purchaser questionnaire response, section III-18, and *** U.S. purchaser questionnaire response, section III-18.

[62] *** is an ***.

U.S. demand

Demand for silica bricks and shapes is derived from the demand for the ultimate product into which it is incorporated, mainly coke ovens and glass furnaces.[63] Based on available information, it is likely that changes in the price level of silica bricks and shapes would result in a moderate change in the quantity of silica bricks and shapes demanded. The main contributing factors are the limited availability of cost efficient substitute products and the high cost share of silica bricks and shapes in their end uses.

U.S. apparent consumption of silica bricks and shapes increased from 2010 to 2011 then declined in 2012, but remained above 2010 levels. Demand tends to fluctuate due to the large-project nature of the industry. The construction of new coke ovens and glass furnaces results in "lumpy" demand as demand increases significantly during large-scale projects and declines once those projects are complete.[64]

End uses and cost share

Silica bricks and shapes are primarily used in construction or a repair of a coke oven or glass furnace (see Part I for more information). Other reported end uses include kilns, electric kilns, electric arc furnaces, and reduction cell lining. Questionnaire responses contained divergent responses regarding the cost share of silica bricks and shapes in their various end use applications.

Utah Refractories reported that silica bricks and shapes accounted for approximately *** percent of the total cost to repair or rebuild a coke oven, and only about *** percent of the total cost to construct a new coke oven. Utah Refractories also reported that silica bricks and shapes accounted for approximately *** percent of the total cost to rebuild or repair a glass furnace, and about *** percent of the total cost to construct a new glass furnace. Utah Refractories reported that silica bricks and shapes account for approximately *** percent of the total end use cost for kilns and electric kilns.

Most responding importers reported that silica bricks and shapes accounted for 95 to 100 percent of the total cost to rebuild or repair a coke oven. Two importers reported that silica bricks and shapes accounted for less than 20 percent of the total cost to construct a new coke oven, and one importer (***) reported that silica bricks and shapes accounted for 95 percent of the total cost of building a new coke oven.[65] Two importers reported cost share data for repairing or rebuilding a glass furnace. One importer reported that silica bricks and shapes account for 35 percent of the total cost to rebuild or repair a glass oven and one reported silica bricks and shapes accounted for 90 percent of the total cost. One importer (***) reported that silica bricks and shapes accounted for 90 percent of the total cost of building a new glass furnace.

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[63] Petitioner's prehearing brief, p. 20, and Respondents' prehearing brief, p. 13.

[64] Respondents' prehearing brief, pp. 7-8.

[65] Respondents reported that, for large new coke oven construction projects, the price of silica bricks and shapes is just a small component of the overall project cost. Respondents' prehearing brief, Attachment C, p. C-1.

Purchasers reported that silica bricks and shapes accounted for 20 percent or less of the total cost to rebuild or repair a coke oven. Two purchasers (***) reported that silica bricks and shapes accounted for 100 percent of the cost to rebuild or repair a glass furnace, while three purchasers reported that silica bricks and shapes accounted for only 1 to 3 percent of the total cost. Two purchasers reported cost share data for silica bricks and shapes used in electric arc furnaces. One purchaser (***) reported that silica bricks and shapes accounted for 100 percent of the total cost of the electric arc furnace, while the other purchaser (***) reported that silica bricks and shapes accounted for less than 1 percent of the total cost.

Business cycles

Utah Refractories and the majority of responding importers (7 of 11) and purchasers (7 of 10) reported that silica bricks and shapes *** distinctive business cycles or conditions of competition. One importer reported that "Glass repairs are major projects which by nature have historic cycles, and tend to be done in the first and fourth quarters of the year to match end customer product demand. With respect to silica bricks and shapes in the steel industry, this market is not subject to particular business cycles." Of the four importers who reported that silica bricks and shapes are subject to distinctive business cycles or conditions of competition, one indicated that there had been changes in the business cycles or conditions of competition since January 2010.[66] One purchaser reported that there have been changes in the conditions of competition or business cycles since January 2010, and stated that there are a reduced number of operating glass furnaces with longer periods between repairs.

Demand trends

Utah Refractories reported that demand within the United States had *** (table II-3). Utah Refractories reported that the closing of glass plants and coke ovens as well as several new coke oven projects are factors that have affected these changes in demand. It noted that although the coke industry has seen a number of plants close due to environmental regulations, new plants are being built in the United States which has increased the demand for silica bricks and shapes.[67] Utah Refractories noted that, due to the 2009 recession, there was a downturn in demand the glass industry because of a drop in the number of new housing starts (window glass and architectural glass), but the glass container market (beer bottles, wine bottles, and jars) has been stable.[68] Utah Refractories reported that it expects demand to improve slightly as

[66] This importer stated that there are fewer of the traditional shapes and more special *** shapes. Silica bricks and shapes for glass furnaces tend to be standard shapes, while silica bricks and shapes for coke ovens are more complex and vary greatly. At the hearing, SunCoke reported that its facilities use 23 different silica brick shapes that fit together in a proprietary SunCoke design. SunCoke noted that these are not shapes that any competitor would use. Hearing transcript, p. 141 (Morey). While traditional coke ovens use many different shapes, Petitioner noted that some of the more modern coke ovens are using fewer shapes like glass furnaces. Hearing transcript, pp. 55-56 (Straight).

[67] Conference transcript, p. 34 (Mulholland).

[68] Hearing transcript, pp. 84-85 (Mulholland).

companies recover from the 2009 recession and begin to repair furnaces that may be overdue for repairs.[69]

Table II-3
Silica bricks and shapes: Firms' responses regarding U.S. demand since 2010

* * * * * * *

Responding importers were split regarding demand trends within the United States. Three importers reported that demand ***, and three reported an *** in demand within the United States since 2010. One importer stated that "both the glass and steel making industries were seriously impacted by the financial downturn beginning in 2008, resulting in an *** in demand for related refractory products. Demand for silica bricks and shapes in the glass industry tends to *** as demand is project timing based."

Three purchasers reported an *** in demand for silica bricks and shapes within the United States. These purchasers reported that, due to market conditions, there are a reduced number of operating glass furnaces. Two responding purchasers reported that demand for silica bricks and shapes within the United States had ***.[70] The majority of responding purchasers reported that demand for their final products either *** or ***, and five of seven purchasers reported that the demand for their coke or glass had no effect on their demand for silica bricks and shapes.[71]

Utah Refractories reported that demand outside the United States ***. The majority of responding importers reported that demand outside of the United States ***, and purchaser responses were split. Two purchasers reported that demand outside of the United States had ***, and two reported that demand ***.[72]

Substitute products

Utah Refractories, 4 of 11 responding importers, and 6 of 10 purchasers indicated that there were substitute products for silica bricks and shapes. Identified substitutes include alumina brick; bonded chrome refractory; cast silica; fused alpha-beta alumina brick; fused alumina brick; fused cast alumina, zirconia, and silica brick; fused cast refractory shapes; and mullite. At the preliminary conference, Utah Refractories reported that cast silica blocks were substitutes for silica bricks and shapes in coke oven applications; however, the product requires extensive re-engineering. Utah Refractories also reported that fused cast and alumina bricks

[69] Hearing transcript, p. 88 (Mullholland).

[70] Four purchasers reported having no knowledge of demand trends in the silica bricks and shapes market.

[71] ***. ***.

[72] Respondents reported that demand outside of the United States is also driven by new construction and repair or replacement projects of coke ovens and glass furnaces. Respondents' prehearing brief, p. 18.

were substitutes that could be used in glass furnace crowns although these two substitutes were approximately three times the cost of silica bricks. Additionally, Utah Refractories reported that mullite brick was a substitute for glass furnace walls and domes; however, they indicated that mullite brick is higher priced than silica brick.[73] Purchaser ***.[74]

Utah Refractories reported that the cost of the substitutes *** the price of silica bricks and shapes. All responding importers and purchasers reported that the substitutes are more expensive than silica bricks and shapes, and that the prices of these substitutes do not affect the prices for silica bricks and shapes.

SUBSTITUTABILITY ISSUES

The degree of substitution between domestic and imported silica bricks and shapes depends on such factors as relative prices, quality, and conditions of sale (e.g., price discounts, lead times between order and delivery, payment terms). Based on available data, staff believes that there is a moderately high degree of substitutability between domestically produced silica bricks and shapes and those imported from China.

Lead times

Silica bricks and shapes are primarily produced-to-order. Utah Refractories reported that *** percent of its 2012 U.S. commercial shipments were produced-to-order, with lead times averaging *** days while the remaining *** percent of its 2012 commercial shipments came from inventories, with lead times averaging *** days. The three responding importers reported that *** percent of silica bricks and shapes from China were produced-to-order, with lead times ranging from *** days. Respondents reported that silica bricks and shapes are custom made after an order is received and are generally produced in "complete, oven-ready sets."[75]

Knowledge of country sources

Eight purchasers indicated they had marketing/pricing knowledge of domestic silica bricks and shapes, and six purchasers reported that they had knowledge of silica bricks and shapes from China. Seven purchasers indicated they had marketing/pricing knowledge of silica bricks and shapes from nonsubject sources including: Germany (5 purchasers), India (2), Belgium (1), and the Czech Republic (1).

As shown in table II-4, most purchasers and their customers "never" make purchasing decisions based on the country of origin of the silica bricks and shapes. While most responding

[73] Conference transcript, pp. 52-53 (Mulholland).
[74] Staff telephone interview with ***.
[75] Respondents' posthearing brief, Responses to Commissioner Questions, p. 54.

Table II-4
Silica bricks and shapes: Purchasing decisions based on producer and country of origin

Purchaser/Customer Decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	4	1	0	5
Purchaser's customers make decision based on producer	0	0	2	6
Purchaser makes decision based on country	0	0	1	8
Purchaser's customers make decision based on country	0	0	1	5

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

purchasers reported that their customers "never" make purchasing decisions based on the manufacturer of the silica bricks and shapes, the majority of responding purchasers was split between "always" and "never" making their own purchasing decisions based on the manufacturer. Purchaser *** reported that it always makes purchasing decisions based on the producer because it needs to be confident about the quality and service life of the silica bricks and shapes.[76] Purchaser *** reported that it always makes decisions based on the manufacturer because ***.[77] Purchaser *** reported that its purchases of silica bricks and shapes ***.

Factors affecting purchasing decisions

The most often cited top three factors firms consider in their purchasing decisions for silica bricks and shapes were quality (8 firms), price (8 firms), and availability (6 firms) as shown in table II-5. Quality was the most frequently cited first most important factor (cited by 6 firms); availability was the most frequently reported second most important factor (4 firms); and price was the most frequently reported third most important factor (4 firms).[78]

[76] ***.

[77] ***.

[78] Petitioner asserts that price is very important and many times the only factor that customers consider when making purchasing decisions. Petitioner's prehearing brief, p. 5. Respondents assert that purchasers will not necessarily purchase the cheapest product because they care about the quality and availability, and that purchasers are extremely loyal to a supplier that has proven that it can meet the availability and quality standards. Hearing transcript, pp. 204-205 (Husisian).

Table II-5
Silica bricks and shapes: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by number of reporting firms

Factor	First	Second	Third	Total
Quality[1]	6	1	1	8
Price[2]	1	3	4	8
Availability	1	4	1	6
Other[3]	2	1	3	6

[1] Purchasers defined quality as apparent porosity, bulk density, chemical composition/purity, cold crushing strength, corrosion tolerance, durability, heat expansion, hot modulus of rupture, load to failure, meeting specifications, product consistency/uniformity, reheat change, size/dimensional tolerance, specific gravity, and thermal conductivity.
[2] One additional firm identified price as another factor that was very important in their purchasing decisions in addition to their top three factors.
[3] Other factors include supply agreements, delivery time, reliability, traditional supplier, and ISO certifications.

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

One purchaser reported that it "always" purchases the lowest priced product, three "usually" purchase the lowest priced product, four reported that they only "sometimes" purchase the lowest priced product for their purchases, and one purchaser "never" purchases the lowest priced product.

