High Chrome Cast Iron Grinding Media from India

Investigation Nos. 701-TA-726 and 731-TA-1694 (Preliminary)

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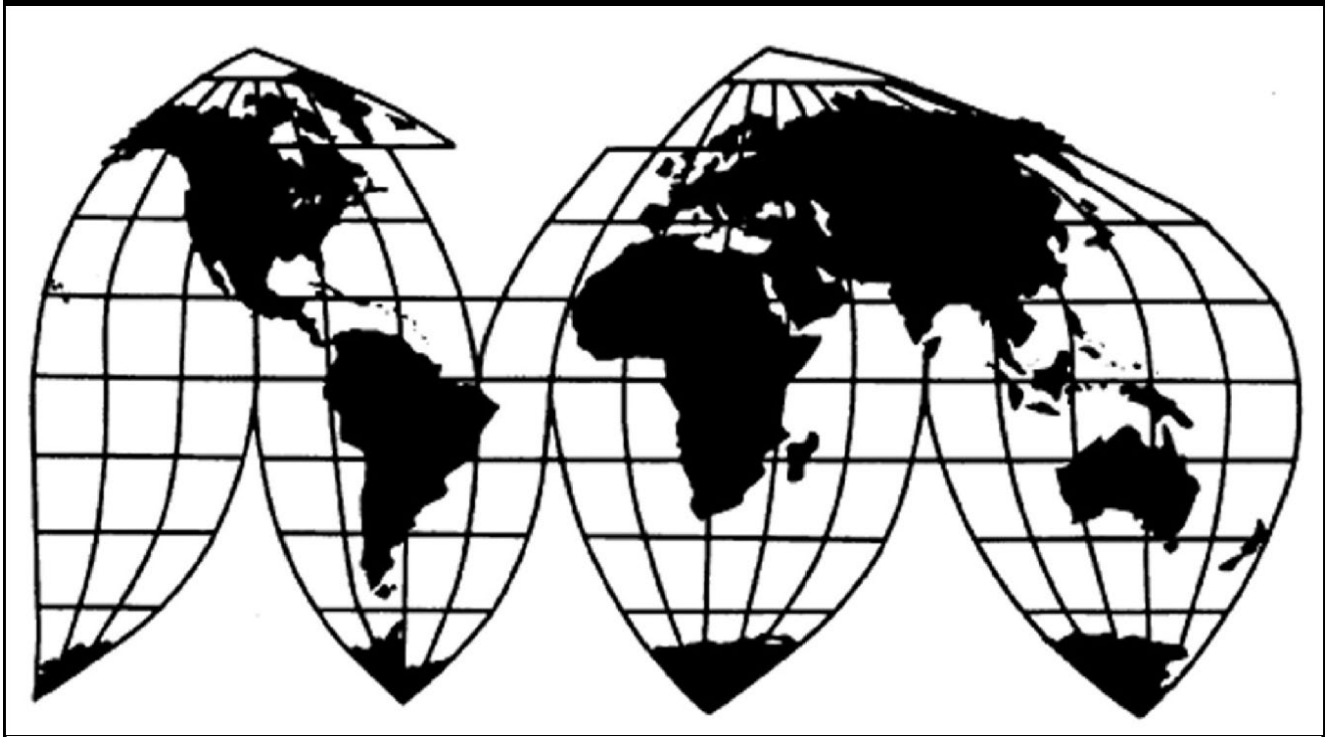
U.S. International Trade Commission



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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-726 and 731-TA-1694 (Preliminary)

High Chrome Cast Iron Grinding Media from India

DETERMINATIONS

On the basis of the record[1] developed in the subject investigations, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of high chrome cast iron grinding media ("HCCIGM") from India, provided for in subheading 7325.91.00 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value ("LTFV") and imports of the subject merchandise from India that are alleged to be subsidized by the government of India.[2]

COMMENCEMENT OF FINAL PHASE INVESTIGATIONS

Pursuant to section 207.18 of the Commission's rules, the Commission also gives notice of the commencement of the final phase of its investigations. The Commission will issue a final phase notice of scheduling, which will be published in the *Federal Register* as provided in § 207.21 of the Commission's rules, upon notice from the U.S. Department of Commerce ("Commerce") of affirmative preliminary determinations in the investigations under §§ 703(b) or 733(b) of the Act, or, if the preliminary determinations are negative, upon notice of affirmative final determinations in those investigations under §§ 705(a) or 735(a) of the Act. Parties that filed entries of appearance in the preliminary phase of the investigations need not enter a separate appearance for the final phase of the investigations. Any other party may file an entry of appearance for the final phase of the investigations after publication of the final phase notice of scheduling. Industrial users, and, if the merchandise under investigation is sold at the retail level, representative consumer organizations have the right to appear as parties in Commission antidumping and countervailing duty investigations. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives,

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

[2] 89 FR 45630 (May 23, 2024); 89 FR 45640 (May 23, 2024).

who are parties to the investigations. As provided in section 207.20 of the Commission's rules, the Director of the Office of Investigations will circulate draft questionnaires for the final phase of the investigations to parties to the investigations, placing copies on the Commission's Electronic Document Information System (EDIS, https://edis.usitc.gov), for comment.

BACKGROUND

On April 26, 2024, Magotteaux Inc., Franklin, Tennessee, filed petitions with the Commission and Commerce, alleging that an industry in the United States is materially injured or threatened with material injury by reason of subsidized imports of HCCIGM from India and LTFV imports of HCCIGM from India. Accordingly, effective April 26, 2024, the Commission instituted countervailing duty investigation No. 701-TA-726 and antidumping duty investigation No. 731-TA-1694 (Preliminary).

Notice of the institution of the Commission's investigations and of a public conference 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 May 2, 2024 (89 FR 35860). The Commission conducted its conference on May 17, 2024. All persons who requested the opportunity were permitted to participate.

Views of the Commission

Based on the record in the preliminary phase of these investigations, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of high chrome cast iron grinding media ("HCCIGM") from India that are allegedly sold in the United States at less than fair value ("LTFV") and subsidized by the government of India.

I. The Legal Standard for Preliminary Determinations

The legal standard for preliminary antidumping and countervailing duty determinations requires the Commission to determine, based upon the information available at the time of the preliminary determinations, whether there is a reasonable indication that a domestic industry is materially injured or threatened with material injury, or that the establishment of an industry is materially retarded, by reason of the allegedly unfairly traded imports.[1] In applying this standard, the Commission weighs the evidence before it and determines whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of such injury; and (2) no likelihood exists that contrary evidence will arise in a final investigation."[2]

II. Background

Magotteaux Inc. ("Petitioner"), the only known domestic producer of HCCIGM during the 2021–2023 period of investigation (the "POI"), filed the petitions in these investigations on April 26, 2024. Petitioner participated in the staff conference[3] accompanied by counsel and submitted a postconference brief.[4]

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[1] 19 U.S.C. §§ 1671b(a), 1673b(a) (2000); *see also American Lamb Co. v. United States*, 785 F.2d 994, 1001–04 (Fed. Cir. 1986); *Aristech Chem. Corp. v. United States*, 20 CIT 353, 354–55 (1996). No party argues that the establishment of an industry in the United States is materially retarded by the allegedly unfairly traded imports.

[2] *American Lamb Co.*, 785 F.2d at 1001; *see also Texas Crushed Stone Co. v. United States*, 35 F.3d 1535, 1543 (Fed. Cir. 1994).

[3] *See* Transcript of Preliminary Conference, EDIS Doc. 821836 (May 17, 2024) ("Conf. Tr.").

[4] *Post-Conference Brief of Magotteaux Inc.*, EDIS Doc. 822092 (May 22, 2024) ("Petitioner's Postconf. Br.").

Four respondent entities actively participated in these investigations. AIA Engineering Limited ("AIA"), a producer and exporter of subject merchandise in India, and its affiliate Vega Industries Limited USA ("Vega"), a U.S. importer of subject merchandise from India, appeared at the staff conference accompanied by counsel and submitted a joint postconference brief.[5] Holcim (US) Inc. ("Holcim"), a U.S. purchaser of subject merchandise from India, appeared at the staff conference accompanied by counsel and submitted a postconference brief.[6] Additionally, Grinding Media Inc. d/b/a Molycop USA, LLC ("Molycop"), a U.S. importer of subject merchandise from India, submitted a postconference brief.[7]

U.S. industry data are based on the questionnaire response of Petitioner, which accounted for all known U.S. production of HCCIGM in 2023.[8] U.S. import data are based on questionnaire responses from U.S. importers.[9] The Commission received responses to its questionnaires from three importers, representing *** U.S. imports of HCCIGM, both subject and nonsubject, during 2023.[10] In addition, the Commission received responses to its questionnaires from one Indian producer and exporter of subject merchandise, accounting for *** percent of production of HCCIGM in India in 2023, and whose exports accounted for *** subject imports in 2023.[11]

III. Domestic Like Product

In determining whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of imports of the subject merchandise, the Commission first defines the "domestic like product" and the "industry."[12] 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

[5] *Post-Conference Brief of AIA Engineering Limited and Vega Industries Limited USA*, EDIS Doc. 822079 (May 22, 2024) ("AIA/Vega's Postconf. Br.").

[6] *Post-Conference Brief on Behalf of Holcim (US) Inc.*, EDIS Doc. 822096 (May 22, 2024) ("Holcim's Postconf. Br.").

[7] *Molycop's Post-Conference Brief*, EDIS Doc. 822107 (May 22, 2024) ("Molycop's Postconf. Br.").

[8] Confidential Report, Memorandum INV-WW-056 (June 3, 2024) ("CR") at I-4 & III-1; Public Report, *High Chrome Cast Iron Grinding Media from India*, Inv. Nos. 701-TA-726 & 731-TA-1694 (Preliminary), USITC Pub. 5518 (June 2024) ("PR") at I-4 & III-1.

[9] CR/PR at I-4 & IV-1.

[10] CR/PR at IV-1.

[11] CR/PR at VII-3.

[12] 19 U.S.C. § 1677(4)(A).

proportion of the total domestic production of the product."[13] 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."[14]

By statute, the Commission's "domestic like product" analysis begins with the "article subject to an investigation," *i.e.*, the subject merchandise as determined by the U.S. Department of Commerce ("Commerce").[15] Therefore, Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value is "necessarily the starting point of the Commission's like product analysis."[16] The Commission then defines the domestic like product in light of the imported articles Commerce has identified.[17] The decision regarding the appropriate domestic like product(s) 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.[18] No single factor is dispositive, and the Commission may consider other factors it deems relevant based on the facts of a particular investigation.[19] The Commission looks for clear dividing lines among

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[13] 19 U.S.C. § 1677(4)(A).

[14] 19 U.S.C. § 1677(10).

[15] 19 U.S.C. § 1677(10). The Commission must accept Commerce's determination as to the scope of the imported merchandise that is subsidized and/or sold at less than fair value. *See*, *e.g.*, *USEC, Inc. v. United States*, 34 F. App'x 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).

[16] *Cleo Inc. v. United States*, 501 F.3d 1291, 1298 (Fed. Cir. 2007); *see also Hitachi Metals, Ltd. v. United States*, 949 F.3d 710, 717 (Fed. Cir. 2020) (the statute requires the Commission to start with Commerce's subject merchandise in reaching its own like product determination).

[17] *Cleo*, 501 F.3d at 1298 n.1 ("Commerce's {scope} finding does not control the Commission's {like product} determination."); *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); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-52 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991) (affirming the Commission's determination defining six like products in investigations where Commerce found five classes or kinds).

[18] *See, e.g.*, *Cleo Inc. v. United States*, 501 F.3d 1291, 1299 (Fed. Cir. 2007); *NEC Corp. v. Dep't 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).

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

possible like products and disregards minor variations.[20] The Commission may, where appropriate, include domestic articles in the domestic like product in addition to those described in the scope.[21]

A. Scope Definition

In its notices of initiation, Commerce defined the imported merchandise within the scope of the investigations as:

> chrome cast iron grinding media in spherical (ball) or ovoid shape, with an alloy composition of seven percent or more (≥7 percent of total mass) chromium (Cr) content and produced through the casting method, with a nominal diameter of up to 127 millimeters (mm) and tolerance of plus or minus 10 mm. The products covered by the scope are currently classified under Harmonized Tariff Schedule of the United States (HTSUS) subheading 7325.91.0000. This HTSUS subheading is provided for convenience and U.S. Customs purposes only. The written description of the scope is dispositive.[22]

HCCIGM are balls cast from ferrochromium and steel scrap. HCCGIM are used in ball mills to grind ore and other materials, predominantly in the mining and cement industries.[23] Only grinding media with seven percent or more chromium are in-scope. Producers tailor the specific chemical composition and size of the HCCIGM to fit the customer's requirements and mill environment.[24]

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[20] *See*, *e.g.*, *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.").

[21] *See*, *e.g.*, *Pure Magnesium from China and Israel*, Inv. Nos. 701-TA-403 & 731-TA-895–896 (Final), USITC Pub. 3467 (Nov. 2001) at 8 n.34; *Torrington,* 747 F. Supp. at 748–49 (holding that the Commission is not legally required to limit the domestic like product to the product advocated by the petitioner, co-extensive with the scope).

[22] *Certain High Chrome Cast Iron Grinding Media from India: Initiation of Less-Than-Fair-Value Investigation*, 89 Fed. Reg. 45630, 45634 (May 23, 2024); *Certain High Chrome Cast Iron Grinding Media from India: Initiation of Countervailing Duty Investigation*, 89 Fed. Reg. 45640, 45644 (May 23, 2024).

[23] CR/PR at I-3, I-7 to I-9.

[24] CR/PR at I-7 to I-8.

B. Arguments of the Parties

Petitioner argues that the Commission should define a single domestic like product coextensive with the scope of the investigations.[25] It asserts that the Commission should not define the domestic like product to include out-of-scope low chrome cast iron grinding media ("LCCIGM") or forged grinding media, or to include two separate domestic like products based on whether HCCIGM is for use in the mining or cement industries.[26] Petitioner maintains that all HCCIGM have the same physical characteristics because they are made from the same basic raw materials and have the same end uses of grinding material or ore in ball mills, regardless of whether the HCCIGM are employed in the mining or cement industries.[27] By contrast, Petitioner argues that LCCIGM[28] and forged grinding media have a lower chromium and carbon content than HCCIGM, reducing the former two products' hardness and resistance to corrosion and abrasion.[29]

Petitioner further argues that all HCCIGM share common channels of distribution and manufacturing facilities, employees, and production processes.[30] While acknowledging that HCCIGM share channels of distribution with LCCIGM and forged grinding media, Petitioner contends that HCCIGM does not share common manufacturing facilities, employees, and production processes with LCCIGM and forged grinding media.[31] Petitioner also contends that producers and customers view HCCIGM as "generally interchangeable regardless of type and source," while HCCIGM are not interchangeable with LCCIGM and forged grinding media.[32] Additionally, Petitioner argues there are no significant price differences between HCCIGM designated for the mining industry versus the cement industry and that HCCIGM are more

[25] Petitioner's Postconf. Br. at 1.

[26] Petitioner's Postconf. Br. at 1. Although other industries use HCCIGM, the parties focus on the mining and cement industries in their arguments because these are the primary users of HCCIGM in the United States. CR/PR at I-3.

[27] Petitioner's Postconf. Br. at 1–2.

[28] Although Petitioner addresses both LCCIGM and forged grinding media, none of the respondents make any arguments regarding LCCIGM. Indeed, Kunal Shah, AIA's Executive Director, testified at the preliminary conference that "there are two main types of grinding media that are used for the cement and mining industries: {HCCIGM} and forged grinding media." Conf. Tr. at 92:3–6 (Shah).

[29] Petitioner's Postconf. Br. at 2.

[30] Petitioner's Postconf. Br. at 2.

[31] Petitioner's Postconf. Br. at 2–3.

[32] Petitioner's Postconf. Br. at 3–4.

expensive than LCCIGM and forged grinding media due to the higher chromium content of HCCIGM.[33]

In contrast, respondents AIA and Vega argue that the Commission should assess whether the domestic like product should be defined to include out-of-scope forged grinding media. They request that the Commission collect additional information concerning forged grinding media in its questionnaires should these investigations proceed to the final phase.[34]

AIA and Vega argue that HCCIGM and forged grinding media share many of the same physical characteristics and end uses and are made from the same "core raw material: steel."[35] They assert that producers and customers view HCCIGM and forged grinding media as interchangeable and that the higher prices for HCCIGM correlate with its reliability and less frequent replacement compared to forged grinding media.[36] AIA and Vega note that both HCCIGM and forged grinding media are sold directly to end users, although they acknowledge that the two products do not share manufacturing facilities or production processes.[37] Molycop claims that HCCIGM and forged grinding media have the same physical characteristics and end uses and that the two products compete on a "total effective cost basis which considers both the price and anticipated consumption rate."[38]

Holcim argues that the Commission should define HCCIGM used in the cement industry as a separate like product from HCCIGM used in mining and other industries.[39] It claims that the HCCIGM used by the cement industry have different physical characteristics than the HCCIGM used by the mining industry, such as a higher minimum chromium content and wider range of sizes.[40] Holcim also observes that HCCIGM used in the cement industry are made of fewer alloys compared to HCCIGM used in the mining industry.[41]

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[33] Petitioner's Postconf. Br. at 4.

[34] AIA/Vega's Postconf. Br. at 3. Molycop indicates that it is "not challenging the like product definition at this time (and reserves the right to do so in any final phase investigations)," but "strongly supports" AIA and Vega's request for the Commission to address forged grinding media in its questionnaires should the investigations proceed to the final phase. Molycop's Postconf. Br. at 29.

[35] AIA/Vega's Postconf. Br. at 4.

[36] AIA/Vega's Postconf. Br. at 5.

[37] AIA/Vega's Postconf. Br. at 5–6.

[38] Molycop's Postconf. Br. at 28; *accord id.* at 4, 7.

[39] Holcim's Postconf. Br. at 1.

[40] Holcim's Postconf. Br. at 4–5. Specifically, Holcim maintains that HCCIGM used in the cement industry range in size from 3/8 in (10 mm) to 3.5 in (90 mm) and have a minimum chromium content ranging from 10 to 18 percent. It contends that HCCIGM used in the mining industry tend to be on the larger end of the size range and can be made with lower chromium content in the range of seven to nine percent. *Id.*

[41] Holcim's Postconf. Br. at 4.

Holcim argues that HCCIGM used in the cement industry is not interchangeable with that used in the mining industry as the latter does not have the required hardness, abrasion resistance, or size required for cement production.[42] It claims that producers and customers perceive HCCIGM used in the cement industry as different from that used in the mining industry, as the grinding equipment used and material to be ground differs between the two industries.[43] Holcim notes that Petitioner treats grinding media designated for the two industries differently on its own website.[44]

C. Analysis

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

1. Whether Out-of-Scope Other Low Chrome Cast Iron Grinding Media Should Be Included in the Definition of the Domestic Like Product

The Commission asked the U.S. producer and importers to compare HCCIGM and LCCIGM with respect to the domestic like product factors, and their responses constitute the bulk of the limited evidence on record regarding the differences between HCCIGM and LCCIGM.[45]

Physical Characteristics and Uses. Of the three firms[46] that responded to the questionnaires, Petitioner reports that HCCIGM and LCCIGM are *** comparable with respect to physical characteristics and uses. Vega and Molycop report that the two products are *** and *** comparable, respectively.[47]

Petitioner reports that HCCIGM and LCCIGM ***.[48] Petitioner notes that HCCIGM typically ***.[49] Petitioner reports that LCCIGM are ***.[50] It maintains that HCCIGM ***, while

[42] Holcim's Postconf. Br. at 6.

[43] Holcim's Postconf. Br. at 7.

[44] Holcim's Postconf. Br. at 8–9. In addition, Holcim relies on the decision of the Canadian International Trade Tribunal ("CITT") excluding subject imports of grinding media used in the cement industry from its determination that the Canadian HCCIGM industry was materially injured by imports of HCCIGM from India. Holcim's Postconf. Br. at 7 & Exh. 3.

[45] CR/PR at Tables I-3, D-1 & D-2.

[46] Petitioner submitted responses to the U.S. producer and importer questionnaires, while Vega and Molycop submitted responses to the U.S. importer questionnaire.

[47] CR/PR at Table I-3.

[48] CR/PR at Tables D-1 & D-2.

[49] CR/PR at Tables D-1 & D-2.

LCCIGM are ***.[51] Petitioner states that HCCIGM ***.[52] It observes that LCCIGM, by contrast, are ***.[53]

Vega reports that HCCIGM and LCCIGM ***.[54] It further states that use of HCCIGM or LCCIGM ***.[55] Molycop reports that ***.[56]

Manufacturing Facilities, Production Processes, and Employees. Petitioner reports that HCCIGM and LCCIGM are *** comparable, while Vega and Molycop report that the two products are *** and *** comparable, respectively.[57]

Petitioner reports that ***.[58] It states that the LCCIGM production process ***.[59] Petitioner reports that the LCCIGM production process ***.[60] According to Petitioner, the HCCIGM production process ***.[61] Petitioner also claims that ***.[62] It ***.[63]

Vega contends that the manufacturing facility, machinery, and manpower ***.[64] Vega acknowledges that ***.[65] Molycop claims that ***.[66] It also states that ***.[67]

Channels of Distribution. The three reporting firms agree that HCCIGM and LCCIGM have *** channels of distribution.[68] In their questionnaire responses, the three firms report that ***.[69]

Interchangeability. Petitioner reports that HCCIGM and LCCIGM are *** interchangeable, while Vega and Molycop report that the two products are *** and *** interchangeable, respectively.[70]

(…Continued)

[50] CR/PR at Tables D-1 & D-2.
[51] CR/PR at Tables D-1 & D-2.
[52] CR/PR at Tables D-1 & D-2.
[53] CR/PR at Tables D-1 & D-2.
[54] CR/PR at Table D-2.
[55] CR/PR at Table D-2.
[56] CR/PR at Table D-2.
[57] CR/PR at Table I-3.
[58] CR/PR at Tables D-1 & D-2.
[59] CR/PR at Tables D-1 & D-2.
[60] CR/PR at Tables D-1 & D-2.
[61] CR/PR at Tables D-1 & D-2.
[62] CR/PR at Tables D-1 & D-2.
[63] CR/PR at III-5.
[64] CR/PR at Table D-2.
[65] CR/PR at Table D-2.
[66] CR/PR at Table D-2.
[67] CR/PR at Table D-2.
[68] CR/PR at Table I-3.
[69] CR/PR at Tables D-1 & D-2.

Petitioner reports that HCCIGM and LCCIGM ***.[71] Vega reports that HCCIGM ***.[72] Molycop reports that "***."[73] In Molycop's view, HCCIGM and LCCIGM ***.[74]

Producer and Customer Perceptions. Petitioner reports that HCCIGM and LCCIGM are *** comparable, while Vega and Molycop report that the two products are *** comparable.[75]

Petitioner reports that producers and customers perceive HCCIGM ***.[76] It states that customers ***.[77] Petitioner maintains that experienced customers ***.[78] According to Petitioner, customers recognize ***.[79]

Vega reports that customers decide between HCCIGM and LCCIGM ***.[80] According to Vega, customers are ***.[81] Molycop reports that customers recognize that ***.[82]

Price. Petitioner reports that HCCIGM and LCCIGM are *** comparable, while Vega and Molycop report that the two products are *** and *** comparable, respectively.[83]

Petitioner reports that the prices of HCCIGM and LCCIGM are *** comparable, as ***.[84] Vega reports that HCCIGM prices ***, and Molycop reports that pricing ***.[85]

Conclusion. Although the record reflects similarity between HCCIGM and LCCIGM with respect to channels of distribution, the available evidence with respect to the remaining factors, namely, physical characteristics and uses, interchangeability, manufacturing facilities, production processes, and employees, and price, as well as producer and customer perceptions, reflects many differences, while we acknowledge the conflicting and competing reports between HCCIGM and LCCIGM with respect to these factors. On this limited record, it is unclear to what extent HCCIGM and LCCIGM are comparable with respect to the domestic like product factors other than channels of distribution and whether there is a clear dividing line

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(…Continued)

[70] CR/PR at Table I-3.
[71] CR/PR at Tables D-1 & D-2.
[72] CR/PR at Table D-2.
[73] CR/PR at Table D-2.
[74] CR/PR at Table D-2.
[75] CR/PR at Table I-3.
[76] CR/PR at Tables D-1 & D-2.
[77] CR/PR at Tables D-1 & D-2.
[78] CR/PR at Tables D-1 & D-2.
[79] CR/PR at Tables D-1 & D-2.
[80] CR/PR at Table D-2.
[81] CR/PR at Table D-2.
[82] CR/PR at Table D-2.
[83] CR/PR at Table I-3.
[84] CR/PR at Tables D-1 & D-2.
[85] CR/PR at Table D-2.

separating HCCIGM within the scope definition from LCCIGM outside the scope definition. On balance, however, given the available evidence for purposes of the preliminary phase of these investigations, we are not persuaded to define the domestic like product to include LCCIGM. In any final phase of these investigations, we intend to investigate further whether the definition of the domestic like product should include out-of-scope LCCIGM.

2. Whether Out-of-Scope Forged Grinding Media Should Be Included in the Definition of the Domestic Like Product

The Commission asked the U.S. producer and importers to compare HCCIGM and forged grinding media with respect to the domestic like product factors, and their responses constitute the bulk of the limited evidence on record regarding the differences between HCCIGM and forged grinding media.[86]

Physical Characteristics and Uses. Petitioner reports that HCCIGM and forged grinding media are *** comparable, while Vega and Molycop report that the two products are *** and *** comparable, respectively.[87]

Petitioner reports that HCCIGM and forged grinding media ***.[88] Petitioner notes that HCCIGM ***.[89] By contrast, Petitioner claims that forged grinding media ***.[90] Petitioner maintains that HCCIGM ***.[91] Petitioner reports that HCCIGM ***.[92] It states that forged grinding media ***.[93]

Vega reports that HCCIGM and forged grinding media ***.[94] It states that use of HCCIGM or forged grinding media ***.[95] Vega also contends that forged grinding media ***.[96] Molycop reports that ***.[97]

Manufacturing Facilities, Production Processes, and Employees. The three firms agree that the two products are *** comparable.[98]

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[86] CR/PR at Tables I-4, D-3 & D-4.
[87] CR/PR at Table I-4.
[88] CR/PR at Tables D-3 & D-4.
[89] CR/PR at Tables D-3 & D-4.
[90] CR/PR at Tables D-3 & D-4.
[91] CR/PR at Tables D-3 & D-4.
[92] CR/PR at Tables D-3 & D-4.
[93] CR/PR at Tables D-3 & D-4.
[94] CR/PR at Table D-4.
[95] CR/PR at Table D-4.
[96] CR/PR at Table D-4.
[97] CR/PR at Table D-4.
[98] CR/PR at Table I-4.

Petitioner reports that the production processes for HCCIGM and forged grinding are "***."[99] It states that ***.[100] Petitioner further states that the forged grinding media production process ***.[101] It reports that the forged grinding media production process ***.[102] According to Petitioner, the HCCIGM production process ***.[103] Petitioner further states that the forged media production process ***.[104]

Vega reports that HCCIGM ***.[105] Molycop reports that ***.[106]

Channels of Distribution. The three reporting firms agree that HCCIGM and forged grinding media have *** channels of distribution.[107] In their questionnaire responses, the three firms report that both products ***.[108]

Interchangeability. Petitioner reports that HCCIGM and forged grinding media are *** interchangeable, while Vega and Molycop indicate that the two products are *** interchangeable.[109]

Petitioner reports that HCCIGM and forged grinding media are ***.[110] Vega reports that ***.[111] Molycop reports that ***.[112] Molycop opines that ***.[113]

Producer and Customer Perceptions. Petitioner states that HCCIGM and forged grinding media are *** comparable, while Vega and Molycop state that the two products are *** and *** comparable, respectively.[114]

Petitioner reports that producers and customers perceive HCCIGM ***.[115] It states that customers ***.[116] Petitioner maintains that experienced customers ***.[117]

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[99] CR/PR at Tables D-3 & D-4.
[100] CR/PR at Tables D-3 & D-4.
[101] CR/PR at Tables D-3 & D-4.
[102] CR/PR at Tables D-3 & D-4.
[103] CR/PR at Tables D-3 & D-4.
[104] CR/PR at Tables D-3 & D-4.
[105] CR/PR at Table D-4.
[106] CR/PR at Table D-4.
[107] CR/PR at Table I-4.
[108] CR/PR at Tables D-3 & D-4.
[109] CR/PR at Table I-4.
[110] CR/PR at Tables D-3 & D-4.
[111] CR/PR at Table D-4.
[112] CR/PR at Table D-4.
[113] CR/PR at Table D-4.
[114] CR/PR at Table I-4.
[115] CR/PR at Tables D-3 & D-4.
[116] CR/PR at Tables D-3 & D-4.
[117] CR/PR at Tables D-3 & D-4.

