Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan

Investigation Nos. 701-TA-506 and 508 and 731-TA-1238-1243 (Review)

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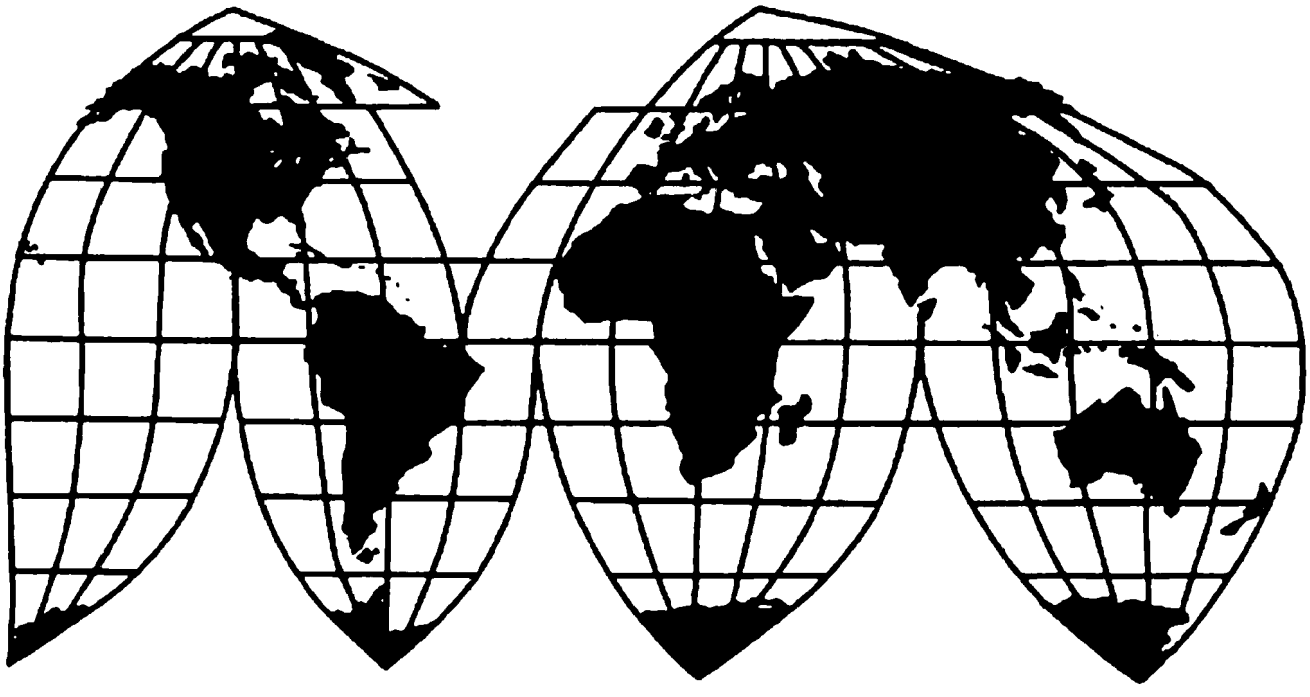
U.S. International Trade Commission



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UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation Nos. 701-TA-506 and 508 and 731-TA-1238-1243 (Review)

Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan

DETERMINATION

On the basis of the record[1] developed in the subject five-year reviews, the United States International Trade Commission ("Commission") determines, pursuant to the Tariff Act of 1930 ("the Act"), that revocation of the countervailing duty orders on non-oriented electrical steel from China and Taiwan and the antidumping duty orders on non-oriented electrical steel from China, Germany, Japan, Korea, Sweden, and Taiwan would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

BACKGROUND

The Commission instituted these reviews on November 1, 2019 (84 FR 58743) and determined on February 4, 2020 that it would conduct full reviews (85 FR 8325, February 13, 2020). Notice of the scheduling of the Commission's reviews and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the *Federal Register* on June 2, 2020 (85 FR 33711). In light of the restrictions on access to the Commission building due to the COVID–19 pandemic, the Commission conducted its hearing through written testimony and video conference on October 8, 2020. All persons who requested the opportunity were permitted to participate.

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

Views of the Commission

Based on the record in these five-year reviews, we determine under section 751(c) of the Tariff Act of 1930, as amended ("the Tariff Act"), that revocation of the countervailing duty orders on non-oriented electrical steel ("NOES") from China and Taiwan and the antidumping duty orders on NOES from China, Germany, Japan, Korea, Sweden, and Taiwan would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

I. Background

Original Investigations. In response to petitions filed by domestic NOES producer AK Steel Corporation ("AK Steel"), the Commission determined in November 2014 that an industry in the United States was materially injured by reason of imports of NOES from China, Germany, Japan, Korea, Sweden, and Taiwan sold at less than fair value and subsidized by the governments of China and Taiwan.[1] The Department of Commerce ("Commerce") issued antidumping duty orders on imports of NOES from all six countries, and countervailing duty orders on imports of NOES from China and Taiwan, on December 3, 2014.[2]

Current Reviews. The Commission instituted these five-year reviews on November 1, 2019.[3] The Commission received a response to its notice of institution from AK Steel, the sole domestic producer of NOES.[4] It also received a joint response from Thyssenkrupp Steel Europe AG ("Thyssenkrupp Europe"), a German producer of NOES, and Thyssenkrupp Steel North

[1] *Non-Oriented Electrical Steel from China*, *Germany, Japan, Korea, Sweden, and Taiwan*, Inv. Nos. 701-TA-506 & 508 and 731-TA-1238-1243 (Final), USITC Pub. 4502 at 1 (Nov. 2014) ("Original Determinations"). Commissioner Broadbent determined that an industry in the United States was neither materially injured nor threatened with material injury by reason of subject imports. *See Separate and Dissenting Views of Chairman Meredith M. Broadbent*, EDIS Doc. 546979.

[2] *Non-Oriented Electrical Steel from the People's Republic of China, Germany, Japan, the Republic of Korea, Sweden, and Taiwan: Antidumping Duty Orders*, 79 Fed. Reg. 71741 (Dec. 3, 2014); *Non-Oriented Electrical Steel From the People's Republic of China and Taiwan: Countervailing Duty Orders*, 79 Fed. Reg. 71749 (Dec. 3, 2014).

[3] *Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan; Institution of Five-Year Reviews*, 84 Fed. Reg. 58743 (Nov. 1, 2019).

[4] AK Steel's Response to Notice of Institution, EDIS Doc. 695936 (Dec. 2, 2019).

America, Inc., a U.S. importer of subject merchandise (collectively, "Thyssenkrupp").[5] The Commission determined to conduct full reviews of the orders on February 4, 2020.[6]

The Commission received prehearing and posthearing briefs from both AK Steel[7] and Thyssenkrupp.[8] Representatives of AK Steel and Thyssenkrupp appeared at the hearing accompanied by counsel.[9]

U.S. industry data in these reviews are based on the questionnaire response of AK Steel, which accounted for all domestic NOES production in 2019.[10] U.S. import data and related information are based on Commerce's official import statistics, and the questionnaire responses of 13 U.S. importers that accounted for more than 70.0 percent of total subject imports and more than 80.0 percent of nonsubject imports in 2019.[11] Foreign industry data and related information are based on the questionnaire responses of four subject producers: Thyssenkrupp Europe, which accounts for *** percent of total NOES production in Germany; JFE Steel Corporation ("JFE") and Nippon Steel Corporation ("Nippon"), which collectively account for *** percent of total NOES production in Japan; and Surahammars Bruks AB ("Surahammars"), which accounts for all known NOES production in Sweden.[12] The

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[5] Thyssenkrupp's Response to Notice of Institution, EDIS Doc. 696019 (Dec. 2, 2019).

[6] *Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan; Notice of Commission Determinations to Conduct Full Five-Year Reviews*, 85 Fed. Reg. 8325 (Feb. 13, 2020); *See also* Explanation of Determinations on Adequacy, EDIS Doc. 702872. The Commission found the domestic interested party group response adequate, and the respondent interested party group response with respect to the antidumping duty order on NOES from Germany adequate. *Id*. Accordingly, the Commission determined to conduct a full review of this order. *Id*. The Commission determined to conduct full reviews of the orders on subject imports from China, Japan, Korea, Sweden, and Taiwan, in spite of inadequate respondent interested party group responses, to promote administrative efficiency, in light of its decision to conduct a full review of the order on NOES from Germany. *Id*.

[7] AK Steel's Corrected Prehearing Brief, EDIS Doc. 721027 (Oct. 2, 2020); AK Steel's Posthearing Brief, EDIS Doc. 722474 (Oct. 19, 2020).

[8] Thyssenkrupp's Prehearing Brief, EDIS Doc. 720753 (Sep. 30, 2020); Thyssenkrupp's Posthearing Brief, EDIS Doc. 722457 (Oct. 19, 2020).

[9] In light of the restrictions on access to the Commission building due to the COVID-19 pandemic, the Commission conducted the hearing by videoconference and written testimony, as set forth in procedures provided to the parties and announced on its website.

[10] Confidential Report, Memorandum INV-SS-128 at I-12 (Nov. 4, 2020) ("CR"); Public Report at I-12 ("PR").

[11] CR/PR at I-12 and IV-1.

[12] CR/PR at I-12.

Commission did not receive a questionnaire response from any producer of subject merchandise in China, Korea, or Taiwan.[13]

II. Domestic Like Product and Industry

A. Domestic Like Product

In making its determination under section 751(c) of the Tariff Act, the Commission defines the "domestic like product" and the "industry."[14] 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 under this subtitle."[15] The Commission's practice in five-year reviews is to examine the domestic like product definition from the original investigation and consider whether the record indicates any reason to revisit the prior findings.[16]

Commerce has defined the scope of the orders in these five-year reviews as follows:

> The merchandise subject to these orders consists of non-oriented electrical steel (NOES), which includes cold-rolled, flat-rolled, alloy steel products, whether or not in coils, regardless of width, having an actual thickness of 0.20 mm or more, in which the core loss is substantially equal in any direction of magnetization in the plane of the material. The term ''substantially equal'' means that the cross- grain direction of core loss is no more than 1.5 times the

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[13] CR/PR at IV-25, IV-45, and IV-55. For current data on the NOES industries in China, Korea, and Taiwan, the Commission relied on information from AK Steel, as well as Global Trade Atlas ("GTA") data and other publicly available information.

[14] 19 U.S.C. § 1677(4)(A).

[15] 19 U.S.C. § 1677(10); *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); *Timken Co. v. United States*, 913 F. Supp. 580, 584 (Ct. Int'l Trade 1996); *Torrington Co. v. United States*, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), *aff'd*, 938 F.2d 1278 (Fed. Cir. 1991); *see also* S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

[16] *See*, *e.g.*, *Internal Combustion Industrial Forklift Trucks from Japan*, Inv. No. 731-TA-377 (Second Review), USITC Pub. 3831 at 8-9 (Dec. 2005); *Crawfish Tail Meat from China*, Inv. No. 731-TA-752 (Review), USITC Pub. 3614 at 4 (July 2003); *Steel Concrete Reinforcing Bar from Turkey*, Inv. No. 731-TA-745 (Review), USITC Pub. 3577 at 4 (Feb. 2003).

straight grain direction (i.e., the rolling direction) of core loss. NOES has a magnetic permeability that does not exceed 1.65 Tesla when tested at a field of 800 A/m (equivalent to 10 Oersteds) along (i.e., parallel to) the rolling direction of the sheet (i.e., B800 value). NOES contains by weight more than 1.00 percent of silicon but less than 3.5 percent of silicon, not more than 0.08 percent of carbon, and not more than 1.5 percent of aluminum. NOES has a surface oxide coating, to which an insulation coating may be applied.

NOES is subject to these orders whether it is fully processed (i.e., fully annealed to develop final magnetic properties) or semi-processed (i.e., finished to final thickness and physical form but not fully annealed to develop final magnetic properties). Fully processed NOES is typically made to the requirements of ASTM specification A 677, Japanese Industrial Standards (JIS) specification C 2552, and/or International Electrotechnical Commission (IEC) specification 60404–8–4. Semi-processed NOES is typically made to the requirements of ASTM specification A 683. However, the scope of these orders is not limited to merchandise meeting the ASTM, JIS, and IEC specifications noted immediately above.

NOES is sometimes referred to as cold-rolled non-oriented (CRNO), nongrain oriented (NGO), non-oriented (NO), or cold-rolled non-grain oriented (CRNGO) electrical steel. These terms are interchangeable.

Excluded from the scope of these orders are flat-rolled products not in coils that, prior to importation into the United States, have been cut to a shape and undergone all punching, coating, or other operations necessary for classification in Chapter 85 of the Harmonized Tariff Schedule of the United States (HTSUS) as a part (i.e., lamination) for use in a device such as a motor, generator, or transformer.

> The subject merchandise is provided for in subheadings 7225.19.0000, 7226.19.1000, and 7226.19.9000 of the HTSUS. Subject merchandise may also be entered under subheadings 7225.50.8085, 7225.99.0090, 7226.92.5000, 7226.92.7050, 7226.92.8050, 7226.99.0180 of the HTSUS. Although HTSUS subheadings are provided for convenience and customs purposes, the written description of the scope is dispositive.[17]

The scope has not changed since the original investigations.[18]

NOES is a flat-rolled, alloy steel mill product developed as a highly efficient raw material specifically for manufacturing individually cut-to-shape laminations (*i.e.*, layers) for subsequent stacking together into laminated electro-magnetic cores for alternating current electrical equipment components.[19] In contrast to grain oriented electrical steel ("GOES"), NOES' magnetic properties are similar in all directions.[20] Thus, NOES is used primarily to produce laminations for which the direction of the magnetic flux in the electrical device is constantly changing, for example in rotating machinery such as motors and generators.[21] Fully processed NOES is final-annealed by the producer, whereas semi-processed NOES (although annealed by the producer) must be re-annealed by the consumer after being formed into laminations to achieve its potential magnetic properties.[22]

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[17] *Issues and Decision Memorandum for the Expedited First Sunset Reviews of the Antidumping Duty Orders on Non-Oriented Electrical Steel from the People's Republic of China, Germany, Japan, Republic of Korea, Sweden, and Taiwan*, EDIS Doc. 722908 at 3 (Feb. 20, 2020); *Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review of the Countervailing Duty Order on Non-Oriented Electrical Steel from the People's Republic of China*, EDIS Doc. 722916 at 2-3 (Feb. 20, 2020); and *Issues and Decision Memorandum for the Expedited Sunset Review of the Countervailing Duty (CVD) Order on Non-Oriented Electrical Steel (NOES) from Taiwan*, EDIS Doc. 722918 at 2-3 (Mar. 2, 2020).

[18] *Non-Oriented Electrical Steel from the People's Republic of China, Germany, Japan, the Republic of Korea, Sweden, and Taiwan: Antidumping Duty Orders*, 79 Fed. Reg. 71741 (Dec. 3, 2014); *Non-Oriented Electrical Steel From the People's Republic of China and Taiwan: Countervailing Duty Orders*, 79 Fed. Reg. 71749 (Dec. 3, 2014).

[19] CR/PR at I-20.

[20] CR/PR at I-20.

[21] CR/PR at I-20.

[22] CR/PR at I-22-23.

Original Investigations. In the original investigations, the Commission's analysis focused on whether to define the domestic like product to include, in addition to NOES, cold rolled motor lamination steel ("CRML"), averred by certain respondents as being an alternative to NOES in a broad range of applications.[23] While the Commission noted that there appeared to be at least some degree of interchangeability between the two products, it found differences between NOES and CRML in physical characteristics, production processes, and prices, and observed that the petitioner and a majority of importers reported that no products could serve as substitutes for NOES.[24] Thus, the Commission defined a single domestic like product consisting of NOES, coextensive with Commerce's scope.[25]

Current Reviews. In the current reviews, the record does not suggest that there have been any changes in the characteristics and uses of domestically produced NOES since the original investigations to warrant revisiting the definition.[26] Moreover, no party has argued for a definition of the domestic like product different from the one adopted in the original investigations.[27] Accordingly, we again define a single domestic like product consisting of NOES, coextensive with Commerce's scope.

B. Domestic Industry

Section 771(4)(A) of the Tariff Act defines the relevant industry 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."[28] In defining the domestic industry, the Commission's general practice has been

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[23] *Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan*, Inv. Nos. 701-TA-506-508 and 731-TA-1238-1243 (Preliminary), USITC Pub. 4441 at 7 (Dec. 2013) ("Preliminary Determinations"); Original Determinations, USITC Pub. 4502 at 8.

[24] Preliminary Determinations, USITC Pub. 4441 at 11; Original Determinations, USITC Pub. 4502 at 9.

[25] Preliminary Determinations, USITC Pub. 4441 at 11; Original Determinations, USITC Pub. 4502 at 10.

[26] *See generally* CR/PR at I-20-23.

[27] Both AK Steel and Thyssenkrupp agree with the Commission's domestic like product definition from the original determinations. *See* AK Steel's Response to Notice of Institution at 30; Thyssenkrupp's Response to Notice of Institution at 10.

[28] 19 U.S.C. § 1677(4)(A). The definitions in 19 U.S.C. § 1677 are applicable to the entire subtitle containing the antidumping and countervailing duty laws, including 19 U.S.C. §§ 1675 and 1675a. *See* 19 U.S.C. § 1677.

to include in the industry producers of all domestic production of the like product, whether toll-produced, captively consumed, or sold in the domestic merchant market.

In the original investigations, the Commission defined the domestic industry as AK Steel, the only know domestic NOES producer.[29] In these reviews, AK Steel remains the only known domestic NOES producer.[30] Further, there are no domestic industry or related party issues,[31] and no party has argued for a different definition of the domestic industry.[32] Accordingly, we again define the domestic industry as AK Steel.

III. Cumulation

A. Legal Standard

> With respect to five-year reviews, section 752(a) of the Tariff Act provides as follows: the Commission may cumulatively assess the volume and effect of imports of the subject merchandise from all countries with respect to which reviews under section 1675(b) or (c) of this title were initiated on the same day, if such imports would be likely to compete with each other and with domestic like products in the United States market. The Commission shall not cumulatively assess the volume and effects of imports of the subject merchandise in a case in which it determines that such imports are likely to have no discernible adverse impact on the domestic industry.[33]

Cumulation therefore is discretionary in five-year reviews, unlike original investigations, which are governed by section 771(7)(G)(i) of the Tariff Act.[34] The Commission may exercise its

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[29] Original Determinations, USITC Pub. 4502 at 10.

[30] CR/PR at Table I-5.

[31] CR/PR at I-26.

[32] Both AK Steel and Thyssenkrupp agree with the Commission's domestic industry definition from the original determinations. *See* AK Steel's Response to Notice of Institution at 30; Thyssenkrupp's Response to Notice of Institution at 10.

[33] 19 U.S.C. § 1675a(a)(7).

[34] 19 U.S.C. § 1677(7)(G)(i); *see also*, *e.g.*, *Nucor Corp. v. United States*, 601 F.3d 1291, 1293 (Fed. Cir. 2010) (Commission may reasonably consider likely differing conditions of competition in deciding whether to cumulate subject imports in five-year reviews); *Allegheny Ludlum Corp. v. United States*, 475 F. Supp. 2d 1370, 1378 (Ct. Int'l Trade 2006) (recognizing the wide latitude the Commission has in selecting the types of factors it considers relevant in deciding whether to exercise discretion to cumulate (Continued…)

discretion to cumulate, however, only if the reviews are initiated on the same day, the Commission determines that the subject imports are likely to compete with each other and the domestic like product in the U.S. market, and imports from each such subject country are not likely to have no discernible adverse impact on the domestic industry in the event of revocation. Our focus in five-year reviews is not only on present conditions of competition, but also on likely conditions of competition in the reasonably foreseeable future.