Eight purchasers reported purchasing silica bricks and shapes from one source although a comparable product was available from another source at a lower price. Purchasers who reported purchasing only domestic silica bricks and shapes stated that they did so because of the stability of supply, quality, and historical performance of the material.[79] One purchaser reported purchasing only Chinese silica bricks and shapes because of its established relationship with importer ***, and another purchaser of Chinese silica bricks and shapes reported that its U.S. supplier went out of business.[80]

Purchaser *** reported that certain types of silica bricks and shapes were only available from a single source, and stated that ***. Purchaser *** noted that, while all of the sizes and shapes it requires are available from multiple manufacturers, it only purchases from ***. Purchaser *** added that it is not common to see silica materials that are ASTM Type A from outside the United States.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 16 factors in their purchasing decisions (table II-6). All ten responding purchasers reported that durability, product consistency, quality meets industry standards, and reliability of supply are factors that are "very important" in their purchasing decisions. Other factors rated as "very important" by more than half of responding

[79] Purchaser *** reported that it only purchases from ***.
[80] Purchaser *** reported that it was purchasing silica bricks and shapes from ***. Email from ***, September 24, 2013.

purchasers were availability (8 firms), delivery time (8), price (7), quality exceeds industry standards (7), and technical support/service (7).

Table II-6
Silica bricks and shapes: Importance of purchase factors, as reported by U.S. purchasers, by number of responding firms

Factor	Very important	Somewhat important	Not important
Availability	8	2	0
Delivery terms	5	4	1
Delivery time	8	2	0
Discounts offered	4	4	2
Durability	10	0	0
Extension of credit	1	2	7
Minimum quantity requirements	2	1	7
Packaging	4	4	2
Price	7	3	0
Product consistency	10	0	0
Product range	3	5	2
Quality meets industry standards	10	0	0
Quality exceeds industry standards	7	3	0
Reliability of supply	10	0	0
Technical support/service	7	2	1
U.S. transportation costs	2	5	3

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

Supplier certification

Eight of ten purchasers require their suppliers to become certified or qualified for all of their silica bricks and shapes purchases. When qualifying a supplier, purchasers reported that they examine various quality characteristics, including chemical composition, mineralogical and dimensional tolerance, consistency of the product, strength tolerance, and expansion and contraction of the silica bricks and shapes. Several purchasers reported examining a supplier's reliability and its ability to meet delivery times. One purchaser also noted reviewing the supplier's financial statements.

At the hearing, SunCoke reported that when qualifying a supplier, the supplier comes to SunCoke with a presentation that shows SunCoke the types of products it is capable of making, and then SunCoke and the supplier discuss the supplier's production capacity and the quality of the product. SunCoke reported that once a supplier passes its capacity and quality standards, then the supplier is allowed to participate in the inquiry (bidding) process.[81] Utah Refractories reported that its smaller customers' qualification process is simply a discussion of the customer's silica bricks and shapes requirements and what Utah Refractories is able to provide. Utah Refractories reported that it reviews the chemical and physical properties of the silica bricks and shapes required by its larger customers and develops an in-house specification for

[81] Hearing transcript, pp. 179-180 (Morey).

the customer. Utah Refractories added that some large customers have never visited its facility while others will come to inspect their order prior to shipment.[82]

Two purchasers reported that supplier qualification or certification took one month or less, one purchaser reported that it took six months, and one reported that it took one year. One purchaser, ***, reported that supplier qualification took anywhere from 5 to 700 days,[83] and one purchaser, ***, reported that it took more than 1,000 days to qualify a supplier.[84]

One purchaser reported that a supplier had failed to certify or qualify since 2010. Purchaser *** reported that ***, failed to qualify on quality and density, and ***, failed on quality and physical strength.[85]

Changes in purchasing patterns

Purchasers mostly reported that their purchases of domestic silica bricks and shapes have increased or remained constant since 2010, and that purchases of Chinese silica bricks and shapes have fluctuated (table II-7), though most reported not having purchased Chinese silica bricks and shapes.[86] Purchasers attributed continued purchases of U.S.-produced silica bricks and shapes to quality concerns[87] and furnace repairs needs. Purchasers attributed increased purchases of U.S.-produced silica bricks and shapes to product needs, quicker delivery, and consistent quality.[88] Purchasers reported that their purchases of Chinese product fluctuated due to the varied need for repairs and new construction.

Table II-7
Silica bricks and shapes: Changes in purchase patterns from U.S. and subject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	1	1	2	4	1
China	7	1	0	0	2

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

[82] Hearing transcript, pp. 68-69 (Mulholland).

[83] Purchaser *** explained that its suppliers must go through ***.

[84] Purchaser *** explained that it ***.

[85] Importer SunCoke noted that suppliers of silica bricks and shapes from *** failed to meet its quality standards, and that suppliers of silica bricks and shapes from *** failed to meet delivery and availability standards. Respondents' posthearing brief, Responses to Commissioner Questions, pp. 20-21.

[86] ***.

[87] Purchaser *** reported that, due to the quality of the silica bricks and shapes, its domestic purchases have remained constant and it did not purchase from China.

[88] At the hearing, Petitioner testified that its silica bricks and shapes have never been rejected by a customer (in the 15 years that the facility has been owned by Worthen and Williams) and that it has not had any complaints from its customers. Hearing transcript, pp. 67-68 (Worthen, Williams, and Mulholland).

Nine of ten responding purchasers reported that they had not changed suppliers since 2010. Purchaser *** reported that it dropped *** in 2011 due to the suppliers not meeting their quality and assurance parameters or failing to deliver quality product. *** also reported that it added *** in 2011 based on product quality and lead times. *** added that it does not change suppliers frequently unless it is necessary for product quality.

Importance of purchasing domestic product

Six of ten purchasers reported that they did not require U.S.-produced silica bricks and shapes for their purchases. Four purchasers reported that they purchase domestic product for 100 percent of their purchases for other reasons. *** referenced their ***; *** reported that it purchases U.S.-produced silica bricks and shapes because of quality, availability, service, and stability of supply; *** reported that U.S.-produced silica bricks and shapes meet ASTM Type A standards; and *** reported that while silica bricks and shapes from Europe are approved for use in glass furnaces, it has only purchased U.S.-produced silica bricks and shapes due to price, quality, and service.

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked for a country-by-country comparison on the same 16 factors (table II-8) for which they were asked to rate the importance. All seven responding purchasers reported that U.S.-produced silica bricks and shapes were comparable to Chinese silica bricks and shapes on extension of credit, minimum quantity requirements, packaging, and product range. At least five of the seven responding purchasers reported that U.S.-produced silica bricks and shapes were comparable to Chinese silica bricks and shapes on availability, discounts offered, quality meets and exceeds industry standards, and technical support/service. Most responding purchasers (5 of 7) reported that U.S. silica bricks and shapes were inferior to Chinese silica bricks and shapes on price, meaning that the U.S.-produced product was priced higher than the Chinese product. Most purchasers reported that U.S.-produced silica bricks and shapes were superior to Chinese product on delivery time (5 of 7) and U.S. transportation costs (4 of 7).

Five purchasers compared U.S.-produced silica bricks and shapes with silica bricks and shapes from nonsubject country Germany, and most purchasers reported that the silica bricks and shapes were comparable on most factors. One purchaser compared U.S.-produced silica bricks and shapes to silica bricks and shapes from nonsubject country Belgium and rated U.S.-produced silica bricks and shapes as superior to Belgian silica bricks and shapes on delivery terms, delivery time, durability, product consistency, quality meets and exceeds industry standards, reliability of supply, technical support/service, and U.S. transportation costs. U.S.-produced silica bricks and shapes were rated inferior to Belgian silica bricks and shapes on price. One purchaser compared U.S.-produced silica bricks and shapes to silica bricks and shapes from the Czech Republic, and reported that the product was comparable on most factors. U.S.-produced silica bricks and shapes were rated as superior to silica bricks and shapes from the Czech Republic on delivery terms and delivery time, and inferior on price and transportation costs.

Table II-8

Silica bricks and shapes: Purchasers' comparisons between U.S.-produced and imported product

Factor	U.S. vs. China			U.S. vs. Belgium		
	S	C	I	S	C	I
Availability	0	5	2	0	1	0
Delivery terms	3	3	1	1	0	0
Delivery time	5	0	2	1	0	0
Discounts offered	0	6	1	0	1	0
Durability	3	3	0	1	0	0
Extension of credit	0	7	0	0	1	0
Minimum quantity requirements	0	7	0	0	1	0
Packaging	0	7	0	0	1	0
Price[1]	0	2	5	0	0	1
Product consistency	3	3	0	1	0	0
Quality meets industry standards	1	5	0	1	0	0
Quality exceeds industry standards	1	5	0	1	0	0
Product range	0	7	0	0	1	0
Reliability of supply	1	4	2	1	0	0
Technical support/service	2	5	0	1	0	0
U.S. transportation costs[1]	4	2	1	1	0	0
Factor	**U.S. vs. Germany**			**U.S. vs. Czech Republic**		
	S	**C**	**I**	**S**	**C**	**I**
Availability	0	4	1	0	1	0
Delivery terms	2	3	0	1	0	0
Delivery time	2	1	2	1	0	0
Discounts offered	0	5	0	0	1	0
Durability	0	4	0	0	1	0
Extension of credit	1	4	0	0	1	0
Minimum quantity requirements	0	5	0	0	1	0
Packaging	0	5	0	0	1	0
Price[1]	1	4	0	0	0	1
Product consistency	0	5	0	0	1	0
Quality meets industry standards	0	5	0	0	1	0
Quality exceeds industry standards	0	5	0	0	1	0
Product range	0	5	0	0	1	0
Reliability of supply	0	5	0	0	1	0
Technical support/service	0	5	0	0	1	0
U.S. transportation costs[1]	3	2	0	0	0	1

[1] A rating of superior means that price/U.S. transportation costs 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 listed country's product is inferior.

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

Comparison of U.S.-produced and imported silica bricks and shapes

Utah Refractories reported that domestic and Chinese silica bricks and shapes are "***" interchangeable (table II-9).[89] Four of six responding importers reported that domestic and Chinese products are "always" or "frequently" interchangeable. The majority of responding purchasers (3 of 5) reported that domestic and Chinese silica bricks and shapes are "sometimes" interchangeable due to differences in the unit of measurement (imperial vs. metric dimensions). Importer *** noted that product interchangeability is dependent on the quality of the product. Importer SunCoke stated that while it is possible to mix and match silica bricks and shapes from different sources, doing so introduces risk from differential thermal expansion if the bricks expand at even slightly different rates when heated.[90] *** added that there is a significant risk in mixing multiple sources of silica bricks and shapes on a particular oven due to consistency differences in the product chemistry, thermal expansion, and manufacturing tolerances.[91] Purchaser *** also noted consistency differences among sources of product and stated that the type of clay must be consistent for any repair. *** added that, when heating the bricks, expansion rates can vary between different suppliers which can cause cracks in oven walls. However, Petitioner asserts that it is aware of two installations (***) where silica bricks and shapes from different sources are used in the same oven without incident and that it has supplied replacement silica bricks and shapes for companies that used Chinese silica bricks and shapes.[92] Utah Refractories also reported that ***, while Respondents assert that the lack of substitutability of silica bricks and shapes from different sources is particularly important in the *** industry.[93] In addition, importer and purchaser ***, which purchased silica bricks and shapes for use in its ***, reported that it is not a common practice to mix silica bricks and shapes from multiple sources when rebuilding an entire wall.[94] However if making a repair in which only 30 to 40 percent of a wall is replaced, *** reported that it will

[89] In its questionnaire response, Utah Refractories indicated that the domestic product and the Chinese product were "***" interchangeable. At the preliminary conference, it stated that the domestic and Chinese product were 100 percent interchangeable in both applications. Petitioner was unable to compare Chinese product with European product. Conference transcript, p. 15 and 41-42 (Mulholland and Straight).

[90] Hearing transcript, p. 143 (Husisian).

[91] *** importer questionnaire response, section III-23.

[92] Petitioner's prehearing brief, p. 11, and hearing transcript, pp. 21 and 66 (Mulholland). Petitioner further notes that Chinese and domestic silica bricks and shapes can be commingled in the same installation. Petitioner's prehearing brief, p. 13. At the hearing, Petitioner reported that it is aware of some of it glass industry customers mixing Utah Refractories' silica bricks and shapes with silica bricks and shapes from European and Indian suppliers. Hearing transcript, p. 66 (Mulholland). Petitioner also reported that ***. Petitioner's posthearing brief, exhibit 10, p. 4, and exhibit 10D.