Vega reports that customers decide between HCCIGM and forged grinding media ***.[118] It states that customers ***.[119] According to Vega, customers are ***.[120] Molycop reports that ***.[121]

Price. Petitioner states that HCCIGM and forged grinding media are *** comparable, while Vega and Molycop state that the two products are *** and *** comparable, respectively.[122]

Petitioner reports that the prices of HCCIGM and forged grinding media are *** comparable, as ***.[123] Vega reports that HCCIGM prices ***.[124] Molycop reports that pricing of the products ***.[125]

Conclusion. Although the record reflects similarity between HCCIGM and forged grinding media with respect to channels of distribution, the available evidence with respect to the remaining factors, namely, physical characteristics and uses, interchangeability, manufacturing facilities, production processes, and employees, and price, as well as producer and customer perceptions, reflects many differences, while we acknowledge the conflicting and competing reports between HCCIGM and forged grinding media with respect to these factors. Based on this limited preliminary phase investigation record, it is unclear whether HCCIGM and forged grinding media are comparable with respect to the domestic like product factors other than channels of distribution, and to what extent there is a clear dividing line separating HCCIGM within Commerce's scope definition from forged grinding media outside the scope definition. On balance, however, the record in the preliminary phase of these investigations does not support defining the domestic like product to include forged grinding media. In any final phase of these investigations, we intend to investigate further whether the definition of the domestic like product should include out-of-scope forged grinding media.

[118] CR/PR at Table D-4.
[119] CR/PR at Table D-4.
[120] CR/PR at Table D-4.
[121] CR/PR at Table D-4.
[122] CR/PR at Table I-4.
[123] CR/PR at Tables D-3 & D-4.
[124] CR/PR at Table D-4.
[125] CR/PR at Table D-4.

3. Whether HCCIGM Used in the Cement Industry Should Be Defined as a Separate Domestic Like Product

Physical Characteristics and Uses. The record indicates that HCCIGM used in the cement industry and HCCIGM used in the mining industry are produced largely from the same basic raw materials: ferrochromium and steel scrap.[126] All HCCIGM have the same use in grinding ore and other materials in ball mills, a process known as comminution.[127] Although all HCCIGM share the same end use, producers tailor the size and exact chemical composition of the products to their customers' specific requirements and end-use environments, based on considerations such as required grinding action, mill size, ore characteristics, and the manner of material discharge from the mill.[128] Holcim claims that HCCIGM designated for use by the cement industry are made of fewer alloys, produced in a wider range of sizes, and contain a higher chromium content than HCCIGM used in the mining industry.[129]

Manufacturing Facilities, Production Processes, and Employees. All HCCIGM are produced using the same production lines, equipment, and employees, regardless of end-use industry.[130] Holcim claims that HCCIGM used in the cement industry are distinct from HCCIGM used in the mining industry because the former must be produced by batch according to the customer's specifications.[131] Additionally, Holcim argues that the cement industry purchases smaller quantities of HCCIGM than the mining industry.[132]

Channels of Distribution. All HCCIGM are generally sold directly to end users, regardless of industry.[133]

Interchangeability. The record indicates that all HCCIGM are generally interchangeable if they meet a given customer's requirements.[134] As discussed above, HCCIGM producers tailor

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[126] CR/PR at I-8 to I-9. Like the parties' arguments concerning this issue, our analysis here focuses on HCCIGM used in the mining and cement industries because these are the primary users of HCCIGM in the United States. *See id.* at I-3.

[127] CR/PR at I-6; Petitioner's Postconf. Br. at 1–2.

[128] CR/PR at I-7 to I-8.

[129] Holcim's Postconf. Br. at 4–5.

[130] Petitioner's Postconf. Br. at 2; Conf. Tr. at 106:19–107:1 (Shah).

[131] Holcim's Postconf. Br. at 10.

[132] Holcim's Postconf. Br. at 10.

[133] CR/PR at II-3; Petitioner's Postconf. Br. at 3; AIA/Vega's Postconf. Br. at 5; Holcim's Postconf. Br. at 10; Molycop's Postconf. Br. at 29.

[134] CR/PR at I-8 to I-9; Petitioner's Postconf. Br. at 3.

their products to the individual customer's unique specifications and environment.[135] Although Holcim argues that HCCIGM used in the cement industry is not interchangeable with HCCIGM used in the mining industry due to differences in chemical composition, all HCCIGM are customized to meet the requirements of specific customers, irrespective of industry.

Producer and Customer Perceptions. Petitioner asserts that customers and producers view all HCCIGM as a single product category.[136] Holcim argues that customers perceive HCCIGM made for the cement industry as different from that made for the mining industry, although the record indicates that all HCCIGM is customized for the requirements of specific customers.[137]

Price. Holcim argues that HCCIGM used in the cement industry is priced higher due to its higher chromium content.[138] Petitioner counters that HCCIGM used in the cement industry does not always have a higher chromium content than HCCIGM used in the mining industry and attributes any price differences between HCCIGM sold to the two industries to differences in order volume.[139]

Conclusion. All domestically produced HCCIGM within the scope are produced using the same basic raw materials, have the same end uses, and are produced through the same production processes in the same manufacturing facilities using the same employees. All domestically produced HCCIGM within the scope are sold through the same channels of distribution, are comparable in price, and are perceived to be a single product category by market participants. Although variations in the size and chemical composition of HCCIGM may limit the interchangeability between HCCIGM destined for different end use industries, the same could be said of HCCIGM destined for different customers in the same industry, as all HCCIGM are customized to meet the requirements of specific customers. These differences are consistent with products that exist on a continuum and do not provide clear dividing lines between HCCIGM products for use in the cement and mining industries.[140] Based on the

[135] CR/PR at I-7 to I-8; *see Petitions for the Imposition of Antidumping and Countervailing Duties Pursuant to Sections 701 and 731 of the Tariff Act of 1930, as Amended: Volume 1 – General Issues and Injury*, EDIS Doc. 819750 (Apr. 26, 2024) at 5; *accord* AIA/Vega's Postconf. Br. at 11–12; Conf. Tr. at 107:2 (Shah) (stating that "{t}he product is custom-made").

[136] Petitioner's Postconf. Br. at 3.

[137] Holcim's Postconf. Br. at 7–8.

[138] Holcim's Postconf. Br. at 10.

[139] Petitioner's Postconf. Br., Answers to Staff Questions at 11.

[140] The Canadian Tribunal decision cited by Holcim specifically rejected the same argument that Holcim makes here that use by the cement industry should be the basis of finding a separate domestic like products. Holcim's Postconf. Br., Exh. 7 at 13.

preponderance of similarities, we do not define HCCIGM for use in the cement and mining industries as separate domestic like products.

Accordingly, we define a single domestic like product consisting of HCCIGM, coextensive with the scope, for purposes of these preliminary determinations.[141]

IV. 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."[142] 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.

Petitioner argues that the Commission should define the domestic industry as including all U.S. producers of the domestic like product—namely, Petitioner, the only known domestic producer of HCCIGM.[143] No respondent disputes this position.[144] There are no related parties issues, as Petitioner did not import subject merchandise during the POI and is not related to an importer or exporter of subject merchandise.[145] Therefore, consistent with our definition of a single domestic like product, we define the domestic industry as the sole domestic producer of HCCIGM, *i.e.*, Petitioner.

[141] We note that in any final phase of the investigations, parties wishing to raise domestic like product or industry issues should do so in their comments on the draft questionnaires and indicate the new information that would need to be collected for consideration of the proposed definitions. 19 C.F.R. § 207.20(b). Parties should clearly identify such products and explain the basis for the proposed separate domestic like product.

[142] 19 U.S.C. § 1677(4)(A).

[143] Petitioner's Postconf. Br. at 1.

[144] *See generally* Holcim's Postconf. Br.; Molycop's Postconf. Br. AIA and Vega take no position on the definition of the domestic industry for purposes of the preliminary determination, but they reserve the right to address the issue in any future proceedings. AIA/Vega's Postconf. Br. at 6.

[145] CR/PR at III-1; Petitioner's Postconf. Br. at 5.

V. Reasonable Indication of Material Injury by Reason of Subject Imports[146]

A. Legal Standard

In the preliminary phase of antidumping and countervailing duty investigations, the Commission determines whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury by reason of the imports under investigation.[147] 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.[148] The statute defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."[149] In assessing whether there is a reasonable indication that 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.[150] 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."[151]

Although the statute requires the Commission to determine whether there is a reasonable indication that the domestic industry is "materially injured or threatened with material injury by reason of" unfairly traded imports,[152] it does not define the phrase "by reason of," indicating that this aspect of the injury analysis is left to the Commission's

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[146] Pursuant to Section 771(24) of the Tariff Act, imports from a subject country of merchandise corresponding to a domestic like product shall be deemed negligible if they account for less than three 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. *See* 19 U.S.C. §§ 1671b(a)(1), 1673b(a)(1), 1677(24)(A)(i). The exceptions to the general three percent rule are not applicable to these investigations.

During the 12-month period preceding the filing of the petition (April 2023–March 2024), subject imports from India accounted for *** percent of total imports of HCCIGM. CR/PR at Table IV-3. Because subject imports from India are above the statutory threshold, we find that imports of HCCIGM from India subject to the antidumping and countervailing duty investigations are not negligible.

[147] 19 U.S.C. §§ 1671b(a), 1673b(a).

[148] 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).

[149] 19 U.S.C. § 1677(7)(A).

[150] 19 U.S.C. § 1677(7)(C)(iii).

[151] 19 U.S.C. § 1677(7)(C)(iii).

[152] 19 U.S.C. §§ 1671b(a), 1673b(a).

reasonable exercise of its discretion.[153] 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.[154]

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.[155] In performing its examination, however, the Commission need not isolate

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[153] *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).

[154] 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).

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

the injury caused by other factors from injury caused by unfairly traded imports.[156] Nor does the "by reason of" standard require that unfairly traded imports be the "principal" cause of injury or contemplate that injury from unfairly traded imports be weighed against other factors, such as nonsubject imports, which may be contributing to overall injury to an industry.[157] It is clear that the existence of injury caused by other factors does not compel a negative determination.[158]

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."[159] The Commission ensures that it has "evidence in the record" to "show that the harm occurred 'by reason of' the LTFV imports," and that it is "not attributing injury from other sources to the subject imports." [160] The Federal Circuit has examined and affirmed various Commission methodologies and has disavowed "rigid adherence to a specific formula."[161]

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[156] 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 & 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.").

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

[158] *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.").

[159] *Mittal Steel*, 542 F.3d at 876 &78; *see also id.* at 873 ("While the Commission may not enter an affirmative determination unless it finds that a domestic industry is materially injured 'by reason of' subject imports, the Commission is not required to follow a single methodology for making that determination ... {and has} broad discretion with respect to its choice of methodology."), *citing United States Steel Group v. United States*, 96 F.3d 1352, 1362 (Fed. Cir. 1996) and S. Rep. 96-249 at 75. In its decision in *Swiff-Train v. United States*, 793 F.3d 1355 (Fed. Cir. 2015), the Federal Circuit affirmed the Commission's causation analysis as comporting with the Court's guidance in *Mittal*.

[160] *Mittal Steel*, 542 F.3d at 873 (quoting from *Gerald Metals*, 132 F.3d at 722), 877–79. One relevant "other factor" may involve the presence of significant volumes of price-competitive nonsubject

(Continued…)

The question of whether the material injury threshold for subject imports is satisfied notwithstanding any injury from other factors is factual, subject to review under the substantial evidence standard.[162] Congress has delegated this factual finding to the Commission because of the agency's institutional expertise in resolving injury issues.[163]

B. Conditions of Competition and the Business Cycle

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

1. Demand Conditions

U.S. demand for HCCIGM is largely driven by the domestic mining and cement industries.[164] In response to questionnaires, the U.S. producer and importers report that overall U.S. demand for HCCIGM has increased since January 1, 2021.[165] In the mining industry, the parties report that demand for HCCIGM grew during the POI, and they expect it to continue to grow.[166] AIA and Vega argue that increased demand for HCCIGM in the mining industry was

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(…Continued)
imports in the U.S. market, particularly when a commodity product is at issue. In appropriate cases, the Commission collects information regarding nonsubject imports and producers in nonsubject countries in order to conduct its analysis.

[161] *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.").

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

[163] *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.").

[164] CR/PR at I-6, II-3, II-7. During the POI, allocations of U.S. shipments of domestically produced HCCIGM to the mining industry ranged from *** to *** percent, while *** to *** percent went to the cement industry and *** to *** percent went to all other end users. *Id.* at Table II-1. During the same period, allocations of U.S. shipments of subject imports to the mining industry ranged from *** to *** percent, while *** to *** percent went to the cement industry and *** percent or less went to all other end users. *Id.*

[165] CR/PR at Table II-5. The Commission received questionnaire responses from one U.S. producer, Petitioner, and three U.S. importers, Petitioner, Vega, and Molycop. *Id.* at II-2, IV-1. In those responses, *** report that the overall domestic demand for HCCIGM *** during the POI, while *** reported that the overall demand *** during the period. *Id.* at II-8 & Table II-4.

[166] Petitioner's Postconf. Br. at 6; AIA/Vega's Postconf. Br. at 13; Conf. Tr. at 20:5–8 (Jacaruso).

partially caused by new customers that were previously using forged grinding media.[167] In the cement industry, Vega reports in its questionnaire response that ***.[168] AIA and Vega state that demand for HCCIGM spiked in 2022 due to cement producers deferring maintenance and consequently purchasing less HCCIGM during the COVID-19 pandemic.[169]

The parties observe that demand for HCCIGM is subject to business cycles. Petitioner reports that the HCCIGM purchases in the cement industry are somewhat seasonal, unlike in the mining industry, with about half of all sales of HCCIGM to cement customers taking place in the first quarter of the year.[170] In its questionnaire response, Vega reports that demand for HCCIGM ***.[171] In its questionnaire response, Molycop reports that demand for HCCIGM ***.[172]

Apparent U.S. consumption of HCCIGM fluctuated during the POI, increasing from *** short tons in 2021 to *** short tons in 2022, then declining to *** short tons in 2023, for an overall increase of *** percent.[173]

2. Supply Conditions

The domestic industry was the *** supply source for the U.S. market during the POI.[174] The industry's share of apparent U.S. consumption declined from *** percent in 2021 to *** percent in 2022 and *** percent in 2023, for an overall decline of *** percentage points.[175] As the only U.S. producer of HCCIGM, Petitioner accounted for 100 percent of domestic HCCIGM production in 2023.[176]

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[167] AIA/Vega's Postconf. Br. at 13.

[168] CR/PR at II-8.

[169] AIA/Vega's Postconf. Br. at 13, Answers to Staff Questions at 10. In its responses to the U.S. producer and importer questionnaires, Petitioner ***. CR/PR at II-8. On the other hand, a Vega executive noted at the preliminary conference that one of its mining customers increased its usual HCCIGM order by 1,000 short tons for buffer stock at the beginning of the COVID-19 pandemic due to uncertainty and returned to its usual purchase amount in subsequent years. Conf. Tr. at 109:24–110:6 (Hurlock).

[170] CR/PR at II-8.

[171] CR/PR at II-8.

[172] CR/PR at II-8.

[173] CR/PR at Tables IV-4 & C-1.

[174] CR/PR at Tables IV-4 & C-1.

[175] CR/PR at Tables IV-4 & C-1.

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

During the POI, Petitioner experienced various production disruptions due to production curtailments, weather-related events, the COVID-19 pandemic, and other developments.[177] Petitioner's practical production capacity remained flat during the POI at *** short tons.[178] Petitioner's capacity utilization rate decreased from *** percent in 2021 to *** percent in 2022 and *** percent in 2023, for an overall decrease of *** percentage points.[179]

Subject imports were the *** supply source for the U.S. market during the POI.[180] Subject imports' share of apparent U.S. consumption increased from *** percent in 2021 to *** percent in 2022 and *** percent in 2023, for an overall increase of *** percentage points.[181]

Nonsubject imports were the *** supply source for the U.S. market during the POI.[182] Their share of apparent U.S. consumption decreased from *** percent in 2021 to *** percent in 2022 and *** percent in 2023, for an overall decline of *** percentage points.[183] Sources of nonsubject imports during the POI were ***.[184] Effective May 10, 2019, cast iron or steel grinding balls originating in China, including HCCIGM, are subject to an additional 25 percent ad valorem duty pursuant to section 301 of the Tariff Act of 1974, 19 U.S.C. § 2411.[185]

3. Substitutability and Other Conditions

Based on the limited record in the preliminary phase of these investigations, particularly Petitioner's and U.S. importers' reporting on the degree of interchangeability between the domestic like product and subject imports, we find that there is high degree of substitutability between domestically produced HCCIGM and subject imports.[186] Petitioner reported that the domestic like product and subject imports were *** interchangeable, while the other U.S.

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[177] CR/PR at Table III-4. As noted, the decline in the domestic producer's U.S. shipments is the result of the subject imports taking market share from the domestic producer. As a result of the market shift, Petitioner states that it ***. *Id.* Petitioner ***. *Id.* Additionally, Petitioner lost four days of production in 2022 after a transformer "shorted out" during an "extreme weather" event. Petitioner's Postconf. Br. at 10–11; Conf. Tr. at 52:20–25 (Hannemann), 165:4–6 (Drake). Petitioner also reports experiencing general supply chain and transportation issues related to the COVID-19 pandemic, although it acknowledges that those issues "impacted everyone after COVID, including importers." Conf. Tr. at 51:25–52:4 (Hannemann); *accord id.* at 53:12–14 (Drake), 80:20–23 (Hannemann).

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

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

[180] CR/PR at Tables IV-4 & C-1.

[181] CR/PR at Tables IV-4 & C-1.

[182] CR/PR at Tables IV-4 & C-1.

[183] CR/PR at Tables IV-4 & C-1.

[184] CR/PR at II-6 & IV-3 n.8. *** accounted for all nonsubject imports during the POI. *Id.*

[185] CR/PR at I-5.

[186] CR/PR at II-11 & Table II-6.

importers reported that the domestic like product and subject imports were *** interchangeable.[187] We note, however, that HCCIGM are generally produced to customer specifications, and customers often require producers to undergo a qualification process before making any purchases of HCCIGM.[188] In addition, information available indicates that factors that may limit interchangeability include customer preferences for supply diversity and potential differences in availability and lead times.[189]

The current record indicates that price is an important factor in purchasing decisions for HCCIGM, among other important factors.[190] Of the eight purchasers that responded to the Commission's lost sales/lost revenues survey, seven purchasers ranked price within the top three purchasing factors, while six purchasers ranked quality/performance and availability of supply within the top three purchasing factors.[191] The U.S. producer and importers differed on the significance of factors other than price, with Petitioner stating that differences other than price were *** significant for purchasers choosing between domestically produced HCCIGM and subject imports and the other U.S. importers stating that differences other than price were *** significant.[192]

During the POI, Petitioner primarily sold HCCIGM on a spot basis or through short-term contracts, which include quarterly, index-based price adjustments for raw materials.[193] Importer Vega sold subject merchandise mainly via ***.[194] Petitioner reported setting prices using ***, Vega reported using ***, and Molycop reported using ***.[195]

The record indicates that HCCIGM are primarily produced to order. During the POI, Petitioner reported that *** percent of its commercial shipments of HCCIGM were produced to order, with lead times averaging *** days, and the remaining *** percent of its commercial shipments came from inventories, with lead times averaging *** days.[196] During the same period, importer Vega reported that *** percent of its commercial shipments of HCCIGM were

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

[188] CR/PR at II-11, II-13 to II-14.

[189] CR/PR at II-11. In any final phase, we intend to further explore the extent to which these and other factors affect the substitutability between subject imports and the domestic like product.

[190] CR/PR at II-11.

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

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

[193] CR/PR at V-3 to V-4; Petitioner's Postconf. Br., Answers to Staff Questions at 15. ***. CR/PR at V-4.

[194] CR/PR at V-4. Vega reported primarily using ***. *Id.*

[195] CR/PR at V-4 & Table V-2.

[196] CR/PR at II-12.

produced to order, with lead times averaging *** days, and the remaining *** percent of its commercial shipments came from inventories, with lead times averaging *** days.[197]

Raw materials used in the production of HCCIGM include ferrochrome and steel scrap.[198] The price of ferrochrome increased irregularly over the POI, increasing by *** percent from January 2021 to its peak in June 2022 and then decreasing by *** percent through December 2023 for an overall decrease of ***.[199] The price of steel scrap fluctuated within a narrow range over the POI, increasing by *** percent from January 2021 to its peak in April 2022 and then decreasing by *** percent through December 2023 for an overall increase of *** percent.[200] In 2023, Petitioner reported that ferrochrome comprised *** percent of its total raw materials costs, stainless steel and other steel scrap comprised *** percent, and other raw materials comprised *** percent.[201]

C. Volume of Subject Imports

Section 771(7)(C)(i) of the Tariff Act provides that the "Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."[202]

The volume of subject imports increased from *** short tons in 2021 to *** short tons in 2022 and decreased to *** short tons in 2023, for an overall increase of *** percent during the POI.[203] [204] Subject imports as a share of apparent U.S. consumption increased from *** percent in 2021 to *** percent in 2022 and *** percent in 2023, for an overall increase of *** percentage points over the POI.[205] [206]

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[197] CR/PR at II-12.

[198] CR/PR at V-1.

[199] CR/PR at V-1, Table V-1 & Figure V-1.

[200] CR/PR at V-1, Table V-1 & Figure V-1.

[201] CR/PR at V-1.

[202] 19 U.S.C. § 1677(7)(C)(i).

[203] As noted, subject imports were the *** supply source for the U.S. market during the POI. CR/PR at Tables IV-2 & C-1.

[204] CR/PR at Table IV-2. The volume of subject imports increased *** percent from 2021 to 2022 and decreased *** percent from 2022 to 2023. *Id.* U.S. importers' U.S. shipments of subject imports increased from *** short tons in 2021 to *** short tons in 2022 and *** short tons in 2023, for an overall increase of *** percent over the POI. *Id.* at Tables IV-4 & C-1. The volume of U.S. shipments of subject imports increased *** percent from 2021 to 2022 and *** percent from 2022 to 2023. *Id.*

[205] CR/PR at Tables IV-4 & C-1. The ratio of subject imports to domestic production increased from *** percent in 2021 to *** percent in 2022 and *** percent in 2023. CR/PR at Table IV-2.

[206] The increase in the volume of subject imports from 2021 to 2022 outpaced the increase in apparent U.S. consumption, and the decrease in volume of subject imports from 2022 to 2023 lagged (Continued…)

Based on the record in the preliminary phase of these investigations, we conclude that the volume of subject imports and the increase in that volume are significant, both in absolute terms and relative to U.S. consumption and production.

D. Price Effects of the Subject Imports

Section 771(7)(C)(ii) of the Tariff Act provides that, in evaluating the price effects of 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.[207]

As addressed in section V.B.3. above, we find that there is a high degree of substitutability between subject imports and domestically produced HCCIGM and that price is an important factor in purchasing decisions, among other important factors.

The Commission collected quarterly pricing data from the U.S. producer and importers for four pricing products shipped to unrelated customers during the POI.[208] Petitioner and two

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(…Continued)
the decrease in apparent consumption. From 2021 to 2022, the volume of subject imports increased by *** short tons, while apparent U.S. consumption increased by *** short tons. CR/PR at Tables IV-2, IV-4 & C-1. From 2022 to 2023, the volume of subject imports decreased by *** short tons, while apparent U.S. consumption decreased by *** short tons. *Id.*

[207] 19 U.S.C. § 1677(7)(C)(ii).

[208] The four pricing products are as follows:

Product 1.-- Cast iron grinding media with a nominal diameter of 50mm/2 inches and chrome content between 16 and 23 percent

Product 2.-- Cast iron grinding media with a nominal diameter of 40mm/1.5 inches and chrome content between 16 and 23 percent

Product 3.-- Cast iron grinding media with a nominal diameter of 25mm/1 inch and chrome content between 9.5 and 13.5 percent

Product 4.-- Cast iron grinding media with a nominal diameter of 90mm/3.5 inches and chrome content between 15.5 and 19 percent

CR/PR at V-6. AIA and Vega argue that the pricing products are overly broad because they "contain very wide ranges of chromium content and do not control for other properties demanded by customers beyond chromium content and diameter." AIA/Vega's Postconf. Br. at 25. We note that in any final phase of the investigations, parties wishing to raise pricing product issues should do so in their comments on the draft questionnaires. 19 C.F.R. § 207.20(b).

U.S. importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[209] Pricing data reported by these firms accounted for *** percent of U.S. shipments of domestically produced HCCIGM and *** percent of U.S shipments of subject imports in 2023.[210]

The pricing data show predominant underselling by subject imports. Subject imports undersold domestically produced HCCIGM in 39 of 47 quarterly comparisons, or 83.0 percent, at margins ranging from *** to *** percent and averaging *** percent.[211] Subject imports oversold domestically produced HCCIGM in 8 of 47 quarterly comparisons, or 17.0 percent, at margins ranging from *** to *** percent and averaging *** percent.[212] There were *** short tons of subject import sales in quarters of underselling, equal to *** percent of the total volume of reported sales of subject imports covered by the Commission's pricing data during the POI.[213] There were *** short tons of subject import sales in quarters of overselling, equal to *** percent of the total volume of reported sales of subject imports.[214]

We have also considered purchasers' responses to the Commission's lost sales/lost revenue survey. Commission staff contacted eight purchasers identified by Petitioner and received responses to the lost sales/lost revenue survey from all eight, who reported purchasing 85,178 short tons of HCCIGM during the POI.[215] Seven of the responding purchasers reported that they had purchased subject imports instead of domestically produced HCCIGM, and they also reported that the price of subject imports was lower than the price of the domestically produced product.[216] Three of those purchasers also reported that price was a primary reason for their decision to purchase *** short tons of HCCIGM imported from India rather than the domestic like product.[217] These lost sales are equivalent to *** percent of

[209] CR/PR at V-6.

[210] CR/PR at V-6.

[211] CR/PR at Table V-9. On an annual basis, subject imports undersold domestically produced HCCIGM in 11 of 16 (or 68.8 percent of the) quarters in 2021, 15 of 16 (or 93.8 percent of the) quarters in 2022, and 13 of 15 (or 86.7 percent of the) quarters in 2023. CR/PR at Table V-10. There were *** shorts tons of subject import sales (*** percent of total volume) in quarters of underselling during 2021, *** short tons of subject import sales (*** percent of total volume) in quarters of underselling during 2022, and *** short tons of subject import sales (*** percent of total volume) in quarters of underselling during 2023. *Id.* Thus, the record indicates there was underselling in more than 85 percent of the quarterly comparisons and more than *** percent on a volume basis. *Id.*

[212] CR/PR at Table V-9.

[213] CR/PR at Table V-9.

[214] CR/PR at Table V-9.

[215] CR/PR at V-15 & Table V-11.

[216] CR/PR at Table V-12.