Original Investigations. In the original investigations, the Commission found a reasonable overlap of competition between and among subject imports from each source and the domestic like product.[35] Specifically, the Commission found that NOES, regardless of source, was at least moderately fungible, that there was geographic overlap and simultaneous presence in the U.S. market for the majority of the period of investigation ("POI"), and that sales of the domestic like product and subject imports to end users were sufficient to constitute a reasonable overlap in channels of distribution.[36] Having found a reasonable overlap of competition, the Commission cumulated subject imports from China, Germany, Japan, Korea, Sweden, and Taiwan for purposes of its material injury analysis.[37]

Current Reviews. In the current reviews, AK Steel argues that the Commission should cumulate subject imports from all six subject countries. It contends that, in the event of revocation, subject imports from each source would likely have a discernable adverse impact, that there would likely be a reasonable overlap of competition between and among subject imports and the domestic like product, and that subject imports from each source would be likely to compete with each other and the domestic like product under the same conditions of competition.[38]

Thyssenkrupp argues that the Commission should not cumulate subject imports from Germany with other subject imports. It contends that, in the event of revocation, subject imports from Germany would likely have no discernible adverse impact on the domestic industry, that it is unlikely there would be a reasonable overlap of competition between NOES

(…Continued)
subject imports in five-year reviews); *Nucor Corp. v. United States*, 569 F. Supp. 2d 1328, 1337-38 (Ct. Int'l Trade 2008).

[35] Original Determinations, USITC Pub. 4502 at 15.

[36] Original Determinations, USITC Pub. 4502 at 12-15.

[37] Original Determinations, USITC Pub. 4502 at 15.

[38] AK Steel's Corrected Prehearing Brief at 16-33; AK Steel's Posthearing Brief at 10-13.

from Germany and other subject imports or the domestic like product, and that the likely conditions of competition disfavor cumulation.[39]

The threshold criterion for cumulation in these five-year reviews is satisfied because all reviews were initiated on the same day, November 1, 2019.[40] For the reasons discussed below, we determine to exercise our discretion to cumulate subject imports from China, Germany, Japan, Korea, Sweden, and Taiwan for purposes of our analysis in these reviews.

B. Likelihood of No Discernible Adverse Impact

The statute precludes cumulation if the Commission finds that subject imports from a country are likely to have no discernible adverse impact on the domestic industry.[41] Neither the statute nor the Uruguay Round Agreements Act ("URAA") Statement of Administrative Action ("SAA") provides specific guidance on what factors the Commission is to consider in determining that imports "are likely to have no discernible adverse impact" on the domestic industry.[42] With respect to this provision, the Commission generally considers the likely volume of subject imports and the likely impact of those imports on the domestic industry within a reasonably foreseeable time if the orders are revoked. Our analysis for each of the subject countries takes into account, among other things, the nature of the product and the behavior of subject imports in the original investigations.

AK Steel argues that subject imports from each source are likely to have a discernable adverse impact on the domestic industry in the event of revocation because they were present in significant volumes during the original POI, prices in the U.S. market are attractive relative to other markets, and producers in each subject country have ample amounts of unused capacity and inventory and are export oriented.[43]

Thyssenkrupp argues that subject imports from Germany are likely to have no discernible adverse impact on the domestic industry because several factors will keep the likely volume of such imports low after revocation.[44] These factors include: German producers are focused on manufacturing e-mobility NOES products (in particular NOES used in the production

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[39] Thyssenkrupp's Prehearing Brief at 10-18; Thyssenkrupp's Posthearing Brief at 2-12.
[40] *Initiation of Five-Year (Sunset) Reviews*, 84 Fed. Reg. 58687 (Nov. 1, 2019).
[41] 19 U.S.C. § 1675a(a)(7).
[42] SAA, H.R. Rep. No. 103-316, vol. I at 887 (1994).
[43] AK Steel's Corrected Prehearing Brief at 16-28.
[44] Thyssenkrupp's Prehearing Brief at 10-15.

of electric vehicles ("EVs")), which are mainly purchased by non-U.S. customers; demand for NOES has declined in the United States as NOES consumers have moved offshore, and the German industry would have little incentive to ship substantial quantities of NOES to a shrinking U.S. market dominated by the domestic industry and nonsubject imports; and additional duties on NOES imports from Germany pursuant to Section 232 of the Trade Expansion Act of 1962 ("Section 232") will ensure that such imports stay at *de minimis* levels after revocation.[45] Moreover, Thyssenkrupp argues, the German NOES industry is not export oriented because its export shipments are primarily to other countries within the European region.[46]

Thyssenkrupp further argues that in the event of revocation, Section 232 duties would effectively bar all imports of NOES from Germany except those that can secure exclusions from these duties, and that such exclusions are only granted if comparable NOES is unavailable domestically.[47] It asserts that the largest quantities of nonsubject NOES are associated with aggressive use of the Section 232 exclusion process, indicating that nonsubject imports from these sources are not competing with domestically produced NOES, and therefore are not adversely impacting the domestic NOES industry.[48] Thus, Thyssenkrupp contends, in the event of revocation, subject imports from Germany would similarly not be likely to have an adverse impact on the domestic NOES industry.[49] Finally, Thyssenkrupp asserts that two prior Commission determinations – *Stainless Steel Bar*[50] and *Carbon Steel Products*[51] – support finding that subject imports from Germany are likely to have no discernable adverse impact on the domestic NOES industry in the event of revocation.[52]

Based on the record in these reviews, we do not find that imports from any of the subject countries would likely have no discernible adverse impact on the domestic industry in the event of revocation.

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[45] Thyssenkrupp's Prehearing Brief at 10-15.

[46] Thyssenkrupp's Posthearing Brief at 3.

[47] Thyssenkrupp's Prehearing Brief at 6-7.

[48] Thyssenkrupp's Posthearing Brief at 4-6.

[49] Thyssenkrupp's Posthearing Brief at 13.

[50] *Stainless Steel Bar from Brazil, India, Japan, and Spain*, Inv. Nos. 731-TA-678, 679, 681, and 682 (Fourth Review), USITC Pub. 4820 (Sep. 2018).

[51] *Certain Carbon Steel Products from Australia, Belgium, Brazil, Canada, Finland, France, Germany, Japan, Korea, Mexico, Poland, Romania, Spain, Sweden, Taiwan, and the United Kingdom*, Inv. Nos. AA1921-197 (Second Review); 701-TA-319, 320, 325-327, 348, and 350 (Second Review); and 731-TA-573, 574, 576, 578, 582-587, 612, and 614-618 (Second Review), USITC Pub. 3899 (Jan. 2007).

[52] Thyssenkrupp's Prehearing Brief at 17-18; Thyssenkrupp's Posthearing Brief at 7-9.

China. In the original investigations, subject imports from China decreased from 16,401 short tons in 2011 to 14,042 short tons in 2012 and 12,724 short tons in 2013; they were 8,217 short tons in January-June ("interim") 2013 and 1,747 short tons in interim 2014.[53] The share of apparent U.S. consumption accounted for by subject imports from China decreased from *** percent in 2011 to *** percent in 2012, and increased to *** percent in 2013; it was *** percent in interim 2013 and *** percent in interim 2014.[54] During the period of review ("POR"), the volume and market share of subject imports from China decreased overall, and these imports were present in only very small amounts by the end of the period.[55]

Limited current data are available concerning the industry in China because no subject Chinese producers responded to the Commission's questionnaires. AK Steel identified 25 NOES producers in China, and public sources indicate that Chinese producer Baosteel had an annual NOES production capacity of 3.1 million short tons in 2019.[56] GTA data, which may include out-of-scope products, indicate that China was the third largest global exporter of flat-rolled, silicon-electrical steel, other than grain oriented, in 2019.[57]

In these reviews, subject imports from China undersold the domestic like product in *** out of *** (or *** percent of) quarterly comparisons.[58] In the original investigations, subject imports from China undersold the domestic like product in 42 out of 43 (or 97.7 percent of) quarterly comparisons.[59]

Based on the volume of subject imports from China during the original POI, the information available indicating the Chinese industry's large capacity and export orientation, and the underselling record from the original POI, we find that subject imports from China are not likely to have no discernible adverse impact upon revocation.[60]

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[53] Original Determinations, USITC Pub. 4502 at Table C-1.

[54] Confidential Report from the Original Investigations, EDIS Doc. 544931, Memorandum INV-MM-10 at Table C-1 (Oct. 23, 2014).

[55] Subject imports from China were 2,188 short tons in 2014, 12 short tons in 2015, 4 short tons in 2016, 17 short tons in 2017, 78 short tons in 2018, and 25 short tons in 2019; they were 0 short tons in January-June ("interim") 2019 and 48 short tons in interim 2020. *See* CR/PR at Tables I-8 and IV-1. The share of apparent U.S. consumption accounted for by subject imports from China was *** percent in 2014, *** percent in 2015, 2016, and 2017, *** percent in 2018, and *** in 2019; it was *** percent in interim 2019 and *** percent in interim 2020. *See* CR/PR at Table I-8.

[56] CR/PR at IV-25.

[57] CR/PR at Table IV-28. These data are based on HS subheadings 7225.19 and 7226.19. *Id*.

[58] CR/PR at Table V-10a.

[59] Original Determinations, USITC Pub. 4502 at Table V-16.

[60] We note that subject imports from China are subject to additional duties pursuant to Section 301 of the Trade Act of 1974 ("Section 301"), as well as Section 232. *See* CR/PR at I-17 and I-19. In light (Continued…)

Germany. In the original investigations, subject imports from Germany decreased from 14,385 short tons in 2011 to 9,568 short tons in 2012 and 7,493 short tons in 2013; they were 3,795 short tons in interim 2013 and 2,282 short tons in interim 2014.[61] The share of apparent U.S. consumption accounted for by subject imports from Germany decreased from *** percent in 2011 to *** percent in 2012 and *** percent in 2013; it was *** percent in interim 2013 and *** percent in interim 2014.[62] During the POR, the volume and market share of subject imports from Germany decreased overall, and these imports were present in only very small amounts by the end of the period.[63]

NOES production capacity reported by the responding German producer, Thyssenkrupp Europe, decreased from *** short tons in 2014 to *** short tons in 2015, *** short tons in 2016, *** short tons in 2017, *** short tons in 2018, and *** short tons in 2019; it was *** short tons in interim 2019 and *** short tons in interim 2020.[64] Thyssenkrupp Europe's capacity utilization was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020.[65] Its exports as a share of total shipments of NOES ranged from *** percent to *** percent over the POR.[66]

In these reviews, subject imports from Germany undersold the domestic like product in *** out of *** (or *** percent of) quarterly comparisons.[67] In the original investigations, subject imports from Germany undersold the domestic like product in 46 out of 61 (or 75.4 percent of) quarterly comparisons.[68]

(…Continued)
of the record evidence discussed above, and in the absence of any contrary argument, we find that Section 232 and 301 additional duties in combination would not prevent subject imports from China from having a discernable adverse impact on the domestic industry in the event of revocation.

[61] Original Determinations, USITC Pub. 4502 at Table C-1.

[62] Confidential Report from the Original Investigations at Table C-1.

[63] Subject imports from Germany were 2,304 short tons in 2014, 181 short tons in 2015, 179 short tons in 2016, 12 short tons in 2017, 14 short tons in 2018, and 12 short tons in 2019; they were 11 short tons in interim 2019 and 4 short tons in interim 2020. *See* CR/PR at Tables I-8 and IV-1. The share of apparent U.S. consumption accounted for by subject imports from Germany was *** percent in 2014, *** percent in 2015, *** percent in 2016, and *** percent in 2017, 2018 and 2019; it was *** percent in both interim 2019 and interim 2020. *See* CR/PR at Table I-8.

[64] CR/PR at Table IV-12. Thyssenkrupp reportedly accounted for *** percent of NOES production in Germany in 2019. *See* CR/PR at I-12. *** *See* CR/PR at IV-30-31.

[65] CR/PR at Table IV-12.

[66] CR/PR at Table IV-12.

[67] CR/PR at Table V-10a.

[68] Original Determinations, USITC Pub. 4502 at Table V-16.

We are unpersuaded by Thyssenkrupp's arguments in support of its assertion that subject imports from Germany are likely to have no discernible adverse impact on the domestic industry. Based on the record, including the hearing testimony of Thyssenkrupp's own witnesses, the focus of the German industry is not limited to the manufacture of e-mobility NOES.[69] Thus, irrespective of what may come to pass with respect to EV demand and production in the United States, subject imports from Germany maintain an ability to impact the domestic industry's sales of NOES to markets for oil and gas products, non-EV motors, mining, locomotive production, and other industrial products.[70] Moreover, competition from the domestic industry and nonsubject imports did not prevent subject imports from Germany from entering the U.S. market in substantial volumes during the original POI,[71] market participants disagree as to whether U.S. demand for NOES will continue to decline,[72] and there is evidence in the record to suggest that EV demand and production in the United States are expected to continue to increase, driving up demand for e-mobility NOES in the reasonably foreseeable future.[73] Further, the German industry's within-region shipments are not of such magnitude to support a claim that it is not export oriented,[74] and Thyssenkrupp's available

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[69] Hearing Transcript, EDIS Doc. 721626 at 150 (Horgan) ("…they {*i.e.,* Thyssenkrupp} produce a broad range of NOES products, so I don't think we're suggesting that we're a specialty company"); Hearing Transcript at 174 (Schmidtz) ("{Thyssenkrupp is} producing every kind of NOES grade…we are producing and offering every grade for NOES"). Moreover, based on Thyssenkrupp's current and projected sales, e-mobility NOES products are not its primary current focus, and will not be in 2021. *See* Appendix to Thyssenkrupp's Posthearing Brief at 1-2 (stating that its sales of e-mobility NOES accounted for *** percent of its total NOES sales in 2020, and are projected to account for *** percent of its total NOES sales in 2021).

Further, Thyssenkrupp has indicated that it is ***, although the record is unclear if e-mobility production for these companies would take place in the United States. *See* Appendix to Thyssenkrupp's Posthearing Brief at 2-3.

[70] CR/PR at II-14 n.26 ("In the current reviews, AK Steel indicated that NOES 'predominantly go*** into markets such as locomotive, oil and gas, mining, and industrial motors.'" (quoting Hearing Transcript at 62 (Konstantinidis))). *** *Id.* at II-1 n.2.

[71] As discussed, annual volumes of subject imports from Germany ranged from 7,493 to 14,385 short tons during the original POI. *See* Original Determinations, USITC Pub. 4502 at Table C-1.

[72] A plurality of responding purchasers reported that they anticipate demand to decrease; however, the ***, a plurality of responding U.S. importers, and *** foreign producers reported that they anticipate demand to increase. *See* CR/PR at Table II-6.

[73] CR/PR at II-2.

[74] For example, in 2019, Thyssenkrupp reported shipping *** short tons of NOES outside the European Union ("EU"). *See* Thyssenkrupp's Foreign Producer Questionnaire, EDIS Doc. 716874 at II-11 (aggregating export shipments to Asia and to all other markets outside the EU). This amount is equivalent to *** percent of the domestic industry's U.S. shipments in 2019. *Derived from*
(Continued…)

capacity in 2019 of *** short tons was greater than total apparent U.S. consumption, which was *** short tons.[75]

We reject Thyssenkrupp's argument that Section 232 duties necessarily will keep subject imports from Germany at *de minimis* levels in the event of revocation. Section 232 duties did not prevent nonsubject imports from entering the United States in significant amounts during the POR.[76]

While some quantity of nonsubject NOES may have entered under 232 exclusions, the record indicates that AK Steel is capable of producing every form of NOES sold in the U.S. market.[77] Thus, although Section 232 exclusion requests for certain nonsubject imports predicated on an absence of U.S. production may have been granted, it does not follow from this evidence that Section 232 duties would bar imports from all NOES products from Germany except those unavailable from the domestic NOES industry. We are therefore unpersuaded by Thyssenkrupp's argument that Section 232 duties would effectively bar imports of all NOES products from Germany except those unavailable from, and therefore likely to have no discernable adverse impact on, the domestic NOES industry.[78]

We reject Thyssenkrupp's argument that *Stainless Steel Bar* and *Carbon Steel Products* support a no likely discernable adverse impact finding with respect to subject imports from Germany.[79]

(…Continued)
Thyssenkrupp's Foreign Producer Questionnaire and CR/PR Table III-5. Moreover, the German industry as a whole exports significant volumes of NOES, or related non-grain oriented electrical steel products, outside its main European export markets. *See* CR/PR at Table IV-13 (indicating that German producers exported 31,426 short tons of such products to "all other destination markets" in 2019).

[75] CR/PR at Tables I-8 and IV-12.

[76] In 2019, nonsubject imports of NOES (22,923 short tons) accounting for *** percent of total apparent U.S. consumption entered, after the imposition of Section 232 duties and apparently prior to the grant of exclusions from these duties highlighted by Thyssenkrupp. *See* CR/PR at Table C-1.

[77] Hearing Transcript at 31-32 (Pfeiffer) and 37 (Konstantinidis); AK Steel's Final Comments, EDIS Doc. 724905 at 8.

[78] We also note that imports of NOES from some sources appear to have increased even without a Section 232 exclusion from Commerce. For instance, NOES imports from nonsubject sources India and Romania increased between 2018 and 2019 after imposition of Section 232 measures, yet the record provides no indication of whether Commerce has granted exemptions for imports of NOES from these sources over this time period. *See* CR/PR at Tables IV-2 & E-1; *see also* Thyssenkrupp's Posthearing Brief at 6 & Attachment A (showing NOES exclusion requests in 2020).

[79] Contrary to Thyssenkrupp's argument, the facts underlying the Commission's no likely discernable adverse impact findings in both *Stainless Steel Bar* and *Carbon Steel Products* are distinguishable from the facts regarding subject imports from Germany in these reviews.
(Continued…)

Based on the volume of subject imports from Germany during the original POI, the German industry's large capacity, available unused capacity (particularly in the most recent full year of the POR), and export orientation, as well as the underselling record from the original POI and the POR, we find that subject imports from Germany are not likely to have no discernible adverse impact upon revocation.

Japan. In the original investigations, subject imports from Japan decreased from 22,747 short tons in 2011 to 18,540 short tons in 2012 and 15,916 short tons in 2013; they were 6,887 short tons in interim 2013 and 4,969 short tons in interim 2014.[80] The share of apparent U.S. consumption accounted for by subject imports from Japan decreased from *** percent in 2011 to *** percent in 2012, and then increased to *** percent in 2013; it was *** percent in interim 2013 and *** percent in interim 2014.[81] During the POR, the volume and market share of subject imports from Japan decreased overall, and these imports were present in only very small amounts by the end of the period.[82]

(…Continued)

In *Stainless Steel Bar*, the Commission's no likely discernable adverse impact finding with respect to imports from Brazil was largely premised on the fact that such imports were subject to a very restrictive *quota* under Section 232. *See Stainless Steel Bar*, USITC Pub. 4820 at 16-17. In declining to make a no likely discernable adverse impact finding with respect to imports from the other subject countries, the Commission found that, unlike in the case of Brazil, the Section 232 trade action imposed a 25 percent *tariff* on such imports, with no quota limit to act as an absolute cap on imports from these countries. *Id*. at 19. In the current reviews, subject imports from Germany are subject to a 25 percent tariff under Section 232 and are not under a very restrictive quota like the stainless steel bar imports from Brazil.