[93] Petitioner's prehearing brief, Exhibit 1, p. 6, Petitioner's posthearing brief, exhibit 10, p. 4, and Respondents' prehearing brief, p. 5.

[94] ***. Email from ***, December 2, 2013.

not necessarily return to the original supplier of the silica bricks and shapes. For this size of repair, *** reported that it selects a supplier based on quality, delivery, and price.[95]

Table II-9

Silica bricks and shapes: Interchangeability between silica bricks and shapes produced in the United States and in other countries, by country pairs

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	2	2	0	1	1	3	0
China vs. other countries: China vs. Germany	***	***	***	***	0	1	1	0	0	2	0	0
China vs. Czech Republic	***	***	***	***	0	1	2	0	0	1	0	0
China vs. Belgium	***	***	***	***	0	1	0	0	0	1	0	0
China vs. other nonsubject[1]	***	***	***	***	0	0	1	0	0	2	0	0
Nonsubject countries: U.S. vs. Germany	***	***	***	***	1	0	2	0	2	0	2	0
U.S. vs. Czech Republic	***	***	***	***	0	2	1	0	0	0	1	0
U.S. vs. Belgium	***	***	***	***	0	1	0	0	0	0	1	0
U.S. vs. other nonsubject[1]	***	***	***	***	0	0	1	0	0	0	2	0

[1] Other nonsubject countries were identified as India and the United Kingdom.

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

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

As can be seen from table II-10, seven responding purchasers reported that domestically produced product "always" met minimum quality specifications. Four responding purchasers reported that Chinese silica bricks and shapes "usually" met minimum quality specifications.

Table II-10

Silica bricks and shapes: Ability to meet minimum quality specifications, by source and number of reporting firms[1]

Source	Always	Usually	Sometimes	Rarely or never
United States	7	1	0	1
China	1	4	0	1
Germany	4	1	0	0
Belgium	1	0	0	0
Czech Republic	1	0	0	0
India	0	1	0	0

[1] Purchasers were asked how often domestically produced or imported silica bricks and shapes meet minimum quality specifications for their own or their customers' uses.

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

[95] Email from ***, December 2, 2013.

Utah Refractories reported that differences other than price were "***" important in comparing U.S. and Chinese product (table II-11). Four of seven importers reported that differences other than price were "sometimes" important in comparing U.S. and Chinese silica bricks and shapes, while four of five purchasers reported that differences other than price were "always" important. Most responding importers and purchasers noted quality and product consistency as other factors that differ among product source.

Table II-11

Silica bricks and shapes: Significance of differences other than price between silica bricks and shapes 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	4	0	4	0	1	0
China vs. other countries: China vs. Germany	***	***	***	***	1	0	1	0	2	0	0	0
China vs. Czech Republic	***	***	***	***	1	0	3	0	1	0	0	0
China vs. Belgium	***	***	***	***	0	0	1	0	1	0	0	0
China vs. other nonsubject[1]	***	***	***	***	1	0	1	0	2	0	0	0
Nonsubject countries: U.S. vs. Germany	***	***	***	***	1	0	2	0	1	0	2	1
U.S. vs. Czech Republic	***	***	***	***	1	0	3	0	0	0	1	0
U.S. vs. Belgium	***	***	***	***	0	0	1	0	1	0	0	0
U.S. vs. other nonsubject[1]	***	***	***	***	1	0	1	0	1	0	1	0

[1] Other nonsubject countries were identified as India and the United Kingdom.

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

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

ELASTICITY ESTIMATES

This section discusses the elasticity estimates; party comments are noted below.

U.S. supply elasticity

The domestic supply elasticity for silica bricks and shapes measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of silica bricks and shapes. 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 silica bricks and shapes.

Petitioner agreed with staff's estimate of supply elasticity in the range of 5 to 7.[96] Respondents assert that Petitioner's reported capacity is misleading, Petitioner is not able to alter capacity in the short-term in response to price changes, there are no alternative products, and there are limited inventories. Respondents also assert that Petitioner's ***. Therefore, Respondents assert that a supply elasticity in the range of 1 to 3 is more appropriate.[97]

As discussed earlier, the U.S. producer has the ability to respond to changes in demand with large changes in the quantity of shipments of U.S. produced silica bricks and shapes to the U.S. market. The main contributing factors are unused capacity and alternative markets; supply responsiveness is somewhat constrained due to the fact that silica bricks and shapes are mostly produced-to-order. Based on available information, the supply elasticity for silica bricks and shapes is likely to be in the range of 5 to 7.

U.S. demand elasticity

The U.S. demand elasticity for silica bricks and shapes measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of silica bricks and shapes. This estimate depends on factors discussed earlier such as the existence, availability, and commercial viability of substitute products, as well as the component share of the silica bricks and shapes in its end uses. Based on the available information, the demand elasticity for silica bricks and shapes is likely to be in the range of -0.5 to -1.5.

Petitioner stated that it agrees with staff's estimate of low demand elasticity with one caveat. Petitioner asserts that while overall market demand for silica bricks and shapes is fairly inelastic, given the substitutability of Chinese silica bricks and shapes with U.S.-produced silica bricks and shapes, customers can easily shift demand from Utah Refractories to a Chinese supplier.[98]

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[99] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance) and conditions of sale (e.g., availability, sales terms/discounts/promotions).

Petitioner disagreed with staff's estimate of moderate-to-high substitution between U.S.-produced and Chinese silica bricks and shapes. Petitioner asserts that the substitutability between U.S. and subject imported silica bricks and shapes is very high given that all silica

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[96] Petitioner's prehearing brief, p. 22.

[97] Respondents' prehearing brief, Attachment C, pp. C-7-C-9.

[98] Petitioner's prehearing brief, p. 21. Respondents did not comment on demand elasticity.

[99] 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.

bricks and shapes are produced-to-order, the majority of questionnaire respondents reported that U.S.-produced and Chinese silica bricks and shapes were interchangeable, and a large majority of purchasers ranked U.S.-produced and Chinese silica bricks and shapes comparable on nearly all purchasing factors. Petitioner suggested a substitution elasticity range of 7 to 9.[100] On the other hand, Respondents assert that the record demonstrates a low-to-moderate substitutability in the U.S. market between U.S.-produced silica bricks and shapes and those imported from China and therefore, the elasticity should be at the low end of staff's estimates. Respondents assert that the low-to-moderate substitutability is due to the Petitioner's inability to service large orders in a timely fashion, the differences in chemical composition in silica bricks and shapes for the coke and glass industries, long-standing purchaser-supplier relationships, and the small cost share accounted for by silica bricks and shapes in the overall cost of a new coke oven.[101]

While most responding purchasers reported that U.S.-produced silica bricks and shapes were comparable with Chinese product on most factors, firms also noted concerns with consistency differences in mixing product from multiple sources on the same project. Based on available information, the elasticity of substitution between U.S.-produced silica bricks and shapes and silica bricks and shapes imported from China is likely to be in the range of 2 to 4.

[100] Petitioner's prehearing brief, pp. 22-23.

[101] Respondents' prehearing brief, Attachment C, pp. C-1-C-7

PART III: U.S. PRODUCER'S 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 alleged margin of dumping was presented earlier in this report and information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V. Information on the other factors specified is presented in this section and/or Part VI and is based on the questionnaire response of the petitioner, Utah Refractories Corp.[1]

U.S. PRODUCER

Petitioner Utah Refractories Corp., located in Lehi, UT, is an independent silica brick refractory manufacturer, wholly-owned by Ray Worthen and Dennis Williams.[2] It is the sole domestic producer of silica bricks and shapes since 1998, when the only other silica brick plant in the United States at that time, Harbison-Walker, shut down.[3] Utah Refractories reported ***.[4]

U.S. CAPACITY, PRODUCTION, AND CAPACITY UTILIZATION

Utah Refractories' domestic production capacity, production, and capacity utilization data for silica bricks and shapes are presented in table III-1.

Table III-1
Silica bricks and shapes: U.S. capacity, production, and capacity utilization, 2010-12, January-June 2012, and January-June 2013

* * * * * * *

The data presented in table III-1 show that the company's annual overall plant capacity to produce silica bricks and shapes has remained constant at *** short tons during the period examined in this investigation. Domestic production, however, decreased by *** percent from *** short tons in 2010 to *** short tons in 2012 and was *** percent higher during the first six months of 2013 than in the comparable period in 2012. For comparison, U.S. imports of the subject merchandise from China increased overall from *** short tons in 2010 to *** short tons in 2012, but were only *** short tons during January-June 2013.

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[1] Petition, p. 5; conference transcript, pp. 16 and 30.

[2] Utah Refractories company web page, http://www.utah-refractories-corp.com/aboutUs.aspx, retrieved December 11, 2012.

[3] Conference transcript, pp. 8-9.

[4] U.S. producer questionnaire response, sections (I-5, I-6, and II-10).

Utah Refractories reported that production capacity is ***,[5] which produces ***.[6] Within the productive capacity there are no constraints ***.[7] Utah Refractories' production facility has operated well below the capacity at which it could have operated, reporting that it operated at *** percent of capacity in 2010, *** percent in 2011, *** percent in 2012, and *** percent during the first six months of 2013. The company indicated that its capacity is based on ***.[8]

Utah Refractories does not currently make any other types of refractories in the same facilities, using the same employees. The company explained that prior to 1996, it operated two shifts, one of which was devoted to the production of alumina-based refractories and the other devoted to silica bricks and shapes. After 1996, the Utah Refractories' plant began operating only one shift that produced only silica bricks and shapes.[9] The producer reported that, in addition to silica bricks, it also currently manufactures ***.[10] These *** accounted for *** of the company's overall production of all products in terms of quantity (in short tons) during the period examined in this investigation.[11]

In the Commission's questionnaire, Utah Refractories was asked if it had experienced any plant openings, relocations, expansions, acquisitions, consolidations, closures, or prolonged shutdowns because of strikes or equipment failure; curtailment of production because of shortages of materials; or any other change in the character of their operations or organization relating to the production of silica bricks and shapes since January 1, 2010. The petitioner reported ***.[12]

Utah Refractories also reported ***.[13]

U.S. PRODUCER'S SHIPMENTS

Data on Utah Refractories' shipments of silica bricks and shapes are presented in table III-2. The domestic commercial market accounted for *** of its U.S. shipments of silica bricks, and for an irregularly growing share of its total shipments of silica bricks during June 2010-June 2013. As a share of total shipments, Utah Refractories' domestic shipments increased from *** percent in 2010, to *** percent in 2012, and were *** percent, by quantity, during January-June 2013. On the other hand, the firm's export shipments fell as a share of its total shipments from *** percent in 2010 to *** percent in 2012. Export shipments accounted for *** percent

[5] U.S. producer questionnaire response, sections II-3 and II-4.

[6] Ibid., section II-3.

[7] Ibid., section II-4.

[8] U.S. producer questionnaire response, section II-8.

[9] Petition, p. 21.

[10] U.S. producer questionnaire response, section II-3.

[11] Ibid.

[12] Ibid., section II-2.

[13] Ibid., sections II-5 and II-6.

of total shipments during the first six months of 2013. Utah Refractories' export markets were ***.[14]

Table III-2
Silica bricks and shapes: U.S. producer's shipments,[1] by types, 2010-12, January-June 2012, and January-June 2013

* * * * * * *

Utah Refractories' U.S. shipments of silica bricks and shapes increased irregularly, in terms of quantity, over the period examined in this investigation. Reported export shipment quantities decreased throughout the period. Export shipment quantities were lower during January-June 2013 than reported for the comparable period in 2012. The unit value of U.S. shipments rose from $*** per short ton in 2010, to $*** per short ton in 2012. The unit value of exports experienced a similar trend, rising from 2010 to 2012. In comparing the partial-year periods, the unit values of U.S. shipments were higher in the first half of 2012 than they were in the first half of 2013, as were the unit values of exports.