[217] CR/PR at Table V-12.

importers' U.S. shipments of subject imports and *** percent of responding purchasers' reported purchases of subject imports during the POI.[218]

Given that subject imports and the domestic like product are highly substitutable, the importance of price in purchasing decisions, the predominant underselling by subject imports in 39 of 47 quarterly comparisons totaling *** percent of reported sales volume, and the confirmed lost sales of *** short tons of HCCIGM, we find that there has been significant underselling by subject imports during the POI. As subject imports increased in volume and significantly undersold the domestic like product over the course of the POI, they gained market share at the expense of the domestic industry, increasing *** percentage points overall during the period.[219]

We have also considered price trends. During the POI, domestic prices fluctuated but increased overall for all four pricing products.[220] Although domestic prices generally increased from the first quarter of 2021 until the second quarter of 2022 for all four pricing products, domestic prices generally declined thereafter for all four pricing products.[221] Most of the decline in prices occurred during the second half of 2022 and through 2023 to the end of the POI.[222] Prices for the subject imports followed similar trends during the POI.[223] Although apparent U.S. consumption decreased by *** percent in 2023 compared to 2022, it remained higher in 2023 than in 2021, ending the POI *** percent higher than at the beginning of the

[218] CR/PR at Tables IV-4, V-11, V-12 & C-1. These lost sales also are equivalent to *** percent of total apparent U.S. consumption over the POI. *Id.*

[219] CR/PR at Tables IV-4 & C-1. Petitioner's share of apparent U.S. consumption declined steadily from *** percent of apparent U.S. consumption in 2021 to *** percent in 2022 and *** percent in 2023, a decline of *** percentage points over that period. *Id*. In contrast, subject imports' share of apparent U.S. consumption increased steadily from *** percent in 2021 to *** percent in 2022 and *** percent in 2023. *Id*. The market share of nonsubject imports declined steadily from *** percent in 2021 to *** percent in 2022 and *** percent in 2023, for an overall decline of *** percentage points. *Id.*

[220] CR/PR at V-13, Tables V-4 to V-8 & Figures V-2 to V-5. Over the POI, domestic prices increased by *** percent for Product 1, *** percent for Product 2, *** percent for Product 3, and *** percent for Product 4. CR/PR at Table V-8.

[221] CR/PR at Tables V-4 to V-8 & Figures V-2 to V-5. We also note that one purchaser reported that Petitioner reduced its quoted prices during the POI to compete with lower-priced subject imports. Specifically, purchaser *** stated that its ***. CR/PR at V-19.

[222] CR/PR at Tables V-4 to V-8 & Figures V-2 to V-5.

[223] CR/PR at Tables V-4 to V-8 & Figures V-2 to V-5. Although subject imports' prices generally increased during the first half of the POI for all four pricing products, subject imports' prices generally declined during the second half of the POI for all four pricing products. *Id.* Over the POI, subject imports' prices increased by *** percent for Product 1, *** percent for Product 2, *** percent for Product 3, and *** percent for Product 4. CR/PR at Table V-8.

POI.[224] Further, although unit COGS decreased by *** percent between 2022 and 2023, this decrease was outpaced by a *** percent decrease in Petitioner's net sales AUVs, indicating that price declines were greater than any decrease in underlying costs.[225] Indeed, Petitioner's net sales AUVs *** its unit COGS, resulting in an operating margin of *** percent in 2023.[226] In light of the domestic price declines during the second half of the POI for all four pricing products and the significant volume and underselling by subject imports, we find that subject imports had significant price-depressing effects on the domestic like product.[227]

We have also examined whether subject imports prevented price increases which otherwise would have occurred to a significant degree. Petitioner reported increasing its prices during first half of the POI but also being forced to subsequently rescind its price increase and lower its prices for a major customer.[228] The record shows that Petitioner's ratio of COGS to net sales increased irregularly by *** percentage points over the POI, declining from *** percent in 2021 to *** percent in 2022 and increasing to *** percent in 2023.[229] Petitioner's total net sales AUVs increased irregularly over the POI, increasing by $*** per short ton from 2021 to 2022, then decreasing by $*** per short ton in 2023, for an overall increase of $*** per short ton.[230] Petitioner's unit COGS also increased irregularly over the POI, increasing by $*** per short ton from 2021 to 2022, then decreasing by $*** per short ton in 2023, for an overall increase of $*** per short ton.[231] The increase in unit COGS came from raw materials, up $*** per short ton over the POI, as well as other factory costs ($*** per short ton) and direct labor ($*** per short ton).[232] [233]

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[224] *See* CR/PR at Tables IV-4 & C-1. Both Petitioner and U.S. importers reported increased demand for HCCIGM during the POI. *Id.* at II-8 & Table II-4.

[225] CR/PR at Tables VI-2 & C-1.

[226] CR/PR at Tables VI-1 & C-1.

[227] Although Chairman Johanson does not join this finding of price depression, he cannot conclude that subject imports did not have significant price-depressing effects on the domestic like product.

[228] *See* Petitioner's Postconf. Br. at 13–14; CR/PR at V-19.

[229] CR/PR at Tables VI-1 & C-1. We further observe that the COGS to net sales ratio was *** throughout the POI, *i.e.*, ranging from *** percent to *** percent. *Id.*

[230] CR/PR at Table VI-2. Petitioner's total net sales AUVs increased from $*** per short ton of HCCIGM in 2021 to $*** per short ton in 2022 and declined to $*** per short ton in 2023. CR/PR at Tables VI-1 & C-1.

[231] CR/PR at Table VI-2. Petitioner's unit COGS increased from $*** per short ton of HCCIGM in 2021 to $*** per short ton in 2022 and declined to $*** per short ton in 2023. CR/PR at Tables VI-1 & C-1.

[232] CR/PR at Table VI-2. Raw materials AUVs increased by $*** per short ton of HCCIGM between 2021 and 2022 and decreased by $*** per short ton between 2022 and 2023. *Id.* Other (Continued…)

We find that Petitioner's unit COGS rising to a greater degree than its total net sales AUVs resulted in a cost-price squeeze during the POI. As discussed, domestic prices initially increased during the POI, resulting in Petitioner's net sales AUVs increasing more than its unit COGS in 2022. However, in 2023 when Petitioner rescinded its price increases, Petitioner's net sales AUVs declined far more than its unit COGS and unit raw material costs.[234]

Chairman Johanson and Commissioner Schmidtlein conclude that subject imports suppressed prices for the domestic like product to a significant degree.[235] [236]

In sum, based on the record of the preliminary phase of these investigations, we find that subject imports significantly undersold the domestic like product, leading to a shift in market share from the domestic industry to subject imports over the POI and depressing prices for the domestic like product to a significant degree during the second half of the period. We therefore find that subject imports had significant adverse price effects.

(…Continued)
factory costs AUVs increased by $*** per short ton of HCCIGM between 2021 and 2022 and decreased by $*** per short ton between 2022 and 2023. *Id.* Direct labor AUVs increased by $*** per short ton of HCCIGM between 2021 and 2022 and decreased by $*** per short ton between 2022 and 2023. *Id.*

[233] We note that fluctuations in raw materials prices were indexed for an estimated *** percent of Petitioner's sales under its ***. CR/PR at V-3 to V-5 & Table V-3.

[234] *See* CR/PR at Table VI-2. Petitioner's prices followed the same trends as ferrochrome prices during the POI. *See id.* at V-1.

[235] Commissioner Kearns believes the finding of price depression in this case supersedes a finding of price suppression, under the specific circumstances of this case, where the relevant time period and the relevant products are all the same under the two frameworks. Given that domestic prices were falling commencing in the second quarter of 2022 through the end of the POI due to the subject imports, the relevant focus pursuant to Section 771(7)(C)(ii) should be on whether the subject imports "depress{} prices to a significant degree" rather than "prevent{} price increases." 19 U.S.C. § 1677(7)(C)(ii)(II). As noted, in light of the domestic price declines during the second half of the POI for all four pricing products and the significant volume and underselling by subject imports, Commissioner Kearns finds that subject imports had significant price-depressing effects on the domestic like product.

[236] Commissioner Karpel similarly finds for purposes of the preliminary phase of these investigations that the circumstances of this case reflect that subject imports have depressed domestic prices to a significant degree rather than prevented price increases which otherwise would have occurred. Commissioner Karpel observes that in 2022 Petitioner's COGS/net sales ratio improved, as increases in its net sales AUVs outpaced increases in its unit COGS as apparent U.S. consumption expanded and raw material costs and overall COGS increased. Although decreases in Petitioner's net sales AUVs in 2023 outpaced decreases in its unit COGS that year, which worsened its COGS/net sales ratio, Commissioner Karpel does not find the record in the preliminary phase of these investigations supports the conclusion that subject imports "prevent{ed} price increases, which otherwise would have occurred, to a significant degree," particularly in view of declining prices and COGs in 2023 and the absence of other indicators that prices otherwise would have increased in 2023. *See* 19 U.S.C. § 1677(7)(C)(ii)(II). Commissioner Karpel intends to investigate further the extent to which subject imports had any price suppressing effects in any final phase of these investigations.

E. Impact of the Subject Imports[237]

Section 771(7)(C)(iii) of the Tariff Act provides that the Commission, in examining the impact of the subject imports on the domestic industry, "shall evaluate all relevant economic factors which have a bearing on the state of the industry." These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, gross profits, net profits, operating profits, cash flow, return on investment, return on capital, ability to raise capital, ability to service debt, research and development ("R&D"), 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."[238]

Despite the overall increase in apparent U.S. consumption during the POI, Petitioner's output indicia generally declined by most measures over the POI as Petitioner lost market share to subject imports throughout the POI. While Petitioner's practical capacity remained flat over the POI, its production declined by *** percent over the same period.[239] As a result, Petitioner's capacity utilization decreased by *** percentage points over the POI, declining steadily from *** percent in 2021 to *** percent in 2022 and *** percent in 2023.[240]

Petitioner's U.S. shipments declined by *** percent over the POI.[241] Petitioner's market share declined overall by *** percentage points over the POI.[242] End-of-period inventories decreased irregularly by *** percent over the POI.[243]

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[237] Commerce initiated an antidumping duty investigation for subject imports from India based on estimated dumping margins ranging from 40.59 to 52.06 percent. *Certain High Chrome Cast Iron Grinding Media from India: Initiation of Less-Than-Fair-Value Investigation*, 89 Fed. Reg. 45630, 45633 (May 23, 2024).

[238] 19 U.S.C. § 1677(7)(C)(iii).

[239] CR/PR at Tables III-5 & C-1. Petitioner's practical capacity was *** short tons during every year of the POI. *Id*. Petitioner's production decreased from *** short tons in 2021 to *** short tons in 2022 and *** short tons in 2023. *Id.*

[240] CR/PR at Tables III-5 & C-1.

[241] CR/PR at Tables III-6 & C-1. Petitioner's U.S. shipments declined from *** short tons in 2021 to *** short tons in 2022 and *** short tons in 2023. *Id.*

[242] CR/PR at Tables IV-4 & C-1. Petitioner's market share declined from *** percent in 2021 to *** percent in 2022 and *** percent in 2023. *Id.*

[243] CR/PR at Tables III-7 & C-1. Petitioner's end-of-period inventories decreased from *** short tons in 2021 to *** short tons in 2022 and increased to *** short tons in 2023. *Id.* As a ratio to total shipments, Petitioner's end-of-period inventories increased irregularly by *** percentage points over the POI, decreasing from *** percent in 2021 to *** percent in 2022 and increasing to *** percent in 2023. *Id.*

Petitioner's employment indicia were mixed during the POI. Petitioner's number of production and related workers ("PRWs"), total hours worked, and productivity decreased irregularly over the POI by *** percent, *** percent, and *** percent, respectively.[244] Hours worked per PRW, wages paid, and unit labor costs increased irregularly over the POI by *** percent, *** percent, and *** percent, respectively.[245] Hourly wages increased steadily throughout the POI.[246]

Most of Petitioner's financial performance indicia declined over the course of the POI. Petitioner's net sales (by value) declined irregularly over the POI by *** percent.[247] Petitioner's gross profits declined irregularly over the POI, and it incurred gross losses in 2023.[248] Similarly, the Petitioner's operating and net income declined irregularly over the POI, and it reported operating losses in 2021 and 2023 and net losses in all three years of the period.[249] As a result, Petitioner's operating and net income margins declined irregularly over the POI by *** and *** percentage points, respectively, with *** operating income margins in 2021 and 2023 and *** net income margins in all three years of the POI.[250]

Petitioner's capital expenditures increased irregularly by *** percent over the POI.[251] Petitioner's net assets declined irregularly by *** percent over the POI.[252] Its operating return

[244] CR/PR at Tables III-8 & C-1. Petitioner's number of PRWs increased from *** in 2021 to *** in 2022 and decreased to *** in 2023. *Id*. The total hours worked increased from *** hours in 2021 to *** hours in 2022 and decreased to *** hours in 2023. *Id*. Productivity decreased from *** short tons per 1,000 hours in 2021 to *** short tons per 1,000 hours in 2022 and increased to *** short tons per 1,000 hours in 2023. *Id.*

[245] CR/PR at Tables III-8 & C-1. Petitioner's hours worked per PRW increased from *** hours in 2021 to *** hours in 2022 and decreased to *** hours in 2023. *Id.* Wages paid increased from $*** in 2021 to $*** in 2022 and decreased to $*** in 2023. *Id.* Unit labor costs increased from $*** per short ton in 2021 to $*** per short ton in 2022 and decreased to $*** per short ton in 2023. *Id.*

[246] CR/PR at Tables III-8 & C-1. Petitioner's hourly wages increased from $*** per hour in 2021 to $*** per hour in 2022 and $*** per hour in 2023. *Id.*

[247] CR/PR at Tables VI-1 & C-1. Petitioner's net sales (by value) increased from $*** in 2021 to $*** in 2022 and declined to $*** in 2023. *Id.*

[248] CR/PR at Tables VI-1 & C-1. Petitioner's gross profits increased from $*** in 2021 to $*** in 2022, and its gross losses were $*** in 2023. *Id.*

[249] CR/PR at Tables VI-1 & C-1. Petitioner's operating income was $*** in 2022, and its operating losses were $*** in 2021 and $*** in 2023. *Id*. Its net losses totaled $*** in 2021, $*** in 2022, and $*** in 2023. *Id.*

[250] CR/PR at Tables VI-1 & C-1. Petitioner's operating income margin increased from *** percent in 2021 to *** percent in 2022 and decreased to *** percent in 2023. *Id*. Its net income margin increased from *** percent in 2021 to *** percent in 2022 and decreased to *** percent in 2023. *Id.*

[251] CR/PR at Tables VI-4 & C-1. Petitioner's capital expenditures increased from $*** in 2021 to $*** in 2022 and decreased to $*** in 2023. *Id.* Petitioner ***. *Id.*

on assets ("ROA") decreased irregularly over the POI by *** percentage points.[253] Petitioner, the sole domestic producer of HCCIGM, also reported negative effects on investment and on growth and development due to subject imports.[254]

Based on the record in the preliminary phase of these investigations, we have found that the significant volume of subject imports undersold the domestic like product to a significant degree and took sales and market share from the domestic industry. Subject imports gained *** percentage points of market share overall, with *** percentage points at the direct expense of Petitioner during the POI.[255] As Petitioner lost market share over the POI, its production, capacity utilization, and U.S. shipments also decreased.[256] We have also found that subject imports depressed domestic producer prices to a significant degree during the second half of the POI. As a result, Petitioner's financial position declined overall by most measures, including declines in operating and net income margins as well as gross, operating, and net losses by the end of the POI.[257] In light of these considerations, we find that subject imports had a significant impact on the domestic industry.

AIA and Vega also argue that Petitioner's declining financial performance during the POI was due to Petitioner's "problems with supply, insufficient volumes of products (and services) customers demanded, at the times the{y} demanded them, offering exorbitant lead times, poor customer service, and missing out on large customer opportunities who were ready and willing to buy domestic irrespective of price."[258] These arguments are undermined, however, by subject imports' pervasive underselling, which is inconsistent with subject imports being drawn into the market because of an inadequate or unreliable domestic supply of HCCIGM. Further, Petitioner's relatively low and declining capacity utilization rate indicates that it had capacity to supply additional volumes of HCCIGM to the U.S. market.[259] AIA and Vega also argue that

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(…Continued)

[252] CR/PR at Tables VI-4 & C-1. Petitioner's total assets increased from $*** in 2021 to $*** in 2022 and decreased to $*** in 2023. *Id.*

[253] CR/PR at Table VI-4. Petitioner's ROA increased from *** percent in 2021 to *** percent in 2022 and declined to *** percent in 2023. *Id.*

[254] CR/PR at Tables VI-6 & VI-7.

[255] CR/PR at Tables IV-4 & C-1. As discussed above, the domestic producer lost *** percentage points of market share during the POI. *Id.*

[256] CR/PR at Tables III-5, III-6 & C-1.

[257] CR/PR at Tables VI-1 & C-1.

[258] AIA/Vega's Postconf. Br. at 26.

[259] In any final phase of these investigations, we intend to investigate further allegations of Petitioner's supply issues and extended lead times.

Petitioner's financial performance was caused by its "***."[260] Although Petitioner's exports declined from *** short tons ($***) in 2021 to *** short tons ($***) in 2023, its export shipments AUVs increased from $*** per short ton of HCCIGM in 2021 to $*** per short ton in 2023.[261] Further, Petitioner's decline in production was greater than its decline in export shipments, and Petitioner's U.S. shipments also declined during the POI.[262]

We also have considered whether there are other factors that may have had an impact on the domestic industry to ensure that we are not attributing injury from such other factors to subject imports. Apparent U.S. consumption increased overall during the POI, and thus demand trends cannot explain the declines in Petitioner's production and U.S. shipments over the same period.[263] Moreover, as noted above, subject imports gained *** percentage points of market share overall, with *** percentage points at the direct expense of Petitioner during the POI.[264] Nonsubject imports were the *** source of supply to the U.S. market throughout the POI.[265] As discussed in section V.B.2 above, the market share of nonsubject imports declined from *** percent in 2021 to *** percent in 2022 and *** percent in 2023.[266] We therefore find, for purposes of these preliminary determinations, that the substantially smaller and declining volume of nonsubject imports does not explain Petitioner's declines in market share or poor financial performance during the POI.

VI. Conclusion

For the reasons stated above, we determine that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of HCCIGM from India that are allegedly sold in the United States at LTFV and that are allegedly subsidized by the government of India.

[260] AIA/Vega's Postconf. Br. at 27.

[261] CR/PR at Tables III-6 & C-1.

[262] As previously discussed, Petitioner's production fell *** short tons between 2021 and 2022 and *** short tons between 2022 and 2023. CR/PR at Tables III-5 & C-1. In comparison, Petitioner's export shipments declined *** short tons between 2021 and 2022 and *** short tons between 2022 and 2023. *Id.* at Tables III-6 & C-1.

[263] CR/PR at Tables III-5, III-6 & C-1.

[264] CR/PR at Tables IV-4 & C-1.

[265] ***. CR/PR at IV-3 n.8.

[266] CR/PR at Tables IV-4 & C-1.

Part I: Introduction

Background

These investigations result from a petition filed with the U.S. Department of Commerce ("Commerce") and the U.S. International Trade Commission ("USITC" or "Commission") by Magotteaux Inc., Franklin, Tennessee, on April 26 2024, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized and less-than-fair-value ("LTFV") imports of high chrome cast iron grinding media ("HCCIGM")[1] from India. Table I-1 presents information relating to the background of these investigations.[2] [3]

Table I-1
HCCIGM: Information relating to the background and schedule of this proceeding

Effective date	Action
April 26, 2024	Petitions filed with Commerce and the Commission; institution of the Commission investigations (89 FR 35860, May 2, 2024)
May 16, 2024	Commerce's notice of initiation of less-than-fair-value ("LTFV") investigation (89 FR 45630, May 23, 2024)
May 16, 2024	Commerce's notice of initiation of countervailing duty investigation (89 FR 45640, May 23, 2024)
May 17, 2024	Commission's conference
June 7, 2024	Commission's vote
June 10, 2024	Commission's determinations
June 17, 2024	Commission's views

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

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

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

Statutory criteria

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

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

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

> *In evaluating the volume of imports of merchandise, the Commission shall consider whether the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States is significant.. . .In evaluating the effect of imports of such merchandise on prices, the Commission shall consider whether. . .(I) there has been significant price underselling by the imported merchandise as compared with the price of domestic like products of the United States, and (II) the effect of imports of such merchandise otherwise depresses prices to a significant degree or prevents price increases, which otherwise would have occurred, to a significant degree.. . . In examining the impact required to be considered under subparagraph (B)(i)(III), the Commission shall evaluate (within the context of the business cycle and conditions of competition that are distinctive to the affected industry) all relevant economic factors which have a bearing on the state of the industry in the United States, including, but not limited to. . . (I) actual and potential decline in output, sales, market share, gross profits, operating profits, net profits, ability to service debt, productivity, return on investments, return on assets, and utilization of capacity, (II) factors affecting domestic prices, (III) actual and potential negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, (IV) actual and potential negative 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.*

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

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

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

Organization of report

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

Market summary

HCCIGM is generally used to crush or grind mineral ore or other raw materials in ball mills utilized in mining operations, cement production, and the utilities industry. The leading U.S. producer of HCCIGM is Magotteaux Inc. ("Magotteaux"), while a leading producer of HCCIGM outside the United States is AIA Engineering Limited ("AIA") of India. The leading U.S. importer of HCCIGM from India is Vega Industries Limited ("Vega"), while the leading U.S. importer of product from nonsubject countries (primarily ***) is ***. U.S. purchasers of HCCIGM are firms that purchase HCCIGM from the U.S. producer and U.S. importers and use the product predominantly in mining operations and cement production. Leading purchasers include ***.

Apparent U.S. consumption of HCCIGM totaled approximately *** short tons ($***) in 2023. Currently, a single firm, Magotteaux, is known to produce HCCIGM in

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

the United States. The U.S. producer's U.S. shipments of HCCIGM totaled *** short tons ($***) in 2023 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from subject sources totaled *** short tons ($***) in 2023 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value. U.S. imports from nonsubject sources totaled *** short tons ($***) in 2023 and accounted for *** percent of apparent U.S. consumption by quantity and *** percent by value.

Summary data and data sources

A summary of data collected in these investigations is presented in appendix C, table C-1. Except as noted, U.S. industry data are based on questionnaire response of Magotteaux, which accounted for the entirety of U.S. production of HCCIGM during 2023. U.S. imports are based on the questionnaire responses of three importers that accounted for *** of official import statistics for subject sources, and *** percent of official import statistics for nonsubject sources, under HTS statistical reporting number 7325.91.0000 in 2023.

Previous and related investigations

HCCIGM has not been the subject of any prior countervailing or antidumping duty investigations in the United States.

Nature and extent of alleged subsidies and sales at LTFV

Alleged subsidies

On May 23, 2024, Commerce published a notice in the Federal Register of the initiation of its countervailing duty investigation on HCCIGM from India.[6]

Alleged sales at LTFV

On May 23, 2024, Commerce published a notice in the Federal Register of the initiation of its antidumping duty investigation on HCCIGM from India.[7] Commerce has initiated an

[6] For further information on the alleged subsidy programs see Commerce's notice of initiation and related CVD Initiation Checklist. 89 FR 45640, May 23, 2024.

[7] 89 FR 45630, May 23, 2024.

antidumping duty investigation based on estimated dumping margins ranging from 40.59 to 52.06 percent for HCCIGM from India.

The subject merchandise

Commerce's scope

In the current proceeding, Commerce has defined the scope as follows:[8]

> *The scope of this investigation covers chrome cast iron grinding media in spherical (ball) or ovoid shape, with an alloy composition of seven percent or more (≥7 percent of total mass) chromium (Cr) content and produced through the casting method, with a nominal diameter of up to 127 millimeters (mm) and tolerance of plus or minus 10 mm.*

Tariff treatment

Based upon the scope set forth by Commerce, information available to the Commission indicates that the merchandise subject to these investigations are provided for in statistical reporting number 7325.91.0000 of the Harmonized Tariff Schedule of the United States ("HTS"). The 2024 general rate of duty is 2.9 percent ad valorem for HTS subheading 7325.91.00.[9] Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Cast iron or steel grinding balls and similar articles for mills are not included among the steel articles or derivative steel articles subject to the 25 percent ad valorem duty under section 232 of the Trade Expansion Act of 1962, as amended.[10] Effective May 10, 2019, cast iron or steel grinding balls originating in China are subject to an additional 25 percent ad valorem duty under section 301 of the Trade Act of 1974, as amended.[11]

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[8] 89 FR 45630, May 23, 2024; 89 FR 45640, May 23, 2024.

[9] USITC, HTS (2024) HTSA Revision 1, USITC Publication 5491, January 2024, p. 73-41, 73-43.

[10] 83 FR 11625, March 15, 2018; 85 FR 5281, January 29, 2020.

[11] HTS subheading 7325.91.00 was included in the Office of the United States Trade Representative's ("USTR's") third enumeration ("Tranche 3" or "List 3") of products originating in China that became subject to an additional 10 percent ad valorem duty (Annexes A and C of 83 FR 47974, September 21, 2018), effective September 24, 2018. Escalation of this duty to 25 percent ad valorem was rescheduled from January 1, 2019 (Annex B of 83 FR 47974, September 21, 2018) to March 2, 2019 (83 FR 65198, December 19, 2018), but was subsequently postponed until further notice (84 FR 7966, March 5, 2019), and then was implemented, effective May 10, 2019 (84 FR 20459, May 9, 2019). A subsequent modification was provided for subject goods exported from China prior to May 10, 2019, not to be subject to the escalated 25 percent duty for such goods entered into the United States prior to June 1, (continued...)

The product

Description and applications[12]

HCCIGM, as defined by the scope of this proceeding, includes all cast iron grinding media (balls) in spherical or ovoid shape, with a nominal diameter of up to 127 mm and tolerance of plus or minus 10 mm, which have a chromium alloy content of at least seven percent (by mass), and that are produced via casting. Most HCCIGM do not have a chromium content exceed 35 percent.[13] There are no specific international technical standards for grinding media, including HCCIGM.

Industry Use

Mineral processing operations, utilities, and cement processing facilities employ grinding media within 'ball mills' to reduce materials (e.g., ores) into small particles or fragments, a process known as comminution). A ball mill is a type of grinder filled with grinding media, such as HCCIGM.[14] Ball mills can be used in these industries to grind or blend materials. The process operates on the principle of impact and attrition: as the ball mill's container (shell) spins, the HCCIGMs drop from near the top of the shell and contact/break the materials into smaller parts. By crushing or grinding the material, the HCCIGM can release the ore and concentrate minerals (figure I-1).

(…continued)

2019 (84 FR 21892, May 15, 2019), with the entry date subsequently being extended to prior to June 15, 2019 (84 FR 26930, June 10, 2019).

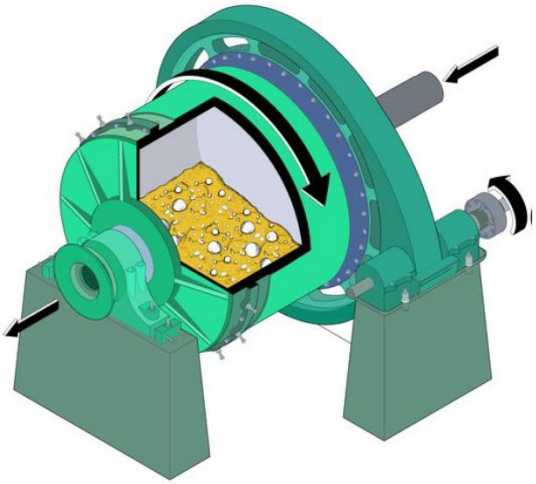
See also HTS heading 9903.88.03 and U.S. notes 20(e) and 20(f) to HTS Subchapter III of Chapter 99 and related tariff provisions for this duty treatment. USITC, HTSUS (2024) Revision 1, USITC Publication 5491, January 2024, pp. 99-III-27 – 99-III-28, 99-III-47, 99-III-225, 99-III-231 – 99-III-232, 99-III-241, 99-III-244 – 99-III-246, 99-III-301, 99-III-303, 99-III-305 – 99-III-307, 99-III-309.

[12] Unless otherwise noted, the information in this section is based on Petition, Volume I, pp. 4–8 Exhibits I-1 and I-2, April 26, 2024, and scope amendment, May 8, 2024.

[13] These thresholds are a widely accepted industry standard. Magotteaux contends that it has established its own standards for size and chromium content which are considered benchmarks for HCCIGM throughout the global industry.

[14] Other types of grinding media include forged grinding media and low chrome cast iron grinding media.

Figure I-1
HCCIGM: Ball mill



Source: Petition, Volume I, p. 8.

The grinding conditions and environments within ball mills are influenced by factors such as required grinding action, mill size, ore characteristics,[15] and the manner of material discharge from the mill.[16] Each mill environment imposes specific conditions on grinding media, necessitating the use of tailored physical and chemical properties for optimal performance. Wear of HCCIGM during the grinding process results in the need for its replacement. Wearing arises from three recognized mechanisms: abrasion, impact, and corrosion. To mitigate grinding media consumption, producers manufacture HCCIGM according to precise specifications, including size and chemical composition, that are tailored to customer requirements.[17]

Size

HCCIGM typically range in size (diameter) from 11.8 to 127 mm. A mill's input feed size (the particle size of material[18] supplied to the mill) and the achieved degree of fineness (the size and percentage of required class size material at the exit of a ball mill) tend to drive customer decisions as to the appropriate HCCIGM size. Although smaller grinding media result in a

[15] Particular grinding applications have specific composition requirements, including if some of the grinding media will remain in the finished product or how the media will react with the material being ground.