In *Carbon Steel Products*, the Commission's no likely discernable adverse impact finding with respect to imports from Mexico was premised on several factors that do not apply to subject imports from Germany in these reviews. These include that, during the original POI, imports from Mexico were only a minimal presence in the U.S. market, and that during the POR, all or substantially all of the Mexican industry's shipments were within its specific country home market. *See Carbon Steel Products*, USITC Pub. 3899 at 44-46.

Finally, we note that that each Commission investigation is *sui generis*, involving a unique combination and interaction of many variables. *See Hitachi Metals, Ltd. v. United States*, 949 F.3d 710, 718 (Fed. Cir. 2020).

[80] Original Determinations, USITC Pub. 4502 at Table C-1.

[81] Confidential Report from the Original Investigations at Table C-1.

[82] Subject imports from Japan were 8,571 short tons in 2014, 5,166 short tons in 2015, 800 short tons in 2016, 398 short tons in 2017, 50 short tons in 2018, and 105 short tons in 2019; they were 87 short tons in interim 2019 and 30 short tons in interim 2020. *See* CR/PR at Tables I-8 and IV-1. The share of apparent U.S. consumption accounted for by subject imports from Japan was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020. *See* CR/PR at Table I-8.

NOES production capacity reported by the responding Japanese producers, JFE and Nippon, was *** short tons in 2014, *** short tons in 2015, *** short tons in 2016, *** short tons in 2017, *** short tons in 2018, and *** short tons in 2019; it was *** short tons in interim 2019 and *** short tons in interim 2020.[83] The responding Japanese producers' capacity utilization was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020.[84] The responding Japanese producers' exports as a share of total shipments of NOES ranged from *** percent to *** percent over the POR.[85]

In these reviews, subject imports from Japan undersold the domestic like product in *** out of *** (or *** percent of) quarterly comparisons.[86] In the original investigations, subject imports from Japan undersold the domestic like product in 42 out of 64 (or 65.6 percent of) quarterly comparisons.[87]

Based on the volume of subject imports from Japan during the original POI, the Japanese industry's large capacity, unused capacity, and export orientation, as well as the underselling record during the original POI and the POR, we find that subject imports from Japan are not likely to have no discernible adverse impact upon revocation.

Korea. In the original investigations, subject imports from Korea increased from 6,880 short tons in 2011 to 7,331 short tons in 2012, then decreased to 4,622 short tons in 2013; they were 1,357 short tons in interim 2013 and 1,823 short tons in interim 2014.[88] The share of apparent U.S. consumption accounted for by subject imports from Korea increased from *** percent in 2011 to *** percent in 2012, then decreased to *** percent in 2013; it was *** percent in interim 2013 and *** percent in interim 2014.[89] During the POR, the volume and market share subject imports from Korea decreased overall, and these imports were present in only very small amounts by the end of the period.[90]

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[83] CR/PR at Table IV-16. JFE and Nippon collectively accounted for *** percent of total NOES production in Japan in 2019. CR/PR at I-12.

[84] CR/PR at Table IV-16.

[85] CR/PR at Table IV-16.

[86] CR/PR at Table V-10a.

[87] Original Determinations, USITC Pub. 4502 at Table V-16.

[88] Original Determinations, USITC Pub. 4502 at Table C-1.

[89] Confidential Report from the Original Investigations at Table C-1.

[90] Subject imports from Korea were 1,841 short tons in 2014, 3,162 short tons in 2015, 883 short tons in 2016, 263 short tons in 2017, zero in 2018, and 177 short tons in 2019; they were 177 short tons in interim 2019 and 41 short tons in interim 2020. *See* CR/PR at Tables I-8 and IV-1. The share of apparent U.S. consumption accounted for by subject imports from Korea was *** percent in 2014, *** (Continued…)

Limited current data are available concerning the industry in Korea because no subject Korean producers responded to the Commission's questionnaires. AK Steel identified three NOES producers in Korea, and public sources indicate that Korean producer POSCO produces approximately 1.1 million short tons of flat-rolled electrical steel products every year.[91] GTA data, which may include out-of-scope products, indicate that Korea was the second-largest global exporter of flat-rolled, silicon-electrical steel, other than grain oriented, in 2019.[92]

In these reviews, subject imports from Korea undersold the domestic like product in *** out of *** (or *** percent of) quarterly comparisons.[93] In the original investigations, subject imports from Korea undersold the domestic like product in 20 out of 22 (or 90.9 percent of) quarterly comparisons.[94]

Based on the volume of subject imports from Korea during the original POI, the information available indicating the Korean industry's large capacity and export orientation, as well as the underselling record during the original POI, we find that subject imports from Korea are not likely to have no discernible adverse impact upon revocation.[95]

Sweden. In the original investigations, subject imports from Sweden increased from 8,599 short tons in 2011 to 9,359 short tons in 2012, then decreased to 7,068 short tons in 2013; they were 3,559 short tons in interim 2013 and 3,162 short tons in interim 2014.[96] The share of apparent U.S. consumption accounted for by subject imports from Sweden increased from *** percent in 2011 to *** percent in 2012, and decreased to *** percent in 2013; it was *** percent in interim 2013 and *** percent in interim 2014.[97] During the POR, the volume and

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percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020. *See* CR/PR at Table I-8.

[91] CR/PR at IV-45.

[92] CR/PR at Table IV-28. These data are based on HS subheadings 7225.19 and 7226.19. *Id*.

[93] CR/PR at Table V-10a.

[94] Original Determinations, USITC Pub. 4502 at Table V-16.

[95] We note that subject imports from Korea are subject to an annual quota pursuant to Section 232. *See* CR/PR at Table I-4. Specifically, this Section 232 quota imposes an annual limit of 8,273.92 short tons on imports from Korea under product category HTS 9903.80.16, which includes both NOES and out-of-scope GOES. *Id*. This quota would allow annualized imports from Korea equivalent to *** percent of the total apparent U.S. consumption of NOES in 2019. *Derived from* CR/PR Tables I-4 and C-1. In light of the record evidence discussed above, we find that the Section 232 quota would not prevent subject imports from Korea from having a discernable adverse impact on the domestic industry in the event of revocation.

[96] Original Determinations, USITC Pub. 4502 at Table C-1.

[97] Confidential Report from the Original Investigations at Table C-1.

market share of subject imports from Sweden decreased overall, and these imports were present in only very small amounts by the end of the period.[98]

NOES production capacity reported by the responding Swedish producer, Surahammars, decreased from *** short tons in 2014 to *** short tons in each subsequent full year of the POR; it was *** short tons in both interim 2019 and interim 2020.[99] Surahammars' capacity utilization was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020.[100] Its exports as a share of total shipments of NOES ranged from *** percent to *** percent over the POR.[101]

In these reviews, subject imports from Sweden undersold the domestic like product in *** out of *** quarterly comparisons.[102] In the original investigations, subject imports from Sweden undersold the domestic like product in 35 out of 62 (or 56.4 percent of) quarterly comparisons.[103]

Based on the volume of subject imports from Sweden during the original POI, the Swedish industry's unused capacity and export orientation, as well as the underselling record during the original POI, we find that subject imports from Sweden are not likely to have no discernible adverse impact upon revocation.

Taiwan. In the original investigations, subject imports from Taiwan increased from 5,203 short tons in 2011 to 17,136 short tons in 2012, then decreased to 9,768 short tons in 2013; they were 2,637 short tons in interim 2013 and 8,691 short tons in interim 2014.[104] The share of apparent U.S. consumption accounted for by subject imports from Taiwan increased from *** percent in 2011 to *** percent in 2012, then decreased to *** percent 2013; it was

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[98] Subject imports from Sweden were 4,700 short tons in 2014, 228 short tons in 2015, 760 short tons in 2016, 323 short tons in 2017, 502 short tons in 2018, and 184 short tons in 2019; they were 91 short tons in interim 2019 and 68 short tons in interim 2020. *See* CR/PR at Tables I-8 and IV-1. The share of apparent U.S. consumption accounted for by subject imports from Sweden was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in both interim 2019 and interim 2020. *See* CR/PR at Table I-8.

[99] CR/PR at Table IV-22. Surahammars accounted for all known NOES production in Sweden. CR/PR at I-12.

[100] CR/PR at Table IV-22.

[101] CR/PR at Table IV-16.

[102] CR/PR at Table V-10a.

[103] Original Determinations, USITC Pub. 4502 at Table V-16.

[104] Original Determinations, USITC Pub. 4502 at Table C-1.

*** percent in interim 2013 and *** percent in interim 2014.[105] During the POR, the volume and market share subject imports from Taiwan decreased overall, and these imports were present in relatively small amounts by the end of the period.[106]

Limited current data are available concerning the industry in Taiwan because no subject Taiwanese producers responded to the Commission's questionnaires. AK Steel identified two NOES producers in Taiwan, and public sources indicate that Taiwanese NOES producer China Steel Taiwan has an annual production capacity of two million short tons.[107] GTA data, which may include out-of-scope products, indicate that Taiwan was the largest global exporter of flat-rolled, silicon-electrical steel, other than grain oriented, in 2019.[108]

In these reviews, subject imports from Taiwan undersold the domestic like product in *** out of *** (or *** percent of) quarterly comparisons.[109] In the original investigations, subject imports from Taiwan undersold the domestic like product in 25 out of 30 (or 66.6 percent of) quarterly comparisons.[110]

Based on the volume of subject imports from Taiwan during the original POI, the information available indicating the Taiwanese industry's large capacity and export orientation, as well as the underselling record during the original POI and the POR, we find that subject imports from Taiwan are not likely to have no discernible adverse impact upon revocation.

C. Likelihood of a Reasonable Overlap of Competition

The Commission generally has considered four factors intended to provide a framework for determining whether subject imports compete with each other and with the domestic like

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[105] Confidential Report from the Original Investigations at Table C-1.

[106] Subject imports from Taiwan were 9,477 short tons in 2014, 2,118 short tons in 2015, 3,160 short tons in 2016, 2,760 short tons in 2017, 572 short tons in 2018, and 1,228 short tons in 2019; they were 578 short tons in interim 2019 and 382 short tons in interim 2020. *See* CR/PR at Tables I-8 and IV-1. The share of apparent U.S. consumption accounted for by subject imports from Taiwan was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020. *See* CR/PR at Tables I-8.

[107] CR/PR at IV-55.

[108] CR/PR at Table IV-28. These data are based on HS subheadings 7225.19 and 7226.19. *Id*.

[109] CR/PR at Table V-10a.

[110] Original Determinations, USITC Pub. 4502 at Table V-16.

product.[111] Only a "reasonable overlap" of competition is required.[112] In five-year reviews, the relevant inquiry is whether there likely would be competition even if none currently exists because the subject imports are absent from the U.S. market.[113]

AK Steel argues that, in the event of revocation, there would likely be a reasonable overlap of competition between and among subject imports and the domestic like product, given that they are fungible, are sold in the same channels of distribution in the same geographic regions, and were simultaneously present in the U.S. market throughout the original POI.[114]

Thyssenkrupp argues that, because NOES from Germany is unlikely to be present in the U.S. market in the reasonably foreseeable future, two of the Commission's four traditional factors – simultaneous presence and geographic overlap – indicate that there is unlikely to be a reasonable overlap of competition between NOES from Germany and other subject imports or the domestic like product.[115]

Fungibility. The record in these reviews indicates that there is a moderate-to-high degree of substitutability between domestically produced NOES and NOES imported from subject sources.[116] The sole domestic producer AK Steel reported that subject imports from

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[111] The four factors generally considered by the Commission in assessing whether imports compete with each other and with the domestic like product are as follows: (1) the degree of fungibility between subject imports from different countries and between subject imports and the domestic like product, including consideration of specific customer requirements and other quality-related questions; (2) the presence of sales or offers to sell in the same geographical markets of imports from different countries and the domestic like product; (3) the existence of common or similar channels of distribution for subject imports from different countries and the domestic like product; and (4) whether subject imports are simultaneously present in the market with one another and the domestic like product. *See, e.g., Wieland Werke, AG v. United States*, 718 F. Supp. 50 (Ct. Int'l Trade 1989).

[112] *See Mukand Ltd. v. United States*, 937 F. Supp. 910, 916 (Ct. Int'l Trade 1996); *Wieland Werke,* 718 F. Supp. at 52 ("Completely overlapping markets are not required."); *United States Steel Group v. United States,* 873 F. Supp. 673, 685 (Ct. Int'l Trade 1994), *aff'd*, 96 F.3d 1352 (Fed. Cir. 1996). We note, however, that there have been investigations where the Commission has found an insufficient overlap in competition and has declined to cumulate subject imports. *See, e.g*., *Live Cattle from Canada and Mexico*, Inv. Nos. 701-TA-386 and 731-TA-812-13 (Preliminary), USITC Pub. 3155 at 15 (Feb. 1999), *aff'd sub nom., Ranchers-Cattlemen Action Legal Foundation v. United States*, 74 F. Supp. 2d 1353 (Ct. Int'l Trade 1999); *Static Random Access Memory Semiconductors from the Republic of Korea and Taiwan*, Inv. Nos. 731-TA-761-62 (Final), USITC Pub. 3098 at 13-15 (Apr. 1998).

[113] *See generally*, *Chefline Corp. v. United States*, 219 F. Supp. 2d 1313, 1314 (Ct. Int'l Trade 2002).

[114] AK Steel's Corrected Prehearing Brief at 28-32; Exhibit 1 to AK Steel's Posthearing Brief at 5-8.

[115] Thyssenkrupp's Posthearing Brief at 11.

[116] CR/PR at II-20.

each subject country are *** interchangeable with each other and with the domestic like product.[117] Similarly, a majority of purchasers reported that subject imports from each subject country are "always" or "frequently" interchangeable with each other and with the domestic like product.[118] While importers' views were somewhat more varied, they generally viewed subject imports as interchangeable with each other and the domestic like product: in 10 of 15 subject country-to-subject country comparisons, a majority of importers reported that NOES is "always" or "frequently" interchangeable,[119] and in all U.S.-to-subject country comparisons but one, a majority of importers reported that NOES is "always" or "frequently" interchangeable.[120] Moreover, a majority of purchasers reported that the domestic like product and subject imports from each source are comparable in most of the 18 enumerated purchasing factors.[121] Finally, *** AK Steel's U.S. shipments over the POR, and *** U.S. shipments of subject imports over this period, were of fully processed (as opposed to semi-processed) NOES.[122]

Geographic Overlap. During the POR, the sole domestic producer AK Steel reported ***.[123] Importers of NOES from all six subject countries reported selling to the ***.[124]

Channels of Distribution. During the POR, both the domestic industry and importers from all six subject sources reported selling NOES to ***. We recognize that the domestic industry sold a larger share of its NOES to *** than to *** over the POR.[125]

Simultaneous Presence in Market. From January 2014 to August 2020, subject imports from both China and Germany were present in 25 out of 80 (or 31.3 percent of) months; subject imports from Japan were present in 54 out of 80 (or 67.5 percent of) months; subject imports Korea were present in 31 out of 80 (or 38.8 percent of) months; subject imports from

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[117] CR/PR at Table II-12.

[118] CR/PR at Table II-12.

[119] CR/PR at Table II-12. In the remaining five subject country-to-subject country comparisons, importers' responses were more evenly distributed between "always," "frequently," "sometimes," and "never." *Id*.

[120] CR/PR at Table II-12. In the U.S. vs. China comparison, half of responding importers (3 of 6) reported that the domestic like product is "always" or "frequently" interchangeable with the subject imports from China, and half (3 of 6) reported that they are "sometimes" or "never" interchangeable. *Id*.

[121] CR/PR at Table II-11a.

[122] CR/PR at Table IV-3.

[123] CR/PR at Table II-4.

[124] CR/PR at Table II-4. In addition, importers from Germany reported selling to the ***; importers from Japan reported selling to the ***; importers from Sweden reported selling to the ***; and importers Taiwan reported selling to the ***. *Id*. Importers from China and Korea ***. *Id*.

[125] CR/PR at Table II-3.

Sweden were present 78 out of 80 (or 97.5 percent of) months; and subject imports from Taiwan were present in 48 out of 80 (or 60.0 percent of) months.[126] Subject imports from all six subject sources were simultaneously present in six months during the POR.[127] The domestic like product was present throughout the POR.[128]

Conclusion. The record in these reviews indicates that subject imports from each source and the domestic like product are fungible. It likewise indicates a geographic overlap (particularly in the ***), common channels of distribution (particularly with respect to sales to ***), and that the domestic like product and subject imports from each source were simultaneously present during the POR. Thyssenkrupp's contention that there is unlikely to be a reasonable overlap of competition between NOES from Germany and other subject imports or the domestic like product because NOES from Germany is unlikely to be present in the U.S. market in the reasonably foreseeable future is unpersuasive; as discussed above, the record reflects that German industry maintains the ability and incentive to ship to the U.S. market upon revocation. We consequently find that there would likely be a reasonable overlap of competition between and among subject imports from each source and the domestic like product in the event of revocation.

D. Likely Conditions of Competition

In determining whether to exercise our discretion to cumulate subject imports, we assess whether subject imports from the subject countries are likely to compete under similar or different conditions in the U.S. market if the orders were revoked. AK Steel argues that subject imports from each source would be likely to compete with each other and the domestic like product under the same conditions of competition if the orders were revoked.[129] Thyssenkrupp argues that the likely conditions of competition disfavor cumulation, as there is no market in the United States for the e-mobility products the German NOES industry is focused on producing.[130]

In these reviews, we do not find any significant differences between how imports of subject NOES from China, Germany, Japan, Korea, Sweden, and Taiwan are likely to compete in

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[126] CR/PR at IV-14 and Table IV-5.
[127] CR/PR at Table IV-5.
[128] CR/PR at Tables V-3-8.
[129] AK Steel's Corrected Prehearing Brief at 32; Exhibit 1 to AK Steel's Posthearing Brief at 7-8.
[130] Thyssenkrupp's Posthearing Brief at 11-12.

the U.S. market in the event of revocation. As discussed above, available information indicates that each of the subject industries possesses available NOES production capacity and is export oriented. Moreover, the record indicates that NOES is substitutable, irrespective of source. Thyssenkrupp's contention that the likely conditions of competition disfavor the cumulation of subject imports from Germany is unpersuasive; as discussed above, the record, including the hearing testimony of Thyssenkrupp's own witnesses, demonstrates that the focus of the German industry is not limited to the manufacture of e-mobility NOES.[131] Consequently, we do not find that subject imports from Germany or any other subject country are likely to compete under different conditions of competition so as to warrant declining to exercise our discretion to cumulate.

E. Conclusion

For the reasons discussed above, we exercise our discretion to cumulate subject imports from China, Germany, Japan, Korea, Sweden, and Taiwan for purposes of our analysis in these reviews.