The petitioner indicated that its U.S. shipments are currently comprised of sales primarily to the domestic glass industry and that its sales to the U.S. steel industry "have all but vanished."[15] It stated that "the imports from China are, without question, the cause of why Utah Refractories has suffered, has lost its business almost entirely to the steel industry and is in a real threat of losing its business to the glass making industry."[16] The petitioner added that it was able to shift some sales that would have otherwise been made to the steel industry to the glass industry, but sales to the glass industry are also falling.[17] It argued that Chinese producers of silica bricks have aggressively targeted both the steel industry and the glassmaking refractories in the United States and "without action against the dumped imports, {it} will most likely be unable to continue operations."[18]

U.S. PRODUCER'S INVENTORIES

Utah Refractories reported *** inventories of silica bricks during 2010-June 2013. It noted that it ***.[19] The petitioner indicated that sometimes a single project for which silica bricks are produced requires hundreds of different types of shapes and that it would be difficult for a producer to keep such a diverse number of finished items in inventory for a diverse range of customers and projects. In fact, Utah Refractories testified that it manufactures about

[14] Ibid., section II-8.

[15] Conference transcript, p. 20 (Straight).

[16] Ibid., p. 17 (Straight).

[17] Ibid., p. 20 (Straight).

[18] Petition, p. 19.

[19] U.S. producer questionnaire response, section II-8.

30,000 different shapes of silica brick and that it would be impractical to keep inventories on hand.[20]

U.S. PRODUCER'S IMPORTS AND PURCHASES

Utah Refractories reported in its questionnaire response submitted in this investigation that ***.[21]

U.S. EMPLOYMENT, WAGES, AND PRODUCTIVITY

Utah Refractories' employment data are presented in table III-3. These data show that there was an increase in the number of production and related workers employed in the manufacture of silica bricks and shapes from *** employees in 2010 to *** employees in 2012. During the first six months of 2013, Utah Refractories employed *** workers in the production of silica bricks and shapes. The number of hours worked by these employees, as well as the total wages paid, also generally increased throughout calendar years 2010-12; however, these indicators were lower during the partial-year period of 2013 than reported in the prior periods. Hourly wages paid were lower during the partial-year period of 2013 than reported in the prior periods. Productivity declined and unit labor costs rose throughout 2010-12; however, productivity rose and unit labor costs fell during the first six months of 2013.

Table III-3
Silica bricks and shapes: U.S. producer's employment-related data, 2010-12, January-June 2012, and January-June 2013

* * * * * * *

Utah Refractories operated two, eight-hour shifts for five days a week at its facilities prior to 1996. As indicated previously, one shift was devoted to the production of alumina-based refractories and the other shift was devoted to the production of silica bricks and shapes. After 1996, Utah Refractories ceased producing the alumina-based refractories and operated only one, ten-hour shift producing silica bricks and shapes for four days per week. The company had planned to fill the second available shift with increased production of silica bricks and shapes but reported that it was unable to do so because of a decline in sales orders. Utah Refractories argues that it currently does not receive the level of silica bricks and shapes orders to justify one full shift and has been forced to operate its only shift with production of silica bricks and shapes solely for the glass industry. The petition stated, "{a}bsent Chinese

[20] Conference transcript, pp. 31-33 (Wiseman).

[21] U.S. producer questionnaire response, sections II-7 and II-10.

dumping of {silica brick}, petitioner would likely be running two or three shifts with one or two shifts devoted to the production of coke oven {silica brick}."[22]

The petitioner stated that it is currently "operating nowhere near capacity" and that it "could certainly increase the number of shifts, the number of hours worked and produce a greater number of bricks if we had a fair playing field and a market into which we could sell them."[23] Petitioner stated that it was "at extremely low production right now simply because we don't have the business."[24]

Petitioner further stated that "revenues in 2010, 2011, and 2012 averaged only 84 percent of pre-recession revenues from 2005, 2006, and early 2007. This comes on the heels of the late 2007, 2008, and 2009 recession years when sales averaged only slightly less than they are now."[25] Petitioner asserted that "Utah Refractories has sufficient capacity to meet U.S. steel and glass industry demand. In addition, if required, the company's capacity can be expanded for a relatively low capital and operating cost."[26] Petitioner allowed that "as a direct result of this filing Utah Refractories saw a modest increase during the first six months of 2013, but this increase came because of the petition."[27]

[22] Petition, p. 21.

[23] Conference transcript, p. 22 (Straight).

[24] Hearing transcript, p. 24 (Williams).

[25] Ibid., p. 27 (Goates).

[26] Ibid., p. 31 (Goates).

[27] Ibid., p. 34 (Goates).

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

U.S. IMPORTERS

The Commission sent questionnaires to two firms (CeramSource, Inc. ("CeramSource") and Intersource) identified in the petition as possible U.S. importers of the subject merchandise from China,[1] along with 24 additional firms that, based on a review of data provided by U.S. Customs and Border Protection ("Customs"), imported merchandise under HTS statistical reporting numbers 6902.20.1020, 6902.20.5020, and 6909.19.5095 since January 1, 2010.[2] Eleven firms responded to the Commission's questionnaire by indicating that they did not import within-scope silica bricks and shapes into the United States from any source since January 1, 2010. Usable questionnaire responses were received from 14 companies that imported silica bricks and shapes. Staff believes that the responding firms represented the majority of total U.S. imports of silica bricks and shapes from all sources during January 2010-June 2013. Table IV-1 lists the U.S. importers of silica bricks and shapes from China and other sources that provided usable questionnaire responses, their locations, and their shares of *reported* U.S. imports. As the table illustrates, *** are the largest responding importers of subject merchandise from China, together accounting for *** percent of total *reported* subject U.S. imports from China during the period for which data were collected in this investigation. *** is the largest responding importer of silica bricks and shapes from a nonsubject source (Germany), accounting for *** percent of total *reported* U.S. imports from nonsubject countries during the period examined in this investigation.

In addition to the 13 companies listed in the table IV-1, (***) provided a response to the Commission's questionnaire concerning their imports of silica bricks and shapes that appear to them to fall within the scope of the product as set forth by Commerce in its preliminary determination. ***.[3]

[1] Petition, p. 17.

[2] The scope of this product was amended by Commerce on December 4, 2012 to add HTS statistical reporting numbers 6901.00.0000 and 6902.20.5020, under which silica refractory brick may be imported into the United States. Letter to the Secretary of Commerce, Samuel Straight, Counsel, Ray Quinney & Nebeker P.C., December 4, 2012. The scope of this product as it appears in Commerce's preliminary determination (78 FR 37203, June 20, 2013) does not include statistical reporting number 6901.00.000; however, statistical reporting number 6909.19.5095 is now included in Commerce's scope.

[3] *** import data is as follows: ***.

Table IV-1
Silica bricks and shapes: U.S. importers, sources of imports, U.S. headquarters, and shares of reported imports during January 2010-June 2013[1]

Firm	Headquarters	Source of imports	Share of reported imports *(percent)*		
			China	Other	All
AGC America, Inc.	Alpharetta, GA	*** *** ***	***	***	***
ANH Refractories Co.	Moon Township, Pittsburg, PA	*** ***	***	***	***
Argelith Ceramic Tiles Inc.	St. Charles, IL	***	***	***	***
Century Aluminum[2]	Robards, KY	***	***	***	***
CTA Inc.	Shaker Heights, OH	***	***	***	***
Intersource, Inc.	Mars, PA	***	***	***	***
McKeown International, Inc.	Round Rock, TX	***	***	***	***
Merkle International	Galena, IL	*** ***	***	***	***
Schott North America, Inc.	Elmsford, NY	***	***	***	***
SunCoke Energy, Inc.	Lisle, IL	***	***	***	***
Uhde Corp. of America	Bridgeville, PA	***	***	***	***
United States Steel Corp.	Pittsburgh, PA	***	***	***	***
Veitsch Radex America Inc.	Burlington, ON Canada	***	***	***	***

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

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

U.S. IMPORTS

Table IV-2 presents data for U.S. imports of silica bricks and shapes from China and all other sources combined. Because Commerce official import statistics for the primary HTS statistical reporting number under which subject silica bricks and shapes are imported into the United States is a relatively large basket category, the import data presented in this report are based on Commission questionnaire responses.

Table IV-2
Silica bricks and shapes: U.S. imports, by sources, 2010-12, January-June 2012, and January-June 2013

* * * * * * *

The quantity of U.S. imports from China rose by *** percent from 2010 to 2011 then decreased in 2012 to a level *** the amount reported in 2010. The quantity of U.S. imports of silica bricks and shapes from China during the first half of 2013 was *** percent higher than the quantity reported in the comparable period of 2012. U.S. imports from China accounted for *** percent of the total quantity of U.S. imports of silica bricks and shapes during 2010, *** percent during 2011, and *** percent during 2012. However, during the first half of 2013, China accounted for only *** percent of total U.S. silica brick imports. The unit values of silica brick imports from China, which ranged from $*** to $*** per short ton, rose irregularly from 2010 to 2012, and were lower during the partial-year period of 2013 than in the comparable 2012 period.

The increase of subject imports from China during 2011 is somewhat explained by *** ***.

The quantity of U.S. imports from countries other than China (primarily Germany) increased by *** percent from 2010 to 2012 and were *** percent higher during the first half of 2013 than the quantity reported in the comparable period of 2012. Conversely to the trend exhibited by the Chinese silica brick, the unit values of silica brick imported from nonsubject sources rose overall from 2010 to 2012 and were higher during the partial-year period of 2013 than in the comparable 2012 period. However, the unit values reported for nonsubject imports were consistently lower than the unit values reported for the Chinese silica brick, ranging from $*** to $*** per short ton during the period examined.

CRITICAL CIRCUMSTANCES

No “critical circumstances” were alleged by the petitioner in this investigation.

NEGLIGIBILITY

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[4] Negligible imports are generally defined in the Tariff Act of 1930, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. The petition in this investigation was filed on November 15, 2012. According to questionnaire data submitted in this investigation, subject imports from China accounted for *** percent of total imports of silica bricks and shapes by quantity (in terms of short tons) during the most recent 12-month period for which data are available that precedes the filing of the petition (October 2011-September 2012).[5]

APPARENT U.S. CONSUMPTION

Data concerning apparent U.S. consumption of silica bricks and shapes during the period of investigation are shown in table IV-3. Apparent U.S. consumption of silica bricks and shapes is based on the U.S. producer's and U.S. importers' U.S. shipments of silica bricks and shapes as compiled from Commission questionnaire responses in this investigation.

Table IV-3
Silica bricks and shapes: U.S. shipments of domestic product, U.S. shipments of imports, and apparent U.S. consumption, 2010-12, January-June 2012, and January-June 2013

* * * * * * *

Consumption for silica bricks and shapes is driven by their use in glass furnace or coke oven projects. As the petitioner stated at the staff conference in the preliminary phase of this investigation, "So as a customer either needs to repair a glass furnace, or build a new battery, or *et cetera*, you will have some spikes in consumption based on those specific requirements."[6] Calculated apparent U.S. consumption of silica bricks and shapes during 2012, in terms of quantity, was *** short tons, *** than the amount consumed during 2010. U.S. consumption was *** percent higher during the first half of 2013 than in the comparable period of 2012.

[4] 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)).

[5] Calculated from data gathered during the preliminary phase of this investigation. China accounted for *** percent of total imports of silica bricks and shapes by quantity (in terms of short tons) during calendar year 2011.

[6] Conference transcript, p. 33 (Straight).

U.S. MARKET SHARES

U.S. market share data are presented in table IV-4. On the basis of quantity (in short tons), the share of the U.S. market held by subject imports of silica bricks and shapes from China rose from *** percent in 2010 to *** percent in 2011, before falling to *** percent in 2012. The share of the U.S. market held by U.S. imports from China during the first half of 2013 (*** percent) was slightly lower than the *** percent share held in the comparable period of 2012. The U.S. producer's share of the domestic market decreased from *** percent in 2010 to *** percent in 2011, before rising to *** percent in 2012. The share of the domestic market held by the U.S. producer during the first half of 2013 (*** percent) was higher than the *** percent share held in the comparable period of 2012.

Table IV-4
Silica bricks and shapes: U.S. consumption and market shares, 2010-12, January-June 2012, and January-June 2013

* * * * * * *

RATIO OF IMPORTS TO U.S. PRODUCTION

Information concerning the ratio of imports to U.S. production of silica bricks and shapes is presented in table IV-5. Subject imports were equivalent to *** percent of U.S. production during 2010. This level rose to *** percent during 2011, but decreased to *** percent of production during 2012. U.S. imports of silica bricks and shapes from China were equivalent to *** percent of production during January-June 2013 compared with *** percent reported for the comparable period in 2012.