[16] There are two main types of ball mills: grate type and overflow type, which discharge material differently.

[17] Since comminution operations are widely considered an expensive and energy-intensive process in the mineral industry, reducing HCCIGM consumption is a key concern for lowering costs.

[18] The material, also known as ore, is typically rock and dirt, that is to be finely crushed to release the metal contained within, such as copper, gold, iron, or zinc prior to their further processing.

smaller particle size of the final product, the grinding media need to be significantly larger than the largest pieces of material to be ground.

Chemical composition

HCCIGM are manufactured from a metal alloy primarily comprising steel scrap and supplemented by alloys such as ***, among others.[19] Of these components, the chromium ("Cr") content is of particular significance regarding the HCCIGM's performance. In particular, Cr content is important as it determines the HCCIGM's hardness level and wear resistance against abrasion and corrosion in a ball mill.[20]

The grinding media should be denser than the material being ground to prevent floating on top of the material. In addition, grinding media must be durable enough to grind the material effectively without excessively wearing down the mill or the media itself. High chrome content also provides corrosion resistance to protect against corrosive environments.[21]

The chromium content of HCCIGM is determined by use of a spectrometer, which calculates the percentage of chromium relative to the total mass of the alloy. Testing of alloys occurs either before the casting stage in the production process or at any point thereafter.

Producers provide a range of alloy types by cultivating recipes that are tailored to vary the Cr content to accommodate the specific customer requirements and considering the end use environment (table I-2).

[19] Also referred to as ***.

[20] Higher hardness provides better wear resistance and size and shape maintenance, which prolongs the HCCIGM life.

[21] Melco Steel Works, "Unleashing the potential of high chrome casting: Properties and applications," https://melcocastings.com/unleashing-the-potential-of-high-chrome-casting-properties-and-applications/, accessed June 3, 2024.

HCCIGM: Grade Composition (Minimum – Maximum)[22]

Grade	Carbon (C) %	Chromium (Cr) %
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***
***	***	***

Source: Petitioner postconference brief, p. 2.

Manufacturing processes[23]

HCCIGM production involves approximately eight key steps: (a) preparation of the alloy (raw material mix); (b) preparation of the sand molds; (c) casting; (d) breaking of the sand mold; (e) heat treatment; (f) quenching; (g) testing and quality control; and (h) shipping. Reportedly, these steps and materials are essentially the same in the United States as in India.[24]

Preparation of the alloy

The first step involves creating the alloy mixture from various materials to add specific chemical and metallurgical properties to the HCCIGM. Steel scrap is the primary input, with a preference for scrap with a high Cr content—such as stainless steel. Other types of steel scrap can also be used, with adjustments made by adding ferrochromium (FeCr) to increase the Cr content.

The scrap metal is sorted according to type and grade, then loaded into electric induction melting furnaces where it is melted down to a liquid state. Once molten, the alloy's chemical composition is tested with a spectrometer, and corrective additions, primarily ferrochromium, are made until the alloy's properties fall within the desired tolerance range.

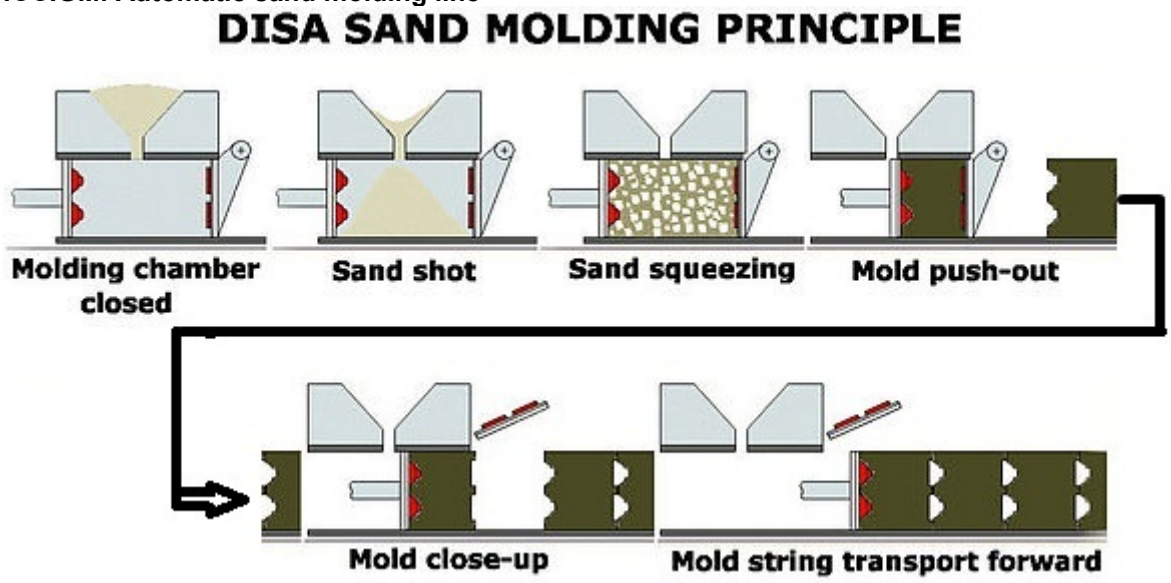
[22] Magotteaux's postconference brief, Answers to staff questions, p. 2.
[23] Unless otherwise noted, the information in this section is based on Petition, Volume I, pp 7–15.
[24] Petition Volume II, p. 3.

After confirmation, the molten metal undergoes degassing in a ladle,[25] followed by the skimming off of slag.[26] The metal is then transferred to a pouring vessel located above the casting line,[27] from which it is poured into sand molds.

Preparation of the sand molds[28]

Sand molds, made of green sand,[29] are used to shape the molten alloy into HCCIGM. Each mold is used once before the sand is recycled. The shaping of sand molds is an automated process along the molding line (figure I-2).

Figure I-2
HCCIGM: Automatic sand molding line



Source: Tecco Industrial, "Disamatic casting," https://www.vn-castings.com.vn/Disamatic-casting/, accessed May 7, 2024.

[25] A degassing ladle is used to remove unwanted dissolved gasses from molten steel. Vac AERO International, Inc., "Vacuum degassing of steel," , accessed May 7, 2024.

[26] Slag is a waste material produced when molten steel is separated from impurities.

[27] Magotteaux uses the DISAMATIC®, (https://www.disagroup.com/disamatic) casting and molding lines. Petition Volume I, p. 9.

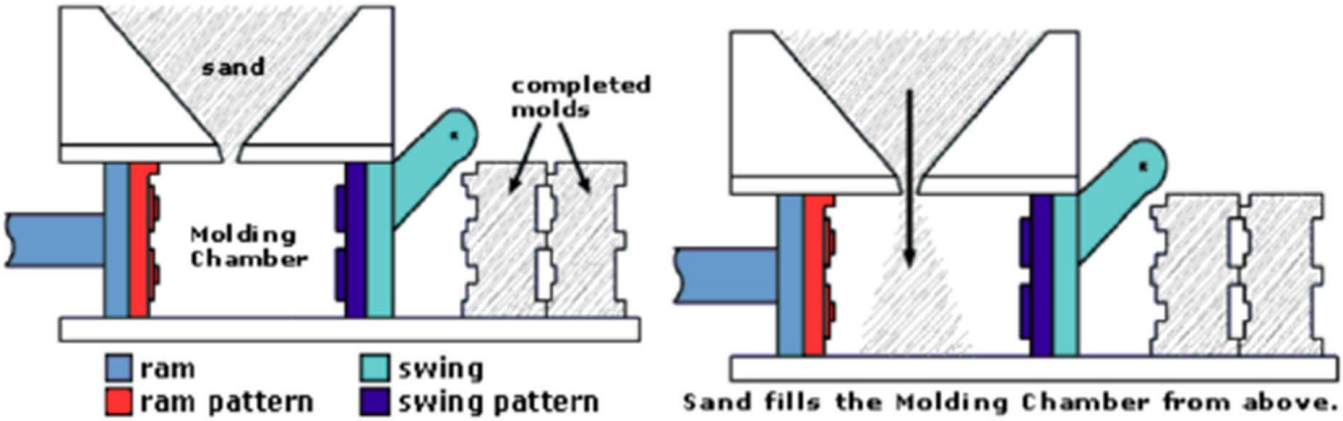
[28] For additional information, see Metal Technologies, "DISAMATIC® Molding Explained," https://www.metal-technologies.com/docs/default-source/education/disamaticmolding.pdf, accessed May 7, 2024.

[29] Green sand is used in metal casting processes. The sand is not green in color; it is called "green" because it's moist. Willman Industries, Inc, "What are green sand castings?," https://willmanind.com/what-are-green-sand-castings/, accessed May 7, 2024.

The molding line comprises a molding machine and an automatic mold transporting conveyor. In the process, a molding sand mixture, made up of a green sand mix (consisting of moist sand and bentonite clay), is blown into a rectangular steel chamber using compressed air (figure I-3). This sand mixture is then pressed against two patterns located at the ends of the chamber: the "ram" and the "swing." Both the ram and the swing are equipped with corresponding pattern plates.

The process is largely automated (figure I-2):[30] the sand shot introduces sand into the machine for molding; the sand squeeze shapes the ball pattern in the mold (see figures I-4 and I-5 for the shape created in the sand); stripping of the swing plant mechanically clears the sand mold; and mold push out moves the mold downward towards the pouring stage.

Figure I-3
HCCIGM: Molding chamber, ram and swing



Source: Petition, Volume I, p. 10.

The pattern plates can be changed, depending on the grinding media size that is being produced; there are different patterns for different sizes of media (figure I-4).

[30] Certain steps require oversight from an operator.

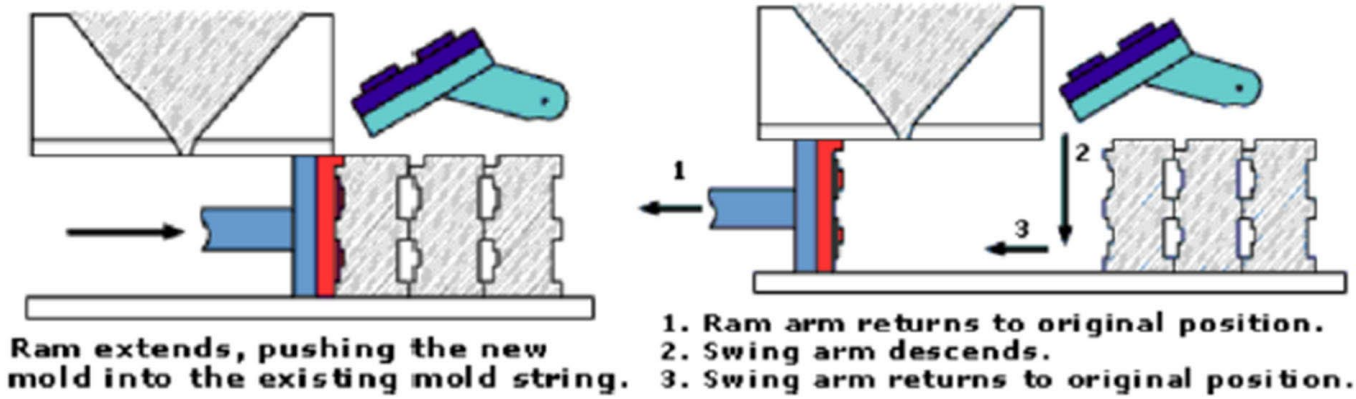
Figure I-4
HCCIGM: Casting pattern for HCCIGM

* * * * *

Source: Petition, Volume I, p. 11.

As the ram automatically advances, it pushes the ram pattern forward, compressing the sand in the molding chamber to form mold impressions. This compression results in positioning the opposite halves of consecutive molds placed in the mold string. Simultaneously, the swing arm moves backward and upward to allow the mold to exit the molding chamber (figure I-5).

Figure I-5
HCCIGM: Assembly of the sand mold



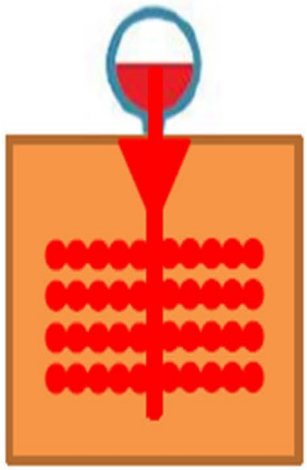
Source: Petition, Volume I, p. 11.

To finalize the mold, the automated molding line inserts a new mold into the mold string, with its leading edge meeting the trailing edge of the previous mold to form a complete mold cavity. After use, these molds are broken down, and the sand is reused for new molds. This process is repeated continuously and automatically on the molding line, ensuring a constant supply of molds.

Casting

The completed mold is positioned below the pouring vessel, which contains the molten alloy, and is prepared to receive the molten alloy through the pouring sprue[31] created by the pattern impressions. The molten alloy flows into the inner cavities, shaped to the correct ball sizes by the pattern plates (figure I-6).

Figure I-6
HCCIGM: Pouring alloy in sand mold



Source: Petition, Volume I, p. 12

Once the sand mold is filled with the molten alloy, it is left to cool, allowing the metal to solidify inside. As the alloy solidifies within the cavities of the mold, it forms a set of solid metal balls connected by metal sprues. The alloy also solidifies in the pouring sprue. Later in the process, the metal sprues will be detached from the balls and removed.

Breaking the sand mold

Once the alloy has cooled and solidified inside the sand mold, the sand mold is fed into a shaker drum. The shaker drum agitates the sand mold, causing the mold to break apart and the sand to separate from the HCCIGM and sprues.

After the sand has been removed, the HCCIGM and the sprues are fed to a breaker drum to separate the balls from each other and the sprues that connect to the media.[32]

[31] A sprue is the channel through which the molten metal is poured into the mold.
[32] The sprue pieces are returned to the furnace to be added back into the scrap and melted again.

Heat treatment

After cooling, the HCCIGM are transferred to the heat treatment process. They pass through a furnace on trays, where they are evenly heated.[33] The media are gradually heated to a temperature ranging from 1,500 to 2,000 degrees Fahrenheit. In addition to the Cr content, heat treatment enhances the hardness of the final product.

Quenching

Following heat treatment, the HCCIGM are quenched by immersing the batch in a bath filled with a polymer-based quenching fluid or through forced air quenching. This controlled cooling process transitions the metal from a high temperature to a cooler one, facilitating the formation of the desired microstructure and physical properties. The thermal shock induced by quenching creates internal stress within the balls, resulting in the desired hardness level.[34]

Testing and quality control

The producer then performs quality tests, including metallurgical microscopic observations, ball mill abrasion tests, impact testing, and hardness tests, to verify the hardness of the HCCIGM.

Shipping

The HCCIGM can be stored in bulk, loaded into one metric ton (MT) drums, or packaged in one or two MT capacity polybags, which may vary in size and weight but generally consist of one to two metric ton super-bags. Shipments are made either in bulk or on palletized containers (drums or bags), based on the customer's preference (figure I-7).

[33] Based on the producer’s production capacity one or more heat treating furnaces will be used.
[34] Hardness is measured on the Rockwell C scale using a durometer.

Figure I-7
HCCIGM: Packed HCCIGM stored for shipment

Source: Petition, Volume I, p. 15.

Domestic like product issues

The Commission's decision regarding the appropriate domestic product(s) that are "like" the subject imported product is based on a number of factors including: (1) physical characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) common manufacturing facilities, production processes, and production employees; (5) customer and producer perceptions; and (6) price. Information regarding these factors is discussed below.

Petitioner Magotteaux proposes that the Commission define a single domestic like product, coextensive with the scope of these investigations.[35] Respondent Holcim (US) Inc. ("Holcim") argues that the Commission should find that cement grinding media is a separate like product from other grinding media products and conduct a separate injury analysis for cement grinding media.[36] Respondents AIA and Vega Industries Limited ("Vega") (collectively, "AIA/Vega") request that the Commission assess whether forged grinding media should be

[35] Magotteaux's postconference brief, pp. 1-4.
[36] Holcim's postconference brief, pp. 3-10.

included as part of the domestic like product, and that if these investigations proceed to a final phase, the Commission collect domestic producer, foreign producer, and importer questionnaire data on forged grinding media in addition to subject merchandise to be able to fully assess this issue.[37] Respondent Grinding Media Inc. d/b/a Molycop USA, LLC ("Molycop") supports the request of AIA/Vega that the Commission gather data on both forged and cast grinding media should the investigations proceed to a final phase. Although Molycop is not challenging the domestic like product definition in this preliminary phase, it reserves the right to do so in any final phase investigations.[38]

The Commission collected information from U.S. producers and U.S. importers regarding the comparability of HCCIGM and out-of-scope other chrome cast grinding media, as well as HCCIGM and out-of-scope forged grinding media, based on the factors identified above. These data are presented in tables I-3 and I-4 below.[39]

Table I-3
HCCIGM: Count of firms' responses regarding the domestic like product factors comparing HCCIGM to out-of-scope other chrome cast iron grinding media

Count in number of firms reporting

Firm type	Factor	Fully	Mostly	Somewhat	Never
U.S. producer	Physical characteristics	***	***	***	***
U.S. producer	Interchangeability	***	***	***	***
U.S. producer	Channels	***	***	***	***
U.S. producer	Manufacturing	***	***	***	***
U.S. producer	Perceptions	***	***	***	***
U.S. producer	Price	***	***	***	***
U.S. importers	Physical characteristics	***	***	***	***
U.S. importers	Interchangeability	***	***	***	***
U.S. importers	Channels	***	***	***	***
U.S. importers	Manufacturing	***	***	***	***
U.S. importers	Perceptions	***	***	***	***
U.S. importers	Price	***	***	***	***

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

[37] AIA/Vega's postconference brief, pp. 2-6.

[38] Molycop's postconference brief, pp. 27-29.

[39] A list of the U.S. producer's and U.S. importers' narrative responses to questions comparing HCCIGM, other chrome cast grinding media, and forged grinding media along the domestic like product factors is contained in Appendix D.

Table I-4
HCCIGM: Count of firms' responses regarding the domestic like product factors comparing HCCIGM to out-of-scope forged grinding media

Count in number of firms reporting

Firm type	Factor	Fully	Mostly	Somewhat	Never
U.S. producer	Physical characteristics	***	***	***	***
U.S. producer	Interchangeability	***	***	***	***
U.S. producer	Channels	***	***	***	***
U.S. producer	Manufacturing	***	***	***	***
U.S. producer	Perceptions	***	***	***	***
U.S. producer	Price	***	***	***	***
U.S. importers	Physical characteristics	***	***	***	***
U.S. importers	Interchangeability	***	***	***	***
U.S. importers	Channels	***	***	***	***
U.S. importers	Manufacturing	***	***	***	***
U.S. importers	Perceptions	***	***	***	***
U.S. importers	Price	***	***	***	***

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

Part II: Conditions of competition in the U.S. market

U.S. market characteristics

HCCIGM are used in ball mills by the mining, cement, and utility industries, to crush or grind ores, cement clinker, minerals, and coal.[1] Mining is the largest market for HCCIGM, with a smaller share used in cement and a very small percentage sold to utilities.[2] Chromium content affects the grinding media's wear resistance and can be altered to meet a customer needs.[3] Other types of grinding media are also used in ball mills, specifically forged grinding media and lower-chromium content cast-iron grinding media. The use of a particular type of grinding media depends on the type of ore being processed, the conditions, and type of mill, with HCCIGM tending to have superior performance in corrosive and abrasive applications and forged media typically used in mills involving high impacts.[4] HCCIGM lasts longer but is more expensive than other types of grinding media.[5]

For mining uses, HCCIGM is usually custom-made whereas for cement, the HCCIGM used is more standardized.[6] For the mining industry, the HCCIGM ball size and the chrome and alloy content selected for a particular operation will vary depending on the mill diameter and other impact conditions.[7] The cement market uses almost exclusively HCCIGM for grinding media, with 18 percent chrome content used in the first chamber of a ball mill for the initial grinding and 12 percent chrome content in a second chamber to grind the material finer.[8]

[1] Petition Volume I, p. 7; AIA/Vega's postconference brief, p. 1. In mining applications, grinding media balls are constantly being added as ore as is added into the mill, and some large customers will use a couple of hundred tons of grinding media per month. Conference transcript, p. 61 (Hannemann).

[2] Conference transcript, p. 22, 40 (Tallent).

[3] Conference transcript, p. 13 (Hannemann).

[4] Conference transcript, p. 14 (Hannemann).

[5] Conference transcript, p. 15 (Hannemann).

[6] Conference transcript, pp. 121-122 (Hurlock).

[7] Conference transcript, p. 107 (Shah), pp. 121-122 (Hurlock), p. 140 (Gilani).

[8] About 10 percent of the cement market will use HCCIGM with more specialized recipes. Conference transcript, p. 22 (Tallent).

U.S. supply of HCCIGM is concentrated, with one U.S. producer, Magotteaux, and one major importer of HCCIGM from India, Vega (which imports from its related producer AIA).[9] In addition, importer questionnaires were received from Magotteaux, which imported HCCIGM ***, and Molycop, which imported ***.[10]

Purchases are somewhat concentrated among a relatively small number of U.S. purchasers. Magotteaux reported that in 2023, ***.[11] Importer Vega reported that in 2023, ***.[12] Importer Molycop reported *** in 2023.

When asked whether there were distinct conditions of competition, U.S. producer Magotteaux reported ***. Importer Vega reported ***. Importer Molycop reported ***.

The U.S. producer and importers reported *** when asked if there had been any significant changes in the product range, product mix, or marketing of grinding media since January 1, 2021. Vega reported ***. Molycop reported *** but stated, "***."

[9] Conference transcript, p. 8 (Jacobson) and pp. 89-90 (Shah).

[10] ***.

[11] ***.

[12] See part V, "Lost sales and lost revenue," for more information on purchasers. ***. AIA/Vega stated that about "*** of Vega's increased sales from 2021 to 2023 were to ***—we do not believe that Magotteaux is supplying or likely to supply that company from its Tennessee plant." AIA/Vega's postconference brief, appendix, p. 11.

Apparent U.S. consumption of HCCIGM increased irregularly overall during 2021 to 2023, increasing from 2021 to 2022 and decreasing in 2023. Overall, apparent U.S. consumption, by quantity, in 2023 was *** percent higher than in 2021.

Channels of distribution

HCCIGM is sold directly to end users.[13] Mining companies comprised the majority of both the U.S. producer's and importers' sales during 2021-23 (table II-1). The U.S. producer and subject importers also sold HCCIGM to cement producers and other end users, whereas nonsubject shipments were *** to mining companies.[14]

Table II-1
HCCIGM: Share of U.S. shipments by source, channel of distribution, and period

Shares in percent

Source	Channel	2021	2022	2023
United States	Distributors	***	***	***
United States	Mining companies	***	***	***
United States	Cement producers	***	***	***
United States	All other end users	***	***	***
India	Distributors	***	***	***
India	Mining companies	***	***	***
India	Cement producers	***	***	***
India	All other end users	***	***	***
Nonsubject	Distributors	***	***	***
Nonsubject	Mining companies	***	***	***
Nonsubject	Cement producers	***	***	***
Nonsubject	All other end users	***	***	***
All imports	Distributors	***	***	***
All imports	Mining companies	***	***	***
All imports	Cement producers	***	***	***
All imports	All other end users	***	***	***

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

[13] Magotteaux's postconference brief, p. 3.
[14] Maggoteaux reported that other end users included ***.

Geographic distribution

U.S. producer Magotteaux reported selling HCCIGM to *** (table II-2). Importer Vega reported selling to *** and Molycop reported selling to *** regions. For Magotteaux, *** percent of sales were within 100 miles of its production facility, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Importer Vega sold *** percent within 100 miles of its U.S. point of shipment, *** percent between 101 and 1,000 miles, and *** percent over 1,000 miles.

Table II-2
HCCIGM: Count of U.S. producers' and U.S. importers' geographic markets

Count in number of firms reporting

Region	U.S. producers	India
Northeast	***	***
Midwest	***	***
Southeast	***	***
Central Southwest	***	***
Mountains	***	***
Pacific Coast	***	***
Other	***	***
All regions (except Other)	***	***
Reporting firms	1	2

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

Note: Other U.S. markets include AK, HI, PR, and VI.

Supply and demand considerations

U.S. supply

Table II-3 provides a summary of the supply factors regarding HCCIGM from U.S. producer Magotteaux and from Indian producer AIA. Reported capacity in both countries was *** from 2021 to 2023 but capacity in India far exceeded U.S. capacity. Most of the U.S. producer's shipments were *** whereas AIA's shipments were primarily to *** in 2023.

Table II-3
HCCIGM: Supply factors that affect the ability to increase shipments to the U.S. market, by country

Quantity in short tons; ratios and shares in percent; Count in number of firms reporting

Factor	Measure	United States	India
Capacity 2021	Quantity	***	***
Capacity 2023	Quantity	***	***
Capacity utilization 2021	Ratio	***	***
Capacity utilization 2023	Ratio	***	***
Inventories to total shipments 2021	Ratio	***	***
Inventories to total shipments 2023	Ratio	***	***
Home market shipments 2023	Share	***	***
Non-US export market shipments 2023	Share	***	***
Ability to shift production	Count	***	***

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

Note: The responding U.S. producer accounted for all of U.S. production of HCCIGM in 2023. The responding foreign producer/exporter firm accounted for *** of U.S. imports of HCCIGM from India during 2023. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from India, please refer to Part I.

Domestic production

Based on available information, the U.S. producer of HCCIGM has the ability to respond to changes in demand with large changes in the quantity of shipments of U.S.-produced HCCIGM to the U.S. market. The main contributing factors to this degree of responsiveness of supply is the availability of unused capacity and some inventories. Factors mitigating responsiveness of supply include limited ability to shift shipments from alternate markets and an inability to shift production to or from alternate products.

Magotteaux reported that its U.S. production capacity *** from 2021 to 2023. Its production decreased by *** percent during the period, with most of the decrease occurring between 2021 and 2022. The reduced production resulted in a *** percent decrease in capacity utilization between 2021 and 2023. Magotteaux's export shipments declined over the period, both absolutely and as a share of its total shipments (from *** percent in 2021 to *** percent in 2023). It reported that its major export markets are ***. Magotteaux reported it ***. Magotteaux reported that "{f}ollowing the surge of Indian imports in 2022, we've had to shorten our shifts and periodically stop production for the equivalent of months."[15]

[15] Conference transcript, p. 16 (Hannemann).

Subject imports from India

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

AIA reported that its capacity ***, and its production and capacity utilization increased from 2021 to 2023. AIA reported that *** (see part VII). Most of AIA's shipments were to third-country export markets. It reported exporting to *** and listed *** among its major export markets. AIA reported *** on the same equipment used to produce HCCIGM.

Imports from nonsubject sources

U.S. shipments of imports from nonsubject sources accounted for *** percent of apparent U.S. consumption in 2023, down from *** percent in 2021. Nonsubject imports were reported ***.

Supply constraints

*** reported that they had not experienced supply constraints since January 1, 2021. Several purchasers responding to the lost sales and lost revenues survey reported that Magotteaux was unable to supply sufficient quantities of HCCIGM or had long lead times (see part V). Purchaser Holcim reported that Magotteaux had long lead times and supply issues during the period, particularly in 2022, when Magotteaux had extended lead times of 8 to 9 months, but that lead times improved in 2023.[16]

U.S. demand

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

End uses and cost share

U.S. demand for HCCIGM depends on the demand by the U.S. mining and cement industries, as well as demand by utilities and other smaller users. HCCIGM accounts for a small share of the cost of the end-use products in which it is used. ***.

[16] Conference transcript, p. 102 (Jeong). Holcim stated that "***. The improvements in lead times in 2023 did lead to Holcim ***." Holcim's postconference brief, appendix, p. 2.

Business cycles

The U.S. producer and importers indicated that the market was subject to business cycles. Magotteaux reported that the cement market, but not the mining market, has some seasonality, with about half of all cement sales taking place in the first quarter of the year.[17] Vega reported that ***. Molycop reported that ***.