IV. Revocation of the Antidumping and Countervailing Duty Orders Would Likely Lead to Continuation or Recurrence of Material Injury Within a Reasonably Foreseeable Time

A. Legal Standards

In a five-year review conducted under section 751(c) of the Tariff Act, Commerce will revoke an antidumping or countervailing duty order unless: (1) it makes a determination that dumping or subsidization is likely to continue or recur and (2) the Commission makes a determination that revocation of the antidumping or countervailing duty order "would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time."[132] The SAA states that "under the likelihood standard, the Commission will engage in a counterfactual analysis; it must decide the likely impact in the reasonably foreseeable future of an important change in the status quo – the revocation or termination of a proceeding and the

[131] Hearing Transcript at 150 (Horgan) and 174 (Schmidtz); *see also* Appendix to Thyssenkrupp's Posthearing Brief at 1-2 (stating that its sales of e-mobility NOES accounted for *** percent of its total NOES sales in 2020, and are projected to account for *** percent of its total NOES sales in 2021).

[132] 19 U.S.C. § 1675a(a).

elimination of its restraining effects on volumes and prices of imports."[133] Thus, the likelihood standard is prospective in nature.[134] The U.S. Court of International Trade has found that "likely," as used in the five-year review provisions of the Act, means "probable," and the Commission applies that standard in five-year reviews.[135]

The statute states that "the Commission shall consider that the effects of revocation or termination may not be imminent, but may manifest themselves only over a longer period of time."[136] According to the SAA, a "'reasonably foreseeable time' will vary from case-to-case, but normally will exceed the 'imminent' timeframe applicable in a threat of injury analysis in original investigations."[137]

Although the standard in a five-year review is not the same as the standard applied in an original investigation, it contains some of the same fundamental elements. The statute provides that the Commission is to "consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the orders are revoked or the suspended

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[133] SAA at 883-84. The SAA states that "{t}he likelihood of injury standard applies regardless of the nature of the Commission's original determination (material injury, threat of material injury, or material retardation of an industry). Likewise, the standard applies to suspended investigations that were never completed." *Id*. at 883.

[134] While the SAA states that "a separate determination regarding current material injury is not necessary," it indicates that "the Commission may consider relevant factors such as current and likely continued depressed shipment levels and current and likely continued {sic} prices for the domestic like product in the U.S. market in making its determination of the likelihood of continuation or recurrence of material injury if the order is revoked." SAA at 884.

[135] *See NMB Singapore Ltd. v. United States*, 288 F. Supp. 2d 1306, 1352 (Ct. Int'l Trade 2003) ("'likely' means probable within the context of 19 U.S.C. § 1675(c) and 19 U.S.C. § 1675a(a)"), *aff'd mem.*, 140 Fed. Appx. 268 (Fed. Cir. 2005); *Nippon Steel Corp. v. United States*, 26 CIT 1416, 1419 (2002) (same); *Usinor Industeel, S.A. v. United States*, 26 CIT 1402, 1404 nn.3, 6 (2002) ("more likely than not" standard is "consistent with the court's opinion;" "the court has not interpreted 'likely' to imply any particular degree of 'certainty'"); *Indorama Chemicals (Thailand) Ltd. v. United States*, 26 CIT 1059, 1070 (2002) ("standard is based on a likelihood of continuation or recurrence of injury, not a certainty"); *Usinor v. United States*, 26 CIT 767, 794 (2002) ("'likely' is tantamount to 'probable,' not merely 'possible'").

[136] 19 U.S.C. § 1675a(a)(5).

[137] SAA at 887. Among the factors that the Commission should consider in this regard are "the fungibility or differentiation within the product in question, the level of substitutability between the imported and domestic products, the channels of distribution used, the methods of contracting (such as spot sales or long-term contracts), and lead times for delivery of goods, as well as other factors that may only manifest themselves in the longer term, such as planned investment and the shifting of production facilities." *Id*.

investigation is terminated."[138] It directs the Commission to take into account its prior injury determination, whether any improvement in the state of the industry is related to the order or the suspension agreement under review, whether the industry is vulnerable to material injury if an order is revoked or a suspension agreement is terminated, and any findings by Commerce regarding duty absorption pursuant to 19 U.S.C. § 1675(a)(4).[139] The statute further provides that the presence or absence of any factor that the Commission is required to consider shall not necessarily give decisive guidance with respect to the Commission's determination.[140]

In evaluating the likely volume of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether the likely volume of imports would be significant either in absolute terms or relative to production or consumption in the United States.[141] In doing so, the Commission must consider "all relevant economic factors," including four enumerated factors: (1) any likely increase in production capacity or existing unused production capacity in the exporting country; (2) existing inventories of the subject merchandise, or likely increases in inventories; (3) the existence of barriers to the importation of the subject merchandise into countries other than the United States; and (4) 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.[142]

In evaluating the likely price effects of subject imports if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider whether there is likely to be significant underselling by the subject imports as compared to the domestic like product and whether the subject imports are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of the domestic like product.[143]

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[138] 19 U.S.C. § 1675a(a)(1).

[139] 19 U.S.C. § 1675a(a)(1). Commerce has not made any duty absorption findings. *See* CR/PR at I-13 n.24.

[140] 19 U.S.C. § 1675a(a)(5). Although the Commission must consider all factors, no one factor is necessarily dispositive. SAA at 886.

[141] 19 U.S.C. § 1675a(a)(2).

[142] 19 U.S.C. § 1675a(a)(2)(A-D).

[143] *See* 19 U.S.C. § 1675a(a)(3). The SAA states that "{c}onsistent with its practice in investigations, in considering the likely price effects of imports in the event of revocation and termination, the Commission may rely on circumstantial, as well as direct, evidence of the adverse effects of unfairly traded imports on domestic prices." SAA at 886.

In evaluating the likely impact of imports of subject merchandise if an order under review is revoked and/or a suspended investigation is terminated, the Commission is directed to consider all relevant economic factors that are likely to have a bearing on the state of the industry in the United States, including but not limited to the following: (1) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity; (2) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment; and (3) likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.[144] All relevant economic factors are to be considered within the context of the business cycle and the conditions of competition that are distinctive to the industry. As instructed by the statute, we have considered the extent to which any improvement in the state of the domestic industry is related to the orders under review and whether the industry is vulnerable to material injury upon revocation.[145]

B. Conditions of Competition and the Business Cycle

In evaluating the likely impact of the subject imports on the domestic industry if an order is revoked, the statute directs the Commission to consider all relevant economic factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry."[146] The following conditions of competition inform our determinations.

1. Demand Conditions

Original Investigations. In the original investigations, the Commission found that demand for NOES depended on demand for its downstream products, such as electric motors, transformers, and generators. As measured by apparent U.S. consumption, demand for NOES decreased from 2011 to 2013, but was higher in interim 2014 than in interim 2013. The

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[144] 19 U.S.C. § 1675a(a)(4).

[145] The SAA states that in assessing whether the domestic industry is vulnerable to injury if the order is revoked, the Commission "considers, in addition to imports, other factors that may be contributing to overall injury. While these factors, in some cases, may account for the injury to the domestic industry, they may also demonstrate that an industry is facing difficulties from a variety of sources and is vulnerable to dumped or subsidized imports." SAA at 885.

[146] 19 U.S.C. § 1675a(a)(4).

Commission found that U.S. purchasers of NOES were end users, distributors, and service centers that performed laminating or stamping.[147]

Current Reviews. In these reviews, demand for NOES continues to be derived from demand for its downstream products, such as electric motors, transformers, and generators.[148] Apparent U.S. consumption of NOES declined overall by *** percent from 2014 to 2019.[149] Market participants disagree about anticipated future U.S. demand for NOES: a plurality of responding purchasers reported that they anticipate demand will decrease, while ***, a plurality of responding U.S. importers, and *** foreign producers reported that they anticipate demand will increase.[150]

2. Supply Conditions

Original Investigations. In the original investigations, the Commission found that the domestic industry (*i.e.*, AK Steel) was the second largest source of supply to the U.S. market from 2011 to 2013, while cumulated subject imports were the largest source, and nonsubject imports were a small presence. France was the largest source of nonsubject imports throughout this period.[151]

Current Reviews. During the POR, the domestic industry accounted for the largest share of apparent U.S. consumption, and this share increased by *** percentage points over the POR, from *** percent in 2014 to *** percent share in 2019.[152] As discussed, the domestic industry comprises the sole domestic producer, AK Steel. The domestic industry primarily supplied *** during the POR.[153]

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[147] Original Determinations, USITC Pub. 4502 at 19.

[148] CR/PR at II-12.

[149] CR/PR at Tables I-8 and C-1. Apparent U.S. consumption was *** short tons in 2014, *** short tons in 2015, *** short tons in 2016, *** short tons in 2017, *** short tons in 2018, and *** short tons in 2019; it was *** short tons in interim 2019, and *** short in interim 2020. *Id*.

[150] CR/PR at Table II-6. While AK Steel contends that U.S. demand for NOES is likely to increase from its currently low level in the reasonably foreseeable future, given that there continues to be significant growth in EV production, Thyssenkrupp argues that U.S. demand for NOES will not increase, as motor lamination production for EVS, even for the U.S. auto industry, will remain outside the United States. *See* AK Steel's Corrected Prehearing Brief at 38-39; Thyssenkrupp's Prehearing Brief at 9.

[151] Original Determinations, USITC Pub. 4502 at 20.

[152] CR/PR at Tables I-8 and C-1. The domestic industry's share of apparent U.S. consumption was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent share 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020. *Id*.

[153] CR/PR at Table II-3.

Due to the discipline of the antidumping and countervailing duty orders, cumulated subject imports' share of apparent U.S. consumption decreased from *** percent in 2014 to *** percent in 2019.[154] Subject imports from combined subject sources primarily supplied *** over the POR.[155]

Nonsubject imports' share of apparent U.S. consumption increased from *** percent in 2014 to *** percent in 2019.[156] Nonsubject imports primarily supplied *** over the POR.[157] The largest sources of nonsubject imports in 2019 were France, Austria, and India.[158]

3. Substitutability and Other Conditions

Original Investigations. In the original investigations, the Commission found a moderate-to-high degree of substitutability among domestically produced NOES and NOES from all subject sources.[159] While, as previously discussed, the Commission found that there appeared to be at least some interchangeability between NOES and CRML, it observed that the parties had presented disparate views on this issue.[160] The Commission found price to be an important factor in purchasing decisions, but noted that quality, reliability and availability were other important factors.[161]

Current Reviews. We find that there continues to be a moderate-to-high degree of substitutability between domestically produced NOES and NOES imported from subject sources.[162] As discussed above, the sole domestic producer AK Steel reported that subject imports from each subject country are *** interchangeable with each other and with the domestic like product; a majority of purchasers reported that subject imports from each subject country are "always" or "frequently" interchangeable with each other and with the domestic like product; and importers generally viewed subject imports as interchangeable with each

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[154] CR/PR at Tables I-8 and C-1. Cumulated subject imports' share of apparent U.S. consumption was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020. *Id*.

[155] CR/PR at Table II-3.

[156] CR/PR at Tables I-8 and C-1. Nonsubject imports' share of apparent U.S. consumption was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020. *Id*.

[157] CR/PR at Table II-3.

[158] CR/PR at II-9-10 and Table IV-2.

[159] Original Determinations, USITC Pub. 4502 at 20.

[160] Original Determinations, USITC Pub. 4502 at 21.

[161] Original Determinations, USITC Pub. 4502 at 21.

[162] CR/PR at II-20.

other and the domestic like product.[163] Moreover, a majority of purchasers reported that the domestic like product and subject imports from each source are comparable in most of the 18 enumerated purchasing factors,[164] and *** AK Steel's U.S. shipments over the POR, and *** U.S. shipments of subject imports over this period, were of fully processed (as opposed to semi-processed) NOES.[165]

We find that price continues to be an important factor in purchasing decisions. When identifying the top three factors in their purchasing decisions, NOES purchasers listed price most frequently as the first-most important factor.[166] The vast majority of purchasers (12 of 14) reported that price is "very important" in their purchasing decisions.[167] Likewise, in most comparisons, a majority or plurality of market participants reported that differences other than price are "never" or only "sometimes" important in purchasing decisions between and among NOES from each subject source and the domestic like product.[168] Moreover, most purchasers (eight of 14) reported that they usually purchase the lowest-priced NOES.[169]

During the POR, both the U.S. producer and importers reported using *** to set prices for NOES.[170] AK Steel reported selling the vast majority of its NOES via ***.[171]

Raw material costs were the second largest component of the cost of goods sold ("COGS") for the domestic industry throughout the POR.[172] Notably, raw material inputs for NOES include scrap steel and ferrosilicon.[173] Prices for scrap steel and ferrosilicon decreased over the POR.[174]

U.S. imports of NOES from China, Germany, Japan, Sweden, and Taiwan, as well as from nonsubject sources, are subject to 25 percent additional duties pursuant to Section 232.[175] Further, U.S. imports of NOES from Korea are subject to an annual quota pursuant to Section

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[163] CR/PR at Table II-12.

[164] CR/PR at Table II-11a.

[165] CR/PR at Table IV-3.

[166] CR/PR at Table II-8.

[167] CR/PR at Table II-9. The remaining two responding purchasers reported that price was "somewhat important" in their purchasing decisions. *Id*.

[168] CR/PR at Table II-14.

[169] CR/PR at II-22.

[170] CR/PR at Table V-1.

[171] CR/PR at Table V-2.

[172] CR/PR at III-18. Raw materials' share of COGS ranged from *** percent to *** percent over the POR. *See* CR/PR at Table III-8.

[173] CR/PR at V-1.

[174] CR/PR at Figure V-1.

[175] CR/PR at I-16 and Appendix E-1.

232.[176] In addition, U.S. imports of NOES from China are subject to an additional 7.5 percent duty under Section 301.[177]

C. Likely Volume of Subject Imports

Original Investigations. In the original investigations, the Commission found that cumulated subject imports were a substantial presence in the U.S. market throughout the POI, that their market share increased from 2011 to 2012, and that they were substantial relative to domestic production.[178] The Commission therefore concluded that the volume of cumulated subject imports was significant both in absolute terms and relative to consumption and production in the United States.[179]

Current Reviews. In these reviews, we determine that the volume of cumulated subject imports from China, Germany, Japan, Korea, Sweden, and Taiwan is likely to be significant in the event of revocation, as it was during the original POI.

The subject industries would have the ability to export significant volumes of subject merchandise to the United States in the event of revocation. The subject NOES industries have significant production capacity,[180] which combined was equivalent in 2019 to *** percent of the domestic industry's capacity that year.[181] Further, the subject industries have appreciable unused capacity,[182] maintain substantial end-of-period inventories,[183] and are export oriented.[184]

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[176] CR/PR at Table I-4. As discussed, this Section 232 quota imposes an annual limit of 8,273.92 short tons on imports from Korea under product category HTS 9903.80.16, which includes both NOES and out-of-scope GOES. *Id*.

[177] CR/PR at I-19 and Appendix E-2.

[178] Original Determinations, USITC Pub. 4502 at 23-24.

[179] Original Determinations, USITC Pub. 4502 at 24.

[180] Total capacity for responding subject producers was 1.1 million short tons in 2014, 1.0 million short tons in 2015, 2016, and 2017, 995,867 short tons in 2018, and 936,238 short tons in 2019; it was 454,906 short tons in interim 2019 and 455,526 short tons in interim 2020. *See* CR/PR at Table IV-26. The above likely significantly understates actual total capacity, as it does not include capacity data from any producers in China, Korea, or Taiwan, as none responded to the Commission's questionnaires.

[181] *Derived from* CR/PR Tables III-3 and IV-26.

[182] Total capacity utilization for responding subject producers was 90.8 percent in 2014, 86.6 percent in 2015, 93.4 percent in 2016, 93.9 percent in 2017, 94.6 percent in 2018, and 87.5 percent in 2019; it was 92.0 percent in interim 2019 and 85.6 percent in interim 2020. *See* CR/PR at Table IV-26.

[183] Total end-of-period inventories of subject NOES in the subject countries were *** short tons in 2014, *** short tons in 2015, *** short tons in 2016, *** short tons in 2017, *** short tons in 2018, (Continued…)

The subject industries would have the incentive to export significant volumes of subject merchandise to the United States in the event of revocation, as the U.S. remains an attractive export market for subject producers. The average unit value ("AUV") data indicate that prices for exports from each subject country are higher in the U.S. market than in most other destination markets.[185] Moreover, the existence of third-country trade barriers to subject imports likely increases the relative attractiveness of the U.S. market.[186] Further, the sizeable presence of nonsubject imports in the U.S. market throughout the POR illustrates the general attractiveness of the United States as a destination market for NOES exports.[187]

Accordingly, based on the subject producers' behavior during the original investigations, the cumulated subject producers' substantial production capacity, appreciable unused capacity, substantial inventories and export orientation, and the attractiveness of the U.S. market, we find that the likely volume of cumulated subject imports would be significant in the event of revocation.[188] [189]

(…Continued)
and *** short tons in 2019; they were *** short tons in interim 2019 and *** in interim 2020. *See* CR/PR at Table IV-26. U.S. importers' inventories of cumulated subject imports were *** short tons in 2014, *** short tons in 2015, *** short tons in 2016, *** short tons in 2017, *** short tons in 2018, and *** short tons in 2019; they were *** short tons in both interim 2019 and interim 2020. *See* CR/PR at Table IV-7.

[184] Exports accounted for between *** percent and *** percent of the subject industries' total shipments between 2014 and 2019. *See* CR/PR at Table IV-26.

[185] CR/PR at IV-9 (China); IV-13 (Germany); IV-18 (Japan); IV-19 (Korea); IV-23 (Sweden); and IV-25 (Taiwan). We recognize that differences in AUVs may reflect differences in product mix. We note in this respect AK Steel's argument and evidence in support of the proposition that product mix issues will not affect the analysis in these reviews of relative prices in the United States and other export markets. *See* Exhibit 1 to AK Steel's Posthearing Brief at 18.

[186] Brazil has imposed antidumping duties on imports of NOES from China, Germany, Korea, and Taiwan, and the EU has in place a safeguard measure against steel products. *See* CR/PR at IV-61 and Table IV-27.

[187] *See* CR/PR at Table C-1.

[188] We have also considered the other factor – *i.e.*, the potential for product shifting – enumerated in the statute regarding the analysis of likely subject import volume. Producers in only three of the six subject countries, Germany, Japan, and Sweden, submitted questionnaire responses. Producers in two of these three subject countries, ***, indicated that they can shift from production of other products to production of subject merchandise using existing equipment. *See* CR/PR at Table II-5.

[189] In light of this record, and for reasons discussed above in section III.B., we find that the Section 232 and/or Section 301 trade actions, though they may well have had some deterrent effect, will not likely prevent a significant volume of subject imports from entering the U.S. market in the event of revocation. *See also* CR/PR at Table D-1 (U.S. importer *** and U.S. purchaser ***).

D. Likely Price Effects

1. The Original Investigations

Original Investigations. In the original investigations, the Commission found that cumulated subject imports undersold the domestic like product in 210 of 282 quarterly comparisons, and that underselling predominated for pricing products accounting for the largest volumes of sales. Thus, the Commission found that the underselling by subject imports was significant.[190]

The Commission also found that subject imports depressed prices for the domestic like product to a significant degree. While it acknowledged that the drop in apparent U.S. consumption between 2011 and 2013 likely affected prices for the domestic like product, the Commission observed that demand trends did not necessarily correlate with or explain falling domestic prices during most of the POI.[191] Conversely, the Commission indicated that prices for the domestic like product fell over the POI as the volume of pervasively undersold subject imports increased, and that there was evidence that AK Steel had lowered its prices in an attempt to stop ceding market share to subject imports.[192] The pricing data and the evidence of AK Steel's pricing plan, the Commission found, demonstrated that underselling by subject imports led to significant price depression.[193] Because the domestic industry lost market share to subject imports, and because its prices were significantly depressed by these imports, the Commission found that subject imports had significant price effects.[194]

Current Reviews. As discussed above, the record in these reviews indicates that there is a moderate-to-high degree of substitutability between domestically produced NOES and NOES imported from subject sources, and that price is an important factor in purchasing decisions.