Table IV-5
Silica bricks and shapes: U.S. production, U.S. imports, and ratios of imports to U.S. production, 2010-12, January-June 2012, and January-June 2013

* * * * * * *

PART V: PRICING DATA

FACTORS AFFECTING PRICES

Raw material costs

The main raw material input for silica bricks and shapes is silica stone, also known as ganister.[1] The U.S. producer's raw material costs accounted for *** percent of its total cost of goods sold during 2012, down from *** percent in 2010.[2] Utah Refractories reported that it owns a quartzite mine located near the plant and sourced all of its requirements for silica stone from this mine.[3] Utah Refractories reported that once the silica stone is crushed, less than 5 percent lime is added to act as a binder (see Part I for additional information on the production process).[4] Utah Refractories reported that ***.

U.S. inland transportation costs

Utah Refractories reported that ***.[5] Utah Refractories reported that ***,[6] and reported that approximately *** percent of its 2012 sales of silica bricks and shapes were shipped *** miles from its production facility, and the remaining *** percent were shipped *** miles from its production facility. Seven of eight responding importers indicated that they typically arrange for transportation and reported that transportation costs account for 20 percent or less of the total delivered cost of the silica bricks and shapes. Importers of silica bricks and shapes from China reported that *** percent of their 2012 sales of silica bricks and shapes were shipped *** miles from their U.S. point of shipment, and *** percent of their 2012 sales of silica bricks and shapes were shipped *** miles from their U.S. point of shipment.

PRICING PRACTICES

Pricing for silica bricks and shapes depends on a number of factors, including complexity of the shapes, quantity of shapes, total number of bricks, quality of the silica, delivery deadlines, and availability of the molds required to produce the product.[7] There are also different specifications for silica, such as bulk density, porosity, and residual quartz, which

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[1] Petition, p. 8.

[2] Raw materials as a share of cost of goods sold was higher in interim 2013 (*** percent) than in interim 2012 (*** percent).

[3] Conference transcript, p. 9 (Wiseman) and p. 54 (Worthen).

[4] Petition, exhibit 1, p. 3.

[5] According to bid data submitted by purchasers of silica bricks and shapes ***.

[6] ***. Staff field trip report, Utah Refractories, October 30, 2013.

[7] Email from ***, December 7, 2012, and petitioner's postconference brief, p. 9.

affect the price of silica bricks and shapes.[8] Pricing is often quoted on a per-project or per-order basis and depends on these factors (i.e., more complex project specifications would mean a higher price).[9] Petitioner provided quotes which ***.[10] Importer *** reported that silica bricks and shapes that are very common and easy-to-make are lower in price than silica bricks and shapes with more complex requirements.[11]

Pricing also differs between end uses of the product. Silica bricks and shapes used in the glass industry are often standard sizes and can be machine-made.[12] On the other hand, "coke oven batteries often require hundreds of shapes, all of which are hand molded by impact press or hand-formed."[13] In addition, Utah Refractories stated that coke oven repair projects also sometimes require a redesign of sections of the furnace and the shapes of the individual bricks, which also often requires more mold work.[14] Utah Refractories reported that there is more labor involved in producing silica bricks and shapes for coke oven as they require more handmade bricks and more frequent mold changes.[15] Due to the differences in manufacturing, silica bricks and shapes used in coke oven applications are generally higher in price than those used in a glass furnace.[16]

Pricing methods

Price determination

Utah Refractories reported that it most commonly determines prices *** for its sales to all customers. Utah Refractories also reported using *** for its sales to ***.[17] Utah Refractories reported that for a steel industry customer, it will examine the scope of material and quote a price per ton of silica brick, while for a glass industry customer, it is more common to quote a

[8] Email from ***, December 7, 2012.

[9] See also Respondents' prehearing brief, p. 16.

[10] Petitioner's postconference brief, exhibit 2.

[11] Email from ***, December 7, 2012.

[12] Conference transcript, p. 48 (Mulholland), and petitioner's postconference brief, p. 9.

[13] Petitioner's postconference brief, p. 9.

[14] Conference transcript, p. 49 (Mulholland).

[15] Hearing transcript, p. 61 (Goates).

[16] Conference transcript, p. 48 (Mulholland), hearing transcript, p. 110 (Goates), petitioner's postconference brief, pp. 9-10, and petitioner's posthearing brief, exhibit 2, pp. 6-7.

[17] Utah Refractories reported that when preparing a quote, it examines the material requested by the customer and the complexity and number of shapes. Utah Refractories added that some customers request a quote on a tonnage basis while others request pricing per piece. Hearing transcript, p. 73 (Mulholland).

price per individual shape.[18] Most importers reported using transaction-by-transaction negotiations for their sales to all end users.[19]

Contract and spot sales

The overwhelming majority of silica bricks and shapes are sold through spot sales. Utah Refractories reported selling *** percent of its silica bricks and shapes to ***, and *** percent of its silica bricks and shapes to ***. Utah Refractories reported selling *** percent of its sales to the glass industry through long-term contracts, and reported that its ***.[20] The three responding importers reported selling *** percent of their silica bricks and shapes through spot sales.

Sales terms and discounts

Utah Refractories reported selling on an *** to all of its customers.[21] Utah Refractories reported that it does extend volume discounts.[22] For its sales to the steel industry, Utah Refractories reported that it offers ***. For its sales to the glass industry, Utah Refractories offers ***. Utah Refractories also reported that it offers *** on silica bricks and shapes sold to other end users, and that it *** for sales to distributors.

Four responding importers reported selling on a delivered basis to the steel industry, three of these importers reported sales terms of net 30 days. One importer, ***, reported that its sales terms were part of the whole coke oven battery contract.[23] One importer reported selling to the glass industry on delivered basis with sales terms of net 30 days. This importer added that non-standard payment terms may be negotiated with its customers on a case-by-case basis.[24] Nearly all responding importers reported offering no discounts. One importer, ***, reported offering quantity discounts on its sales to the glass industry.

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[18] Hearing transcript, p. 56 (Mulholland).

[19] No importer reported ***.

[20] Although Utah Refractories ***. Utah Refractories' U.S. producer questionnaire response, sections IV-9 and IV-10.

[21] ***. Commission staff telephone interview with ***, September 30, 2013.

[22] Utah Refractories stated that "if somebody orders 10 straight brick, that price is a little bit higher than if somebody orders 10,000. We would extend a volume discount at that point." Hearing transcript, p. 73 (Mulholland).

[23] In the preliminary phase of the investigation, ***.

[24] Another importer reported sales terms of net 30 days to the glass industry, but did not specify if the sales were delivered or f.o.b.

Price leadership

Purchasers were asked to identify price leaders in the silica bricks and shapes market. Five of ten responding purchasers reported that they either do not know of any price leaders or do not track price leader information.[25] Three reported that there are no price leaders in the silica bricks and shapes market.[26] One purchaser (***) identified Utah Refractories as a price leader, and one purchaser (***) identified German supplier Otto as a price leader.

Negotiations

Pricing for silica bricks and shapes depends on a number of factors, including complexity of the shapes, quantity of shapes, total number of bricks, quality of the silica, delivery deadlines, and availability of the molds required to produce the product.[27] Therefore, silica bricks and shapes are priced and sold on a per-project basis, and most firms are only allowed one chance to bid on a project. However, Utah Refractories reported that it is ***.[28]

Utah Refractories reported that when it receives ***.[29] Utah Refractories reported that ***.[30] Utah Refractories reported that it has been excluded from bidding on projects because of pricing.[31] Utah Refractories also reported that it has been excluded from bidding on initial new construction projects.[32] Since January 1, 2010, Utah Refractories reported that it ***.[33] ***. Utah Refractories reported that ***. Utah Refractories also reported that in some instances, the mold work for a project is an individual line item on the quote, and sometimes it is amortized over the pieces in the order, depending on the customer's request.[34]

The majority of responding importers (7 of 11) reported that they are never allowed more than one opportunity to bid on a particular sales agreement, and nearly all importers (9 of 10) reported that their customers never discuss the bids of competing suppliers in order to get them to lower their prices. Since January 1, 2010, two importers reported being excluded from bidding on silica bricks and shapes projects. Importer *** reported being excluded from bidding a couple of times by purchaser *** because it is considered a "historically high price vendor." Importer *** reported being excluded once because its product was disqualified based on

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[25] Three of these purchasers are ***, and two are ***.

[26] These three purchasers are all ***.

[27] Email from ***, December 7, 2012, and petitioner's postconference brief, p. 9, and Respondents' prehearing brief, p. 16.

[28] Utah Refractories reported that ***. Utah Refractories' U.S. producer questionnaire response, section IV-2, and staff telephone interview with ***.

[29] Petitioner's posthearing brief, exhibit 10A.

[30] Utah Refractories reported that ***.

[31] Hearing transcript, pp. 63 and 78 (Straight).

[32] Hearing transcript, p. 105 (Straight and Worthen)

[33] ***.

[34] Hearing transcript, p. 74 (Mullholland).

specification. Most importers (8 of 10) reported that their bids do not typically include other services. The two importers who reported including other services were ***. *** reported that it supplies ***, and *** reported that it supplies ***. *** added that its customers can decline the other services it offers and only purchase the silica bricks and shapes from the bid.

Purchasers reported repairing their coke ovens as needed or on a yearly basis and reported purchasing annually.[35] Purchasers who purchased silica bricks and shapes for use in an electric arc furnace also reported purchasing silica bricks and shapes on an annual basis. Purchasers also reported repairing their glass furnaces as needed or on a yearly basis, and most reported completely rebuilding their glass furnaces every 8 to 15 years. Nearly all purchasers who purchased silica bricks and shapes for use in a glass furnace reported purchasing silica bricks and shapes as needed for repairs or projects. One glass industry end user (***) reported purchasing silica bricks and shapes quarterly. Utah Refractories reported that repairs are often scheduled well in advance.[36] SunCoke reported that it plans repairs months in advance.[37] Utah Refractories added that there is more planning in the glass industry as its customers often want the silica bricks and shapes for the project up to a year before installation to ensure that, in the event of a problem, they have the silica bricks and shapes available for a repair because they are often pushing the furnaces to the maximum operating limit before making the repair.[38]

Respondents assert that the supplier of the original project has a bidding advantage for repair projects because it already has the molds needed to make the replacement bricks.[39] However, Utah Refractories asserts that for modern coke ovens and container glass manufacturers, there is no advantage to the original supplier when bidding on repair projects because of the relatively small number of different shapes required by each end user.[40]

PRICE DATA

Since sales of silica bricks and shapes are largely completed on a project-by-project basis, purchasers were asked to submit information on all bids received for each of their firm's

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[35] Purchasers who reported purchasing silica bricks and shapes for use in a coke oven reported making repairs annually or as needed, but did not specify a time frame for the frequency of completely rebuilding the coke oven.

[36] Hearing transcript, p. 64 (Mulholland).

[37] Hearing transcript, p. 216 (Morey). SunCoke added that the time a oven is out of service for a repair varies. Sometimes an oven is out of service for three to four weeks and sometimes it is just a matter of days. Hearing transcript, p. 213 (Morey).

[38] Hearing transcript, p. 65 (Mulholland).

[39] Respondents' prehearing brief, p. 12.

[40] Utah Refractories also reported that flat glass producers and conventional coke oven end users require many more shapes. Utah Refractories asserts that because of its long history and inventory of molds, the fact that it did not supply the original project would not create a cost disadvantage that would preclude it from competitively bidding on most of these projects. Petitioner's posthearing brief, exhibit 6, p. 1.

purchases since January 1, 2010.[41] Ten purchasers provided data for their purchases of silica bricks and shapes, although most purchasers reported contacting only one supplier for a quote. Data for the two purchasers who reported receiving bids from competing suppliers are presented separately.