Demand trends

Magotteaux and AIA/Vega both reported increased demand for HCCIGM. Magotteaux attributed growth to increased mining for products like lithium and other green energy materials.[18] AIA/Vega reported increased demand because of increased U.S. mineral production and customers substituting HCCIGM for forged grinding media, as well as increased demand in 2022 due to restocking of HCCIGM by cement customers that had deferred maintenance during the COVID pandemic.[19]

In questionnaire responses, the U.S. producer and importers reported an increase in U.S. demand for HCCIGM since January 1, 2021 (table II-4). Magotteaux reported U.S. demand ***. It also reported ***. Vega reported that ***. It also reported that ***.

[17] Conference transcript, p. 23 (Tallent).
[18] Conference transcript, p. 20 (Jacaruso).
[19] AIA/Vega's postconference brief, p. 13.

Table II-4
HCCIGM: Count of firms' responses regarding overall domestic and foreign demand, by firm type

Count in number of firms reporting

Market	Firm type	Steadily increased	Fluctuated up	No change	Fluctuated down	Steadily decreased
Domestic demand	U.S. producers	***	***	***	***	***
Domestic demand	Importers	***	***	***	***	***
Foreign demand	U.S. producers	***	***	***	***	***
Foreign demand	Importers	***	***	***	***	***

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

Substitute products

Substitutes for HCCIGM include forged grinding media and low chromium cast iron grinding media. Magotteaux reported that *** but importers Vega and Molycop reported that ***. Molycop reported that ***. Magotteaux's witness also reported that purchasers look at total cost of ownership in evaluating the type of grinding media to use.[20] AIA/Vega's witness stated that "customers must determine the tradeoff between the reliability and less frequent replacement costs of high chrome products versus the lower upfront cost of forged products."[21] Purchaser *** stated, "***."

[20] "The decision to switch is obviously based on the total cost of ownership, because we would have a firstly, the risk is fairly low because we would have done a trial with the customer using what we call a mark ball, a ball trial to demonstrate that high chromium media is the better media to use in the mill." Conference transcript, p. 30 (Hannemann).

[21] Conference transcript, p. 92 (Shah).

Parties reported that customer switching from HCCIGM to other types of grinding media rarely occurs. Magotteaux could only recall one customer that switched to forged media and reported that this customer has since switched back to HCCIGM.[22] AIA/Vega reported that none of its customers have switched from HCCIGM to forged product.[23] ***.[24] ***.[25]

Most cement customers currently use HCCIGM for their grinding media.[26] Cement producer Holcim reported, "{F}orged grinding media is used in the cement industry for very limited application and only where the grinding mill technology permits."[27] AIA/Vega reported increased demand for HCCIGM resulting from mining customers switching from forged to HCCIGM and that most of mining market still uses forged grinding media,[28] but Magotteaux reported that the "vast majority of such conversions occurred many years ago."[29]

[22] Conference transcript, p. 70 (Hannemann).
[23] Conference transcript, p. 134 (Gilani).
[24] ***. AIA/Vega's postconference brief, appendix, p. 4.
[25] ***. Magotteaux's postconference brief, Answers to staff questions, p. 5.
[26] Conference transcript, p. 144 (Shah).
[27] Holcim's postconference brief, p. 5 n.11.
[28] Conference transcript, p. 92 (Shah).
[29] Magotteaux's postconference brief, p. 10.

Substitutability issues

This section assesses the degree to which U.S.-produced HCCIGM and imports of HCCIGM from India can be substituted for one another by examining the importance of certain purchasing factors and the comparability of HCCIGM from domestic and imported sources based on those factors. Based on available data, staff believes that there is a high degree of substitutability between domestically produced HCCIGM and HCCIGM imported from India.[30] Factors contributing to this level of substitutability include similar quality and interchangeability between domestic and subject imported HCCIGM. Purchaser preferences for multiple suppliers and some lead time and availability differences at times during the period may somewhat limit substitutability.

Factors affecting purchasing decisions

Purchasers responding to lost sales lost revenue allegations[31] were asked to identify the main purchasing factors their firm considered in their purchasing decisions for HCCIGM. The major purchasing factors identified by firms included price, quality, and availability/supply (table II-5).

Table II-5
HCCIGM: Count of ranking of factors used in purchasing decisions as reported by purchasers, by factor

Factor	First	Second	Third	Total
Price	3	1	3	7
Quality/performance	2	2	2	6
Availability/supply	3	2	1	6
All other factors	0	2	1	NA

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

Note: All other factors include technical and service support for second factor. ***.

[30] The degree of substitution between domestic and imported HCCIGM depends upon the extent of product differentiation between the domestic and imported products and reflects how easily purchasers can switch from domestically produced HCCIGM to the HCCIGM imported from the subject country (or vice versa) when prices change. The degree of substitution may include such factors as relative prices (discounts/rebates), quality differences (e.g., grade standards, defect rates, etc.), and differences in sales conditions (e.g., lead times between order and delivery dates, reliability of supply, product services, etc.).

[31] This information is compiled from responses by purchasers identified by Magotteaux to the lost sales lost revenue allegations. See part V for additional information.

Lead times

HCCIGM is primarily produced-to-order. U.S. producer Magotteaux reported that *** percent of its commercial shipments were produced-to-order, with lead times averaging *** days. The remaining *** percent of its commercial shipments came from inventories, with lead times averaging *** days. Importer Vega reported that *** percent of its commercial shipments were produced-to-order, with lead times averaging *** days.[32] The remaining *** percent of its commercial shipments came from U.S. inventories, with lead times averaging *** days.

Suppliers keep inventories of some commonly used products, particularly for cement customers, as well as keeping some buffer stocks for specific mining customers. Cement customers typically keep grinding media in inventory to use throughout the year, and Magotteaux also stocks some commonly used products for cement customers that may need more material than originally ordered.[33] Magotteaux "***."[34] AIA also stocks some inventory in the United States for cement customers and some buffer stocks for specific mining customers.[35]

[32] In its brief, AIA reported that its lead time is ***. AIA/Vega's postconference brief, appendix, p. 4.

[33] Conference transcript, p. 23 (Tallent).

[34] Magotteaux's postconference brief, Answers to staff questions, p. 13.

[35] AIA stated, "For mining, products are custom-made and designed based on plant operating conditions. Because customers require supply assurance, they usually place an order only if there is visibility of 3 to 6 months of supply. This is ensured by having *** of stock of their custom product in transit and additional product in staging locations or warehouses *** which are earmarked for individual customers. These buffer stocks are ***. Vega typically makes monthly shipments to customers as per their instruction and ***. *** of AIA's U.S. inventories of products intended to be sold to mining customers are buffer stocks which are earmarked for specific mining customers. AIA/Vega's postconference brief, appendix, p. 5.

Qualification

AIA/Vega reported that the customer qualification process takes several months, and involves technical presentations on product offerings, evaluation of mineral ore samples, an audit of the mill's operating conditions, and mark ball tests (involving designing a few different alloys and testing them in the customer's mill to see which performs best).[36] It reported that qualification is not necessarily a one-time event since "operation and corrosion properties change over time" and if the supplier has not supplied in several years it may need to go through the qualification process again.[37] Witnesses for Magotteaux stated that AIA/Vega is qualified to supply Magotteaux's customers in the United States.[38]

For new customers, Magotteaux provides engineering to identify the ideal ball diameter and chemistry of the grinding media that provides the best performance and grinding efficiency for their particular mill.[39] The "Marked Ball Test ("MBT") is a method for testing a new alloy or a new supplier's products in a customer's mill using different types of balls which are uniquely marked to distinguish them.[40]

Comparison of U.S.-produced and imported HCCIGM

In order to determine whether U.S.-produced HCCIGM can generally be used in the same applications as imports from India, the U.S. producer and importers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table II-6, U.S. producer and importer Magotteaux reported that HCCIGM from all sources were *** interchangeable. The other two importers reported that all sources were *** interchangeable.

[36] Conference transcript, p. 132 (Shah); AIA/Vega's postconference brief, p. 12.

[37] For customers switching from forged grinding media to HCCIGM, "it will take several more months to change over to high chrome products because we conduct additional alloy optimization and mock ball tests to make sure we are providing our customers with the best product solution." Conference transcript, p. 94 (Shah).

[38] Conference transcript, p. 43 (Jacaruso, Tallent).

[39] Conference transcript, p. 20 (Jacaruso) and p. 73 (Hannemann).

[40] Magotteaux's postconference brief, Answers to staff questions, p. 13.

Table II-6
HCCIGM: Count of firms reporting the interchangeability between product produced in the United States and in other countries, by firm type and country pair

Country pair	Firm type	Always	Frequently	Sometimes	Never
United States vs. India	U.S. producers	***	***	***	***
United States vs. Other	U.S. producers	***	***	***	***
India vs. Other	U.S. producers	***	***	***	***
United States vs. India	Importers	***	***	***	***
United States vs. Other	Importers	***	***	***	***
India vs. Other	Importers	***	***	***	***

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

Vega reported, "***."

Molycop reported, "***."

AIA/Vega stated that mining customers will not generally mix HCCIGM from different sources in the same mill although it may sometimes occur in cement uses, but that mines and cement plants have multiple production lines and could apply competing products in the different circuits.[41] Holcim, the largest U.S. cement producer, reported that both Magotteaux and AIA manufacture HCIGGM to its specifications, and "therefore the physical criteria are the same and the products are interchangeable. In practice, a grinder is typically fed with products manufactured by a single supplier but the products from two suppliers could be mixed if appropriate."[42]

[41] Conference transcript, pp. 130-131 (Hurlock).

[42] Holcim's postconference brief, appendix, p.4.

In addition, the U.S. producer and importers were asked to assess how often differences other than price were significant in sales of HCCIGM from the United States, subject, or nonsubject countries. As seen in table II-7, U.S. producer and importer Magotteaux reported that differences other than price between sources were *** significant factors in its sales. The other two importers reported that such factors were *** significant.

Table II-7
HCCIGM: Count of firms reporting the significance of differences other than price between product produced in the United States and in other countries, by firm type and country pair

Country pair	Firm type	Always	Frequently	Sometimes	Never
United States vs. India	U.S. producers	***	***	***	***
United States vs. Other	U.S. producers	***	***	***	***
India vs. Other	U.S. producers	***	***	***	***
United States vs. India	Importers	***	***	***	***
United States vs. Other	Importers	***	***	***	***
India vs. Other	Importers	***	***	***	***

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

Vega reported, "***." Molycop reported that ***.

Part III: U.S. producers' production, shipments, and employment

The Commission analyzes a number of factors in making injury determinations (see 19 U.S.C. §§ 1677(7)(B) and 1677(7)(C)). Information on the subsidies and dumping margins was presented in Part I of this report and information on the volume and pricing of imports of the subject merchandise is presented in Part IV and Part V. Information on the other factors specified is presented in this section and/or Part VI and (except as noted) is based on the questionnaire responses of Magotteaux, which accounted for 100.0 percent of U.S. production of HCCIGM during 2023.

U.S. producers

The Commission issued a U.S. producer questionnaire to one firm based on information contained in the petition. One firm provided usable data on their operations. Table III-1 lists the U.S. producer of HCCIGM, its production location, position on the petition, and share of total production.

Table III-1
HCCIGM: U.S. producer Magotteaux, its position on the petition, production location, and share of reported production, 2023

Share in percent

Firm	Position on petition	Production location	Share of production
Magotteaux	Petitioner	Pulaski, TN	100.0

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

Table III-2 presents information on the U.S. producer's ownership and related and/or affiliated firms.

Table III-2
HCCIGM: U.S. producer Magotteaux's ownership, related and/or affiliated firms

Reporting firm	Relationship type and related firm	Details of relationship
Magotteaux	***	***
Magotteaux	***	***
Magotteaux	***	***
Magotteaux	***	***
Magotteaux	***	***
Magotteaux	***	***
Magotteaux	***	***

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

As indicated in table III-2, Magotteaux *** to foreign producers of in-scope products in non-subject countries (i.e., Brazil, Canada, South Africa, and Thailand) and *** related to U.S. importers of the subject merchandise.[1] In addition, as discussed in greater detail below, Magotteaux reported that it did not directly import the subject merchandise and that it *** the subject merchandise from U.S. importers.[2]

[1] Conference transcript, p. 97 (Jacobson).

[2] Although Magotteaux did not report imports of subject HCCIGM during the period of investigation, it ***. Magotteaux's U.S. importer questionnaire, section II-6a. Magotteaux's postconference brief, p. 5.

Table III-3 presents events in the U.S. industry since January 1, 2021.

Table III-3
HCCIGM: Important domestic industry events since January 1, 2021

Item	Firm	Event
System Conversion	Magotteaux	In 2021, Magotteaux upgraded its sand binder system at its Pulaski, TN facility to improve in-house casting surface quality.
Research and Development	Magotteaux	In 2023, Magotteaux worked with the Department of Energy's Manufacturing Demonstration Facility, using a RevV grant from the State of Tennessee to achieve more abrasion-resistant materials through 3D-printing.

Source: John Cory, "Binder system conversion at Magotteaux Pulaski," December 8-11, 2021, https://www.sfsa.org/wp-content/uploads/2022/01/2021-Magotteaux-Cory.pdf. Elliott, Amy M., "Pulaski plant achieves more durable product through work with advanced manufacturing experts," Oak Ridge National Laboratory, July 8, 2023, https://www.ornl.gov/news/pulaski-plant-achieves-more-durable-product-through-work-advanced-manufacturing-experts.

Producers in the United States were asked to report any change in the character of their operations or organization relating to the production of HCCIGM since January 1, 2021. Magotteaux indicated in its questionnaire that it had experienced such changes, as shown in table III-4.

Table III-4
HCCIGM: U.S. producer Magotteaux's reported changes in operations, since January 1, 2021

Item	Firm name and narrative response on changes in operations
Production curtailments	***
Weather-related or force majeure events	***

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

U.S. production, capacity, and capacity utilization

Table III-5 presents Magotteaux's installed and practical capacity and production on the same equipment. Magotteaux's installed overall capacity, practical overall capacity, and practical HCCIGM capacity remained flat during the period reported.[3] The production line at Magotteaux's Pulaski, Tennessee facility used to produce HCCIGM is ***.[4] Magotteaux's practical HCCIGM production decreased steadily during 2021-23, for a decline of *** percent. The vast majority (*** percent) of the overall 2021-23 decline in production of HCCIGM occurred during 2021-22, during which time production declined by *** percent. As capacity *** and production steadily decreased, practical HCCIGM capacity utilization also steadily decreased during the period reported, with a decline of *** percentage points during 2021-23.[5]

Table III-5
HCCIGM: U.S. producer Magotteaux's installed and practical capacity, production, and utilization on the same equipment as subject production, by period

Capacity and production in short tons; utilization in percent

Item	Measure	2021	2022	2023
Installed overall	Capacity	***	***	***
Installed overall	Production	***	***	***
Installed overall	Utilization	***	***	***
Practical overall	Capacity	***	***	***
Practical overall	Production	***	***	***
Practical overall	Utilization	***	***	***
Practical HCCIGM	Capacity	***	***	***
Practical HCCIGM	Production	***	***	***
Practical HCCIGM	Utilization	***	***	***

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

[3] Regarding the ability to reach installed overall capacity, Magotteaux stated that, ***. Magotteaux's U.S. producer questionnaire, section II-3e.

[4] Magotteaux's U.S. producer questionnaire, section II-4.

[5] Magotteaux indicated that, for its Pulaski, Tennessee facility, a capacity utilization rate of 85 percent is considered a "target" or "basic threshold" needed to achieve profitability. Conference transcript, p. 65 (Hannemann).

Figure III-1
HCCIGM: U.S. producer Magotteaux's capacity and production, by period

* * * * *

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

Alternative products

Magotteaux ***.

U.S. producer's U.S. shipments and exports

Table III-6 presents Magotteaux's U.S. shipments, export shipments, and total shipments.[6] Magotteaux's U.S. shipments of HCCIGM, by quantity, decreased annually during 2021-23 for an overall decline of *** percent. Over the same period, the value of Magotteaux's U.S. shipments increased irregularly by *** percent. The irregular increase in value was due to a *** percent increase from 2021 to 2022, followed by a 2022-23 decrease of *** percent. As the value increased and the quantity decreased between 2021 and 2023,

[6] As Magotteaux *** of HCCIGM during the period of investigation, Magotteaux's U.S. shipments ***. Magotteaux's U.S producer questionnaire, section II-8.

the average unit value ("AUV") of Magotteaux's U.S. shipments of HCCIGM consequently increased by *** percent over the same period, after reaching a peak in 2022.

Magotteaux's exports of HCCIGM, by quantity, followed a similar trend as U.S. shipments, steadily decreasing over the period reported for an overall decline of *** percent during 2021-23.[7] The bulk of the overall decrease in exports of HCCIGM occurred between 2021 and 2022, which saw a *** percent decline. Unlike the value of Magotteaux's U.S. shipments, which first peaked in 2022 before an overall irregular increase during 2021-23, the value of Magotteaux's exports decreased annually during 2021-23 for an overall decrease of *** percent. Unlike the irregular increase in the AUV of Magotteaux's U.S. shipments, the AUV of exports consistently increased between 2021 and 2023, for a rise of *** percent, the majority of which occurred from 2021 to 2022.

With both U.S. shipments and exports declining during 2021-23, Magotteaux reported a *** percent decline in total shipments of HCCIGM, by quantity, over the same period, the majority of which was accounted for by the decline in exports. In terms of value, the magnitude of the irregular increase in the value of U.S. shipments was outpaced by the decrease in the value of exports, resulting in a 2021-23 decrease of *** percent in the value of Magotteaux's total shipments of HCCIGM. Due to the spike in the value of Magotteaux's U.S. shipments in 2022, however, the value of Magotteaux's total shipments did initially increase by *** percent from 2021 to 2022, and subsequently declined by *** percent during 2022-23. The AUV of Magotteaux's total shipments followed a similar trajectory as the AUV of U.S. shipments, with an initial 2021-22 increase of *** percent, followed by a 2022-23 decrease of *** percent, ending *** percent higher in 2023 compared to 2021. As a share of total shipments by quantity and value, U.S. shipments increased by *** percentage points and *** percentage points, respectively, during the period reported.

[7] Magotteaux's ***. Magotteaux's U.S. producer questionnaire, section II-8. In response to staff questions factors regarding the factors affecting the decrease in exports from 2021 to 2023, Magotteaux stated that, ***. Email from ***, May 16, 2024.

Table III-6
HCCIGM: U.S. producer Magotteaux's shipments, by destination and period

Quantity in short tons; value in 1,000 dollars; unit value in dollars per short ton; shares in percent

Item	Measure	2021	2022	2023
U.S. shipments	Quantity	***	***	***
Export shipments	Quantity	***	***	***
Total shipments	Quantity	***	***	***
U.S. shipments	Value	***	***	***
Export shipments	Value	***	***	***
Total shipments	Value	***	***	***
U.S. shipments	Unit value	***	***	***
Export shipments	Unit value	***	***	***
Total shipments	Unit value	***	***	***
U.S. shipments	Share of quantity	***	***	***
Export shipments	Share of quantity	***	***	***
Total shipments	Share of quantity	100.0	100.0	100.0
U.S. shipments	Share of value	***	***	***
Export shipments	Share of value	***	***	***
Total shipments	Share of value	100.0	100.0	100.0

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

U.S. producer's inventories

Table III-7 presents Magotteaux's end-of-period inventories and the ratio of these inventories to Magotteaux's production, U.S. shipments, and total shipments**.** Magotteaux's end-of-period inventories first decreased by *** percent during 2021-22, and subsequently increased by *** percent during 2022-23, for an irregular decline of *** percent from 2021 to 2023. Inventory as a ratio to U.S. production, U.S. shipments, and total shipments all reported irregular increases from 2021 to 2023 of between *** and *** percentage points.

Table III-7
HCCIGM: U.S. producer Magotteaux's inventories and their ratio to select items, by period

Quantity in short tons; ratio in percent

Item	2021	2022	2023
End-of-period inventory quantity	***	***	***
Inventory ratio to U.S. production	***	***	***
Inventory ratio to U.S. shipments	***	***	***
Inventory ratio to total shipments	***	***	***

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

U.S. producer's imports from subject sources

Magotteaux did not report any imports of HCCIGM from India during the period of investigation.[8]

U.S. producer's purchases of imports from subject sources

Magotteaux ***.

U.S. employment, wages, and productivity

Table III-8 shows Magotteaux's employment-related data. From 2021 to 2022, Magotteaux reported an increase of *** production and related workers ("PRWs"), followed by a 2022-23 decline of *** PRWs, for a net decline of *** PRWs during 2021-23.[9] [10] Hourly wages increased steadily during the period of investigation, increasing by *** percent from 2021 to 2023, while total wages paid first increased by *** percent during 2021-22, then decreased by *** percent during 2022-23, for a net increase in total wages paid of *** percent from 2021 to 2023. As productivity decreased irregularly over the period reported, and total wages paid increased irregularly by *** percent, unit labor costs thereby increased irregularly from 2021 to 2023. Unit labor costs increased by *** percent from 2021 to 2022 and subsequently decreased by *** percent during 2022-23, for an increase of *** percent from 2021 to 2023.

[8] Magotteaux's postconference brief, p. 5. Magotteaux's U.S. importer questionnaire, section II-5a.

[9] Magotteaux stated that it ***. Magotteaux's U.S. producer questionnaire, section II-10. In response to staff questions about ***, Magotteaux stated, ***. Email from ***, May 16, 2024.

[10] Magotteaux stated that it ***. Magotteaux estimates that it lost *** shifts in 2021, *** shifts in 2022, and *** shifts in 2023, out of all shifts available, due to these factors. Magotteaux's postconference brief, Answers to staff questions, pp. 19-20.

Table III-8
HCCIGM: U.S. producer Magotteaux's employment related information, by period

Item	2021	2022	2023
Production and related workers (PRWs) (number)	***	***	***
Total hours worked (1,000 hours)	***	***	***
Hours worked per PRW (hours)	***	***	***
Wages paid ($1,000)	***	***	***
Hourly wages (dollars per hour)	***	***	***
Productivity (short tons per hour)	***	***	***
Unit labor costs (dollars per short ton)	***	***	***

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

Part IV: U.S. imports, apparent U.S. consumption, and market shares

U.S. importers

The Commission issued importer questionnaires to nine firms believed to be importers of subject HCCIGM, as well as to the U.S. producer of HCCIGM.[1] Usable questionnaire responses were received from three companies, representing *** U.S. imports from India in 2023 under HTS subheading 7325.91.00, a "basket" category.[2] [3] Table IV-1 lists all responding U.S. importers of HCCIGM from India and other sources, their locations, and their shares of U.S. imports in 2023.[4]

[1] The Commission issued questionnaires to those firms identified in the petition; staff research; and proprietary, Census-edited Customs' import records.

[2] Imports of HCCIGM reported by ***, which accounted for *** reported subject imports, were reported in the questionnaire ***. In correspondence with Commission staff, ***. As such, subject imports questionnaire data in this report ***, as ***. *** U.S. importer questionnaire, section II-5a. Appendix E contains the official import statistics for the period of investigation, under HTS reporting number 7325.91.0000.

[3] ***. Magotteaux's U.S. producer questionnaire, section II-7a. Email from ***, May 16, 2024.

[4] ***.

Table IV-1
HCCIGM: U.S. importers, their headquarters, and share of imports within each source, 2023

Share in percent

Firm	Headquarters	India	Nonsubject sources	All import sources
Magotteaux	Franklin, TN	***	***	***
Molycop	Omaha, NE	***	***	***
Vega	Brentwood, TN	***	***	***
All firms	Various	100.0	100.0	100.0

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

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

U.S. imports

Table IV-2 presents data for U.S. imports of HCCIGM from India and all other sources. U.S. imports of HCCIGM from India increased irregularly over the period reported, first increasing by *** percent during 2021-22, and subsequently declining during 2022-23 by *** percent, resulting in a *** percent net increase from 2021 to 2023. As Magotteaux ***, and Molycop ***, virtually all subject imports are accounted for by imports from ***.[5] [6] By value, subject imports also increased irregularly over the period reported. The value of subject imports increased by *** percent during 2021-22, then declined by *** percent during 2022-23, for a net increase of *** percent from 2021 to 2023. Although both the quantity and value of subject imports increased during 2021-22, the magnitude of the increase in value outpaced the increase in quantity, resulting in a *** percent increase in the

[5] Molycop reported ***. Molycop's U.S. importer questionnaire, section II-5a. Molycop also reported ***. Molycop's U.S. importer questionnaire, sections I-8 and II-8. Email from ***, May 20, 2024.

[6] *** Email from ***, May 20, 2024.

AUV of subject imports during that period. Similarly, as both the quantity and value of subject imports decreased during 2022-23, the proportionally larger decrease in value led to a decrease of *** percent across that period in the AUV of subject imports. Despite the initial 2021-22 increase in the AUV of subject imports, the 2022-23 decline resulted in a net decline of *** percent from 2021 to 2023.[7]

The quantity of imports of HCCIGM from nonsubject sources was highest at the beginning of the period of investigation and declined annually from 2021 to 2023, for an overall decline of *** percent.[8] The vast majority of the decline in the quantity of imports from nonsubject sources took place during 2021-22, during which time nonsubject imports decreased by approximately ***. Nonsubject imports as measured by value followed a similar trajectory, decreasing annually from 2021 to 2023, for an overall decline of *** percent. Although the quantity and value of nonsubject imports declined during 2021-22, while the quantity and value of subject imports increased, the AUV of imports from nonsubject sources followed a similar trajectory as the AUV of subject imports over that period, increasing by *** percent. However, whereas the 2022-23 decline in the AUV of subject imports resulted in a net decline in AUV from 2021 to 2023, the 2022-23 decline in the AUV of nonsubject imports resulted in a net increase, with the AUV of nonsubject imports in 2023 being *** percent higher than in 2021.

Imports from India accounted for the vast majority of imports from all sources, by quantity, throughout the period reported, and increased annually as a share of total imports for a 2021-23 increase of *** percentage points. Imports from India never accounted for less than *** percent of total imports of HCCIGM and increased annually for a 2021-23 increase of *** percentage points. As subject imports accounted for the vast majority of total imports both in terms of quantity and value throughout the period reported, the irregular increases in the quantity and value of subject imports drove similar irregular increases in the quantity and value of total imports, despite the steady decline in nonsubject imports. Imports of HCCIGM from all sources increased by *** percent, by quantity, and *** percent, by value, from 2021

[7] In response to staff questions about changes in the AUV of subject imports, *** Email from ***, May 20, 2024.

[8] Imports from all other sources consisted ***. *** U.S. importer questionnaire, section II-4.

to 2023. Likewise, the AUV of total imports declined irregularly by *** percent over the same period, driven by the similar decrease in the AUV of subject imports.

As a ratio to U.S. production, imports from India *** from 2021 to 2023, whereas nonsubject imports declined by *** percentage points. Total imports as a ratio to U.S. production increased irregularly by *** percentage points over the same period.

Table IV-2
HCCIGM: U.S. imports by source and period

Quantity in short tons; value in 1,000 dollars; unit value in dollars per short ton; share and ratio in percent

Source	Measure	2021	2022	2023
India	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
India	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
India	Unit value	***	***	***
Nonsubject sources	Unit value	***	***	***
All import sources	Unit value	***	***	***
India	Share of quantity	***	***	***
Nonsubject sources	Share of quantity	***	***	***
All import sources	Share of quantity	100.0	100.0	100.0
India	Share of value	***	***	***
Nonsubject sources	Share of value	***	***	***
All import sources	Share of value	100.0	100.0	100.0
India	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***

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

Note: Share of quantity is the share of U.S. imports by quantity; share of value is the share of U.S. imports by value; ratio is U.S. imports to production.

Figure IV-1
HCCIGM: U.S. import quantities and average unit values, by source and period

* * * * *

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

Negligibility

The statute requires that an investigation be terminated without an injury determination if imports of the subject merchandise are found to be negligible.[9] Negligible imports are generally defined in the Act, as amended, as imports from a country of merchandise corresponding to a domestic like product where such imports account for less than 3 percent of the volume of all such merchandise imported into the United States in the most recent 12-month period for which data are available that precedes the filing of the petition or the initiation of the investigation. However, if there are imports of such merchandise from a number of countries subject to investigations initiated on the same day that individually account for less than 3 percent of the total volume of the subject merchandise, and if the imports from those countries collectively account for more than 7 percent of the volume of all such merchandise imported into the United States during the applicable 12-month period, then

[9] Sections 703(a)(1), 705(b)(1), 733(a)(1), and 735(b)(1) of the Act (19 U.S.C. §§ 1671b(a)(1), 1671d(b)(1), 1673b(a)(1), and 1673d(b)(1)).

imports from such countries are deemed not to be negligible.[10] Imports from India accounted for *** percent of total imports of HCCIGM by quantity during April 2023 to March 2024.