The Commission collected quarterly pricing data from the U.S. producer and importers for six NOES products shipped to unrelated U.S. customers during the POR.[195] The sole U.S.

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[190] Original Determinations, USITC Pub. 4502 at 25.

[191] Original Determinations, USITC Pub. 4502 at 26.

[192] Original Determinations, USITC Pub. 4502 at 26-28. This evidence included affidavits and contemporaneous documentation of AK Steel's pricing plan. *See Id*. at 27 n.145.

[193] Original Determinations, USITC Pub. 4502 at 28.

[194] Original Determinations, USITC Pub. 4502 at 28-29.

[195] CR/PR at V-6. The six pricing products are:

> **Product 1.** M-19, 0.45-0.50mm thickness, fully processed, maximum core loss 2.90 W/kg (1.5T; 50Hz), 600mm or more wide, coated.

(Continued…)

producer and seven importers provided usable pricing data for sales of these products, although not all firms reported pricing for all products for all quarters.[196] Pricing data reported by these firms accounted for approximately *** percent of the U.S. producer's U.S. commercial shipments of NOES and *** percent of reported U.S. commercial shipments of subject imports from Taiwan in 2019 (no importer reported U.S. commercial shipments or pricing data for imports for China, Germany, Japan, Korea, or Sweden in 2019).[197]

According to these pricing data, cumulated subject imports undersold the domestic like product in 17 of 38 quarterly comparisons, or 44.7 percent of the time, involving 3,317 short tons of NOES, with an average underselling margin of 13.4 percent.[198] Cumulated subject imports oversold the domestic like product in the other 21 quarterly comparisons, or 55.3 percent of the time, involving 1,175 short tons of NOES, and with an average overselling margin of 16.8 percent.[199] Thus, notwithstanding the discipline of the orders, subject imports undersold the domestic like product in nearly half of all quarterly comparisons, and almost threefold more short tons of subject imports undersold the domestic like product than oversold the domestic like product during the POR.

In light of the underselling observed during the original POI and during the POR with the orders in place, the significance of price in purchasing decisions, and the moderate-to-high degree of substitutability between the domestic like product and subject imports, we find that significant underselling by cumulated subject imports is likely in the event of revocation. Additionally, because price is an important factor in purchasing decisions and the domestic like product and subject imports are substitutable, the significant quantities of cumulated subject imports that would likely enter the United States and that would likely undersell the domestic like product would likely force the domestic industry to lower prices, forego price increases, or

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(…Continued)

Product 2. M-22, 0.45-0.50mm thickness, fully processed, maximum core loss 3.10 W/kg (1.5T; 50Hz), 900mm or more wide, coated.
Product 3. M-36, 0.60-0.65mm thickness, fully processed, maximum core loss 4.10 W/kg (1.5T; 50Hz), 600mm or more wide, coated.
Product 4. M-43, 0.60-0.65mm thickness, fully processed, maximum core loss 4.35 W/kg (1.5T; 50Hz), 600mm or more wide, coated.
Product 5. M-45, 0.60-0.65mm thickness, fully processed, maximum core loss 4.80 W/kg (1.5T; 50Hz), 600mm or more wide, coated.
Product 6. 0.20-0.35mm thickness, fully processed, maximum core loss 22.0 W/kg (1.0T; 400Hz), 600mm or more wide, coated.

[196] CR/PR at V-7.
[197] CR/PR at V-7.
[198] *Derived from* CR/PR Table V-10a.
[199] CR/PR Table V-10a.

risk losing market share. Consequently, we find that cumulated subject imports would likely have significant depressing and/or suppressing effects on prices for the domestic like product, and/or would likely gain market share at the domestic industry's expense, in the event of revocation within a reasonably foreseeable time.[200]

E. Likely Impact

Original Investigations. In the original investigations, the Commission found that virtually all indicators of the domestic industry's performance declined over the POI. Production, capacity utilization, U.S. shipments, and market share each fell from 2011 to 2013. The number of production related workers ("PRWs"), total hours worked, wages paid, and productivity each also fell over this period. Financial indicators were likewise poor and declined from 2011 to 2013.[201]

The Commission found that subject imports had a significant impact on the domestic industry. Specifically, the Commission found that the domestic industry lost market share to large volumes of lower-priced subject imports during the POI, forcing it to reduce its prices in an attempt to regain this market share, leading to revenue losses that contributed in large part to its poor and deteriorating financial condition.[202]

The Commission also considered whether other factors may have had an impact on the domestic industry. It did not find the relatively small volume of nonsubject imports, with consistently higher AUVs than subject imports, to be a cause of injury.[203]

The Commission rejected respondents' argument that the decline in the domestic industry's performance over the POI merely reflected the decline in demand for NOES over this period. Subject imports, the Commission found, were an independent cause of the domestic industry's deteriorating performance over the POI.[204] Among other things, it noted in support

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[200] Statements from importers and purchasers support our finding that the cumulated subject imports would likely adversely impact prices for the domestic like product or gain market share at the domestic industry's expense in the event of revocation. For example, U.S. importer ***. *See* CR/PR at Table D-1. U.S. purchaser ***. *Id*.

[201] Original Determinations, USITC Pub. 4502 at 30-31.

[202] Original Determinations, USITC Pub. 4502 at 31.

[203] Original Determinations, USITC Pub. 4502 at 31-32.

[204] Original Determinations, USITC Pub. 4502 at 33.

of this finding AK Steel's policy during the POI of reducing its prices in response to low-priced subject imports.[205]

The Commission rejected respondents' argument that the deterioration in the domestic industry's financial performance over the POI was attributable to competition from CRML and laminations. It observed that most purchasers reported no substitutes for NOES, and that AK Steel had not been told by any customer that it needed to reduce its prices to compete with CRML.[206]

Finally, the Commission also rejected respondents' argument that AK Steel's performance over the POI was largely a function of its ***, particularly its ***.[207] It found nothing in the record to indicate that the domestic industry's other factory costs were anomalous, and observed that AK Steel's cost structure did not explain the market share shift or the price depression that occurred over the POI, both of which played an important role in the domestic industry's poor and deteriorating performance.[208]

Current Reviews. The domestic industry's production capacity stayed constant over the POR,[209] but its production over this period decreased.[210] Consequently, its capacity utilization likewise decreased from 2014 to 2019, and was lower in interim 2020 than in interim 2019.[211] The domestic industry's U.S. shipments also decreased from 2014 to 2019, and were lower in interim 2020 than in interim 2019.[212] The domestic industry's market share increased over the POR, but not significantly.[213]

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[205] Original Determinations, USITC Pub. 4502 at 33.

[206] Original Determinations, USITC Pub. 4502 at 33.

[207] Original Determinations, USITC Pub. 4502 at 34; Confidential Original Determinations, EDIS Doc. 546978 at 49.

[208] Original Determinations, USITC Pub. 4502 at 34-35.

[209] The domestic industry's production capacity was *** short tons in each full year of the POR, and *** short tons in each interim period. *See* CR/PR at Table C-1.

[210] The domestic industry's production was *** short tons in 2014, *** short tons in 2015, *** short tons in 2016, *** short tons in 2017, *** short tons in 2018, and *** short tons in 2019; it was *** short tons in interim 2019 and *** short tons in interim 2020. *See* CR/PR at Table C-1.

[211] The domestic industry's capacity utilization rate was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020. *See* CR/PR at Table C-1.

[212] U.S. shipments were *** short tons in 2014, *** short tons in 2015, *** short tons in 2016; *** short tons in 2017, *** short tons in 2018, and *** short tons in 2019; they were *** short tons in interim 2019 and *** short tons in interim 2020. *See* CR/PR at Table C-1.

[213] The domestic industry's share of apparent U.S. consumption was *** percent in 2014, *** percent in 2015, *** in 2016, *** in 2017, *** percent in 2018, and *** in 2019; it was *** percent in interim 2019 and *** percent in interim 2020. *See* CR/PR at Table C-1.

The number of PRWs, hours worked, and wages paid, as well as productivity, each decreased from 2014 to 2019, and were each lower in interim 2020 than in interim 2019.[214] The domestic industry's net sales revenues decreased from 2014 to 2019, and were lower in interim 2020 than in interim 2019.[215] It reported a gross loss in each full year of the POR, and in interim 2020.[216] The domestic industry reported operating losses and net losses throughout the POR.[217] Its operating margin was negative throughout the POR.[218] Both its capital expenditures and research and development ("R&D") expenses declined from 2014 to 2019, and were lower in interim 2020 than in interim 2019.[219] Relative to its capacity levels, the domestic industry's production and capacity utilization rates were low throughout the POR, and particularly between 2016 and 2019.[220]

In sum, the domestic industry's trade and employment indicators deteriorated over the POR, its financial indicators likewise trended downward or were negative throughout the period, and its levels of production and capacity utilization remained at low and declining levels. Based on the foregoing, we find the domestic industry to be in a vulnerable condition.

As discussed above, we have found that revocation of the orders would likely result in a significant increase in the volume of low-priced cumulated subject imports that would depress

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[214] The number of PRWs was *** in 2014, *** in 2015, *** in 2016, *** in 2017, *** in 2018, and *** in 2019; it was *** in interim 2019 and *** in interim 2020.

Hours worked were *** in 2014, *** in 2015, *** in 2016, *** in 2017, *** in 2018, and *** in 2019; they were *** in interim 2019 and *** in interim 2020. *See* CR/PR at Table C-1.

[215] Net sales revenues were $*** in 2014, $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, and $*** in 2019; they were $*** in interim 2019 and $*** in interim 2020. *See* CR/PR at Table III-8.

[216] Gross *** was $*** in 2014, $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, and $*** in 2019; gross *** was $*** in interim 2019, and gross *** was $*** in interim 2020. *See* CR/PR at Table III-8.

[217] Operating *** was $*** in 2014, $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, and $*** in 2019; it was $*** in interim 2019, and $*** in interim 2020. *See* CR/PR at Table III-8.

Net *** was $*** in 2014, $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, and $*** in 2019; it was $*** in interim 2019, and $*** in interim 2020. *Id*.

[218] The domestic industry's operating margin was *** percent in 2014, *** percent in 2015, *** percent in 2016, *** percent in 2017, *** percent in 2018, and *** percent in 2019; it was *** percent in interim 2019 and *** percent in interim 2020. *See* CR/PR at Table III-8.

[219] Capital expenditures were $*** in 2014, $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, and $*** in 2019; they were $*** in interim 2019 and $*** in interim 2020. *See* CR/PR at Table III-12.

R&D expenses were $*** in 2014, $*** in 2015, $*** in 2016, $*** in 2017, $*** in 2018, and $*** in 2019; they were $*** in interim 2019 and $*** in interim 2020. *Id*.

[220] CR/PR at Table C-1.

and/or suppress domestic producer prices and/or take market share from the domestic industry. This volume of low-priced subject imports would consequently likely have an adverse impact on the production, shipments, sales, market share, and revenues of the domestic industry. These reductions would likely have a direct adverse impact on the industry's profitability and employment, as well as its ability to raise capital and make and maintain necessary capital investments. We therefore conclude that, if the orders were revoked, cumulated subject imports would be likely to have a significant impact on the domestic industry within a reasonably foreseeable time.

We have also considered factors other than subject imports in the U.S. market. Nonsubject imports were a growing presence in the U.S. market during the POR.[221] However, there is no indication on this record that the presence of nonsubject imports would prevent low-priced cumulated subject imports from increasing their presence in the U.S. market significantly in the event of revocation of the orders. Given the moderate-to-high degree of substitutability between the subject imports and the domestic like product, and the fact that the domestic industry has supplied the majority of the U.S. market over the POR, the likely increase in low-priced subject imports upon revocation would likely take appreciable market share from the domestic industry. Therefore, the cumulated subject imports are likely to have adverse effects on the domestic industry, distinct from any adverse effects nonsubject imports may have on the domestic industry, in the event of revocation.

We have also considered the likely future effects of demand on the domestic industry, given that U.S. demand for NOES declined by *** percent from 2014 to 2019.[222] As discussed above, market participants disagree as to whether U.S. demand for NOES will continue to decline,[223] and there is evidence in the record to suggest that EV demand and production in the United States are expected to continue to increase, driving up demand for e-mobility NOES in the reasonably foreseeable future.[224] Moreover, cumulated subject imports will likely increase and significantly impact the domestic industry in the event of revocation irrespective of likely demand trends, given the substantial total capacity of subject industries, their export orientation, and the relative attractiveness of the U.S. market, as discussed above. Thus, were U.S. demand to further contract after revocation of the orders, additional harm to the domestic

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[221] CR/PR at Tables I-8 and C-1. As discussed, nonsubject imports' share of apparent U.S. consumption increased by *** percentage points from 2014 to 2019. *Id*.

[222] CR/PR at Table C-1.

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

[224] CR/PR at II-2.

industry resulting from such a contraction would be independent of the likely significant impact of cumulated subject imports on the domestic industry.

Accordingly, we find that cumulated subject imports are likely to have a significant impact upon the domestic industry in the event of revocation, notwithstanding nonsubject imports and demand conditions.

V. Conclusion

For the foregoing reasons, we determine that revocation of the countervailing duty orders on NOES from China and Taiwan and the antidumping duty orders on NOES from China, Germany, Japan, Korea, Sweden, and Taiwan would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.

Part I: Introduction

Background

On November 1, 2019, the U.S. International Trade Commission ("Commission" or "USITC") gave notice, pursuant to section 751(c) of the Tariff Act of 1930, as amended ("the Act"),[1] that it had instituted reviews to determine whether revocation of the countervailing duty orders on non-oriented electrical steel ("NOES") from China and Taiwan and the antidumping duty orders on NOES from China, Germany, Japan, Korea, Sweden, and Taiwan would likely lead to the continuation or recurrence of material injury to a domestic industry.[2] [3] On February 4, 2020, the Commission determined that it would conduct full reviews pursuant to section 751(c)(5) of the Act. [4] The following tabulation presents information relating to the background and schedule of this proceeding:[5]

[1] 19 U.S.C. 1675(c).

[2] 84 FR 58743, November 1, 2019. All interested parties were requested to respond to this notice by submitting the information requested by the Commission.

[3] In accordance with section 751(c) of the Act, the U.S. Department of Commerce ("Commerce") published a notice of initiation of five-year reviews of the subject antidumping and countervailing duty orders. 84 FR 58687, November 1, 2019.

[4] 85 FR 8325, February 13, 2020. The Commission found that the domestic interested party group response to its notice of institution was adequate. The Commission also found that the respondent interested party group response to its notice of institution concerning the antidumping duty order on imports from Germany was adequate and, therefore, determined to proceed with a full review of that order. The Commission determined that the respondent interested party group responses to its notice of institution concerning the countervailing duty orders on imports from China and Taiwan, and the antidumping duty orders on imports from China, Japan, Korea, Sweden, and Taiwan were inadequate. However, the Commission determined to conduct full reviews of those orders in order to promote administrative efficiency considering its determination to conduct a full review of the antidumping duty order on imports from Germany.

[5] The Commission's notice of institution, notice to conduct full reviews, scheduling notice, and statement on adequacy are referenced in appendix A and may also be found at the Commission's web site (internet address *www.usitc.gov*). Commissioners' votes on whether to conduct expedited or full reviews may also be found at the web site. Appendix B presents witnesses participating at the Commission's hearing.

Effective date	Action
December 3, 2014	Commerce's antidumping duty orders on NOES from China, Germany, Japan, Korea, Sweden, and Taiwan (79 FR 71741, December 3, 2014)
December 3, 2014	Commerce's countervailing duty orders on NOES from China and Taiwan (79 FR 71749, December 3, 2014)
November 1, 2019	Commission's institution of five-year reviews (84 FR 58743, November 1, 2019)
November 1, 2019	Commerce's initiation of five-year reviews (84 FR 58687, November 1, 2019)
February 4, 2020	Commission's determinations to conduct full five-year reviews (85 FR 8325, February 13, 2020)
February 27, 2020	Commerce's final results of expedited five-year reviews of the antidumping duty orders (85 FR 11337, February 27, 2020)
February 27, 2020	Commerce's final results of expedited five-year review of the countervailing duty order on NOES from China (85 FR 11339, February 27, 2020)
March 6, 2020	Commerce's final results of expedited five-year review of the countervailing duty order on NOES from Taiwan (85 FR 13135, March 6, 2020)
May 27, 2020	Commission's scheduling of the reviews (85 FR 33711, June 2, 2020)
October 8, 2020	Commission's hearing
November 18, 2020	Commission's vote
December 10, 2020	Commission's determinations and views

The original investigations

The original investigations resulted from petitions filed by AK Steel Corp. ("AK Steel"), West Chester, Ohio, on September 30, 2013, alleging that an industry in the United States is materially injured and threatened with material injury by reason of subsidized imports of NOES from China, Korea, and Taiwan and less-than-fair-value ("LTFV") imports of NOES from China, Germany, Japan, Korea, Sweden and Taiwan. On October 14, 2014, Commerce made a final negative countervailing duty determination concerning imports of NOES from Korea.[6] Following notification of a final determination by Commerce that imports of NOES from China, Germany, Japan, Korea, Sweden and Taiwan were being sold at LTFV,[7] and that imports of NOES from China and Taiwan that have been found by Commerce to be subsidized by the governments of China and Taiwan[8] the Commission determined on November 25, 2014 that a domestic industry was materially injured by reason of LTFV imports of NOES from China, Germany, Japan, Korea, Sweden, and Taiwan and subsidized imports of NOES from China and Taiwan.[9] Commerce published the countervailing duty orders on subject imports of NOES from China and Taiwan on December, 3 2014.[10] Commerce also published the antidumping duty orders on NOES from China, Germany, Japan, Korea, Sweden, and Taiwan on December 3, 2014.[11]

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[6] 79 FR 61605, October 14, 2014.

[7] 79 FR 61612, October 14, 2014; 79 FR 61614, October 14, 2014; and 79 FR 61609, October 14, 2014.

[8] 79 FR 61607, October 14, 2020; and 79 FR 61602, October 14, 2014.

[9] *Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan*, *Inv. Nos. 701-TA-506-508 and 731-TA-1238-1243(Final)*, USITC Publication 4502, November 2014 ("Original publication"), p. 1.

[10] 79 FR 71749, December 3, 2014. Because China Steel Corporation and its cross-owned affiliates Dragon Steel Corporation, HiMag Magnetic Corporation, and China Steel Global Trading Corporation (collectively, CSC Companies) received a de minimis net subsidy rate, they were excluded from the countervailing duty order on imports from Taiwan.

[11] 79 FR 71741, December 3, 2014.

Previous and related investigations

NOES has not been the subject of any prior related antidumping or countervailing duty investigations in the United States. However, the Commission has conducted investigations on other forms of electrical steel including grain-oriented electrical steel ("GOES") from China, Czech Republic, Germany, Italy, Japan, Korea, Poland, and Russia.