Of the *** reported projects, Utah Refractories was selected as the supplier in *** instances,[42] and a Chinese supplier was selected in the remaining *** instances.[43] According to reported bid data, the average size of an order purchased from Utah Refractories was approximately *** short tons, and the average size of an order purchased from a Chinese supplier was approximately *** short tons.[44]

Seven purchasers reported only purchasing silica bricks and shapes from the United States during 2010-12, two reported only purchasing from China, and one reported purchasing from both sources. Purchasers who only purchased U.S.-produced silica bricks and shapes reported doing so because of the high quality, availability, stability of supply, and historical performance of the domestic product. One purchaser, that reported only purchasing Chinese-produced product, reported that it has done so for the last 20 years with little or no quality issues, and another purchaser of Chinese-produced product reported that its domestic suppliers went out of business.

Eight purchasers reported contacting only one supplier before making a purchase.[45] These purchasers reported having a longstanding working relationship with their suppliers and knowledge of the supplier's product quality as reasons for not seeking additional suppliers or contacting other suppliers before making a purchase. Purchase data as reported by these firms are reported in table V-1.

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[41] The requested data included the project name and location, project type (new construction or repair), date of request for proposal (RFP) or bid, types and sizes of silica bricks and shapes requested, quantity of silica bricks and shapes requested (short tons), bidding firm name, country of origin of the silica bricks and shapes, date of the bid or quote, f.o.b quote for silica bricks and shapes (dollars), f.o.b quote for other materials or services (dollars), identify other materials or services, freight costs (dollars), total quote amount (dollars), identify the winning bid, reasons why a bid was accepted or rejected, delivery date, type and size of silica bricks and shapes purchased, quantity purchased (short tons), f.o.b purchase price (dollars), f.o.b purchase price of other materials and services (dollars), identify other services or materials purchased, freight costs for product purchased (dollars), and the total purchase amount (dollars).

[42] Utah Refractories supplied ***.

[43] A Chinese supplier was selected for ***.

[44] This calculation does not include the ***.

[45] Three of these purchasers, *** reported that they generally contact 2 to 3 purchasers before making a purchase, but confirmed that they only contacted one supplier for their purchases since 2010 as reported in their bid data spreadsheet responses. *** purchaser questionnaire response, section III-15, email from ***, August 20, 2013, *** purchaser questionnaire response, section III-15, email from ***, September 10, 2013, *** purchaser questionnaire response, section III-15, and email from ***, October 22, 2013.

Table V-1
Silica bricks and shapes: Selected purchase data from firms that solicited bids from one supplier since 2010

* * * * * * *

***

As shown in table V-1, purchaser ***.[46] ***.[47]

***

Purchaser ***.

***

Purchaser ***.[48]

***

Purchaser ***.[49] ***.[50]

***

Purchaser ***.[51] ***.

***

Purchaser ***.[52]

***

Purchaser ***.

***

Purchaser ***.[53]

---

[46] ***.
[47] *** purchaser questionnaire response, section III-9.
[48] ***.
[49] ***. Staff telephone interview with ***.
[50] Staff telephone interview with ***.
[51] ***. Email from ***, September 24, 2013.
[52] ***.
[53] ***.

Two purchasers reported generally contacting at least three suppliers before making a purchase, and provided competing bid information for their purchases. Purchase data provided by *** are reported in tables V-2 and V-3, respectively.

Table V-2
Silica bricks and shapes: Selected purchase data as reported by *

* * * * * * *

***

Purchaser ***.[54] [55]
***.[56] [57] ***.[58]
***.[59] ***.
***.

Table V-3
Silica bricks and shapes: Selected purchase data as reported by *

* * * * * * *

***

Purchaser ***.
***.
***.

LOST SALES AND LOST REVENUE

The petitioner provided both lost sales and lost revenue allegations in the petition. The 8 lost sales allegations totaled $*** million and involved *** short tons and the 10 lost revenue allegations totaled $*** and involved *** short tons of silica bricks and shapes.[60] Staff contacted all purchasers named in the allegations and a summary of the information obtained follows (tables V-4 and V-5).

---

[54] ***. Email from ***, November 7, 2013.

[55] Utah Refractories asserts that ***. Petitioner's prehearing brief, Exhibit 1, p. 8. ***. Email from ***, December 2, 2013.

[56] ***.

[57] ***.

[58] ***. ***.

[59] Email from ***, November 22, 2013.

All four responding purchasers named in lost sales and lost revenue allegations indicated that they had not switched purchases of silica bricks and shapes from the U.S. producer to suppliers of product from China since January 2009.[61] No purchaser reported that the U.S. producer reduced its prices of silica bricks and shapes in order to compete with prices of silica bricks and shapes imported from China since January 2009. *** indicated that the U.S. producer's prices had declined, and that it was not certain that the price decline could be attributed to competition with Chinese imports, but rather that the price decline was demand driven.

Table V-4
Silica bricks and shapes: U.S. producers' lost sales allegations

* * * * * * *

Table V-5
Silica bricks and shapes: U.S. producers' lost revenue allegations

* * * * * * *

*****:**

*** of *** disagreed with the lost sale allegation involving his company. He stated that *** has purchased silicon brick from China for over 20 years because of product delivery.

*****:**

*** of *** stated that the information provided in the one lost sale and two lost revenue allegations involving his firm was insufficient for *** to assess the allegations.

*****:**

Petitioner provided two additional allegations involving *** which were alleged to have occurred prior to the period of investigation. *** of *** also disagreed with these allegations. Regarding the lost sale allegation from *** referencing the ***, he reported that the alleged date was earlier than they expected to purchase bricks for the project and stated that all silica bricks were purchased for this project in ***. Regarding the lost sale allegation from ***

(…*continued*)

[60] The petitioner provided seven additional lost sales allegations and two additional lost revenue allegations in the petition but it did not provide information on the quantities, rejected U.S. prices, and accepted U.S. prices involved in the allegations. In addition, the petitioner also provided four lost sales allegations with alleged dates that occurred prior to the period of investigation, which totaled $*** million and involved *** short tons of silica bricks and shapes. Staff contacted the purchasers in attempt to verify these allegations. Four purchasers, ***, responded to these lost sales and lost revenue allegations, and their responses are included in the narrative following tables V-4 and V-5.

[61] Petitioners asserts that these purchasers did not allow Utah Refractories to participate or bid on their projects. Hearing transcript, p. 105 (Straight).

referencing the ***, he reported that no silica bricks were purchased through a bidding process.

*****:**

*** of *** agreed with the lost sale allegation for the ***, and disagreed with the lost sale allegations involving the *** and ***. Regarding the ***, *** reported that the *** does not have the capacity to supply this large project, and that his firm did place *** orders with ***. Regarding the ***, *** reported that *** placed multiple orders with the *** during ***.

PART VI: FINANCIAL EXPERIENCE OF U.S. PRODUCERS

BACKGROUND

Utah Refractories provided usable financial data on its operations producing silica bricks and shapes.[1] Utah Refractories is the sole producer of silica bricks and shapes and accounted for all of the production of silica bricks and shapes in the United States in 2012.[2]

OPERATIONS ON SILICA BRICKS AND SHAPES

Income-and-loss data for Utah Refractories on its operations on silica bricks and shapes are presented in table VI-1.[3] Generally speaking, total net sales, by quantity, declined while total net sales, by value, rose between 2010 and 2012 and both were higher in January-June 2013 than in January-June 2012. Total cost of goods sold ("COGS") increased ***. Selling, general, and administrative ("SG&A") expenses ***. Operating ***.[4] Net income before taxes and cash flows were ***.[5]

Table VI-1 presents data on operations on silica bricks by Utah Refractories, which include certain revisions to the data made by Commission staff. Revisions to the data are discussed following table VI-1.

Table VI-1
Silica bricks and shapes: Results of operations of Utah Refractories, fiscal years 2010-12, January-June 2012, and January-June 2013

* * * * * * *

[1] Utah Refractories is a privately held corporation owned by Ray Worthen and Dennis Williams that operates gas-fired kilns at a plant in Lehi, Utah. Separate entities, owned by the partnership of Worthen and Williams, own ***.

[2] Utah Refractories began producing in 1998. For a description of the acquisition and divestiture that gave rise to the firm, see *Silica Bricks and Shapes from China, Investigation No. 731-TA-1205 (Preliminary)*, USITC Publication 4369, January 2013, p. VI-1, note 2.

[3] Utah Refractories used *** to compile its financial reports. Reportedly, the accounting system does not build inventory very well, so ***. The firm presented its balance sheet and statement of operations (income statement) for the yearly periods 2005-11 and January-September 2012 in its petition, exh. 11 (see notes to table VI-1 in the preliminary phase staff report). These statements were updated to include full year 2012 and January-June 2013 with the firm's questionnaire response in the final phase investigations. The firm's questionnaire data generally tie to those statements in both the preliminary phase and final phases of this investigation. Commission staff interviewed *** by phone on September 30, 2013 ("Telephone interview of September 30, 2013"). Certain revisions by staff are presented in table VI-1 based on that phone interview as well as on petitioner's posthearing brief, exh. 7.

[4] Operating and financial data include the ***. ***.

[5] Other income includes ***. Telephone interview on September 30, 2013.

Pursuant to the telephone interview of September 30, 2013 (footnote 3, supra, and footnote 6, below), Commission staff made certain adjustments to the data reported by Utah Refractories.[6] Adjustments for the period January-June 2012 were made based on the relative sales value of that six month period to the full year 2012. These changes to the data are discussed as follows:

(1) Deduction of ***.[7]

(2) Correction of an ***. Commission staff noted that ***.[8]

(3) Deduction of an allocated amount from total COGS to account for ***.[9]

(4) Deduction from SG&A expenses ***.[10]

(5) Reclassification of certain SG&A expenses to COGS. Petitioner stated that it determined that ***.[11] Commission staff agrees with these changes. The first two categories were added to direct labor while the last three categories were added to other factory costs. The total of the five categories was deducted from SG&A expenses.[12]

Beyond the deductions and adjustments made by Commission staff, respondents claim that there are other adjustments that should be made Utah Refractories' questionnaire response to reflect the way in which Utah Refractories is structured.[13] Specifically, first respondents question whether or not Utah Refractories' operating statement category of ***.[14] Second, respondents assert that the operating statement category of ***.[15] Third, respondents question the category of ***.[16] Last, respondents suggest that ***.[17]

The cost of raw materials used in the production of silica bricks and shapes *** as depicted in table VI-1. As a ratio to sales, raw material costs ***. Such costs also ***. Utah

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[6] The data in table VI-1 are the data presented in table VI-2 in the prehearing report. When asked , petitioner stated that it does not agree with certain ***. Petitioner's posthearing brief, exh. 1 (Williamson questions), p. 6 and exh. 7. Petitioner also stated that it had "***." Petitioner's posthearing brief, exh. 6 (Pinkert questions), p. 2 and exh. 7 (misidentified in the brief as exh. 8). These are discussed following table VI-1.

[7] Petitioner agrees with this change. *See* petitioner's posthearing brief, exh. 7, pp. 7-8.

[8] Petitioner was silent on this correction.

[9] Petitioner does not agree with this correction and stated that ***.

[10] Petitioner does not agree with the accounting treatment by staff of ***. Petitioner's posthearing brief, exh. 7, pp. 1 and 8. Staff agrees that if ***.

[11] Petitioner's posthearing brief, exh. 7, p. 7.

[12] *Ibid*. Added to direct labor in table VI-1, were the sum of the two categories of ***.

[13] Respondents' prehearing brief, pp. 21, 22 and attachment A. Spokesmen for Utah Refractories stated that the costs referred to by respondents are market-based and were incurred irrespective of the ownership structure of Utah Refractories. Hearing transcript, p. 81 (Goates and Straight).

[14] *See* petitioner's posthearing brief, exh. 7, pp. 1 and 2.

[15] Commission staff have noted in previous investigations that ***. *See* petitioner's posthearing brief, exh. 7, p. 3.

[16] *See* petitioner's posthearing brief, exh. 7, p. 2.

[17] *See* petitioner's posthearing brief, exh. 7, pp. 4-5.

Refractories ***.[18] Direct labor and other factory costs (factory overhead) ***. Labor costs (composed of ***) and other factory costs (composed of ***. SG&A expenses (which include ***. SG&A expenses were ***.

Variance analysis

A variance analysis for the operations of Utah Refractories for silica bricks and shapes is presented in table VI-2,[19] based on the information derived from table VI-1. The analysis in table VI-2 indicates that the *** between 2010 and 2012 was mainly due to the ***. The firm recorded *** in the January-June 2013 period because of the *** and the combined favorable ***.