Table IV-3
HCCIGM: U.S. imports in the twelve-month period preceding the filing of the petition, April 2023 through March 2024

Quantity in short tons; share in percent

Source of imports	Quantity	Share of quantity
India	***	***
Nonsubject sources	***	***
All import sources	***	100.0

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

Apparent U.S. consumption and market shares

Quantity

Table IV-4 presents data on apparent U.S. consumption and U.S. market shares by quantity for HCCIGM. The overall market for HCCIGM, by quantity, increased irregularly from 2021 to 2023, by *** percent.[11] U.S. shipments of HCCIGM by U.S. producer Magotteaux decreased annually from 2021 to 2023 for an overall decline of *** percent. U.S. shipments of HCCIGM from nonsubject sources likewise showed annual decreases from 2021 to 2023, the bulk of which came during 2021-22, which saw a *** percent decline in U.S. shipments of nonsubject imports. Nonsubject imports continued to decrease during 2022-23, resulting in a 2021-23 decrease of *** percent. While U.S. shipments of domestic product and from nonsubject sources were decreasing in quantity, U.S. shipments of HCCIGM from India showed the opposite trend, increasing annually from 2021 to 2023, an overall increase of *** percent. The vast majority (*** percent) of this rise in the quantity of U.S. shipments of subject imports occurred during 2021-22, which showed a *** percent year-on-year increase. Consequently, while subject imports increased their market share by *** percentage points from 2021 to 2023, the U.S. producer's and nonsubject imports each saw a *** and *** percentage point decline in market share, respectively, over the same period. With the 2021-23 increase in subject imports outpacing the simultaneous decrease in nonsubject imports, U.S. shipments of imports of HCCIGM from all sources increased by *** percent, and its market share increased by *** percentage points, over the same period.

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

[11] Magotteaux cited "factors including the rebound from COVID, the 'green energy revolution,' and an increase in mining for lithium" as drivers of continued growth in the market. Petitioner's postconference brief, p. 6.

Table IV-4
HCCIGM: Apparent U.S. consumption and market shares based on quantity, by source and period

Quantity in short tons; shares in percent

Source	Measure	2021	2022	2023
U.S. producer	Quantity	***	***	***
India	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producer	Share	***	***	***
India	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

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

Figure IV-2
HCCIGM: Apparent U.S. consumption based on quantity, by source and period

* * * * *

Source: Compiled from data submitted in response to Commission questionnaires

Value

Table IV-5 presents data on apparent U.S. consumption and U.S. market shares by value for HCCIGM. U.S. producer Magotteaux's U.S. shipments of HCCIGM increased by *** percent in terms of value from 2021 to 2023, with a 2021-22 increase of *** percent followed by a 2022-23 decrease of *** percent. U.S. shipments of subject imports likewise increased irregularly from 2021 to 2023 (*** percent), but experienced a relatively larger increase during 2021-22, as compared to domestic U.S. shipments. U.S. shipments of HCCIGM from nonsubject sources was the only source which reported a steady decline from 2021 to 2023, for a decrease of *** percent in the value of U.S. shipments. Driven by the increase in U.S. shipments of subject imports, the value of imports from all sources also increased irregularly over the period reported, for a 2021-23 rise of *** percent, after reaching a peak in 2022. The shares of the total U.S. market accounted for by U.S. producer Magotteaux and by HCCIGM from nonsubject sources each declined steadily from 2021 to 2023, for overall declines of *** and *** percentage points. HCCIGM from India, the only source which reported a net increase in market share from 2021 to 2023, increased its share by *** percentage points. Whereas India was the *** source of HCCIGM in the U.S. market at the start of the period, it ended the period reported as the *** source of HCCIGM in the U.S. market, accounting for *** of the market. As the value of U.S. shipments by Magotteaux and from India both increased from 2021 to 2023, the value of total U.S. shipments of HCCIGM correspondingly increased by *** percent over the same period, after a peak in 2022.

Table IV-5
HCCIGM: Apparent U.S. consumption and market shares based on value, by source and period

Value in 1,000 dollars; shares in percent

Source	Measure	2021	2022	2023
U.S. producer	Value	***	***	***
India	Value	***	***	***
Nonsubject sources	Value	***	***	***
All import sources	Value	***	***	***
All sources	Value	***	***	***
U.S. producer	Share	***	***	***
India	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0

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

Figure IV-3
HCCIGM: Apparent U.S. consumption based on value, by source and period

* * * * *

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

Table IV-6 presents the market for U.S. shipments by U.S. producer Magotteaux and U.S. importers of HCCIGM used in mining operations.[12] Both the U.S. producer's U.S. shipments and importers' U.S. shipments from nonsubject sources to mining end users decreased steadily from 2021 to 2023, for overall declines of *** percent and *** percent, respectively. Over the same period, however, importers' U.S. shipments of HCCIGM from India for use in mining operations increased annually, for a 2021-23 increase of *** percent. Despite the declines in the volume of Magotteaux's U.S. shipments and U.S. shipments from nonsubject sources, the magnitude of the increase in U.S. shipments from subject imports drove an overall increase of *** percent in U.S. shipments from all sources for use in mining operations.[13]

The 2021-23 increase in U.S. shipments from subject sources corresponded to a *** percentage point increase in market share, with subject sources as the *** of HCCIGM for use in mining operations in 2023. While Magotteaux's U.S. production was the *** at the beginning of the period reported, the decline in U.S. shipments resulted in a *** percentage point decline in market share from 2021 to 2023. Nonsubject imports likewise experienced an *** percentage point decline in market share over the same period, accounting for less than *** percent of the market for HCCIGM for use in mining operations in 2023.

[12] Magotteaux noted in conference testimony that the market for HCCIGM in mining operations is "by far the biggest" sector of the market, and that Magotteaux believes "demand for high chrome casting media is going up." Conference transcript, pp. 20 (Jacaruso) and 22 (Tallent).

[13] In its postconference brief, AIA/Vega noted, "Demand for {HCCCIGM} closely tracks the demand patterns in the cement and mining industries {…} Mining demand in the United States has increased steadily during the POI, with U.S. mineral production increasing by roughly 4 billion dollars year-on-year from 2021-2023, and exceeding 105 billion dollars in 2023. Similarly, demand in the {HCCIGM} industry that services the mining sector has also steadily grown during the POI. In addition, some of the growth for {HCCIGM} demand in the mining industry has originated from the conversion of customers away from using forged grinding media. This growth is expected to continue." AIA/Vega's postconference brief, p. 13.

Table IV-6
HCCIGM: Market for U.S. producer Magotteaux's and U.S. importers' U.S. shipments for mining, by source and period

Quantity in short tons, share and ratio in percent

Source	Measure	2021	2022	2023
U.S. producer	Quantity	***	***	***
India	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producer	Share	***	***	***
India	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0
U.S. producer	Ratio	***	***	***
India	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***
All sources	Ratio	***	***	***

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

Note: Ratio is to apparent U.S. consumption of HCCIGM.

Table IV-7 presents the market for U.S. shipments by U.S. producer Magotteaux and U.S. importers of HCCIGM used in cement production.[14] U.S. shipments of HCCIGM by U.S. producer Magotteaux for use in cement production increased irregularly by *** percent from 2021 to 2023, and peaked in 2022. The irregular increase in the volume of Magotteaux's U.S. shipments corresponded to an increase of *** percentage points as a share of total U.S. shipments for use in cement production, although Magotteaux's shipments *** in any period reported. Likewise, U.S. shipments of subject imports also increased irregularly from 2021 to 2023, for an increase of *** percent. Only *** reported U.S. shipments of subject imports to cement production end users. As a ratio to total apparent consumption of all HCCIGM, total shipments for use in cement production increased irregularly by *** percentage points, after reaching of peak of *** percent in 2022.[15]

[14] Magotteaux noted in conference testimony that, historically, the cement market has been the second-largest market for HCCIGM in the United States, although it is a "much smaller market" as compared to the market for HCCIGM in mining operations. Grinding media used in the cement sector is "almost exclusively" HCCIGM, due to the corrosion and abrasion which takes place in the ball mill during cement production. Magotteaux also noted seasonality effect in the cement sector, where demand softens from December to April each year due to the annual slowdown in construction. Conference transcript, pp. 22-23 (Tallent).

[15] In regards to the demand trend for the cement sector of the overall HCCIGM market, AIA/Vega stated, "For the cement industry, production (and therefore demand for {HCCIGM}) increased significantly in 2022. As was explained at the Staff Conference, 'during COVID, there was a lot of apprehension' and cement customers, in particular, 'deferred maintenance.' This led to a spike in demand for balls in the cement industry in 2022…" AIA/Vega's postconference brief, pp. 13-14.

Table IV-7
HCCIGM: Market for U.S. producer Magotteaux's and U.S. importers' U.S. shipments for cement production, by source and period

Quantity in short tons, share and ratio in percent

Source	Measure	2021	2022	2023
U.S. producer	Quantity	***	***	***
India	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producer	Share	***	***	***
India	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0
U.S. producer	Ratio	***	***	***
India	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***
All sources	Ratio	***	***	***

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

Note: Ratio is to apparent U.S. consumption of HCCIGM. Zeroes, null values, and undefined calculations are suppressed and shown as "---"

Table IV-8 presents the market for U.S. shipments by U.S. producer Magotteaux and U.S. importers of HCCIGM used for all other end uses other than mining operations and cement production. U.S. producer Magotteaux *** of all U.S. shipments of HCCIGM for all other end uses, with such shipments increasing by *** percent during 2021-22 and *** percent during 2022-23.[16] Only *** reported U.S. shipments of imported HCCIGM for all other end uses. *** accounted for *** of U.S. shipments in 2022, and *** U.S. shipments in 2023.[17] *** reported U.S. shipments in ***.[18] As a ratio to total apparent consumption of HCCIGM, U.S. shipments for all other end uses never exceeded *** percent during the period reported.

[16] ***. Magotteaux's U.S. producer questionnaire, section II-9.
[17] ***. *** U.S. importer questionnaire, section II-5b.
[18] *** *** U.S. importer questionnaire, section II-5b. Email from ***, May 20, 2024.

Table IV-8
HCCIGM: Market for U.S. producer Magotteaux's and U.S. importers' U.S. shipments for all other end uses, by source and period

Quantity in short tons, share and ratio in percent

Source	Measure	2021	2022	2023
U.S. producer	Quantity	***	***	***
India	Quantity	***	***	***
Nonsubject sources	Quantity	***	***	***
All import sources	Quantity	***	***	***
All sources	Quantity	***	***	***
U.S. producer	Share	***	***	***
India	Share	***	***	***
Nonsubject sources	Share	***	***	***
All import sources	Share	***	***	***
All sources	Share	100.0	100.0	100.0
U.S. producer	Ratio	***	***	***
India	Ratio	***	***	***
Nonsubject sources	Ratio	***	***	***
All import sources	Ratio	***	***	***
All sources	Ratio	***	***	***

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

Note: Ratio is to total apparent consumption of HCCIGM. Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Part V: Pricing data

Factors affecting prices

Raw material costs

The major raw materials to produce HCCIGM are ferrochrome and steel scrap. Magotteaux reported that, in 2023, ferrochrome comprised *** percent of its total raw material costs, stainless steel and other steel scrap comprised *** percent, and other raw materials comprised *** percent (see part VI). Ferrochrome prices increased sharply in 2022, reaching a period high in June 2022, at a level almost four times the price in January 2021 (figure V-1 and table V-1).[1] Ferrochrome prices declined after June 2022 but remained above January 2021 levels. Steel scrap prices fluctuated within a narrow range over the period.

Figure V-1
Raw materials: Price indices of ferrochrome and steel scrap

* * * * * * *

Source: ***, accessed May 23, 2024. ***.

[1] The price series shown in figure V-1 are the series used by Magotteaux. In its brief, it reported that ferrochrome accounts ***. Magotteaux's postconference brief, Answers to staff questions, p. 15.

Table V-1
Raw materials: Price indices of ferrochrome and steel scrap

Price index in percent; January 2021 = 100

Period	Ferrochrome	Steel scrap
January 2021	***	***
February 2021	***	***
March 2021	***	***
April 2021	***	***
May 2021	***	***
June 2021	***	***
July 2021	***	***
August 2021	***	***
September 2021	***	***
October 2021	***	***
November 2021	***	***
December 2021	***	***
January 2022	***	***
February 2022	***	***
March 2022	***	***
April 2022	***	***
May 2022	***	***
June 2022	***	***
July 2022	***	***
August 2022	***	***
September 2022	***	***
October 2022	***	***
November 2022	***	***
December 2022	***	***
January 2023	***	***
February 2023	***	***
March 2023	***	***
April 2023	***	***
May 2023	***	***
June 2023	***	***
July 2023	***	***
August 2023	***	***
September 2023	***	***
October 2023	***	***
November 2023	***	***
December 2023	***	***
January 2024	***	***
February 2024	***	***
March 2024	***	***
April 2024	***	***

Source: ***, accessed May 23, 2024. ***.

Transportation costs to the U.S. market

Transportation costs for HCCIGM shipped from India to the United States averaged 9.2 percent during 2023. These estimates were derived from official import data and represent the transportation and other charges on imports.[2]

U.S. inland transportation costs

*** reported that they typically arrange transportation to their customers. Magotteaux reported U.S. inland transportation costs of *** percent, Vega reported *** percent, and Molycop reported *** percent. Magotteaux typically ships HCCIGM by truck (either in the back of a tip truck, in drums, or in one-metric-ton bags) from its production facility in Pulaski, Tennessee, although for longer distances such as shipping to Nevada, rail may be used.[3]

Pricing practices

Pricing methods

Magotteaux sells to mining companies on either a spot basis or through informal contract arrangements, which may specify quantities and typically involve quarterly price adjustments for steel scrap and ferrochrome, based on the previous three months' raw material pricing. The raw material price adjustments "may be subject to additional negotiation" and Magotteaux may also attempt to adjust prices annually for inflation.[4] Magotteaux's sales to cement customers are typically on a spot basis although it has a small amount of contract sales.[5]

[2] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2023 and then dividing by the customs value based on the HTS statistical reporting number 7325.91.0000.

[3] Conference transcript, p. 80 (Hannemann); Petition Volume 1, p. 15.

[4] Conference transcript, pp. 18-19, 46-49 (Jacaruso).

[5] Conference transcript, p. 22 (Tallent).

***.[6] Magotteaux reported setting prices ***, Vega reporting *** and Molycop reported *** (table V-2).

Table V-2
HCCIGM: Count of firms' reported price setting methods

Method	U.S. producer	Importers
Transaction-by-transaction	***	***
Contract	***	***
Set price list	***	***
Other	***	***
Responding firms	1	2

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

Note: The sum of responses down may not add up to the total number of responding firms as each firm was instructed to check all applicable price setting methods employed. Magotteaux is not included in the importer column in this table.

Magotteaux's sales were mainly via *** (table V-3).[7] ***.

Importer Vega reported that ***.

[6] AIA/Vega's postconference brief, appendix, p. 6.

[7] ***. Magotteaux's postconference brief, Answers to staff questions, p. 17.

Table V-3
HCCIGM: Firms' shares of commercial U.S. shipments by type of sale, 2023

Share in percent

Type of sale	U.S. producer	Subject importers
Long-term contracts	***	***
Annual contracts	***	***
Short-term contracts	***	***
Spot sales	***	***
Total	100.0	100.0

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

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

Sales terms and discounts

The U.S. producer and importers typically ***. Firms generally reported ***, although Magotteaux reported ***." Vega reported ***.

Price data

The Commission requested the U.S. producer and importers to provide quarterly data for the total quantity and f.o.b. value of the following HCCIGM products shipped to unrelated U.S. customers during January 2021 to December 2023.

Product 1.-- Cast iron grinding media with a nominal diameter of 50mm/2 inches and chrome content between 16 and 23 percent

Product 2.-- Cast iron grinding media with a nominal diameter of 40mm/1.5 inches and chrome content between 16 and 23 percent

Product 3.-- Cast iron grinding media with a nominal diameter of 25mm/1 inch and chrome content between 9.5 and 13.5 percent

Product 4.-- Cast iron grinding media with a nominal diameter of 90mm/3.5 inches and chrome content between 15.5 and 19 percent

One U.S. producer and two importers provided usable pricing data for sales of the requested products, although not all firms reported pricing for all products for all quarters.[8] [9] Pricing data reported by these firms accounted for approximately *** percent of U.S. producers' U.S. shipments of HCCIGM and *** percent of U.S. shipments of subject imports from India in 2023.[10] [11]

Price data for products 1-4 are presented in tables V-4 to V-7 and figures V-2 to V-5.[12]

[8] Importer pricing data were reported by Vega, which accounted for *** percent of the quantity of pricing data reported, and Molycop, ***.

[9] Per-unit pricing data are calculated from total quantity and total value data provided by U.S. producers and importers. The precision and variation of these figures may be affected by rounding, limited quantities, and producer or importer estimates.

[10] Pricing coverage is based on U.S. shipments reported in questionnaires.

[11] Magotteaux sold ***. Magotteaux's postconference brief, Answers to staff questions, p. 12.

[12] AIA/Vega contends that the pricing product definitions are overly broad. AIA/Vega's postconference brief, p. 25. In response to staff questions, Magotteaux and AIA/Vega provided some price ranges for their pricing product data. See Magotteaux's postconference brief, Answers to Staff questions, pp. 16-17; AIA/Vega's postconference brief, appendix, p. 7.

Table V-4
HCCIGM: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by source and quarter

Price in dollars per short ton, quantity in short tons, margin in percent.

Period	US price	US quantity	India price	India quantity	India margin
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

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

Note: Product 1: Cast iron grinding media with a nominal diameter of 50mm/2 inches and chrome content between 16 and 23 percent.

Table V-5
HCCIGM: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by source and quarter

Price in dollars per short ton, quantity in short tons, margin in percent.

Period	US price	US quantity	India price	India quantity	India margin
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

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

Note: Product 2: Cast iron grinding media with a nominal diameter of 40mm/1.5 inches and chrome content between 16 and 23 percent.

Table V-6
HCCIGM: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by source and quarter

Price in dollars per short ton, quantity in short tons, margin in percent.

Period	US price	US quantity	India price	India quantity	India margin
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

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

Note: Product 3: Cast iron grinding media with a nominal diameter of 25mm/1 inch and chrome content between 9.5 and 13.5 percent.

Table V-7
HCCIGM: Weighted-average f.o.b. prices and quantities of domestic and imported product 4 and margins of underselling/(overselling), by source and quarter

Price in dollars per short ton, quantity in short tons, margin in percent.

Period	US price	US quantity	India price	India quantity	India margin
2021 Q1	***	***	***	***	***
2021 Q2	***	***	***	***	***
2021 Q3	***	***	***	***	***
2021 Q4	***	***	***	***	***
2022 Q1	***	***	***	***	***
2022 Q2	***	***	***	***	***
2022 Q3	***	***	***	***	***
2022 Q4	***	***	***	***	***
2023 Q1	***	***	***	***	***
2023 Q2	***	***	***	***	***
2023 Q3	***	***	***	***	***
2023 Q4	***	***	***	***	***

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

Note: Product 4: Cast iron grinding media with a nominal diameter of 90mm/3.5 inches and chrome content between 15.5 and 19 percent.

Figure V-2
HCCIGM: Weighted-average f.o.b. prices and quantities of domestic and imported product 1, by source and quarter

Price of product 1

* * * * * * *

Volume of product 1

* * * * * * *

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

Note: Product 1: Cast iron grinding media with a nominal diameter of 50mm/2 inches and chrome content between 16 and 23 percent.

Figure V-3
HCCIGM: Weighted-average f.o.b. prices and quantities of domestic and imported product 2, by source and quarter

Price of product 2

* * * * * * *

Volume of product 2

* * * * * * *

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

Note: Product 2: Cast iron grinding media with a nominal diameter of 40mm/1.5 inches and chrome content between 16 and 23 percent.

Figure V-4
HCCIGM: Weighted-average f.o.b. prices and quantities of domestic and imported product 3, by source and quarter

Price of product 3

* * * * * * *

Volume of product 3

* * * * * * *

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

Note: Product 3: Cast iron grinding media with a nominal diameter of 25mm/1 inch and chrome content between 9.5 and 13.5 percent.

Figure V-5
HCCIGM: Weighted-average f.o.b. prices and quantities of domestic and imported product 4, by source and quarter

Price of product 4

* * * * * * *

Volume of product 4

* * * * * * *

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

Note: Product 4 Cast iron grinding media with a nominal diameter of 90mm/3.5 inches and chrome content between 15.5 and 19 percent.

Price trends

Prices increased overall during 2021 to 2023, increasing from Q1 2021 to Q2 2022 and then decreasing during the remainder of the period. Table V-8 summarizes the price trends, by country and by product. Domestic price increases ranged from *** percent during 2021–2023 and import price increases ranged from *** percent.

Table V-8
HCCIGM: Summary of price data, by product and source, January 2021-December 2023

Quantity in short tons, price in dollars per short ton

Product	Source	Number of quarters	Quantity of shipments	Low price	High price	First quarter price	Last quarter price	Percent change in price over period
Product 1	United States	12	***	***	***	***	***	***
Product 1	India	12	***	***	***	***	***	***
Product 2	United States	12	***	***	***	***	***	***
Product 2	India	12	***	***	***	***	***	***
Product 3	United States	11	***	***	***	***	***	***
Product 3	India	12	***	***	***	***	***	***
Product 4	United States	12	***	***	***	***	***	***
Product 4	India	12	***	***	***	***	***	***

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

Note: Percent change column is percentage change from the first quarter 2021 to the fourth quarter in 2023.

Price comparisons

As shown in tables V-9 and V-10, prices for HCCIGM imported from India were below those for U.S.-produced HCCIGM in 39 of 47 instances (*** short tons); margins of underselling ranged from *** percent. In the remaining 8 instances (*** short tons), prices for HCCIGM from India were between *** percent above prices for the domestic product.

Table V-9
HCCIGM: Instances of underselling and overselling and the range and average of margins, by product

Quantity in short tons; margin in percent

Product	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
Product 1	Underselling	11	***	***	***	***
Product 2	Underselling	11	***	***	***	***
Product 3	Underselling	8	***	***	***	***
Product 4	Underselling	9	***	***	***	***
Total, all products	Underselling	39	***	***	***	***
Product 1	Overselling	1	***	***	***	***
Product 2	Overselling	1	***	***	***	***
Product 3	Overselling	3	***	***	***	***
Product 4	Overselling	3	***	***	***	***
Total, all products	Overselling	8	***	***	***	***

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

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Table V-10
HCCIGM: Instances of underselling and overselling and the range and average of margins, by year

Quantity in short tons; margin in percent

Year	Type	Number of quarters	Quantity	Average margin	Min margin	Max margin
2021	Underselling	11	***	***	***	***
2022	Underselling	15	***	***	***	***
2023	Underselling	13	***	***	***	***
All years	Underselling	39	***	***	***	***
2021	Overselling	5	***	***	***	***
2022	Overselling	1	***	***	***	***
2023	Overselling	2	***	***	***	***
All years	Overselling	8	***	***	***	***

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

Note: These data include only quarters in which there is a comparison between the U.S. and subject product.

Lost sales and lost revenue

The Commission requested that the U.S. producer of HCCIGM report purchasers with which they experienced instances of lost sales or revenue due to competition from imports of HCCIGM from India since January 1, 2021. Magotteaux reported that ***. Magotteaux submitted lost sales and lost revenue allegations in the petition and identified eight firms with which it lost sales or revenue (all eight were lost sales allegations, and two were also lost revenue allegations). Most allegations spanned 2022 to 2024; two spanned 2021 to 2024; and in one allegation, the lost sale was reported to have occurred in 2020.[13]

Staff contacted eight purchasers and all eight provided questionnaire responses. Responding purchasers reported purchasing 85,178 short tons of HCCIGM during 2021 to 2023 (table V-11). Six purchasers reported purchasing both domestic HCCIGM and subject imports, one purchaser (***) reported purchasing only subject imports, and one purchaser (***)[14] reported purchasing only nonsubject imports.

[13] ***.

[14] ***.

Table V-11
HCCIGM: Purchasers' reported purchases and imports, by firm and source

Quantity in short tons, Change in shares in percentage points

Purchaser	Domestic quantity	Subject quantity	All other quantity	Change in domestic share	Change in subject country share
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	32,113	52,211	854	(23.8)	24.2

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

Note: All other is all other sources (no purchaser reported purchases from unknown sources). Change is the percentage point change in the share of the firm's total purchases of domestic and/or subject country imports between first and last years. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Note: ***. ***.

During 2023, responding purchasers purchased 26.4 percent from U.S. producers, 72.9 percent from India, and 0.7 percent from nonsubject countries. When asked about changes in their purchase patterns since 2021, most firms reported a decrease in domestic purchases and an increase in subject import purchases. Explanations for decreased purchases of domestic product included domestic supply constraints, the recent entry of alternative sources into the U.S. market, supply diversification, and contract with a new supplier (***). ***. ***. ***.

Of the eight responding purchasers, seven reported that, since 2021, they had purchased imported HCCIGM from India instead of U.S.-produced product. All seven of these purchasers reported that subject import prices were lower than prices of domestic product, and three of these purchasers reported that price was a primary reason for the decision to purchase imported product rather than U.S.-produced product. Three purchasers estimated the quantity of HCCIGM from India purchased instead of domestic product; quantities ranged from *** to *** short tons (table V-12). Purchasers identified supply factors (including ensuring supply continuity, reliable supply, and ability to supply in a timely manner), quality, technical support and service, and capacity as non-price reasons for purchasing imported rather than U.S.-produced product.

Table V-12
HCCIGM: Purchasers' responses to purchasing subject imports instead of domestic product, by firm

Quantity in short tons

Purchaser	Purchased subject imports instead of domestic	Imports priced lower	Choice based on price	Quantity	Explanation
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
***	***	***	***	***	***
All firms	Yes--7; No--1	Yes--7; No--0	Yes--3; No--4	10,915	NA

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

When asked if U.S. producers had reduced prices in order to compete with lower-priced imports from India, one of the eight purchasers responded "yes"; three responded "no"; and four reported that they did not know.[15] The sole firm (***) responding "yes" reported a price reduction of 0.0 percent and provided the following explanation: ***."

In responding to the lost sales lost revenue survey, some purchasers provided additional information, as reported below.

: "."

[15] ***); No (***, ***, and ***; and Don't know (***, ***, ***, and ***).

: “.”

: “.”

: “.”

: “.”

Part VI: Financial experience of the U.S. producer

Background[1]

Magotteaux, the only U.S. producer of HCCIGM during the period of investigation, manufactures HCCIGM and castings at separate facilities within the same U.S. manufacturing plant. HCCIGM financial results and related information reported to the Commission are based on information from an accounting system designed to generate/report overall financial results on the basis of International Financial Reporting Standards ("IFRS").[2] Magotteaux's ultimate parent company is Sigdo Koppers SA, a publicly traded company headquartered in Chile.[3]

During 2021 through 2023 Magotteaux reported ***, replacement of a damaged power transformer in 2022, and the equivalent of several months of reduced production activity.[4]

Operations on HCCIGM

Table VI-1 and table VI-2 present income-and-loss data for the U.S. producer's HCCIGM operations and corresponding changes in AUVs, respectively. Table VI-3 presents a variance analysis of corresponding financial results.[5]

[1] The following abbreviations may be used in the tables and/or text of this section: generally accepted accounting principles ("GAAP"), fiscal year ("FY"), net sales ("NS"), cost of goods sold ("COGS"), selling, general, and administrative expenses ("SG&A expenses"), average unit values ("AUVs"), research and development expenses ("R&D expenses"), and return on assets ("ROA").

[2] Magotteaux's U.S. producer questionnaire, section III-2.B.4. A Magotteaux company official confirmed that HCCIGM financial results were reported on the basis of IFRS. Conference transcript, p. 66 (Haberman).

[3] Conference transcript, p. 55 (Hannemann).

[4] Magotteaux's U.S. producer questionnaire, section II-2a. Conference transcript, pp. 16, 52. (Hannemann).