GOES from Italy and Japan

In 1993, GOES was the subject of antidumping and countervailing duty investigations with respect to imports from Italy and Japan. Following affirmative determinations by Commerce[12] and the Commission,[13] a countervailing duty order covering U.S. imports of GOES from Italy was published on June 7, 1994, an antidumping duty order was published on U.S. imports of GOES from Japan on June 10, 1994, and an antidumping duty order was published on imports of GOES from Italy on August 12, 1994.[14]

On December 1, 1999, Commerce initiated and the Commission instituted the first five year reviews of the antidumping and countervailing duty orders on GOES from Italy and Japan. The Commission determined that revocation of the countervailing duty order on imports of GOES from Italy and revocation of the antidumping duty orders on imports of GOES from Italy and Japan would be likely to lead to continuation or recurrence of material injury to an industry in the United States within a reasonably foreseeable time.[15] On March 14, 2001, Commerce published a notice of the continuation of the antidumping and countervailing duty orders.[16]

On February 1, 2006, Commerce initiated and the Commission instituted the second five-year reviews of the antidumping and countervailing duty orders.[17] At that time, the domestic industry chose not to participate in the reviews because it believed subject imports from Italy and Japan were unlikely to cause a recurrence of material injury to the domestic

[12] 59 FR 74, April 18, 1994; 59 FR 79, April 25, 1994; and 59 FR 126, July 1, 1994.
[13] 59 FR 158, August 17, 1994.
[14] 59 FR 108, June 7, 1994; 59 FR 111, June 10, 1994; and 59 FR 155, August 12, 1994.
[15] 66 FR 12958, March 1, 2001.
[16] 50 FR 14889, March 14, 2001.
[17] 70 FR 5243, February 1, 2006; and 70 FR 5376, February 1, 2006.

industry.[18] As a result, the antidumping and countervailing duty orders on GOES from Italy and Japan were revoked effective March 14, 2006.[19]

GOES from China, Czech Republic, Germany, Japan, Korea, Poland, and Russia

In 2013, GOES was the subject of antidumping and countervailing duty investigations with respect to imports from China, Czech Republic, Germany, Japan, Korea, Poland, and Russia. On August 27, 2014, the Commission found an industry in the United States was not materially injured or threatened with material injury, and the establishment of an industry in the United States was not materially retarded, by reason of imports from Germany, Japan, and Poland of GOES, found by Commerce[20] to be sold in the United States at LTFV.[21] On October 23, 2014, the Commission found that an industry in the United States was not materially injured or threatened with material injury, and the establishment of an industry in the United States was not materially retarded, by reason of imports from China, Czech Republic, Korea, and Russia of GOES, found by Commerce[22] to be sold in the United States at LTFV and subsidized by the government of China.[23]

[18] *Grain-Oriented Electrical Steel form Germany, Japan and Poland, Inv. Nos. 731-TA-1233, 1234, and 1236 (Final)*, USITC Publication 4491, September 2014, p. I-9.

[19] 59 FR 15376, March 28, 2006.

[20] 79 FR 42501, July 22, 2014.

[21] 79 FR 54744, September 12, 2014.

[22] 79 FR 58324, September 29, 2014; 79 FR 59226, October 1, 2014; 79 FR 59224, October 1, 2014; 79 FR 59223, October 1, 2014; and 79 FR 59221, October 1, 2014.

[23] 79 FR 66739, November 10, 2014.

Summary data

Table I-1 and figure I-1 present data from the original investigations, and the current full five-year reviews. Summary data from the original proceeding and the current reviews appear in Appendix C. U.S. producer AK Steel's U.S. shipments and export shipments, by quantity, were lower in 2019 than 2013 by *** percent and by *** percent, respectively. Total U.S. imports, by quantity, were 59.9 percent lower in 2019 than 2013. U.S. producer AK Steel's share of apparent U.S. consumption, by quantity, was *** percentage points higher in 2019 compared to 2013 even though its production and U.S. shipments were lower in 2019 compared to 2013.

Table I-1
NOES: Comparative data from the original investigations and subsequent reviews, 2013 and 2019

Item	Original investigations	First reviews
	2013	2019
	Quantity (short tons)	
U.S. consumption quantity	***	***
	Share of quantity (percent)	
Share of U.S. consumption: U.S. producer's share	***	***
U.S. importers' share: China	***	***
Germany	***	***
Japan	***	***
Korea	***	***
Sweden	***	***
Taiwan	***	***
Subject sources	***	***
Nonsubject sources	***	***
All import sources	***	***
	Value (1,000 dollars)	
U.S. consumption	***	***
	Share of value (percent)	
Share of U.S. consumption: U.S. producer's share	***	***
U.S. importers' share: China	***	***
Germany	***	***
Japan	***	***
Korea	***	***
Sweden	***	***
Taiwan	***	***
Subject sources	***	***
Nonsubject sources	***	***
All import sources	***	***

Table continued on next page.

Table I-1—Continued
NOES: Comparative data from the original investigations and subsequent reviews, 2013 and 2019

Item	Original investigations	First reviews
	2013	2019
	Quantity (short tons); Value (1,000 dollars); and Unit Value (dollars per short ton)	
U.S. imports.--		
China:		
Quantity	12,724	25
Value	12,231	26
Unit value	$961	$1,036
Germany:		
Quantity	7,493	12
Value	8,342	30
Unit value	$1,113	$2,507
Japan:		
Quantity	15,916	105
Value	20,035	197
Unit value	$1,259	$1,879
Korea:		
Quantity	4,622	177
Value	4,207	196
Unit value	$910	$1,104
Sweden:		
Quantity	7,068	184
Value	10,556	1,532
Unit value	$1,494	$8,333
Taiwan:		
Quantity	9,768	1,228
Value	8,745	1,189
Unit value	$895	$968
Subject sources:		
Quantity	57,591	1,731
Value	64,116	3,169
Unit value	$1,113	$1,831
Nonsubject sources:		
Quantity	3,879	22,923
Value	4,956	30,826
Unit value	$1,278	$1,345
All import sources:		
Quantity	61,470	24,655
Value	69,072	33,996
Unit value	$1,124	$1,379

Table continued on next page.

Table I-1—Continued
NOES: Comparative data from the original investigations and subsequent reviews, 2013 and 2019

Item	Original investigations	First reviews
	2013	2019
	Quantity (short tons); Value (1,000 dollars); and Unit Value (dollars per short ton)	
U.S. industry:		
Capacity (quantity)	***	***
Production (quantity)	***	***
Capacity utilization (percent)	***	***
U.S. shipments:		
Quantity	***	***
Value	***	***
Unit value	***	***
Export shipments:		
Quantity	***	***
Value	***	***
Unit value	***	***
Ending inventory	***	***
Inventories/total shipments	***	***
Production workers	***	***
Hours worked (1,000)	***	***
Wages paid (1,000 dollars)	***	***
Hourly wages	***	***
Productivity (short tons per 1,000 hour)	***	***
Financial data:		
Net sales:		
Quantity	***	***
Value	***	***
Unit value	***	***
Cost of goods sold	***	***
Gross profit or (loss)	***	***
SG&A expense	***	***
Operating income or (loss)	***	***
Unit COGS	***	***
Unit operating income	***	***
COGS/ Sales (percent)	***	***
Operating income or (loss)/ Sales (percent)	***	***

With respect to the ***. Email from Neal Reynolds, Counsel for AK Steel, September 22, 2020.

Source: Office of Investigations memorandum INV-MM-109 (October 23, 2014), official U.S. import statistics, and compiled from data submitted in response to Commission questionnaires.

Figure I-1
NOES: Historical apparent U.S. consumption 2011-19

* * * * * * *

Source: Office of Investigations memorandum INV-MM-109 (October 23, 2014), official U.S. import statistics, and compiled from data submitted in response to Commission questionnaires.

Statutory criteria

Section 751I of the Act requires Commerce and the Commission to conduct a review no later than five years after the issuance of an antidumping or countervailing duty order or the suspension of an investigation to determine whether revocation of the order or termination of the suspended investigation "would be likely to lead to continuation or recurrence of dumping or a countervailable subsidy (as the case may be) and of material injury."

Section 752(a) of the Act provides that in making its determination of likelihood of continuation or recurrence of material injury—

> *(1) IN GENERAL.-- . . . the Commission shall determine whether revocation of an order, or termination of a suspended investigation, would be likely to lead to continuation or recurrence of material injury within a reasonably foreseeable time. The Commission shall consider the likely volume, price effect, and impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated. The Commission shall take into account—*
>
> *(A) its prior injury determinations, including the volume, price effect, and impact of imports of the subject merchandise on the industry before the order was issued or the suspension agreement was accepted,*
>
> *(B) whether any improvement in the state of the industry is related to the order or the suspension agreement,*
>
> *I whether the industry is vulnerable to material injury if the order is revoked or the suspension agreement is terminated, and*
>
> *(D) in an antidumping proceeding . . ., (Commerce's findings) regarding duty absorption . . ..*
>
> *(2) VOLUME.—In evaluating the likely volume of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether the likely volume of imports of the subject merchandise would be significant if the order is revoked or the suspended investigation is terminated, either in absolute terms or relative to production or consumption in the United States. In so doing, the Commission shall consider all relevant economic factors, including—*
>
> *(A) any likely increase in production capacity or existing unused production capacity in the exporting country,*
>
> *(B) existing inventories of the subject merchandise, or likely increases in inventories,*
>
> *I the existence of barriers to the importation of such merchandise into countries other than the United States, and*
>
> *(D) 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.*

(3) PRICE.—In evaluating the likely price effects of imports of the subject merchandise if the order is revoked or the suspended investigation is terminated, the Commission shall consider whether—

> *(A) there is likely to be significant price underselling by imports of the subject merchandise as compared to domestic like products, and*
> *(B) imports of the subject merchandise are likely to enter the United States at prices that otherwise would have a significant depressing or suppressing effect on the price of domestic like products.*

(4) IMPACT ON THE INDUSTRY.—In evaluating the likely impact of imports of the subject merchandise on the industry if the order is revoked or the suspended investigation is terminated, the Commission shall consider all relevant economic factors which are likely to have a bearing on the state of the industry in the United States, including, but not limited to–

> *(A) likely declines in output, sales, market share, profits, productivity, return on investments, and utilization of capacity,*
> *(B) likely negative effects on cash flow, inventories, employment, wages, growth, ability to raise capital, and investment, and*
> *I likely negative effects on the existing development and production efforts of the industry, including efforts to develop a derivative or more advanced version of the domestic like product.*

The Commission shall evaluate all such relevant economic factors . . . within the context of the business cycle and the conditions of competition that are distinctive to the affected industry.

Section 752(a)(6) of the Act states further that in making its determination, "the Commission may consider the magnitude of the margin of dumping or the magnitude of the net countervailable subsidy. If a countervailable subsidy is involved, the Commission shall consider information regarding the nature of the countervailable subsidy and whether the subsidy is a subsidy described in Article 3 or 6.1 of the Subsidies Agreement."

Organization of report

Information obtained during the course of the reviews that relates to the statutory criteria is presented throughout this report. A summary of trade and financial data for NOES as collected in the reviews is presented in appendix C. U.S. industry data are based on the questionnaire response of AK Steel which is believed to have accounted all domestic production of NOES in 2019. U.S. import data and related information are based on Commerce's official import statistics and the questionnaire responses of thirteen U.S. importers of NOES that represent more than 70.0 percent of U.S. imports from the combined subject countries and more than 80 percent of imports from the nonsubject countries during 2019. Foreign industry data and related information are based on the questionnaire responses of four producers of NOES. Thyssenkrupp Steel Europe AG ("Thyssenkrupp") in Germany accounted for *** percent of total production in Germany; JFE Steel Corporation ("JFE Steel") and Nippon Steel Corporation ("Nippon") in Japan accounted for *** percent of total production in Japan; and Surahammars Bruks AB ("Surahammars") in Sweden accounted for all known production in Sweden. Responses by AK Steel, importers, purchasers, and foreign producers of NOES to a series of questions concerning the significance of the existing antidumping and countervailing duty orders and the likely effects of revocation of such orders are presented in appendix D.

Commerce's reviews[24]

Five-year reviews

Commerce has issued the final results of its expedited reviews with respect to all subject countries.[25] Table I-2 presents the countervailable subsidy margins calculated by Commerce in its original investigations and first reviews and tables I-3 presents the dumping margins calculated by Commerce in its original investigations and first reviews.

Table I-2
NOES: Commerce's original and first five-year countervailable subsidy rates for producers/exporters in China and Taiwan

Producer/exporter	Original margin (*percent*)	First five-year review margin (*percent*)
China		
Baoshan Iron & Steel Co., Ltd	158.88	158.88
All others	158.88	158.88
Taiwan		
Leicong Industrial Company, Ltd. (Leicong)	17.12	17.12
All others	8.80	8.61

Note: China Steel Corporation (CSC) and its cross-owned affiliates Dragon Steel Corporation (DSC), HiMag Magnetic Corporation (HIMAG) and China Steel Global Trading Corporation (CSGT)(collectively, CSC Companies.) received a de minimis rate of 0.48. 79 FR 61602, October 14, 2014.

Source: 79 FR 61607, October 14, 2014; 79 FR 61602, October 14, 2014; 85 FR 11339, February 27, 2020; and 85 FR 13135, March 6, 2020.

[24] Commerce has not conducted any administrative reviews, changed circumstances reviews or scope rulings. In addition, Commerce has not issued any duty absorption findings, any company revocations, anti-circumvention findings since the imposition of the subject orders.

[25] 85 FR 11337, February 27, 2020 and 85 FR 13135, March 6, 2020.

Table I-3
NOES: Commerce's original and first five-year dumping margins for producers/exporters in China, Germany, Japan, Korea, Sweden, and Taiwan

Producer/exporter	Original margin (*percent*)	First five-year review margin (*percent*)
China		
PRC-Wide Entity	407.52	Up to 407.52
Germany		
CD Walzholz	98.84	([1])
Thyssenkrupp Electrical Steel EBG GMBH	98.84	([1])
All others	86.29	Up to 98.84
Japan		
JFE Steel Corporation	204.79	([1])
Sumitomo Corporation	204.79	([1])
All others	135.59	Up to 204.79
Korea		
POSCO/Daewoo International Corporation	6.88	([1])
All others	6.88	Up to 6.88
Sweden		
Surahammars Bruks AB	126.72	([1])
All others	98.46	Up to 126.72
Taiwan		
China Steel Corporation	27.54	([1])
Leicong Industrial Company, Ltd. (Leicong)	52.23	([1])
All others	27.54	Up to 52.23

[1] Individual company information was not specified in Commerce's Federal Register notice concerning the final results of the expedited sunset reviews of the antidumping duty orders for the above countries.

Source: 79 FR 61609, October 14, 2014; 79 FR 61612, October 14, 2014; 79 FR 61614, October 14, 2014; and 85 FR 11337, February 27, 2020.

The subject merchandise

Commerce's scope

Commerce has defined the scope as follows:

> *The merchandise subject to these orders consists of non-oriented electrical steel (NOES), which includes cold-rolled, flat-rolled, alloy steel products, whether or not in coils, regardless of width, having an actual thickness of 0.20 mm or more, in which the core loss is substantially equal in any direction of magnetization in the plane of the material. The term ''substantially equal'' means that the cross grain direction of core loss is no more than 1.5 times the straight grain direction (i.e., the rolling direction) of core loss. NOES has a magnetic permeability that does not exceed 1.65 Tesla when tested at a field of 800 A/m (equivalent to 10 Oersteds) along (i.e., parallel to) the rolling direction of the sheet (i.e., B800 value). NOES contains by weight more than 1.00 percent of silicon but less than 3.5 percent of silicon, not more than 0.08 percent of carbon, and not more than 1.5 percent of aluminum. NOES has a surface oxide coating, to which an insulation coating may be applied.*
>
> *NOES is subject to these orders whether it is fully processed (i.e., fully annealed to develop final magnetic properties) or semi-processed (i.e., finished to final thickness and physical form but not fully annealed to develop final magnetic properties). Fully processed NOES is typically made to the requirements of ASTM specification A 677, Japanese Industrial Standards (JIS) specification C 2552, and/or International Electrotechnical Commission (IEC) specification 60404–8–4. Semi-processed NOES is typically made to the requirements of ASTM specification A 683. However, the scope of these orders is not limited to merchandise meeting the ASTM, JIS, and IEC specifications noted immediately above.*
>
> *NOES is sometimes referred to as cold-rolled non-oriented (CRNO), nongrain oriented (NGO), non-oriented (NO), or cold-rolled non-grain oriented (CRNGO) electrical steel. These terms are interchangeable.*
>
> *Excluded from the scope of these orders are flat-rolled products not in coils that, prior to importation into the United States, have been cut to a shape and undergone all punching, coating, or other operations necessary for classification in Chapter 85 of the Harmonized Tariff Schedule of the United States (HTSUS) as a part (i.e., lamination) for use in a device such as a motor, generator, or transformer.*
>
> *The subject merchandise is provided for in subheadings 7225.19.0000, 7226.19.1000, and 7226.19.9000 of the HTSUS. Subject merchandise may also be entered under subheadings 7225.50.8085, 7225.99.0090, 7226.92.5000, 7226.92.7050, 7226.92.8050, 7226.99.0180 of the HTSUS. Although HTSUS*

subheadings are provided for convenience and customs purposes, the written description of the scope is dispositive.[26]

Tariff treatment

NOES is provided for in HTS subheadings 7225.19.00, 7226.19.10, and 7226.19.90. The subject merchandise may also be imported under HTS statistical reporting numbers 7225.50.8080, 7225.99.0090, 7226.92.5000, 7226.92.7050, 7226.92.8050, or 7226.99.0180. NOES originating in China, Germany, Japan, Korea, Sweden, and Taiwan and provided for in the 3 covered subheadings has a column 1-general duty rate of "Free." Decisions on the tariff classification and treatment of imported goods are within the authority of U.S. Customs and Border Protection.

Section 232 tariff treatment[27]

NOES classifiable under HTS subheadings 7225.19 and 7226.19, as well as electrical steel classifiable under HTS subheadings 7225.50, 7225.99, 7226.92, and 7226.99, were included in the enumeration of iron and steel articles that became subject to the additional 25 percent ad valorem Section 232 duties,[28] as of March 23, 2018.[29] See also U.S. notes 16(a) and 16(b) of subchapter III of HTS chapter 99.[30] At this time, imports of NOES produced in China, Germany, Japan, Sweden, and Taiwan are subject to 25 percent additional duties and imports of NOES from Korea are subject to annual quota limits (see table I-4).[31] Treatment under Section 232

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[26] 79 FR 71749, December 3, 2014; 79 FR 71741, December 3, 2014; Issues and Decision Memorandum for the Expedited First Sunset Reviews of the Antidumping Duty Orders on Non-Oriented Electrical Steel from People's Republic of China, Germany, Japan, Republic of Korea, Sweden, and Taiwan, February 20, 2020; Issues and Decision Memorandum for the Final Results of the Expedited First Sunset Review of the Countervailing Duty Order on Non-Oriented Electrical Steel from The People's Republic China, February 20, 2020; and Issues and Decision Memorandum for the Expedited Sunset Review of the Countervailing Duty (CVD) Order on Non-Oriented Electrical Steel (NOES) from Taiwan, March 2, 2020.

[27] A summary of section 232 measures, by country, is provided in appendix E, Table E-1.

[28] Section 232 of the *Trade Expansion Act of 1962*, as amended (19 U.S.C. 1862) authorizes the President, on advice of the Secretary of Commerce, to adjust the imports of an article and its derivatives that are being imported into the United States in such quantities or under such circumstances as to threaten to impair the national security.