Table VI-2
Silica bricks and shapes: Summary variance analysis on the operations of Utah Refractories, fiscal years 2010-12, January-June 2012, and January-June 2013

* * * * * * *

CAPITAL EXPENDITURES AND RESEARCH AND DEVELOPMENT EXPENSES

Utah Refractories reported capital expenditures valued at $*** in 2010, $*** in 2011, and $*** in 2012. The firm reported *** capital expenditures in ***. Utah Refractories reported ***.[20]

The reported data mostly represent the investment in *** as well as the repair and maintenance costs that led to an increase in production capacity or an improvement in the useful life of equipment.[21]

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[18] A spokesman for Utah Refractories testified at the hearing that the firm is somewhat protected on the price of quartzite raw material, but is not insulated from the cost or cost increases because it pays an independent contractor for mining and transportation of raw materials to the plant. Hearing transcript, p. 49 (Goates). *See* also petitioner's posthearing brief, exh. 7, pp. 4-5.

[19] The Commission's variance analysis is calculated in three parts: Sales variance, cost of sales variance (COGS variance), and SG&A expense variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense (cost/expense) variance (in the case of the COGS and SG&A expense variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. Summarized at the bottom of the table, the price variance is from sales; the cost/expense variance is the sum of those items from COGS and SG&A variances, respectively, and the volume variance is the sum of the volume components of the net sales, COGS, and SG&A expense variances. The overall volume component of the variance analysis is generally small.

[20] ***.

[21] ***.

ASSETS AND RETURN ON INVESTMENT

Data on Utah Refractories' total assets[22] and its return on investment ("ROI") are presented in table VI-3 based on the operating data in tables VI-1. Total assets increased between 2010 and 2012, accounted for by ***. The value of fixed assets (***) was $***, net of depreciation in 2010, 2011, and 2012, respectively.[23] ROI, calculated by dividing operating income or (loss) by total assets, followed the trend in operating income or loss, shown earlier in table VI-1. ***.

Table VI-3
Silica bricks and shapes: Utah Refractories' total assets and return on investment, fiscal years 2010-12

* * * * * * *

CAPITAL AND INVESTMENT

The Commission requested U.S. producers of Silica bricks and shapes to describe any actual or potential negative effects of imports of Silica bricks and shapes from China on their firms' growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments. Utah Refractories' responses are shown below.

Actual Negative Effects

"***."

Anticipated Negative Effects

"***."

[22] Utah Refractories' financial statements provide data for its assets. Total assets reported in the questionnaire were verified against its balance sheet. Total assets consist of ***. During the telephone interview of September 30, 2013, ***.

[23] Utah Refractories' financial statements, balance sheet.

PART VII: THREAT CONSIDERATIONS AND INFORMATION ON NONSUBJECT COUNTRIES

The Commission analyzes a number of factors in making threat determinations (see 19 U.S.C. § 1677(7)(F)(I)). Information on the volume and pricing of imports of the subject merchandise is presented in Parts IV and V; and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts is presented in Part VI. Information on inventories of the subject merchandise; foreign producers' operations, including the potential for "product-shifting;" any other threat indicators, if applicable; and any dumping in third-country markets, follows. Also presented in this section of the report is information obtained for consideration by the Commission on nonsubject countries and the global market.

OVERVIEW

According to statistics of Global Trade Information Services Inc. ("GTIS"), the United States was neither a major world importer nor exporter of alumina or silica refractory bricks and shapes during 2010-12.[1] By contrast, China was the world's leading exporter during that same period. China's exports increased by over 28.7 percent from 2010 to 2012, exceeding 900,000 short tons in 2012 (table VII-1). China's exports also accounted for over 45 percent of the world's exports in 2012 and China's net trade surplus grew by approximately 30 percent from 681,880 short tons in 2010 to 884,974 short tons in 2012.

[1] The global trade balance data presented are derived from GTIS, *Global Trade Atlas*, HS 6902.20. The products covered under this six-digit HS classification include all refractory bricks, blocks, tiles and similar goods not elsewhere specified or identified and containing over 50 percent (by weight) singly or combined, of alumina or silica. According to the petitioner, the majority of subject silica refractory brick is included in the data presented, as are many other products. Other products included in the data are alumina refractory brick, high purity silica brick for semiconductor wafer manufacturing, and fused silica brick, to name a few. Also included is HS 6909.19 Ceramic Wares for Laboratory, Chemical or Other technical uses, Other than of porcelain or china; Other than articles having a hardness equivalent to 9 or more on the Mohs scale; Other, as included in the scope of the investigation. The *Global Trade Atlas* data presented exclude the data for Colombia, Peru, and Uruguay because these data are not consistent with other data reported.

Table VII-1
Alumina and silica refractory bricks and shapes: World exports, imports, and trade balances, by country, 2010-12

Item	Calendar year		
	2010	2011	2012
	Quantity (*short tons*)		
Exports from:			
China	703,454	826,734	905,502
Germany	188,231	186,964	196,233
India	84,713	333,188	141,508
France	64,415	95,955	89,656
Netherlands	30,262	58,861	63,063
Spain	54,289	62,135	60,873
Italy	48,203	52,746	53,793
Czech Republic	54,895	56,505	53,146
Ukraine	90,141	58,522	51,627
Poland	49,814	52,769	47,821
Belgium	23,012	29,602	32,191
All other countries	251,674	259,736	265,461
Total	1,643,103	2,073,718	1,960,874
Imports into:			
China	21,574	25,048	20,527
Germany	51,360	57,260	82,558
India	72,575	120,918	98,858
France	30,159	37,018	40,836
Netherlands	26,545	30,997	33,388
Spain	14,977	15,305	14,702
Italy	40,892	43,881	37,394
Czech Republic	18,298	18,440	11,198
Ukraine	8,158	14,300	11,549
Poland	31,477	18,538	11,710
Belgium	22,936	24,852	24,743
All other countries	1,429,924	1,391,473	2,938,479
Total	1,768,876	1,798,031	3,325,942

Table continued on following page.

Table VII-1--*Continued*

Alumina and silica refractory bricks and shapes: World exports, imports, and trade balances, by country, 2010-12

Item	Calendar year		
	2010	2011	2012
	Quantity (*short tons*)		
Trade balance:			
China	681,880	801,686	884,974
Germany	136,871	129,704	113,675
India	12,138	212,269	42,650
France	34,256	58,937	48,820
Netherlands	3,716	27,864	29,675
Spain	39,311	46,831	46,171
Italy	7,311	8,865	16,399
Czech Republic	36,596	38,065	41,948
Ukraine	81,983	44,222	40,078
Poland	18,336	34,231	36,111
Belgium	77	4,750	7,448
All other countries	(1,178,250)	(1,131,737)	(2,673,018)
Total	(125,773)	275,686	(1,365,069)

Note.--Positive numbers presented for "trade balance" show net exports and numbers in parentheses presented for "trade balance" show net imports. Countries presented separately are based on the top exporting countries to the world in 2012.

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

Source: Global Trade Information Services Inc., Global Trade Atlas, HS 6902.20 (Refractory Bricks, Blocks, Tiles And Similar Goods Nesoi, Containing Over 50% (Wt.) Singly Or Combined, Of Alumina Or Silica), excluding data for Colombia, Peru, and Uruguay that were not convertible to short tons, and HS 6909.19 Ceramic Wares for Laboratory, Chemical or Other technical uses; ceramic troughs, tubs and similar receptacles of a kind used in agriculture; ceramic pots, jars and similar articles of a kind used for the conveyance or package of goods: Other: Other, retrieved September 27, 2013.

THE INDUSTRY IN CHINA

Although there is no comprehensive public source for capacity, production, and/or shipment data for Chinese producers of silica bricks and shapes, publicly available information indicates that most Chinese manufacturers use continuous furnaces to fire silica brick, produce many types of refractories at their facilities, and have high annual production and capacity. In fact, the petitioner argues that China has a vast capacity to produce silica bricks, which amounts to "thousands of times greater" than the capacity of domestic producer Utah Refractories. The noted annual productions/capacities in table VII-2 are ***. The petitioner contends that China has strong domestic demand as exemplified by its large steel industry, which is composed primarily of integrated mills that require coke for blast furnaces, rather than mini mills that use electric arc furnaces, as well as a growing glass industry. The petitioner also notes that although there appears to be "significant" demand for silica bricks in China, especially for coke oven applications in the Chinese steel industry, the silica brick producers in China are export-oriented based on the competition for sales of silica brick in the United States.[2]

Table VII-2
Refractory materials: Advertised annual Chinese refractory production/capacity

Chinese company name	Advertised annual production/capacity
Shandong Wanqiao Group Co.	120,000 tons of silica bricks
Zhengzhou Annec Industrial Co.	50,000 tons of silica products
AwayZibo Yonganda Refractory Materials Co.	50,000 tons of refractories
Zibo Zhuoyue Refractory Material Co.	50,000 tons of refractories
Zibo Yaodong Refractory Material Co.	20,000 tons of refractories
Henan Zinmi Changzing Refractory Co.	80,000 tons of refractory materials
Tangshan Kaiping Yinhai Furnace Materials Factory	60,000 tons of refractory materials

Source: Petitioner's postconference brief, exh. I.

The Commission sent foreign producer questionnaires to 15 firms identified as possible producers/exporters of silica bricks and shapes in China that, based on a review of data provided by Customs, exported merchandise to the United States under HTS statistical reporting numbers 6902.20.1020, 6902.20.5020, and 6909.19.5095 since January 1, 2010. One

[2] Conference transcript, pp. 18 and 43 (Straight) and pp. 43-44 (Mulholland).

silica brick producer in China submitted a foreign producer questionnaire response in the final phase of this investigation, ***.[3]

In its questionnaire response, *** indicated ***. It reported that it is a Chinese producer of silica bricks and shapes. *** estimated that it accounted for *** percent of total production of silica bricks and shapes in China in 2012 and that *** percent of its total sales are represented by sales of silica bricks and shapes.

*** also reported ***. *** reported ***. According to the estimate provided in ***'s questionnaire response, its exports of subject silica bricks and shapes to the United States accounted for *** percent of total exports of subject merchandise to the United States from China during 2012. According to the import data collected in response to Commission questionnaires in this investigation, ***'s exports to the United States accounted for *** percent of reported U.S. imports from China during January 2010-June 2013. Data reported by *** in its questionnaire response are presented in table VII-3. These data show that ***'s exports to the United States increased by *** percent from *** short tons in 2010 to *** short tons in 2012. However, the company's projections for calendar years 2013 and 2014 indicate that exports to the United States are expected to fall from *** short tons in 2013 to *** short tons in 2014.

Table VII-3
Silica bricks and shapes: Chinese production capacity, production, shipments, and inventories, 2010-12, January-June 2012, January-June 2013, and projected 2013-14

* * * * * * *

Respondents stated that "silica brick that are intended for coke and glass market are never interchangeable" and that "TNCR, like all Chinese manufacturers, sells to the United States almost completely within the steel market."[4] Respondents further stated that TNCR's product is not sold on price; customers focus on TNCR's ability to meet their delivery schedule, quality concerns, and even care about sourcing of input for the silica bricks.[5]

According to respondents, ninety percent of the silica brick produced in China (over two million tons) are sold and used in the Chinese market with the remainder sold primarily in the market outside the United States.[6]

In comparing the U.S. and Chinese markets for brick produced for the glass industry, respondent asserted that brick produced for U.S. glass industries are super-duty or Type A silicon with a very low impurity level as the bricks produced for glass manufacture must be able

[3] ***. Foreign producer questionnaire response (section 1-2).

[4] Hearing transcript, p. 155 (Dai).

[5] Ibid.