[5] The Commission's variance analysis is calculated in three parts: sales variance, COGS variance, and SG&A expenses variance. Each part consists of a price variance (in the case of the sales variance) or a cost or expense variance (in the case of the COGS and SG&A expenses variance), and a volume variance. The sales or cost/expense variance is calculated as the change in unit price or per-unit cost/expense times the new volume, while the volume variance is calculated as the change in volume times the old unit price or per-unit cost/expense. As summarized at the bottom of the variance analysis, 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 expenses variances. The Commission's variance analysis is more meaningful when product mix remains the same throughout the period. As noted in the *Net sales* section below, Magotteaux's HCCIGM product mix remained essentially unchanged during the period.

Table VI-1
HCCIGM: U.S. producer's results of operations, by item and period

Quantity in short tons; value in 1,000 dollars; shares and ratios in percent, unit values in dollars per short ton; count in number of firms reporting

Item	Measure	2021	2022	2023
Total net sales	Quantity	***	***	***
Total net sales	Value	***	***	***
COGS: Raw materials	Value	***	***	***
COGS: Direct labor	Value	***	***	***
COGS: Other factory costs	Value	***	***	***
COGS: Total	Value	***	***	***
Gross profit or (loss)	Value	***	***	***
SG&A expenses	Value	***	***	***
Operating income or (loss)	Value	***	***	***
Interest expense	Value	***	***	***
All other expenses	Value	***	***	***
All other income	Value	***	***	***
Net income or (loss)	Value	***	***	***
Depreciation/amortization included above	Value	***	***	***
Estimated cash flow from operations	Value	***	***	***
COGS: Raw materials	Ratio to NS	***	***	***
COGS: Direct labor	Ratio to NS	***	***	***
COGS: Other factory costs	Ratio to NS	***	***	***
COGS: Total	Ratio to NS	***	***	***
Gross profit or (loss)	Ratio to NS	***	***	***
SG&A expenses	Ratio to NS	***	***	***
Operating income or (loss)	Ratio to NS	***	***	***
Net income or (loss)	Ratio to NS	***	***	***
COGS: Raw materials	Share	***	***	***
COGS: Direct labor	Share	***	***	***
COGS: Other factory costs	Share	***	***	***
COGS: Total	Share	***	***	***
Total net sales	Unit value	***	***	***
COGS: Raw materials	Unit value	***	***	***
COGS: Direct labor	Unit value	***	***	***
COGS: Other factory costs	Unit value	***	***	***
COGS: Total	Unit value	***	***	***
Gross profit or (loss)	Unit value	***	***	***
SG&A expenses	Unit value	***	***	***
Operating income or (loss)	Unit value	***	***	***
Net income or (loss)	Unit value	***	***	***
Operating losses	Count	***	***	***
Net losses	Count	***	***	***
Data	Count	1	1	1

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

Note: Shares represent the share of COGS. Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Table VI-2
HCCIGM: Changes in AUVs between comparison periods

Changes in percent

Item	2021-23	2021-22	2022-23
Total net sales	***	***	***
COGS: Raw materials	***	***	***
COGS: Direct labor	***	***	***
COGS: Other factory costs	***	***	***
COGS: Total	***	***	***

Table continued.

Table VI-2 Continued
HCCIGM: Changes in AUVs between comparison periods

Changes in dollars per short ton

Item	2021-23	2021-22	2022-23
Total net sales	***	***	***
COGS: Raw materials	***	***	***
COGS: Direct labor	***	***	***
COGS: Other factory costs	***	***	***
COGS: Total	***	***	***
Gross profit or (loss)	***	***	***
SG&A expenses	***	***	***
Operating income or (loss)	***	***	***
Net income or (loss)	***	***	***

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

Note: Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

Table VI-3
HCCIGM: Variance analysis on the operations of the U.S. producer between comparison periods

Value in 1,000 dollars

Item	2021-23	2021-22	2022-23
Net sales price variance	***	***	***
Net sales volume variance	***	***	***
Net sales total variance	***	***	***
COGS cost variance	***	***	***
COGS volume variance	***	***	***
COGS total variance	***	***	***
Gross profit variance	***	***	***
SG&A cost variance	***	***	***
SG&A volume variance	***	***	***
SG&A total variance	***	***	***
Operating income price variance	***	***	***
Operating income cost variance	***	***	***
Operating income volume variance	***	***	***
Operating income total variance	***	***	***

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

Note: These data are derived from the data in table VI-1. Unfavorable variances (which are negative) are shown in parentheses, all others are favorable (positive).

Net sales

Commercial sales of HCCIGM (***) accounted for *** sales during the period of investigation.[6] Because commercial sales are the *** sale category, a single sales line item is presented in the relevant tables above.

Quantity

While both sales categories (***) declined in 2022 and in 2023, most of the decline in 2022 was due to reduced ***.[7] In 2023, the overall decline was primarily due to reduced ***.

[6] *** tolling activity was reported. Magotteaux's U.S. producer questionnaire, section II-6.

[7] Magotteaux attributed the decline in ***. Magotteaux's postconference brief, Answers to staff questions, p. 18.

Value

Generally HCCIGM sales are made on a standalone basis; i.e., they are not bundled with other products such as castings.[8] HCCIGM sales that include a raw material passthrough component are generally limited to non-spot sales.[9]

In 2022 and notwithstanding the above-noted decline in total sales quantity, HCCIGM total net sales value increased to its highest level of the period, reflecting a relatively large increase in the total net sales value of ***, which more than offset the corresponding decline in ***. In 2023, total net sales value declined to its lowest level of the period, reflecting a large decline in the net sales value of *** and a continued decline in ***.

As shown in the sales section of the variance analysis (table VI-3), the increase in total net sales value in 2022 was due to a positive price variance that more than offset the corresponding negative sales volume variance; the source of the 2022 positive price variance being a *** percent increase in average net sales value (see table VI-2). The subsequent decline in total net sales value in 2023 reflects the combination of a negative price variance, the larger factor, and a negative sales volume variance. As shown in table VI-2, average net sales value declined by *** percent in 2023.[10] The absence of any notable change in HCCIGM product mix during the period, as reported by Magotteaux company officials,[11] indicates that changes in average net sales value primarily reflect variations in underlying prices.

[8] Conference transcript, p. 55 (Jacaruso), pp. 55-56 (Tallent). As described by a Magotteaux company official, "When you're talking about a ball mill, castings are protecting the shell of the ball mill, and you have the balls, the grinding media, tumbling inside the ball mill. So we're supplying all the internals for these mills. So it's tied together, but the procurement companies . . . can be separate procurement groups for the grinding media, and the casting side." Conference transcript, p. 64 (Tallent).

[9] Conference transcript, pp. 57-58 (Jacaruso). ***. Magotteaux's postconference brief, Answers to staff questions, p. 17.

[10] In 2022, the increase in average net sales value reflects increases in average *** that were of similar magnitude. In 2023, the decline in overall average net sales value reflects a relatively large decline in average *** value, partially offset by a somewhat higher average *** value.

[11] Conference transcript, p. 57 (Hannemann, Jacaruso, Tallent).

Cost of goods sold and gross profit or loss

Raw materials

Raw material costs are the largest component of HCCIGM COGS (ranging from a low of *** percent of COGS (2022) to a high of *** percent (2021)). In 2023 steel scrap accounted for *** percent of total raw material costs, and ferrochrome accounted for *** percent. Other raw material inputs, such as ***, accounted for the remainder (*** percent). Magotteaux reported that it *** purchase inputs from related suppliers.[12]

In conjunction with the above-noted declines in total net sales quantity, total HCCIGM raw material costs declined in 2022 and 2023. Average per short ton raw material cost, however, increased *** percent in 2022 and then declined *** percent in 2023 (see table VI-2).[13] While directionally the same, the percentage changes in average raw materials were less pronounced as compared to the percentage changes in average net sales value.

Direct labor cost and other factory costs

HCCIGM production operations are reportedly capital intensive, reflecting a high degree of fixed costs. As a result, the level of corresponding capacity utilization has an important impact on COGS and financial results.[14] As shown in part III of this report (figure III-1), Magotteaux's grinding media capacity utilization declined from *** percent in 2021 to *** percent in 2022 and then *** percent in 2023. With regard to capacity utilization a Magotteaux company official stated, "Ideally a facility like ours, and from our previous experience . . . typically what we'd like to be doing is at least running at 85 percent."[15]

[12] Magotteaux's U.S. producer questionnaire, section III-5.

[13] While there were reportedly no supply disruptions with respect to primary raw materials, a Magotteaux company official noted that scrap steel and ferrochrome prices increased substantially during the period. Conference transcript, p. 52 (Hannemann). The company does not enter into raw material forward contracts or engage in hedging activity related to raw materials. Conference transcript, p. 59 (Haberman).

[14] As it relates to the capital intensive nature of the production process, a Magotteaux company official stated that "fewer tons running through our facility means that each ton we do produce carries a larger portion of our fixed costs." Conference transcript, p. 24 (Tallent). Another Magotteaux company official stated, "The manufacture of high chrome cast iron grinding media is a capital-intensive industry with high fixed costs. A company like ours needs to sell as much as it can in order to spread this fixed cost over more product, and the volume of sales over which we can spread these costs determines the company's profitability." Conference transcript, p. 25 (Haberman).

[15] Conference transcript, p. 65 (Hannemann).

Direct labor cost, the smallest component of HCCIGM COGS, ranged from a low of *** percent of COGS (2021) to a high of *** percent (2022). Other factory costs, the second largest component of HCCIGM COGS, ranged from a low of *** percent of COGS (2021) to a high of *** percent (2022).

During the period Magotteaux reported that notable changes in HCCIGM COGS were ***.[16] In response to declining sales, Magotteaux reported that it ***.[17] The direct and indirect costs associated with plant shutdowns (***) are included in ***.

Unlike total raw material costs, in most instances a variable cost expected to reflect the directional pattern of sales quantity, total direct labor cost and total other factory costs both increased somewhat in 2022 and then declined in 2023, remaining above the levels reported in 2021. In general, this pattern is consistent with a mixed cost profile in which direct labor cost and other factory costs reflect a combination of variable and fixed costs.[18] In conjunction with a relatively large decline in capacity utilization in 2022 and a further decline in 2023 (see figure III-2), average HCCIGM direct labor cost and average other factory costs increased notably in 2022. While declining somewhat in 2023, both remained above the levels reported in 2021.

COGS and gross profit or loss

Notwithstanding declines in total net sales quantity in 2022, total COGS increased, reflecting relatively large increases in all components of average COGS (see table VI-2). In 2023, total COGS declined to its lowest level, reflecting a continued reduction in total net sales

[16] Magotteaux's postconference brief, Answers to staff questions, p. 19.

[17] Magotteaux's postconference brief, Answers to staff questions, pp. 19-20. ***. Ibid.

[18] Magotteaux considers a relatively large share of direct labor cost to be fixed (*** percent (2021), *** percent (2022), *** percent (2023)) with the rest variable. Other factory costs reflect a somewhat *** level of fixed costs (*** percent (2021), *** percent (2022), *** percent (2023)). When considered together as conversion costs (i.e., direct labor cost and other factory costs combined) fixed costs accounted for somewhat over half of total conversion costs (*** percent (2021), *** percent (2022), *** percent (2023)). Ibid; USITC auditor preliminary-phase notes.

quantity and a decline in average COGS, all components of COGS declining by varying magnitudes in that year (see table VI-2).

Gross profit ratio (total gross profit or loss divided by total net sales value) was marginally above breakeven in 2021, expanded somewhat in 2022, and then contracted to a gross loss in 2023. As indicated in table VI-2, the modest expansion in gross profit ratio in 2022 reflects a percentage increase in average net sales value that exceeded the corresponding percentage increase in average COGS. The level of total gross profit in 2022 in turn reflects the combined effect of the improvement in gross profit ratio and increase in total net sales value. The subsequent contraction to a gross loss ratio in 2023 reflects a percentage decline in average net sales value that exceeded the corresponding percentage decline in average COGS (see table VI-2); the level of total gross loss reflecting both the gross loss ratio itself and corresponding decline in total net sales value.

SG&A expenses and operating income or loss

Magotteaux's total HCCIGM SG&A expenses remained within a relatively narrow range throughout the period, increasing to their highest level in 2022 and then declining in 2023, but remaining above the level in 2021. SG&A expense ratios (total SG&A expenses divided by total net sales value) increased overall but also remained within a relatively narrow range.

As noted above the total gross profit generated in 2021 was only marginally above break even and was therefore more than offset by corresponding SG&A expenses, yielding an operating loss in that year. SG&A expenses were additive to the reported gross loss in 2023, yielding an operating loss in that year as well. The only operating income of the period was reported in 2022, reflecting a gross profit ratio that was somewhat higher than corresponding SG&A expense ratio. In addition to a positive operating profit ratio, the level of total operating income in 2022 also reflects the increase in total net sales value.

Interest expense, other expenses and income, and net income or loss

HCCIGM net results, ***, were lower than corresponding operating results due to the presence of interest expense and other expenses included in net results.[19] Directionally and on a relative basis, operating and net results both improved in 2022 and declined in 2023. *** non-recurring items were included in HCCIGM financial results.[20]

Capital expenditures, R&D expenses, total net assets and ROA

Table VI-4 presents Magotteaux's HCCIGM-related capital expenditures, R&D expenses, net assets, and ROA.[21] Table VI-5 presents corresponding narrative explanations of the nature, focus, and significance of capital expenditures, R&D expenses, and any notable changes in asset levels.

Table VI-4
HCCIGM: U.S. producer's capital expenditures, R&D expenses, total net assets, and ROA, by item and period

Value in 1,000 dollars, ratio in percent

Item	2021	2022	2023
Capital expenditures	***	***	***
R&D expenses	***	***	***
Total net assets	***	***	***
ROA	***	***	***

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

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

[19] ***. Magotteaux's postconference brief, Answers to staff questions, p. 20.

[20] Magotteaux's U.S. producer questionnaire, section III-10a-b.

[21] ROA is calculated here as operating results divided by total assets. With regard to a company's overall operations, staff notes that a total asset value (i.e., the bottom line value on the asset side of a company's balance sheet) reflects an aggregation of a number of current and non-current assets, which, in many instances, are not product specific. The ability of the U.S. producer to assign total asset values to a discrete product line affects the meaningfulness of calculated operating return on net assets.

Table VI-5
HCCIGM: U.S. producer's narrative description of its capital expenditures, R&D expenses, and net assets

Firm	Narrative
Capital expenditures	***
R&D expenses	***
Net assets	***

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

Capital expenditures increased to their highest level in 2022 and then declined in 2023, remaining above the level reported in 2021. Magotteaux attributed the ***.[22]

In conjunction with lower overall HCCIGM production and sales activity, the pattern of declining total net assets is generally consistent with reductions in underlying assets such as inventory (raw material, work in progress, finished goods) and accounts receivables.

Capital and investment

The Commission requested the U.S. producer to describe any actual or potential negative effects of imports of HCCIGM from India on its growth, investment, ability to raise capital, development and production efforts, or the scale of capital investments.

Table VI-6 presents the effects reported, and table VI-7 provides the U.S. producer's narrative descriptions.

[22] Magotteaux's postconference brief, Answers to staff questions, p. 20.

Table VI-6
HCCIGM: Count indicating actual and anticipated negative effects of imports from subject sources on investment, growth, and development since January 1, 2021, by effect

Number of firms reporting

Effect	Category	Count
Cancellation, postponement, or rejection of expansion projects	Investment	***
Denial or rejection of investment proposal	Investment	***
Reduction in the size of capital investments	Investment	***
Return on specific investments negatively impacted	Investment	***
Other investment effects	Investment	***
Any negative effects on investment	Investment	***
Rejection of bank loans	Growth	***
Lowering of credit rating	Growth	***
Problem related to the issue of stocks or bonds	Growth	***
Ability to service debt	Growth	***
Other growth and development effects	Growth	***
Any negative effects on growth and development	Growth	***
Anticipated negative effects of imports	Future	***

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

Table VI-7
HCCIGM: U.S. producer Magotteaux's narratives relating to actual and anticipated negative effects of imports on investment, growth, and development, since January 1, 2021

Item	Firm name and accompanying narrative response
Return on specific investments negatively impacted	***
Other (effects of imports on investment)	***
Other (effects of imports on growth and development)	***
Anticipated effects of imports	***

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

Part VII: Threat considerations and information on nonsubject countries

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

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

[1] Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "The Commission shall consider {these factors} . . . as a whole in making a determination of whether further dumped or subsidized imports are imminent and whether material injury by reason of imports would occur unless an order is issued or a suspension agreement is accepted under this title. The presence or absence of any factor which the Commission is required to consider . . . shall not necessarily give decisive guidance with respect to the determination. Such a determination may not be made on the basis of mere conjecture or supposition."

(VII) in any investigation under this title which involves imports of both a raw agricultural product (within the meaning of paragraph (4)(E)(iv)) and any product processed from such raw agricultural product, the likelihood that there will be increased imports, by reason of product shifting, if there is an affirmative determination by the Commission under section 705(b)(1) or 735(b)(1) with respect to either the raw agricultural product or the processed agricultural product (but not both),

(VIII) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the domestic like product, and

(IX) any other demonstrable adverse trends that indicate the probability that there is likely to be material injury by reason of imports (or sale for importation) of the subject merchandise (whether or not it is actually being imported at the time).[2]

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

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

The industry in India

The Commission issued foreign producers' or exporters' questionnaires to nine firms believed to produce and/or export HCCIGM from India.[3] Usable responses to the Commission's questionnaires were received from one firm, AIA. This firm's exports to the United States accounted for *** U.S. imports of grinding media from India in 2023. According to estimates requested of the responding producer in India, the production of HCCIGM in India reported in questionnaires accounts for approximately *** percent of overall production of HCCIGM in India.[4] Table VII-1 presents information on the HCCIGM operations of the responding producer and exporter in India.

Table VII-1
HCCIGM: Summary data for producers in India, 2023

Quantity in short tons; share in percent

Producer	Production (short tons)	Share of reported production (percent)	Exports to the United States (short tons)	Share of reported exports to the United States (percent)	Total shipments (short tons)	Share of firm's total shipments exported to the United States (percent)
AIA	***	***	***	***	***	***

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

Table VII-2 presents events in India's industry since January 1, 2021.

Table VII-2
HCCIGM: Important industry events in India since 2021

Item	Firm	Event
Expansion	AIA Engineering Limited	Expansion at the Kerala GIDC facility in Gujarat near Ahmedabad for added grinding media capacity (to increase capacity to 80,000 MT) is under way. The capital expenditure is 250 Crores (approximately $120,0000) and the project is projected to be completed in December 2024.

Source: AIA Engineering Limited, 33rd Annual Report 2022-23, p. 73, https://aiaengineering.com/wp-content/uploads/2023/08/AIA-Engineering-AR-2022-23.pdf.

[3] These firms were identified through a review of information submitted in the petition and presented in third-party sources.

[4] AIA estimates that it accounts for *** percent of exports to the United States from India of HCCIGM in 2023. AIA's foreign producer questionnaire, section II-7b.

Changes in operations

Producers in India were asked to report any change in the character of their operations or organization relating to the production of HCCIGM since 2021. AIA indicated in its questionnaire that it ***.

Operations on HCCIGM

Table VII-3 presents data on AIA's installed capacity, practical overall capacity, and practical HCCIGM capacity and production on the same equipment. AIA's installed overall capacity *** from 2021 to 2022, then increasing by *** percent from 2022 to 2023.[5] Practical overall capacity and practical HCCIGM capacity *** throughout the period reported.[6] Both practical overall production and practical HCCIGM production increased steadily throughout the period reported, with net increases of *** percent and *** percent, respectively, during 2021-23.[7] With practical overall capacity and practical HCCIGM capacity ***, while both practical overall and practical HCCIGM production increased from 2021-23, capacity utilization thereby increased, as well. Practical overall capacity utilization increased by *** percentage points from 2021 to 2023, as practical HCCIGM capacity utilization increased by *** percentage points over the same period.

[5] In regards to the 2022-23 increase in installed overall capacity, AIA noted that ***. Email from ***, May 20, 2024.

[6] AIA ***. AIA's foreign producer questionnaire, section II-3d.

[7] ***. AIA's foreign producer questionnaire, sections II-3 and II-4. Email from ***, May 20, 2024.

Table VII-3
HCCIGM: Indian producer AIA's installed and practical capacity and production on the same equipment as in-scope production, by period

Quantity in short tons

Item	Measure	2021	2022	2023
Installed overall	Capacity	***	***	***
Installed overall	Production	***	***	***
Installed overall	Utilization	***	***	***
Practical overall	Capacity	***	***	***
Practical overall	Production	***	***	***
Practical overall	Utilization	***	***	***
Practical HCCIGM	Capacity	***	***	***
Practical HCCIGM	Production	***	***	***
Practical HCCIGM	Utilization	***	***	***

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

Table VII-4 presents information on the HCCIGM operations of AIA. AIA's capacity *** during 2021-23 and is projected to increase by *** percent from 2024 to 2025 as a result of a planned brownfield expansion in 2025.[8] Production of HCCIGM increased annually from 2021 to 2023, for an overall increase of *** percent, and is projected to further increase during 2023-25, for an increase of *** percent. AIA's projected production in 2025, which coincides with the aforementioned planned capacity expansion, will be *** percent higher than 2021 production levels. AIA's HCCIGM capacity utilization rate also increased annually from 2021-23, for an overall rise of *** percentage points. Capacity utilization is projected to further increase during 2023-24 by *** percentage points, and then *** during 2024-25, as capacity and production increase in tandem.

Home market shipments increased irregularly during 2021-23, for an increase of *** percent, and are projected to *** in 2024 and 2025.[9] Home market shipments as a share of total shipments likewise increased irregularly from 2021 to 2023, an increase of *** percentage points, and are projected to decline from 2023 to 2025, with home market shipments as a share of total shipments in 2025 being *** percentage points lower as

[8] AIA's foreign producer questionnaire, section II-9. In its postconference brief, AIA noted, "AIA's Board has approved a brownfield capacity addition that will offer an additional installed capacity of approximately *** and practical capacity of approximately ***. This extra capacity will allow AIA to fulfil{l} strong demand from its home country, India, which is in midst of a massive infrastructure investment, as well from its customers in more than 100 countries around the world…" AIA/Vega's postconference brief, Answers to staff questions, p. 2.

[9] As AIA ***. AIA's foreign producer questionnaire, section II-9.

compared to 2021.[10] AIA's exports of HCCIGM to the United States followed a similar trend to home market shipments, increasing irregularly from 2021 to 2023. Exports to the United States first increased by *** percent from 2021-22, then decreased by *** percent during 2022-23, for a net increase of *** percent from 2021 to 2023. Exports to the United States are then projected to decrease by *** percent during 2023-24, and *** from 2024-25. As a share of total shipments, exports to the United States increased irregularly by *** percent from 2021 to 2023, but are projected to decrease annually from 2023 to 2025, with projected exports to the United States as a share of total shipments in 2025 showing a *** net decline compared to 2021.

The quantity of AIA's exports to all other markets increased annually from 2021 to 2023 for an overall increase of *** percent.[11] Exports to all other markets are then projected to continue to increase in 2024 and 2025, with exports to all other markets in 2025 representing a *** percent increase as compared to 2021.[12] Unlike home market shipments and exports to the United States, exports to all other markets as a share of total imports decreased irregularly during 2021-23, for an overall decline of *** percentage points. Exports to all other markets are projected to increase, however, in 2024 and 2025, with exports to all other markets in 2025 projected to be *** points higher than in 2021.

Contrary to production, home market shipments, and export shipments, AIA's end-of-period inventories of HCCIGM decreased during 2021-23. Inventories first decreased by *** percent during 2021-22, then increased by *** percent during 2022-23, for an overall decline of *** percent. Inventories are then projected to decrease in 2024, before increasing in 2025, with 2025 inventories *** percent lower compared to 2021. As a ratio to production and total shipments, end-of-period inventories was highest in 2021, and is projected to decrease by *** and *** percentage points, respectively, in 2025 compared to 2021.

[10] Commission staff collected data in the foreign producer questionnaire on exports to the United States of HCCIGM not produced by the responding firm (i.e., resales of HCCIGM). AIA reported ***. AIA's foreign producer questionnaire, section II-10.

[11] AIA noted, ***. AIA's foreign producer questionnaire, section II-8b.

[12] Regarding exports of HCCIGM to all other markets, AIA noted that, ***. AIA's foreign producer questionnaire, section II-9.

Table VII-4
HCCIGM: Data on industry in India, by period

Quantity in short tons; ratio and share in percent

Item	2021	2022	2023	Projection 2024	Projection 2025
Capacity	***	***	***	***	***
Production	***	***	***	***	***
End-of-period inventories	***	***	***	***	***
Home market shipments	***	***	***	***	***
Exports to the United States	***	***	***	***	***
Exports to all other markets	***	***	***	***	***
Export shipments	***	***	***	***	***
Total shipments	***	***	***	***	***
Capacity utilization ratio	***	***	***	***	***
Inventory ratio to production	***	***	***	***	***
Inventory ratio to total shipments	***	***	***	***	***
Home market shipments share	***	***	***	***	***
Exports to the United States share	***	***	***	***	***
Exports to all other markets share	***	***	***	***	***
Export shipments share	***	***	***	***	***
Total shipments share	100.0	100.0	100.0	100.0	100.0

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

Alternative products

As shown in table VII-5, AIA ***. HCCIGM accounted for *** of AIA's overall production in 2021, and for *** of AIA's production in 2022 and 2023. ***.[13]

Table VII-5
HCCIGM: Indian producer AIA's overall production on the same equipment as subject production, by product type and period

Quantity in short tons; share in percent

Product type	Measure	2021	2022	2023
HCCIGM	Quantity	***	***	***
Other chrome cast iron grinding media	Quantity	***	***	***
Forged grinding media	Quantity	***	***	***
Other products	Quantity	***	***	***
All out-of-scope products	Quantity	***	***	***
All products	Quantity	***	***	***
HCCIGM	Share	***	***	***
Other chrome cast iron grinding media	Share	***	***	***
Forged grinding media	Share	***	***	***
Other products	Share	***	***	***
All out-of-scope products	Share	***	***	***
All products	Share	100.0	100.0	100.0

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

Note: Zeroes, null values, and undefined calculations are suppressed and shown as "---".

Exports

According to GTA, the leading export markets for grinding balls and similar articles for mills, cast, of iron or steel, other than nonmalleable cast iron ("grinding balls") from India are Australia, Brazil, and Ghana (table IV-6). During 2023, the United States was the fourth-largest export market for grinding balls from India, accounting for 10.4 percent. Australia was the largest export market for grinding balls from India, accounting for 17.6 percent, followed by Brazil at 15.5 percent, and Ghana at 13.4 percent.

[13] AIA stated, ***. AIA's foreign producer questionnaire, section II-4b.

Table VII-6
Grinding balls and similar articles for mills, cast, of iron or steel, other than nonmalleable cast iron: Exports from India, by period

Quantity in short tons; value in 1,000 dollars

Destination market	Measure	2021	2022	2023
United States	Quantity	22,940	27,790	23,146
Australia	Quantity	40,416	41,605	39,209
Brazil	Quantity	11,662	8,793	34,599
Ghana	Quantity	25,165	23,134	29,727
Canada	Quantity	5,786	10,367	11,561
Mexico	Quantity	11,474	13,862	9,418
Tanzania	Quantity	5,003	8,961	6,050
Russia	Quantity	1,281	2,814	5,636
Papua New Guinea	Quantity	5,406	6,336	5,419
Philippines	Quantity	6,511	3,342	5,355
Netherlands	Quantity	6,403	4,267	5,059
Bahrain	Quantity	2,292	3,985	4,890
All other exporters	Quantity	55,580	61,243	42,554
All reporting exporters	Quantity	199,920	216,500	222,624
United States	Value	25,262	37,378	26,390
Australia	Value	43,771	50,597	43,109
Brazil	Value	15,047	13,877	41,966
Ghana	Value	27,504	30,235	35,114
Canada	Value	6,262	13,264	14,251
Mexico	Value	12,265	17,796	10,795
Tanzania	Value	5,131	12,324	7,944
Russia	Value	1,288	3,320	6,850
Papua New Guinea	Value	5,804	8,156	5,884
Philippines	Value	6,317	4,008	5,745
Netherlands	Value	7,482	5,523	6,099
Bahrain	Value	2,472	5,348	5,744
All other exporters	Value	56,310	74,759	50,206
All reporting exporters	Value	214,915	276,586	260,097

Table continued.