[29] 83 FR 11625, March 15, 2018.

[30] *HTSUS (2020) Revision 20*, USITC Publication 5118, September 2020, pp. 99-III-5 - 99-III-7, 99-III-223 - 99-III-225.

[31] The composition of the quota product groups may not exactly match the product scope of these investigations. See the CBP quota bulletin at https://www.cbp.gov/trade/quota/bulletins/qb-19-008-

(*continued*...)

with respect to the subject merchandise in these investigations are as follows and described further in Appendix E, Table E-1:

China, Japan, and Taiwan – Imports of NOES produced in China, Japan, and Taiwan have been subject to the Section 232 duties since they took effect on March 23, 2018.[32]

Germany and Sweden – Imports of NOES produced in Germany, Sweden, and other European Union ("EU") member countries were initially exempted from the Section 232 duties when they became effective as of March 23, 2018.[33] On June 1, 2018, the EU's exemption from the Section 232 duties was discontinued. Imports of NOES from Germany, Sweden, and other EU member countries continue to remain subject to the 25 percent Section 232 duties.[34]

Korea – Imports of NOES produced in Korea were initially exempted from the Section 232 duties when they became effective as of March 23, 2018.[35] On May 1, 2018, the exemption for Korea was continued, however, imports from Korea became subject to annual quota limits.[36] Table I-4 summarizes these limits by each respective subheading subject to these investigations.

(…*continued*)
2019-absolute-quota-steel-mill-articles-first-quarter-limits for a full list of product groups as well as their specified quotas and HTS definitions.

[32] 83 FR 11625, March 15, 2018.
[33] 83 FR 13361, March 28, 2018.
[34] 83 FR 20683, May 7, 2018.
[35] 83 FR 13361, March 28, 2018.
[36] 83 FR 20683, May 7, 2018.

Table I-4
NOES: Section 232 annual quantitative limitations for Korea

Chapter 99	Article description	Annual limit (kilograms)	Annual limit (short tons)
9903.80.16	Silicon electrical steel sheets and strip, provided for in subheading 7225.11.00, 7225.19.00, 7226.11.10, 7226.11.90, 7226.19.10 or 7226.19.90.	7,505,976.00	8,273.92

Note: CBP quota product category (HTS 9903.80.16) for silicon electrical steel sheets & strip includes the principal HTS subheadings for NOES, along with those for nonsubject GOES. NOES might also be included under other CBP product categories.

Source: U.S. Customs and Border Protection ("CBP"), "QB 20-602 2020 2QTR Absolute Quota for Steel Mill Articles: Argentina, Brazil and South Korea," https://www.cbp.gov/trade/quota/bulletins/qb-20-602-2020-2qtr-absolute-quota-steel-mill-articles-argentina-brazil-and-south-korea, retrieved August 25, 2020.

Section 301 tariff treatment[37]

U.S. imports of Chinese-origin NOES classifiable under HTS subheadings 7225.19.00, 7226.19.10, and 7226.19.90, as well as electrical steel classifiable under HTS subheadings 7225.50.80, 7225.99.00, 7226.92.50, 7226.92.70, 7226.92.80, and 7226.99.01, are currently subject to an additional 7.5 percent ad valorem Section 301 duty.[38] See also U.S. notes 20I, and 20(s) to subchapter III of HTS chapter 99.[39]

Section 301 of the *Trade Act of 1974*, as amended (19 U.S.C. § 2411) authorizes the Office of the United States Trade Representative ("USTR"), at the direction of the President, to take appropriate action to respond to a foreign country's unfair trade practices. On August 18, 2017, USTR initiated an investigation into certain acts, policies, and practices of the Government of China related to technology transfer, intellectual property, and innovation.[40] On April 6, 2018, USTR published its determination that the acts, policies, and practices of China under investigation are unreasonable or discriminatory and burden or restrict U.S. commerce, and are thus actionable under section 301(b) of the Trade Act.[41]

NOES is among the products included in the USTR's first list to the fourth enumeration ("List 1 to Tranche 4") of the products originating in China that became subject to the additional 10 percent ad valorem Section 301 duties (Annexes A and B to 84 FR 43304), as of September 1, 2019, which was subsequently increased to 15 percent while retaining the same date.[42] As of February 14, 2020, the 15 percent duty was reduced to 7.5 percent for the products enumerated on List 1 to Tranche 4.[43] For a list of Section 301 Presidential Proclamations affecting imports of articles from China, see Appendix E, table E-2.

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[37] For a list of Section 301 Presidential Proclamations affecting imports of steel articles from China, see Appendix E, table E-2.

[38] 85 FR 3741, January 22, 2020.

[39] *HTSUS (2020) Revision 21, USITC publication 5118*, September 2020, pp. 99-III-84 - 99-III-85, 99-III-94 - 99-III-95, 99-III-235.

[40] 82 FR 40213, August 24, 2017.

[41] 83 FR 14906, April 6, 2018.

[42] 84 FR 43304, August 20, 2019 and 84 FR 45821, August 30, 2019.

[43] 85 FR 3741, January 22, 2020.

The product

Description and applications[44]

NOES is a flat-rolled, alloy steel mill product developed as a highly energy efficient raw material specifically for manufacturing the individually cut-to-shape laminations (layers) for subsequent stacking together into laminated electro-magnetic cores for alternating current ("AC") electrical equipment components.[45] NOES is characterized as having magnetic properties that are similar in all directions (non-oriented), in contrast to grain-oriented electrical steel ("GOES"), with superior magnetic properties along the lengthwise direction of the sheet, but less favorable properties in other directions. Thus, NOES is used primarily to produce laminations for which the direction of the magnetic flux in the electrical device is constantly changing, for example in rotating machinery such as motors and generators, whereas GOES is used primarily in static equipment, such as transformers, for which the laminations can take advantage of the favorable directionality of the steel. NOES is also used in small static devices, such as small, low-voltage transformers and fluorescent lighting ballasts (current regulators), when the higher cost of GOES cannot be justified by potential savings from improved energy efficiency.[46] Figures I-2-5 present images for end use applications and products that use NOES and GOES, respectively.

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[44] Unless otherwise noted, this information is based on Original publication, pp. I-10 - I-11; and Investigation Nos. 701-TA-506 and 508 and 731-TA-1238-1243 (Final): Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan, Confidential Report, INV-MM-109, October 23, 2014 ("Original confidential report"), pp. I-13 - I-14.

[45] Electromagnetic cores can become more energy efficient (with less energy lost as heat) by restricting eddy currents, minimizing hysteresis, and enhancing permeability of the steel. Eddy (stray electrical) currents in the magnetic field generated by the electrical current flow can be restricted by constructing the magnetic core from stacked laminations and by alloying the steel with silicon, aluminum, and manganese to increase its electrical resistance. Hysteresis (misalignment of the magnetization/demagnetization cycle phases of the core material subject to AC current flow) can be minimized by utilizing steels with large grain size; having very low carbon contents; and that are relatively free of oxide, nitride, and sulfide contaminants. High-permeability (magnetization efficiency) steels that provide greater flux density (magnetic force) to magnetic field strength require less electrical current (and generate lesser heat losses) to provide a given magnetic force. For more information, see: U.S. Steel "Cold Rolled Motor Lamination Sheet," January 28, 2016, https://www.ussteel.com/products-solutions/products/cold-rolled-motor-lamination-sheet.

[46] Hearing transcript, pp. 118-120 (Pfeiffer).

Figure I-2
Industrial Motor using NOES

Source: AK Steel, "Steel for Industrial Motors," https://www.aksteel.com/our-markets/industrial-motors, retrieved October 26, 2020.

Figure I-3
Electric Motor for Electric Vehicle (EV) using NOES

Source: POSCO, "Why Electrical Steel Can Make All The Difference In EV Motors," October 18, 2017, https://newsroom.posco.com/en/electrical-steel-make-ev-motors/.

Figure I-4
Electrical Transformer using GOES

Source: AK Steel, "Grain Oriented Electrical Steels," https://www.aksteel.com/our-products/electrical-steel/grain-oriented-electrical-steels, retrieved October 26, 2020.

Figure I-5
Wound-core Distribution Transformer using GOES

Source: AK Steel, "Grain Oriented Electrical Steels," https://www.aksteel.com/our-products/electrical-steel/grain-oriented-electrical-steels, retrieved October 26, 2020.

NOES is available from steel mills either as coils or in straight lengths. Two types of NOES are distinguishable by their degree of annealing: fully processed NOES, which is final-annealed by the producer; and semi-processed NOES, which, although annealed by the producer, must

be re-annealed by the consumer after being formed into laminations[47] to achieve its potential magnetic properties.[48] Both domestic and imported NOES comply with American Society for Testing and Materials ("ASTM") International,[49] proprietary, or international specifications.[50]

As defined by the scope, NOES contains by weight more than 1.00 percent but less than 3.5 percent of silicon, with aluminum usually added in lesser amounts. Both silicon and aluminum increase the electrical resistivity of steel, resulting in lower loss of energy in finished motors or other electrical devices produced using NOES.[51]

Manufacturing processes[52]

Production of NOES begins with the melting of steel in either an electric-arc furnace ("EAF") or a basic oxygen furnace ("BOF"). The molten steel is transferred to a refining ladle where it undergoes additional processing such as argon-oxygen refining, ladle metallurgy treatment, and vacuum degassing. These steps refine the chemistry of the steel by reducing undesirable contaminants. Silicon, aluminum, and other alloying metals are imparted as ferroalloys. The refined molten steel is then continuously cast into slabs, which are rolled on a continuous hot-strip mill to produce hot-rolled coils.

All subsequent coil processing steps are performed on continuous processing lines for which the coils are uncoiled, passed through the processing lines, and recoiled after processing. The first step of coil processing is annealing and cleaning. Next, the coils are rolled to ordered

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[47] Laminations are produced from NOES by stamping or sometimes by laser cutting. Original publication, p. I-10.

[48] Flattening, stamping, or shearing NOES into individual laminations introduces strains within the steel that impede its magnetic properties. Annealing the laminations removes these accumulated strains and restores the potential magnetic properties. Original publication, p. I-10.

[49] Specification ASTM A677 covers fully processed types and ASTM A683 covers semiprocessed types of NOES. Both specify properties for NOES of the commonly produced thicknesses of 0.0185 inch and 0.025 inch. ASTM A677 also specifies the properties for 0.014-inch thick material. ASTM International, ASTM A677 – 16, "Standard Specification for Nonoriented Electrical Steel, Fully Processed Types," ©1996 – 2019, http://www.astm.org/cgi-bin/resolver.cgi?A677; ASTM A683 – 16, "Standard Specification for Nonoriented Electrical Steel, Semiprocessed Types," ©1996 – 2019, http://www.astm.org/cgi-bin/resolver.cgi?A683.

[50] International standards are very similar to ASTM standards. Original publication, p. I-11.

[51] For more information, see: U.S. Steel "Cold Rolled Motor Lamination Sheet," January 28, 2016, https://www.ussteel.com/products-solutions/products/cold-rolled-motor-lamination-sheet.

[52] Unless otherwise noted, this information is based on the Original confidential report, pp. I-14 - I-17, and Original publication, pp. I-11 - I-13.

thickness on a cold-rolling mill.[53] Then, the coils are annealed for the final time on a continuous annealing line using a controlled, decarburizing atmosphere that results in a tightly adherent surface oxide to prevent the laminations from sticking to one another and to increase the electrical resistance between laminations. Fully processed NOES is usually provided with an applied coating (called "coreplate") to increase further the electrical resistance between adjacent laminations.[54] Finally, the coils may be slit to ordered width.

Because NOES is produced in a wider width than that needed by the end user, virtually all NOES is slit— i.e., cut into one or more coils of narrower width— before it is consumed. Slitting may be performed either by the steel producer or by the purchaser.[55] Purchasers that complete this step include firms that specialize in laminating and stamping, while certain purchasers in the automotive industry (e.g., original equipment manufacturers of vehicle motors) may complete this stage themselves.[56] If a producer of NOES is certified as an approved supplier by an automotive OEM, the producer could supply NOES directly to stampers/laminators that have been selected by the OEM as part of the approved supply chain.[57]

According to AK Steel, the subject foreign producers in China, Germany, Japan, Korea, Sweden, and Taiwan generally use similar manufacturing processes to produce NOES. AK Steel also reported using the same melting, casting, and hot-rolling equipment to produce NOES for other types of steel as well, including GOES, stainless steels, and carbon steels. However, AK

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[53] In some cases, to produce very thin product, coils may be initially cold-rolled to an intermediate thickness, annealed, and then cold-rolled again to the desired thickness.

[54] Several types of coatings are applied to NOES in a continuous process and are cured by heating. An organic varnish/enamel coating is most common for fully processed NOES. However, such a coating will not withstand later stress-relief annealing temperatures. If fully processed NOES is to be stress-relief annealed by the customer after stamping, the applied coating may be inorganic or mostly inorganic with certain ceramic fillers or film-forming inorganic components added to increase the surface insulating ability. Semi-processed NOES usually includes a thin inorganic coating, often referred to as "anti-stick." ASTM International, ASTM A976 – 18, "Standard Classification of Insulating Coatings for Electrical Steels by Composition, Relative Insulating Ability and Application," ©1996 – 2019, http://www.astm.org/cgi-bin/resolver.cgi?A976.

[55] NOES may also be flattened and sheared into rectangular sheets for further processing. Such rectangular or other straight-length forms that have not been cut into the shape of laminations are included within the scope.

[56] Hearing transcript, p. 88-89 (Vaughn and Pfeiffer).

[57] Thyssenkrupp's posthearing brief, p. 2.

Steel's coil-processing equipment for NOES is separate from that for producing other mill products.[58]

Domestic like product issues

In its original determinations, the Commission defined the domestic like product as a single domestic like product that is coextensive with the scope definition.[59] In its notice of institution in these current five-year reviews, the Commission solicited comments from interested parties regarding the appropriate definitions of the domestic like product and domestic industry.[60] Domestic interested party AK Steel and respondent interested party Thyssenkrupp agreed with the Commission's definition of the domestic like product.[61] No party requested that the Commission collect data concerning other possible domestic like products in their comments on the Commission's draft questionnaires.

[58] Original publication, p. I-12.
[59] Original publication, p. 10.
[60] 84 FR 58743, November 1, 2019.
[61] AK Steel's, Response to Notice of Institution, December 2, 2019, p. 30; and Thyssenkrupp's, Response to Notice of Institution, December 2, 2019, p. 10.

U.S. market participants

U.S. producer

During the original investigations, the Commission received a U.S. producer questionnaire from AK Steel the sole domestic producer of NOES in the United States in 2013. In these current proceedings, the Commission issued U.S. producers' questionnaires to two firms. AK Steel provided the Commission with information on its NOES operations, while ***. AK Steel is believed to account all U.S. production of NOES in 2019. Presented in table I-5 is a list of AK Steel's position on continuation of the orders, production locations, and share of reported production of NOES in 2019.

Table I-5
NOES: U.S. producer AK Steel, its position on the continuation of orders, location of production, and share of reported production, 2019

Firm	Position on continuation of order(s)	Production location(s)	Share of production (percent)
AK Steel	***	Butler, Pennsylvania Zanesville, Ohio	100.0
Total			100.0

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

As indicated in table I-6, AK Steel ***. In addition, AK Steel does not import NOES nor does it ***.

Table I-6
NOES: U.S. producer AK Steel's ownership, related and/or affiliated firms

Item / Firm	Firm Name	Affiliated/Ownership
Ownership:		
AK Steel	***	***

Note: AK Steel's parent company Cleveland-Cliffs Inc. has entered an agreement to acquire the operations of ArcelorMittal USA LLC and its subsidiaries ("ArcelorMittal USA"). ArcelorMittal USA ***. Email correspondence with ***, October 27, 2020 and Email correspondence with ***, October 27, 2020.

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

U.S. importers

In the original investigations, 24 U.S. importing firms supplied the Commission with usable information on their operations involving the importation of NOES, accounting for 89.7 percent of subject imports of NOES during 2014. None the responding U.S. importers were domestic producers of NOES.

In the current proceedings, the Commission issued U.S. importers' questionnaires to 61 firms believed to be importers of NOES, as well as to all U.S. producers of NOES. Usable questionnaire responses were received from 13 firms, representing more than 70 percent of U.S. imports from combined subject countries and more than 80 percent of imports from nonsubject countries. Table I-7 lists all responding U.S. importers of NOES from China, Germany, Japan, Korea, Sweden, and Taiwan and other sources, their locations, and their shares of U.S. imports in 2019.

Table I-7
NOES: U.S. importers, source(s) of imports, U.S. headquarters, and shares of imports in 2019

Firm	Headquarters	Share of imports by source (percent)					
		China	Germany	Japan	Korea	Sweden	Taiwan
ArcelorMittal	Chicago, IL	***	***	***	***	***	***
Cogent Power Inc	Burlington, ON	***	***	***	***	***	***
Hartree	New York, NY	***	***	***	***	***	***
JFE	Long Beach, CA	***	***	***	***	***	***
Kanematsu	Arlington Heights, IL	***	***	***	***	***	***
LCS	Saint Paul, MN	***	***	***	***	***	***
Metal One America	Rosemont, IL	***	***	***	***	***	***
Mitsui	New York, NY	***	***	***	***	***	***
National Material	Elk Grove Village, IL	***	***	***	***	***	***
Tempel Steel	Chicago, IL	***	***	***	***	***	***
Thyssenkrupp	Southfield, MI	***	***	***	***	***	***
Sumitomo	Rosemont, IL	***	***	***	***	***	***
Voestalpine	Houston, TX	***	***	***	***	***	***
Total		***	***	100.0	***	***	100.0

Table continued on next page.

Table I-7—Continued
NOES: U.S. importers, source(s) of imports, U.S. headquarters, and shares of imports in 2019

Firm	Headquarters	Share of imports by source (percent)		
		Subject sources	All other sources	All import sources
ArcelorMittal	Chicago, IL	***	***	***
Cogent Power Inc	Burlington, ON	***	***	***
Hartree	New York, NY	***	***	***
JFE	Long Beach, CA	***	***	***
Kanematsu	Arlington Heights, IL	***	***	***
LCS	Saint Paul, MN	***	***	***
Metal One America	Rosemont, IL	***	***	***
Mitsui	New York, NY	***	***	***
National Material	Elk Grove Village, IL	***	***	***
Tempel Steel	Chicago, IL	***	***	***
Thyssenkrupp	Southfield, MI	***	***	***
Sumitomo	Rosemont, IL	***	***	***
Voestalpine	Houston, TX	***	***	***
Total		100.0	100.0	100.0

Note: AK Steel's parent company Cleveland-Cliffs Inc. has entered an agreement to acquire the operations of ArcelorMittal USA LLC and its subsidiaries ("ArcelorMittal USA"). ArcelorMittal USA ***. Email correspondence with ***, October 27, 2020 and Email correspondence with ***, October 27, 2020.

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

U.S. purchasers

The Commission received 14 usable purchaser questionnaire responses from firms that bought NOES during 2014-19.[62] [63] One responding purchaser is a distributor, eight are stampers/laminators, six are end users, and one identified as an "other" type of firm that makes "mostly laminations {and} some wound cores."[64] In general, responding U.S. purchasers were located in the Midwest (9 firms), Northeast (4 firms) and Southeast (1 firm) regions. The responding purchasers represented firms in a variety of domestic industries and sold NOES mostly to producers of electric motors, transformers, and generators. One firm specifically reported selling NOES for the aerospace and defense industries.