[6] Ibid., p. 156 (Dai).

to withstand a much higher temperature than brick made for coke oven industries.[7] Respondents opined that the brick produced in China for glass manufacture customers is very different from those that are acceptable in the United States or Europe.[8] Respondents stated that, to their knowledge, TNCR is the only Chinese manufacturer that can produce Type A silica bricks and shapes that meet U.S. or European standards because TNCR licensed the necessary technology from ANH (formerly Harbison-Walker).[9]

Respondents asserted that they had no interest in competing in the U.S. market for silica bricks used in glass manufacture, as the U.S. glass customer requires Type A and a super-duty brick which only one of TNCR's plants can make this kind of product and it is already booked up with orders from Chinese customers. No other Chinese silica brick producer has developed this capability because the Chinese glass industry has a much higher tolerance for impurity and a much higher demand.[10] Respondents further noted that China still imports Type A silica brick for glass tanks, and is a net importer of glass tank silica brick, mostly that are manufactured in Europe.[11] Respondents further stated that the Type A brick that is imported is mainly for plants owned by foreign companies, such as a Pilkington, PPG, or Corning in China.[12] According to respondents, TNCR approached Utah Refractories in 2003 for a possible representation to sell their product in China.[13]

Respondents stated that there is an issue of availability of the high purity rock in China which is one constraint to production of Type A silica bricks and shapes in China.[14] The majority of the silica brick manufacture in China is in an area where there is no high purity rock.[15] The high purity rock in China is far away in a remote area with high transportation costs per short ton.[16]

Respondents further stated that silica bricks and shapes production in China has been declining since 2005, because the Chinese Government is removing a lot of old technology beehive kiln capacity for environmental reasons.[17] This means that approximately 50 percent of the Chinese coke and glass plants are being rebuilt using newer technology.[18]

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[7] Ibid. pp. 156-157 (Dai).

[8] Ibid.

[9] Respondents' posthearing brief, exh.1, p. 5.

[10] Hearing transcript, pp. 158-159 (Dai).

[11] Ibid., p. 161 and p. 174 (Dai).

[12] Ibid., p. 188-189 (Dai).

[13] Ibid., p. 175 (Dai).

[14] Ibid., p. 188 (Klett).

[15] Ibid., p. 190 (Dai).

[16] Ibid., p. 189-90 (Dai).

[17] Ibid., p. 223 (Dai).

[18] Respondents' posthearing brief, exh. 1, p. 4.

Respondents opined that U.S. glass producers are using much less silica bricks and shapes because they are substituting with other types of product for the glass crowns and the large glass tanks have all moved way from conventional silica brick crowns.[19]

Petitioner stated that some of its major glass customers are still actively looking to source Chinese silica brick.[20] According to respondents, TNCR has sold approximately ***.[21]

U.S. INVENTORIES OF SILICA BRICKS AND SHAPES FROM CHINA

Data collected in this investigation on U.S. importers' end-of-period inventories of silica bricks and shapes are presented in table VII-4. These data show that U.S. importers of silica brick typically maintain relatively low levels of U.S. inventories of the imported product. The petitioner testified that "given the very specific nature of many of the orders and the various types of bricks that are used," little, if any, inventories of silica bricks and shapes are maintained in the United States.[22]

As shown in table VII-4, *** reported holding inventories of silica bricks and shapes imported from China during the period for which data were collected in this investigation. *** reported holding *** short tons of the subject merchandise in inventory ***. These inventories accounted for *** percent of total reported U.S. imports from China during that period. The firm indicated that ***.

Table VII-4
Silica bricks and shapes: U.S. importers' end-of-period inventories of imports, by source, 2010-12, January-June 2012, and January-June 2013

* * * * * * *

*** U.S. importer from nonsubject sources (***) reported holding inventories of silica bricks and shapes in the United States. The inventories of silica bricks and shapes imported from nonsubject sources held by *** were *** short tons at yearend 2010, *** short tons at yearend 2011, *** short tons at yearend 2012, and *** short tons at the end of June 2013. Inventories of nonsubject silica brick imports accounted for *** percent of total reported U.S. imports from nonsubject sources during 2010, *** percent in 2011, *** percent in 2012, and *** percent during January-June 2012.

[19] Hearing transcript, p. 224 (Dai).

[20] Hearing transcript, p. 23 (Mullholland).

[21] Respondents' posthearing brief, responses to supplemental staff questions, p. 62.

[22] Conference transcript, p. 31 (Wiseman).

U.S. IMPORTERS' CURRENT ORDERS

The Commission requested that importers indicate whether they imported or arranged for the importation of silica bricks and shapes from China after June 30, 2013. Data reported by these U.S. importers concerning their orders of imported silica bricks and shapes from China are presented in table VII-5. The following *** U.S. importers reported that they had placed orders for silica bricks and shapes from China for delivery into the United States after June 30, 2013: ***. The largest order placed, by far, was by ***. Smaller orders were placed by ***. No U.S. importer reported imports for delivery after ***.

Table VII-5
Silica bricks and shapes: U.S. importers' orders for silica bricks and shapes imports from China after June 30, 2013

* * * * * * *

ANTIDUMPING INVESTIGATIONS IN THIRD-COUNTRY MARKETS

There is no evidence on the record in this investigation that there are antidumping investigations or orders in any third-country markets concerning silica bricks and shapes produced in China.

INFORMATION ON NONSUBJECT COUNTRIES

In assessing whether the domestic industry is materially injured or threatened with material injury "by reason of subject imports," the legislative history states "that the Commission must examine all relevant evidence, including any known factors, other than the dumped imports, that may be injuring the domestic industry, and that the Commission must examine those other factors (including nonsubject imports) 'to ensure that it is not attributing injury from other sources to the subject imports.'"[23]

According to the petitioner, the largest U.S. import sources for silica bricks and shapes after China over the 2009-2012 period were the Czech Republic, Germany, and Belgium.[24] Questionnaire responses ***.[25] Noted foreign refractory manufacturers include PD Refractories in the Czech Republic and Germany, RHI in Germany, and Belref in Belgium.[26]

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[23] Mittal Steel Point Lisas Ltd. v. United States, Slip Op. 2007-1552 at 17 (Fed. Cir., Sept. 18, 2008), quoting from Statement of Administrative Action on Uruguay Round Agreements Act, H.R. Rep. 103-316, Vol. I at 851-52; see also Bratsk Aluminum Smelter v. United States, 444 F.3d 1369 (Fed. Cir. 2006).

[24] Conference transcript, p.69 (Mulholland).

[25] ***

[26] Conference transcript, p.40 (Mulholland).

***.[27] Petitioner stated that it understood SunCoke had engineered a mixed brick coke oven that was probably going to have Chinese brick in the walls and brick from the Czech Republic in the crown.[28]

Official U.S. trade statistics do not precisely reflect U.S. imports of silica bricks and shapes, as the HTSUS statistical reporting numbers given in Commerce's scope also include nonsubject products. However, based on HTSUS number 6902.20.1020, which contains the highest proportion of subject silica bricks and shapes, Europe is the largest source of U.S. imports by volume followed by China.[29] Europe was also the largest global exporter by volume of refractory bricks containing 50 percent or more of alumina or silica over the 2010-2012 period, which includes the subject silica bricks and shapes.[30] The European refractories industry is well-established with a diversity of manufacturers, including some of the largest global heat-resistant refractory manufacturers. For example, RHI AG, headquartered in Austria with 33 global production sites, is the largest refractories manufacturer in the world[31] and was estimated to comprise 15 percent of global refractories production in 2000.[32] Other noted manufacturers include the P-D Group, which is self-described as "the biggest and most successful refractory manufacturer in Europe" and has production in Germany and the Czech Republic[33] and Belref Refractories which is part of the larger Ipratec refractories group which also provides furnace engineering and construction services.[34] These companies, along with other international refractory manufacturers with silica bricks and shapes production in Europe have global operations and the capacity to make many different types of refractory products, including monolithics, mortars, paste, and non-silica items.

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[27] ***

[28] Hearing transcript, p. 21 (Mullholland).

[29] USITC Dataweb, HTS 6902.20.2010, retrieved September 27, 2013.

[30] Global Trade Information Services Inc., Global Trade Atlas, HS 6902.20 (Refractory Bricks, Blocks, Tiles And Similar Goods Nesoi, Containing Over 50% (Wt.) Singly Or Combined, Of Alumina Or Silica), retrieved September 27, 2013.

[31] Staff telephone interview with ***.

[32] http://www.referenceforbusiness.com/history2/68/RHI-AG.html, retrieved September 27, 2013.

[33] http://www.pd-refractories.com/en/corporate/our-plants/mslz, retrieved September 27, 2013.

[34] http://www.ipratec.com/en/companies/fusiref/presentation, retrieved October 18, 2013; Staff telephone interview with ***.

APPENDIX A

FEDERAL REGISTER NOTICES

Notices in the Federal Register

Silica Bricks and Shapes From China: Institution of an Antidumping Duty Investigation and Scheduling of a Preliminary Phase Investigation, 77 FR 70185, November 23, 2012
http://www.gpo.gov/fdsys/pkg/FR-2012-11-23/pdf/2012-28419.pdf

Silica Bricks and Shapes From the People's Republic of China: Initiation of Antidumping Duty Investigation, 77 FR 73982, December 12, 2012
http://www.gpo.gov/fdsys/pkg/FR-2012-12-12/pdf/2012-29976.pdf

Silica Bricks and Shapes from China: Determination, 78 FR 3449, January 16, 2013
http://www.gpo.gov/fdsys/pkg/FR-2013-01-16/pdf/2013-3449.pdf

Silica Bricks and Shapes From the People's Republic of China: Preliminary Determination of Antidumping Duty Investigation and Postponement of Final Determination, 78 FR 37203, June 20, 2013
http://www.gpo.gov/fdsys/pkg/FR-2013-06-20/pdf/2013-37203.pdf

Silica Bricks and Shapes from China: Scheduling of the Final Phase of an Antidumping Investigation, 78 FR 45968, July 30, 2013
http://www.gpo.gov/fdsys/pkg/FR-2013-07-30/pdf/2013-45968.pdf

Silica Bricks and Shapes from China: Revised Schedule for the Subject Investigation, 78 FR 64533, October 29, 2013
http://www.gpo.gov/fdsys/pkg/FR-2013-10-29/pdf/2013-65433.pdf

Final Determination of Sales at Less Than Fair Value: Silica Bricks and Shapes From the People's Republic of China, 78 FR 70918, November 27, 2013
http://www.gpo.gov/fdsys/pkg/FR-2013-11-27/pdf/2013-70918.pdf

APPENDIX B

CALENDAR OF THE PUBLIC HEARING

CALENDAR OF PUBLIC HEARING

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

Subject: Silica Bricks and Shapes from China

Inv. **No.:** 731-TA-1205 (Final)

Date and Time: November 21, 2013 - 9:30 a.m.

Sessions were held in connection with this investigation in the Main Hearing Room (room 101), 500 E Street, S.W., Washington, DC.

OPENING REMARKS:

Petitioner **(Samuel C. Straight,** Ray Quinney & Nebeker)
Respondents **(Gregory Husisian,** Foley & Lardner LLP)

In Support of the Imposition of Antidumping Duty Order:

Ray Quinney & Nebeker
Salt Lake City, UT
on behalf of

Utah Refractories

Ray Worthen, President and Owner, Utah Refractories

Dennis Williams, Vice President and Owner, Utah Refractories

Tom Mulholland, Director of Sales and Marketing, Utah Refractories

Kent Goates, Economic Consultant, Lone Peak Valuation Group

Samuel C. Straight)
) - OF COUNSEL
D. Zachary Wiseman)

In Opposition to the Imposition of
Antidumping Duty Order:

Foley & Lardner LLP
Washington, DC
on behalf of

and

Law Offices of Nithya Nagarajan, LLC
Bethesda, MD
on behalf of

SunCoke Energy, Inc.
Tianjin New Century Refractories Co., Ltd.

Steven R. Morey, Director of Construction,
SunCoke Energy, Inc.

Daniel Klett, Principal, Capital Trade Inc.

Yong S. Dai, PhD, Managing Director,
Tianjin New Century Refractories Co., Ltd.

Gregory Husisian)
Christopher M. Swift)-OFCOUNSEL
Nithya Nagarajan)

REBUTTAL/CLOSING REMARKS:

Petitioner (Samuel C. Straight, Ray Quinney & Nebeker)
Respondents (Gregory Husisian, Foley & Lardner LLP)

-END-

APPENDIX C

SUMMARY DATA FOR SILICA BRICKS AND SHAPES

Table C-1
Silica bricks and shapes: Summary data concerning the U.S. market, 2010-12, January to June 2012, and January to June 2013

* * * * * * *