Table VII-6 Continued
Grinding balls and similar articles for mills, cast, of iron or steel, other than nonmalleable cast iron: Exports from India, by period

Unit value in dollars per short ton; share in percent

Destination market	Measure	2021	2022	2023
United States	Unit value	1,101	1,345	1,140
Australia	Unit value	1,083	1,216	1,099
Brazil	Unit value	1,290	1,578	1,213
Ghana	Unit value	1,093	1,307	1,181
Canada	Unit value	1,082	1,279	1,233
Mexico	Unit value	1,069	1,284	1,146
Tanzania	Unit value	1,025	1,375	1,313
Russia	Unit value	1,006	1,180	1,215
Papua New Guinea	Unit value	1,074	1,287	1,086
Philippines	Unit value	970	1,200	1,073
Netherlands	Unit value	1,169	1,294	1,206
Bahrain	Unit value	1,079	1,342	1,175
All other exporters	Unit value	1,013	1,221	1,180
All reporting exporters	Unit value	1,075	1,278	1,168
United States	Share of quantity	11.5	12.8	10.4
Australia	Share of quantity	20.2	19.2	17.6
Brazil	Share of quantity	5.8	4.1	15.5
Ghana	Share of quantity	12.6	10.7	13.4
Canada	Share of quantity	2.9	4.8	5.2
Mexico	Share of quantity	5.7	6.4	4.2
Tanzania	Share of quantity	2.5	4.1	2.7
Russia	Share of quantity	0.6	1.3	2.5
Papua New Guinea	Share of quantity	2.7	2.9	2.4
Philippines	Share of quantity	3.3	1.5	2.4
Netherlands	Share of quantity	3.2	2.0	2.3
Bahrain	Share of quantity	1.1	1.8	2.2
All other exporters	Share of quantity	27.8	28.3	19.1
All reporting exporters	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 7325.91 as reported by various national statistical authorities in the Global Trade Atlas Suite database, accessed May 13, 2024.

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. Zeroes, null values, and undefined calculations are suppressed and shown as “---“. United States is shown at the top followed by the countries under investigation, all remaining top exporting countries in descending order of 2023 data.

Note: Chile reported data in net kilograms (KN), which was treated as kilograms and converted to short tons. The Kenya GTA data series was used and duplicates deleted.

U.S. inventories of imported merchandise

Table VII-7 presents data on U.S. importers' reported inventories of HCCIGM. U.S. importers' inventories of imports from India increased steadily by *** percent from 2021 to 2023, while inventories from nonsubject sources increased irregularly by *** percent over the same period. Inventories from India never accounted for less than *** percent of inventories of imports from all sources throughout the period reported. As a ratio to imports, U.S. shipments of imports, and total shipments of imports, inventories fluctuated from 2021 to 2023 but stayed within a range of *** to *** percent.

Table VII-7
HCCIGM: U.S. importers' inventories and their ratio to select items, by source and period

Quantity in short tons; ratio in percent

Measure	Source	2021	2022	2023
Inventories quantity	India	***	***	***
Ratio to imports	India	***	***	***
Ratio to U.S. shipments of imports	India	***	***	***
Ratio to total shipments of imports	India	***	***	***
Inventories quantity	Nonsubject	***	***	***
Ratio to imports	Nonsubject	***	***	***
Ratio to U.S. shipments of imports	Nonsubject	***	***	***
Ratio to total shipments of imports	Nonsubject	***	***	***
Inventories quantity	All	***	***	***
Ratio to imports	All	***	***	***
Ratio to U.S. shipments of imports	All	***	***	***
Ratio to total shipments of imports	All	***	***	***

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

U.S. importers' outstanding orders

The Commission requested importers to indicate whether they imported or arranged for the importation of HCCIGM from India after December 31, 2023. The three responding importers' reported data is presented in table VII-8. Subject imports accounted for *** percent of U.S. importers' reported arranged imports. *** were the only firms which reported arranged imports from India, with *** accounting for *** percent of the total. Conversely, *** accounted for *** of arranged imports from nonsubject sources, which consisted of ***.

Table VII-8
HCCIGM: U.S. importers' arranged imports, by source and period

Quantity in short tons

Source	Jan-Mar 2024	Apr-Jun 2024	Jul-Sep 2024	Oct-Dec 2024	Total
India	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

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

Third-country trade actions

Table VII-9 presents information on third-country antidumping duty orders on HCCIGM products from India. Canada and Brazil have enforced specific duty rates on HCCIGM from India.

Table VII-9
HCCIGM: Third-country orders on subject country

Subject country	Country imposing orders	Product description	Imposition date	Duty rates
India	Canada	Grinding media balls (excluding forged grinding media balls)	Countervailed: August 27, 2021. Anti-dumping: September 4, 2021	Countervailing: 6.3 percent; Other 34.5 percent. Anti-dumping: 15.7 percent; Other 38.7 percent.
India	Brazil	Grinding media balls (excluding forged grinding media balls)	Countervailed: April 1, 2019. Anti-dumping: June 19, 2018.	Countervailing: 2 percent. Anti-dumping: 9.8 percent; Other 37.7 percent.

Sources: World Trade Organization ("WTO"), Semi-Annual Report under Article 25.11 of the Agreement: Canada, G/SCM/N/386/CAN, p. 2, April 22, 2022, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SCM/N386CAN.pdf&Open=True, accessed May 7, 2024; World Trade Organization ("WTO"), Semi-Annual Report under Article 16.4 of the Agreement: Canada, G/ADP/N/364/CAN, p. 3, April 14, 2022, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/ADP/N364CAN.pdf&Open=True, accessed May 7, 2024; World Trade Organization ("WTO"), Semi-Annual Report under Article 25.11 of the Agreement: Brazil, G/SCM/N/349/BRA, p. 2, October 24, 2019, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SCM/N349BRA.pdf&Open=True, accessed May 7, 2024; World Trade Organization ("WTO"), Semi-Annual Report under Article 16.4 of the Agreement: Brazil, G/ADP/N/314/BRA, p. 3, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/ADP/N314BRA.pdf&Open=True, accessed May 7, 2024.

Table VII-10 presents information on third-country antidumping duty orders on grinding media products from non-subject countries, including China and Thailand. India, Australia, and Chile have all enforced either ad valorem or specific duty rates on grinding media from China. India has enforced a specific duty rate on grinding media from Thailand.

Table VII-10
Grinding media: Country orders on non-subject countries

Non-subject country	Country imposing orders	Product description	Imposition date	Duty rates
China	India	Grinding media balls (excluding forged grinding media balls)	July 16, 2012, in force until July 7, 2023	Anti-dumping US $387.36 per MT
Thailand	India	Grinding media balls (excluding forged grinding media balls)	July 16, 2012, in force until July 12, 2023	Anti-dumping US $158.80-187 per MT
China	Australia	Grinding balls	September 9, 2016, in force until April 26, 2023	Anti-dumping 12.6 percent to 58.9 percent; Other 104.8 percent Countervailing 0 percent; Other 8.2 percent
China	Chile	Steel grinding balls	May 23, 2019, in force until May 23, 2020	Anti-dumping 8.7 percent to 15.3 percent; Other 5.6 percent

Sources: World Trade Organization ("WTO"), Semi-Annual Report under Article 16.4 of the Agreement: India, G/ADP/N/237/IND, pp. 2 and 7, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/ADP/N237IND.pdf&Open=True, accessed May 7, 2024. World Trade Organization ("WTO"), Semi-Annual Report under Article 16.4 of the Agreement: Australia, G/ADP/N/286/AUS, August 29, 2016, p. 3, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/ADP/N286AUS.pdf&Open=True, accessed May 7, 2024. World Trade Organization ("WTO"), Semi-Annual Report under Article 25.11 of the Agreement: Australia, G/SCM/N/313/AUS, March 1, 2017, p. 2, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SCM/N313AUS.pdf&Open=True, accessed May 7, 2024. World Trade Organization ("WTO"), Semi-Annual Report under Article 16.4 of the Agreement: Chile, G/ADP/N/328/CHL, July 10, 2019, p. 2, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/ADP/N328CHL.pdf&Open=True, accessed May 7, 2024.

In addition, Turkey initiated a safeguard investigation on imports of grinding balls and similar articles for mills in 2021.[14] The final ruling was announced on July 27, 2022. The three-year safeguard measure on the subject products imposed a duty of $200 per ton for the first year, $195 per ton for the second year, and $190 per ton for the third year.

Information on nonsubject countries

Table VII-11 presents global export data for grinding media, including cast iron or steel grinding balls and similar articles for mills. China, India, and Thailand were the largest exporters in 2023 and accounted for 37.6 percent, 35.3 percent, and 18.1 percent of total global exports by quantity, respectively.[15]

[14] Notification under Article 12.1(A) of the Agreement on Safeguards on Initiation of an Investigation and the Reasons for it: Turkey, G/SG/N/6/TUR/28, 13 Oct 2021, https://docs.wto.org/dol2fe/Pages/SS/directdoc.aspx?filename=q:/G/SG/N6TUR28.pdf&Open=True, accessed May 7, 2024. Yieh Corp., Steel News, "Turkey makes final ruling of safeguard measures on imported grinding balls, July 28, 2022, https://www.yieh.com/en/NewsItem/135470, accessed May 7, 2024.

[15] China is a large global exporter of grinding media. According to ***. Molycop's post-conference brief, p. 13. However, as noted by Magotteaux and Molycop, imports of HCCIGM are subject to section 301 duties. Conference transcript, p. 45 (Jacaruso) and Molycop postconference brief, p. 13.

Table VII-11
Grinding balls and similar articles for mills, cast, of iron or steel, other than nonmalleable cast iron: Global exports by exporter and period

Quantity in short tons; value in 1,000 dollars

Exporting country	Measure	2021	2022	2023
United States	Quantity	8,119	2,791	2,456
India	Quantity	199,920	216,500	222,624
China	Quantity	162,200	189,558	237,032
Thailand	Quantity	100,645	88,391	114,227
South Africa	Quantity	16,806	15,747	11,781
Belgium	Quantity	10,513	10,184	8,845
Turkey	Quantity	15,692	11,125	8,619
Egypt	Quantity	5,740	6,275	3,292
Brazil	Quantity	3,464	3,805	3,096
Australia	Quantity	3,357	3,848	2,674
Finland	Quantity	331	1,242	2,412
Zambia	Quantity	584	5,786	2,216
All other exporters	Quantity	44,761	33,703	10,716
All reporting exporters	Quantity	572,133	588,955	629,989
United States	Value	11,677	6,227	4,923
India	Value	214,915	276,586	260,097
China	Value	163,824	223,549	238,054
Thailand	Value	108,815	114,451	146,600
South Africa	Value	19,135	22,715	15,042,
Belgium	Value	15,544	17,916	14,976
Turkey	Value	15,578	15,132	10,642
Egypt	Value	5,820	7,880	3,746
Brazil	Value	4,245	6,428	4,982
Australia	Value	4,483	3,718	2,330
Finland	Value	513	2,024	3,377
Zambia	Value	435	6,947	2,879
All other exporters	Value	76,689	68,437	32,209
All reporting exporters	Value	641,673	772,011	739,857

Table continued.

Table VII-11 Continued
Grinding balls and similar articles for mills, cast, of iron or steel, other than nonmalleable cast iron: Global exports, by reporting country and by period

Unit values in dollars per short ton; shares in percent

Exporting country	Measure	2021	2022	2023
United States	Unit value	1,438	2,231	2,005
India	Unit value	1,075	1,278	1,168
China	Unit value	1,010	1,179	1,004
Thailand	Unit value	1,081	1,295	1,283
South Africa	Unit value	1,139	1,443	1,277
Belgium	Unit value	1,479	1,759	1,693
Turkey	Unit value	993	1,360	1,235
Egypt	Unit value	1,014	1,256	1,138
Brazil	Unit value	1,225	1,690	1,609
Australia	Unit value	1,335	966	871
Finland	Unit value	1,552	1,629	1,400
Zambia	Unit value	745	1,201	1,299
All other exporters	Unit value	1,713	2,031	3,006
All reporting exporters	Unit value	1,122	1,311	1,174
United States	Share of quantity	1.4	0.5	0.4
India	Share of quantity	34.9	36.8	35.3
China	Share of quantity	28.4	32.2	37.6
Thailand	Share of quantity	17.6	15.0	18.1
South Africa	Share of quantity	2.9	2.7	1.9
Belgium	Share of quantity	1.8	1.7	1.4
Turkey	Share of quantity	2.7	1.9	1.4
Egypt	Share of quantity	1.0	1.1	0.5
Brazil	Share of quantity	0.6	0.6	0.5
Australia	Share of quantity	0.6	0.7	0.4
Finland	Share of quantity	0.1	0.2	0.4
Zambia	Share of quantity	0.1	1.0	0.4
All other exporters	Share of quantity	7.8	5.7	1.7
All reporting exporters	Share of quantity	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 7325.91 as reported by various national statistical authorities in the Global Trade Atlas Suite database, accessed May 13, 2024. These data may be overstated as the HS subheading may contain products outside the scope of these investigations.

United States is shown at the top followed by India, with all remaining top exporting countries in descending order of 2023 data.

Note: Chile reported data in net kilograms (KN), which was treated as kilograms and converted to short tons. The Kenya GTA data series was used and duplicates were deleted.

APPENDIX A

FEDERAL REGISTER NOTICES

The Commission makes available notices relevant to its investigations and reviews on its website, www.usitc.gov. In addition, the following tabulation presents, in chronological order, Federal Register notices issued by the Commission and Commerce during the current proceeding.

Citation	Title	Link
89 FR 35860, May 2, 2024	*High Chrome Cast Iron Grinding Media From India; Institution of Antidumping and Countervailing Duty Investigations and Scheduling of Preliminary Phase Investigations*	https://www.govinfo.gov/content/pkg/FR-2024-05-02/pdf/2024-09509.pdf
89 FR 45630, May 23, 2024	*Certain High Chrome Cast Iron Grinding Media From India: Initiation of Less-Than-Fair-Value Investigation*	https://www.govinfo.gov/content/pkg/FR-2024-05-23/pdf/2024-11263.pdf
89 FR 45640, May 23, 2024	*Certain High Chrome Cast Iron Grinding Media From India: Initiation of Countervailing Duty Investigation*	https://www.govinfo.gov/content/pkg/FR-2024-05-23/pdf/2024-11264.pdf

APPENDIX B

LIST OF STAFF CONFERENCE WITNESSES

CALENDAR OF PUBLIC PRELIMINARY CONFERENCE

Those listed below appeared in the United States International Trade Commission's Preliminary Conference:

Subject: High Chrome Cast Iron Grinding Media from India

Inv. Nos.: 701-TA-726 and 731-TA-1694 (Preliminary)

Date and Time: May 17, 2024 - 9:45 a.m.

Sessions were held in connection with these preliminary phase investigations in the Main Hearing Room (Room 101), 500 E Street, SW., Washington, DC.

OPENING REMARKS:

In Support of Imposition (**Christopher T. Cloutier**, Schagrin Associates)
In Opposition to Imposition (**Michael G. Jacobson**, Hogan Lovells US LLP)

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

Schagrin Associates
Washington, DC
on behalf of

Magotteaux Inc. ("Magotteaux")

Markus Hannemann, General Manager, Magotteaux

Jessica Jacaruso, Regional Sales Manager,
United States and Mexico –Mining, Magotteaux

Brian Tallent, Engineering and Business Manager – Cement, Magotteaux

Gustavo Haberman, Finance Manager – North America, Magotteaux

Lionel Van Obbergh, Sales Manager – North America, Magotteaux

Richard Donohue, Magotteaux Plant Controller – Pulaski, TN, Magotteaux

Christopher T. Cloutier)
Elizabeth J. Drake) – OF COUNSEL
Justin N. Neuman)

In Opposition to the Imposition of the
Antidumping and Countervailing Duty Orders:

Hogan Lovells US LLP
Washington, DC
on behalf of

AIA Engineering Limited ("AIA")
Vega Industries Limited USA ("Vega")

Kunal Shah (remote witness), Executive Director, AIA Engineering Limited

Rizwan A. Gilani (remote witness), Global Sales Director,
Vega Industries (Middle East) F.Z.C.

David Hurlock (remote witness), Commercial Director,
Vega Industries Limited USA

Namrita Raghuwanshi (remote witness), Joint Partner,
TPM Solicitors and Consultants

Jared R. Wessel)
Michael G. Jacobson) – OF COUNSEL
Lyric E. Galvin)

Greenberg Traurig, LLP
Washington, DC
on behalf of

Holcim (US) Inc. ("Holcim")

Rosa S. Jeong) – OF COUNSEL

REBUTTAL/CLOSING REMARKS:

In Support of Imposition (**Elizabeth J. Drake**, Schagrin Associates)
In Opposition to Imposition (**Jared R. Wessel**, Hogan Lovells US LLP)

APPENDIX C

SUMMARY DATA

Table C-1
HCCIGM: Summary data concerning the U.S. market, by item and period

Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted

Item	Reported data			Period changes		
	Calendar year			Comparison years		
	2021	2022	2023	2021-23	2021-22	2022-23
U.S. consumption quantity:						
Amount	***	***	***	▲***	▲***	▼***
Producers' share (fn1)	***	***	***	▼***	▼***	▼***
Importers' share (fn1):						
India	***	***	***	▲***	▲***	▲***
Nonsubject sources	***	***	***	▼***	▼***	▼***
All import sources	***	***	***	▲***	▲***	▲***
U.S. consumption value:						
Amount	***	***	***	▲***	▲***	▼***
Producers' share (fn1)	***	***	***	▼***	▼***	▼***
Importers' share (fn1):						
India	***	***	***	▲***	▲***	▲***
Nonsubject sources	***	***	***	▼***	▼***	▼***
All import sources	***	***	***	▲***	▲***	▲***
U.S. importers' U.S. shipments of imports from:						
India:						
Quantity	***	***	***	▲***	▲***	▲***
Value	***	***	***	▲***	▲***	▼***
Unit value	***	***	***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	▲***	▲***	▲***
Nonsubject sources:						
Quantity	***	***	***	▼***	▼***	▼***
Value	***	***	***	▼***	▼***	▼***
Unit value	***	***	***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	▲***	▼***	▲***
All import sources:						
Quantity	***	***	***	▲***	▲***	▼***
Value	***	***	***	▲***	▲***	▼***
Unit value	***	***	***	▲***	▲***	▼***
Ending inventory quantity	***	***	***	▲***	▲***	▲***
U.S. producer's:						
Practical capacity quantity	***	***	***	***	***	***
Production quantity	***	***	***	▼***	▼***	▼***
Capacity utilization (fn1)	***	***	***	▼***	▼***	▼***
U.S. shipments:						
Quantity	***	***	***	▼***	▼***	▼***
Value	***	***	***	▲***	▲***	▼***
Unit value	***	***	***	▲***	▲***	▼***
Export shipments:						
Quantity	***	***	***	▼***	▼***	▼***
Value	***	***	***	▼***	▼***	▼***
Unit value	***	***	***	▲***	▲***	▲***
Ending inventory quantity	***	***	***	▼***	▼***	▲***
Inventories/total shipments (fn1)	***	***	***	▲***	▼***	▲***

Table continued.

Table C-1 Continued
HCCIGM: Summary data concerning the U.S. market, by item and period

Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted

Item	Reported data			Period changes		
	Calendar year			Comparison years		
	2021	2022	2023	2021-23	2021-22	2022-23
U.S. producer's: Continued						
Production workers	***	***	***	▼***	▲***	▼***
Hours worked (1,000s)	***	***	***	▼***	▲***	▼***
Wages paid ($1,000)	***	***	***	▲***	▲***	▼***
Hourly wages (dollars per hour)	***	***	***	▲***	▲***	▲***
Productivity (short tons per 1,000 hours)	***	***	***	▼***	▼***	▲***
Unit labor costs	***	***	***	▲***	▲***	▼***
Net sales:						
Quantity	***	***	***	▼***	▼***	▼***
Value	***	***	***	▼***	▲***	▼***
Unit value	***	***	***	▲***	▲***	▼***
Cost of goods sold (COGS)	***	***	***	▼***	▲***	▼***
Gross profit or (loss) (fn2)	***	***	***	▼***	▲***	▼***
SG&A expenses	***	***	***	▲***	▲***	▼***
Operating income or (loss) (fn2)	***	***	***	▼***	▲***	▼***
Net income or (loss) (fn2)	***	***	***	▼***	▲***	▼***
Unit COGS	***	***	***	▲***	▲***	▼***
Unit SG&A expenses	***	***	***	▲***	▲***	▲***
Unit operating income or (loss) (fn2)	***	***	***	▼***	▲***	▼***
Unit net income or (loss) (fn2)	***	***	***	▼***	▲***	▼***
COGS/sales (fn1)	***	***	***	▲***	▼***	▲***
Operating income or (loss)/sales (fn1)	***	***	***	▼***	▲***	▼***
Net income or (loss)/sales (fn1)	***	***	***	▼***	▲***	▼***
Capital expenditures	***	***	***	▲***	▲***	▼***
Research and development expenses	***	***	***	***	***	***
Total assets	***	***	***	▼***	▲***	▼***

Source: Compiled from data submitted in response to Commission questionnaires. 508-compliant tables for these data are contained in parts III, IV, VI, and VII of this report.

Note.--Shares and ratios shown as "0.0" percent represent non-zero values less than "0.05" percent (if positive) and greater than "(0.05)" percent (if negative). Zeroes, null values, and undefined calculations are suppressed and shown as "---". Period changes preceded by a "▲" represent an increase, while period changes preceded by a "▼" represent a decrease.

fn1.--Reported data are in percent and period changes are in percentage points.
fn2.--Percent changes only calculated when both comparison values represent profits; The directional change in profitability provided when one or both comparison values represent a loss.

APPENDIX D

NARRATIVE RESPONSES FOR DOMESTIC LIKE PRODUCT FACTORS

Table D-1
HCCIGM: U.S. producer Magotteaux's narratives regarding the domestic like product factors comparing in-scope high chrome cast iron grinding media to out-of-scope other chrome cast iron grinding media

Factor	Producer name and narrative on the domestic like product factors
Physical characteristics	***
Interchangeability	***
Channels	***

Factor	Producer name and narrative on the domestic like product factors
Manufacturing	***

Factor	Producer name and narrative on the domestic like product factors
Perceptions	***
Price	***

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

Table D-2
HCCIGM: U.S. importers' narratives regarding the domestic like product factors comparing in-scope high chrome cast iron grinding media to out-of-scope other chrome cast iron grinding media

Factor	Importer name and narrative on the domestic like product factors
Physical characteristics	***
Physical characteristics	***
Physical characteristics	***
Interchangeability	***
Interchangeability	***
Interchangeability	***
Channels	***
Channels	***

Factor	Producer name and narrative on the domestic like product factors
Channels	***
Manufacturing	***
Manufacturing	***
Manufacturing	***

Factor	Producer name and narrative on the domestic like product factors
Perceptions	***
Perceptions	***
Perceptions	***

Factor	Importer name and narrative on the domestic like product factors
Price	***
Price	***
Price	***

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

Table D-3
HCCIGM: U.S. producer Magotteaux's narratives regarding the domestic like product factors comparing in-scope high chrome cast iron grinding media to out-of-scope forged grinding media

Factor	Importer name and narrative on the domestic like product factors
Physical characteristics	***
Interchangeability	***
Factor	**Importer name and narrative on the domestic like product factors**
Channels	***
Manufacturing	***

Factor	Importer name and narrative on the domestic like product factors
Perceptions	***
Price	***

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

Table D-4
HCCIGM: U.S. importers' narratives regarding the domestic like product factors comparing in-scope high chrome cast iron grinding media to out-of-scope forged grinding media

Factor	Importer name and narrative on the domestic like product factors
Physical characteristics	***
Physical characteristics	***
Physical characteristics	***
Interchangeability	***
Interchangeability	***

Factor	Importer name and narrative on the domestic like product factors
Interchangeability	***
Channels	***
Channels	***
Channels	***
Manufacturing	***
Manufacturing	***

Factor	Importer name and narrative on the domestic like product factors
Manufacturing	***
Perceptions	***
Perceptions	***
Perceptions	***

Factor	Importer name and narrative on the domestic like product factors
Price	***
Price	***
Price	***

Source: Compiled from data submitted in response to Commission questionnaires

APPENDIX E

OFFICIAL IMPORT STATISTICS

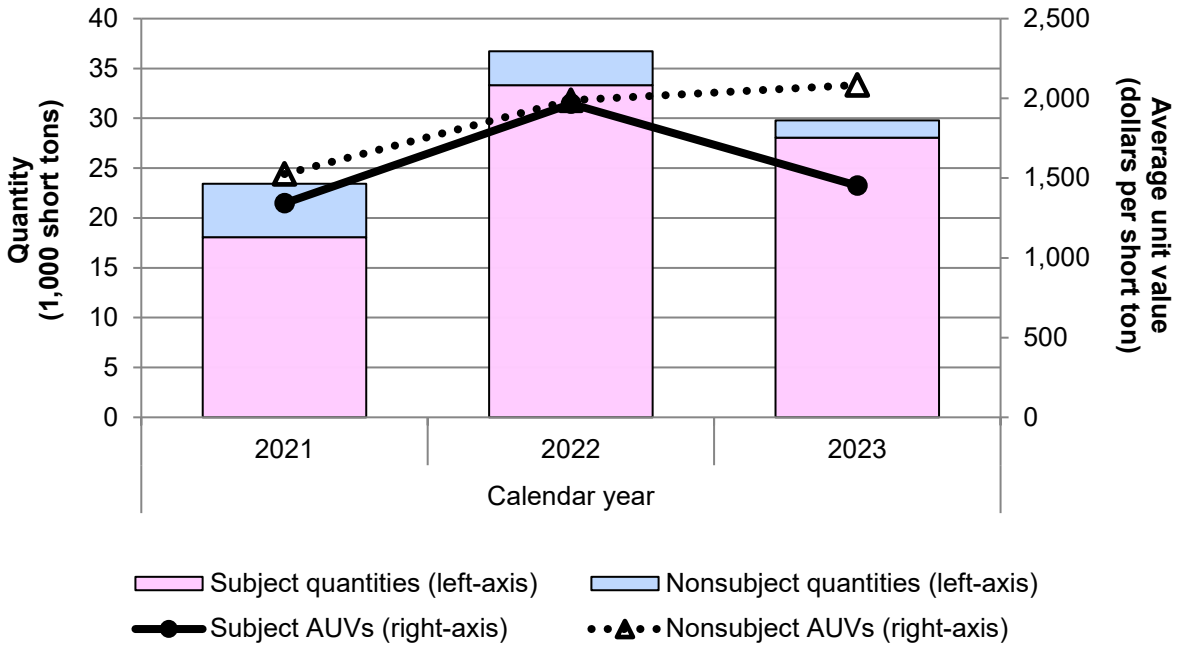
Table E-1
HCCIGM: U.S. imports, by source and period

Quantity in short tons; value in 1,000 dollars, unit values in dollars per short ton; share in percent

Source	Measure	2021	2022	2023
India	Quantity	18,081	33,330	28,070
Nonsubject sources	Quantity	5,351	3,394	1,724
All import sources	Quantity	23,432	36,725	29,794
India	Value	24,263	65,506	40,787
Nonsubject sources	Value	8,162	6,749	3,593
All import sources	Value	32,425	72,255	44,381
India	Unit value	1,342	1,965	1,453
Nonsubject sources	Unit value	1,525	1,988	2,084
All import sources	Unit value	1,384	1,967	1,490
India	Share of quantity	77.2	90.8	94.2
Nonsubject sources	Share of quantity	22.8	9.2	5.8
All import sources	Share of quantity	100.0	100.0	100.0
India	Share of value	74.8	90.7	91.9
Nonsubject sources	Share of value	25.2	9.3	8.1
All import sources	Share of value	100.0	100.0	100.0

Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting number 7325.91.0000, accessed on May 15, 2024. Imports are based on the imports for consumption data series. Value data reflect landed duty-paid values.

Figure E-1
HCCIGM: U.S. import quantities and average unit values, by source and period



Source: Compiled from official U.S. import statistics of the U.S. Department of Commerce Census Bureau using HTS statistical reporting number 7325.91.0000, accessed on May 15, 2024. Imports are based on the imports for consumption data series. Value data reflect landed duty-paid values.