In the original investigations, the largest purchasers of NOES included ***.[65] Among the firms that reported their purchase quantities during the current reviews, the largest purchaser of NOES in 2019 was ***, which was responsible for *** of reported purchases that year.[66] The next largest purchasers were *** and ***.

[62] Of the 14 responding purchasers, 10 purchased domestically manufactured NOES in 2019 (representing 80.7 percent of reported purchases that year), 4 purchased imports of the subject merchandise from Sweden (0.9 percent of purchases), 2 purchased imports of the subject merchandise from Taiwan (0.4 percent of purchases), and 8 purchased imports of NOES from nonsubject sources (18.0 percent of purchases). The reported nonsubject sources included France (5 firms), Austria (4 firms), India (3 firms), and Brazil and Russia (1 firm each). No responding firms reported purchases from China, Germany, Japan, or Korea in 2019.

[63] In the original investigations, the Commission received 20 questionnaires that purchased NOES since January 2011. Original publication, p. II-2. The majority of the reported purchases in 2013 were of subject country product (*** percent), while *** percent were from domestic producers, and *** percent were from nonsubject sources. The reported nonsubject sources included Austria (4 firms), France (3 firms), and Russia (1 firm).

[64] In the original investigations, 6 purchasers were stampers/laminators, 4 were distributors, 14 were end users, and 5 fell into more than one category. Original publication, p. II-2.

[65] Purchasers' total reported purchases frequently exceeded total U.S. production and imports in a particular year, likely reflecting the status of some purchasers as distributors that re-sell to other purchasers. Original confidential report, p. II-3.

[66] Twelve of the 14 purchasers reported their 2019 purchase quantity, while 2 firms (***) did not.

Apparent U.S. consumption and U.S. market shares

Data concerning apparent U.S. consumption of NOES and U.S. market share data are presented in table I-8, figure I-6 and figure I-7. Apparent U.S. consumption, in terms of quantity, decreased from 2014 to 2016, increased from 2016 to 2017, and then decreased from 2017 to 2019. Apparent U.S. consumption, in terms of value, decreased from 2014 to 2016, increased from 2016 to 2018, and then decreased between 2018 and 2019. Overall, during 2014-19, apparent U.S. consumption of NOES decreased, in terms of quantity and in terms of value, by *** percent and by *** percent, respectively. Apparent U.S. consumption, in terms of quantity, was *** percent lower in January to June ("interim") 2020 compared to interim 2019 (*** percent lower, in terms of value).

Table I-8
NOES: Apparent U.S. consumption, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
U.S. producer's U.S. shipments	***	***	***	***	***	***	***	***
U.S. imports from.--								
China	2,188	12	4	17	78	25	---	48
Germany	2,304	181	179	12	14	12	11	4
Japan	8,571	5,166	800	398	50	105	87	30
Korea	1,841	3,162	883	263	---	177	177	41
Sweden	4,700	228	760	323	502	184	91	68
Taiwan	9,477	2,118	3,160	2,760	572	1,228	578	382
Subject sources	29,082	10,867	5,787	3,772	1,215	1,731	945	572
Nonsubject sources	24,656	35,095	22,766	28,882	25,078	22,923	12,272	8,438
All import sources	53,738	45,962	28,554	32,655	26,293	24,655	13,217	9,010
Apparent U.S. consumption	***	***	***	***	***	***	***	***
	Value (1,000 dollars)							
U.S. producer's U.S. shipments	***	***	***	***	***	***	***	***
U.S. imports from.--								
China	1,840	21	8	21	115	26	---	33
Germany	2,538	170	233	32	41	30	27	19
Japan	11,400	6,302	1,007	625	88	197	169	52
Korea	1,776	2,930	1,028	333	---	196	196	50
Sweden	7,563	1,650	2,159	1,660	1,795	1,532	1,114	603
Taiwan	7,664	1,581	2,052	1,990	547	1,189	580	356
Subject sources	32,782	12,654	6,487	4,661	2,587	3,169	2,085	1,114
Nonsubject sources	27,876	37,481	22,854	31,264	34,054	30,826	16,815	11,276
All import sources	60,658	50,134	29,341	35,925	36,641	33,996	18,901	12,390
Apparent U.S. consumption	***	***	***	***	***	***	***	***

Table continued on next page.

Table I-8—Continued
NOES: Apparent U.S. consumption, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Share of quantity (percent)							
U.S. producer's U.S. shipments	***	***	***	***	***	***	***	***
U.S. imports from.--								
China	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***
Japan	***	***	***	***	***	***	***	***
Korea	***	***	***	***	***	***	***	***
Sweden	***	***	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***
	Share of value (percent)							
U.S. producer's U.S. shipments	***	***	***	***	***	***	***	***
U.S. imports from.--								
China	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***
Japan	***	***	***	***	***	***	***	***
Korea	***	***	***	***	***	***	***	***
Sweden	***	***	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed August 9, 2020.

Figure I-6
NOES: Apparent U.S. consumption, 2014-19, January to June 2019, and January to June 2020

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed August 9, 2020.

Figure I-7
NOES: Market share, 2014-19, January to June 2019, and January to June 2020

* * * * * * *

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed August 9, 2020.

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

U.S. market characteristics

NOES is primarily used to make electric motors and generators. The most commonly reported end uses include motors, generators, and transformers.[1] [2] It can be supplied in master coils, slit, or in straight lengths, and either semi-processed or fully processed.[3]

Overall, apparent U.S. consumption of NOES decreased by *** percent between 2014 and 2019. U.S. shipments of domestic product, subject imported product, and nonsubject product all declined during this time by *** percent, 94.0 percent, and 7.0 percent, respectively.[4] Apparent U.S. consumption of NOES was almost *** percent lower in January-June 2020 compared to January-June 2019. In their questionnaire responses, a plurality of firms reported a decrease in U.S. demand for NOES since January 1, 2014, with importers and purchasers citing higher domestic prices due to the AD/CVD duties, greater demand for imported NOES, and an inability to compete with imported finished goods as reasons. U.S. producer AK Steel and importer Thyssenkrupp both stated that the decline in demand can be attributed partly to a shift in purchases from NOES to downstream products made from NOES (such as cores, laminations, or motors), ***.[5]

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[1] *Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan, Inv. Nos. 701-TA-506 & 508 and 731-TA-1238-1243 (Final)*, USITC Publication 4502, November 2014, p. II-13 ("Original publication").

[2] Most of the NOES supplied to the U.S. market by domestic producer AK Steel is used ***. AK Steel's posthearing brief (Answers to Commissioner Questions), p. 34. Respondent Thyssenkrupp reported that it sells NOES ***. Thyssenkrupp's posthearing brief, Responses to Commissioners' Questions, p. 8.

[3] In the original investigations, *** imports were in the fully processed form and about *** of AK Steel's sales were of fully processed NOES. Investigation Nos. 731-TA-506 and 508 and 731-TA-1238-1243 (Final): Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan, Confidential Report, INV-MM-109, October 23, 2014, p. II-1 ("Original confidential report").

[4] The quantity of imports of NOES from nonsubject countries were roughly six times higher in 2019 than they were in 2013, and while nonsubject imports made up 6.3 percent of U.S. imports in 2013, they made up 93.0 percent of U.S. imports in 2019. Original publication, pp. IV-4-5.

[5] Thyssenkrupp's prehearing brief, pp. 6-7; email from ***, September 21, 2020.

Most firms (including ***) reported that there had not been any significant changes in the product range, product mix, or marketing of NOES since January 2014, and most did not anticipate any future changes. However, some importers indicated that newer grades of NOES have been introduced to support the electric vehicle ("EV") market. When asked specifically about the trends and developments in the United States with respect to NOES products made for EVs, firms generally stated that EV demand and production have increased and they expect it to continue to increase, with demand for the NOES used in these applications increasing along with it.

When asked if the imposition of the section 232 tariffs on imported steel and aluminum products had an impact on the NOES market in the United States, most firms (including ***) reported that it did.[6] Most firms reported that it had no impact on the supply of U.S.-produced NOES, but that it decreased the supply of imported NOES (table II-1). Regarding the impact of the section 232 tariffs on prices, almost all responding purchasers reported that it caused NOES prices to increase. AK Steel reported that the 232 tariffs *** the price of NOES, while most importers reported that the 232 tariffs either increased prices or caused prices to fluctuate. Similarly, most purchasers reported that the section 232 tariffs caused raw material prices to increase, while AK Steel reported that it caused them ***, and importers' responses were fairly evenly distributed. *** reported that the section 232 tariffs decreased the overall U.S. demand for NOES, while a plurality of importers reported that it did not change U.S. demand.

[6] As discussed in Part I, imports of NOES from China, Germany, Japan, Sweden, and Taiwan are subject to Section 232 duties, while imports of NOES from Korea are subject to a quota. See Part I, *Section 232 Tariff Treatment*.

Table II-1
NOES: U.S. producer's, importers', and purchasers' responses regarding the impact of the section 232 tariff on the NOES market, by number of firms

Item	Increase	No change	Decrease	Fluctuate
Supply of U.S. produced NOES:				
U.S. producer	***	***	***	***
Importers	1	7	---	---
Purchasers	2	6	1	2
Supply of imported NOES:				
U.S. producer	***	***	***	***
Importers	---	3	6	---
Purchasers	1	4	4	2
Prices of NOES:				
U.S. producer	***	***	***	***
Importers	3	2	1	3
Purchasers	11	---	---	1
Overall U.S. demand for NOES:				
U.S. producer	***	***	***	***
Importers	1	4	3	1
Purchasers	1	---	8	1
Raw material costs:				
U.S. producer	***	***	***	***
Importers	2	3	2	2
Purchasers	4	1	1	1

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

When asked if the imposition of the section 301 tariffs on Chinese-origin products had an impact on the NOES market in the United States, most firms reported that they either did not know or that it had no impact.[7] [8] As shown in table II-2, all importers reported that the section 301 tariffs resulted in no change for any of the factors listed. Among responding purchasers, most reported that the section 301 tariffs resulted in no change to the supply of U.S.-produced NOES, the supply of NOES imported from China, and the cost of raw materials. Regarding the impact of the section 301 tariffs on the supply of NOES imported from other countries, the prices of NOES, and the overall U.S. demand for NOES, responses were more mixed but did not demonstrate a clear trend.

[7] Antidumping and countervailing duties on NOES from China have been in place since 2014, while the section 301 tariff on NOES has been in place since 2019. As discussed in Part I, *Section 301 Tariff Treatment*, NOES is among the products included in the USTR's first list to the fourth enumeration ("List 1 to Tranche 4") of the products originating in China that became subject to the additional 10 percent ad valorem Section 301 duties (Annexes A and B to 84 FR 43304), as of September 1, 2019 (84 FR 43304, August 20, 2019), which was subsequently increased to 15 percent while retaining the same date (84 FR 45821, August 30, 2019). As of February 14, 2020, the 15 percent duty was reduced to 7.5 percent for the products enumerated on List 1 to Tranche 4 (85 FR 3741, January 22, 2020).

[8] Only one purchaser reported that the section 301 tariffs on Chinese-origin products had an impact on the U.S. NOES market. As shown in table II-2, however, several firms submitted responses regarding its impact on supply, prices, and demand. These firms may have misinterpreted the question or interpreted it as applying specifically to that firm.

Table II-2
NOES: U.S. producer's, importers', and purchasers' responses regarding the impact of the section 301 tariff on the NOES market, by number of firms

Item	Increase	No change	Decrease	Fluctuate
Supply of U.S. produced NOES:				
U.S. producer	***	***	***	***
Importers	---	5	---	---
Purchasers	---	2	---	1
Supply of NOES imported from China:				
U.S. producer	***	***	***	***
Importers	---	5	---	---
Purchasers	---	2	---	1
Supply of NOES imported from other countries:				
U.S. producer	***	***	***	***
Importers	---	5	---	---
Purchasers	---	1	1	1
Prices of NOES:				
U.S. producer	***	***	***	***
Importers	---	5	---	---
Purchasers	1	1	---	1
Overall U.S. demand for NOES:				
U.S. producer	***	***	***	***
Importers	---	5	---	---
Purchasers	---	1	---	1
Raw material costs:				
U.S. producer	***	***	***	***
Importers	---	5	---	---
Purchasers	---	2	---	1

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

Channels of distribution

In the original investigations, the U.S. producer and importers of *** NOES sold mostly to ***, while importers of NOES from *** sold mostly to distributors, importers of *** NOES sold mostly to ***, and importers of *** NOES sold to ***.[9] In the current reviews, U.S. producer AK Steel sold mainly to ***, while importers of NOES from the subject countries sold mainly to end users (table II-3).[10] Importers of NOES from nonsubject countries sold mainly to stampers/laminators.[11]

[9] Original confidential report, p. II-4.

[10] Reported U.S. shipments *** accounted for *** percent of apparent consumption in 2019, while reported U.S. shipments *** accounted for *** percent of apparent consumption.

[11] Reported U.S. shipments *** accounted for *** percent of apparent consumption in 2019.

Table II-3
NOES: U.S. producer's and importers' share of reported U.S. commercial shipments, by sources and channels of distribution, 2014-19, January-June 2019, and January-June 2020

Item	Period							
	Calendar year						January-June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Share of reported shipments (percent)							
U.S. producer's U.S. commercial shipments of NOES:								
Distributors / slitters	***	***	***	***	***	***	***	***
Stampers / laminators	***	***	***	***	***	***	***	***
End users	***	***	***	***	***	***	***	***
U.S. importers' U.S. commercial shipments of NOES from China:								
Distributors / slitters	***	***	***	***	***	***	***	***
Stampers / laminators	***	***	***	***	***	***	***	***
End users	***	***	***	***	***	***	***	***
U.S. importers' U.S. commercial shipments of NOES from Germany:								
Distributors / slitters	***	***	***	***	***	***	***	***
Stampers / laminators	***	***	***	***	***	***	***	***
End users	***	***	***	***	***	***	***	***
U.S. importers' U.S. commercial shipments of NOES from Japan:								
Distributors / slitters	***	***	***	***	***	***	***	***
Stampers / laminators	***	***	***	***	***	***	***	***
End users	***	***	***	***	***	***	***	***
U.S. importers' U.S. commercial shipments of NOES from Korea:								
Distributors / slitters	***	***	***	***	***	***	***	***
Stampers / laminators	***	***	***	***	***	***	***	***
End users	***	***	***	***	***	***	***	***
U.S. importers' U.S. commercial shipments of NOES from Sweden:								
Distributors / slitters	***	***	***	***	***	***	***	***
Stampers / laminators	***	***	***	***	***	***	***	***
End users	***	***	***	***	***	***	***	***
U.S. importers' U.S. commercial shipments of NOES from Taiwan:								
Distributors / slitters	***	***	***	***	***	***	***	***
Stampers / laminators	***	***	***	***	***	***	***	***
End users	***	***	***	***	***	***	***	***
U.S. importers' U.S. commercial shipments of NOES from all subject countries combined:								
Distributors / slitters	***	***	***	***	***	***	***	***
Stampers / laminators	***	***	***	***	***	***	***	***
End users	***	***	***	***	***	***	***	***
U.S. importers' U.S. commercial shipments of NOES from all other countries:								
Distributors / slitters	***	***	***	***	***	***	***	***
Stampers / laminators	***	***	***	***	***	***	***	***
End users	***	***	***	***	***	***	***	***

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

Geographic distribution

U.S. producer AK Steel reported selling NOES to *** (table II-4). All importers of NOES from the subject countries reported selling to the Northeast and Midwest regions, while NOES from 4 of the 6 subject countries was reported to be sold to the Southeast region, and NOES from 2 of the 6 subject countries was reported to be sold to the Central Southwest and Pacific Coast regions. No importers reported selling to the Mountain region.

For U.S. producer AK Steel, *** percent of its sales were within 100 miles of its production facility, *** percent were between 101 and 1,000 miles, and *** percent were over 1,000 miles. Importers sold *** percent within 100 miles of their U.S. points of shipment, *** percent between 101 and 1,000 miles, and *** percent over 1,000 miles.

Table II-4
NOES: Geographic market areas in the United States served by the U.S. producer and importers

Region	U.S. producer	Importers						
		China	Germany	Japan	Korea	Sweden	Taiwan	Subject
Northeast	***	***	***	***	***	***	***	4
Midwest	***	***	***	***	***	***	***	7
Southeast	***	***	***	***	***	***	***	5
Central Southwest	***	***	***	***	***	***	***	3
Mountain	***	***	***	***	***	***	***	---
Pacific Coast	***	***	***	***	***	***	***	2
Other	***	***	***	***	***	***	***	---
All regions (except Other)	***	***	***	***	***	***	***	---
Reporting firms	1	1	3	7	1	2	4	10

Note: Other is all other U.S. markets, including AK, HI, PR, and VI.

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

Supply and demand considerations

U.S. supply

Table II-5 provides a summary of the supply factors regarding NOES from U.S. producers and from subject countries. No foreign producer from China, Korea, or Taiwan submitted foreign producer questionnaires in the current review.

Table II-5
NOES: Supply factors that affect the ability to increase shipments to the U.S. market

Country	Capacity (short tons)		Capacity utilization (percent)		Ratio of inventories to total shipments (percent)		Shipments by market, 2019 (percent)		Able to shift to alternate products
	2014	2019	2014	2019	2014	2019	Home market shipments	Exports to non-U.S. markets	No. of firms reporting "yes"
United States	***	***	***	***	***	***	***	***	***
China	---	---	---	---	---	---	---	---	***
Germany	***	***	***	***	***	***	***	***	***
Japan	***	***	***	***	***	***	***	***	***
Korea	---	---	---	---	---	---	---	---	***
Sweden	***	***	***	***	***	***	***	***	***
Taiwan	---	---	---	---	---	---	---	---	***

Note: AK Steel accounted for all known U.S. production of NOES in 2019. Responding foreign producer/exporter firms from Germany, Japan, and Sweden accounted for *** of the U.S. imports of NOES from these countries during 2019, ***. No foreign producer from China, Korea, or Taiwan submitted foreign producer questionnaires in the current reviews. For additional data on the number of responding firms and their share of U.S. production and of U.S. imports from each subject country, please refer to Part I, "Summary Data and Data Sources."

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

Domestic production

Based on available information, AK Steel has the ability to respond to changes in demand with large changes in the quantity of shipments of U.S.-produced NOES to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity, some inventories, and the ability to shift production to or from alternate products. One mitigating factor in AK Steel's supply responsiveness is a limited ability to shift shipments from alternate markets.

AK Steel's capacity utilization declined by *** percentage points between 2014 and 2019, reflecting a decrease in production of *** percent (the firm's total capacity ***). AK Steel's export market shipments ***. The firm reported ***. AK Steel also reported ***. However, AK Steel's coil-processing equipment for NOES is separate from that of producing other mill products, so ***.

Subject imports from Germany

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

The responding German producer's capacity utilization decreased by *** percentage points between 2014 and 2019, reflecting a decrease in overall capacity of *** percent. Despite this decrease in capacity, the responding German producer's reported capacity in 2019 was *** U.S. producer AK Steel. The German producer's home market shipments represented approximately *** of its total shipments in 2019, while the remaining *** were to other non-U.S. export markets, including ***; there were no reported shipments to the U.S. market in 2019. The responding German producer reported that ***. When German producer Thyssenkrupp was asked whether it could produce GOES on the same machinery used to produce NOES, it testified that it cannot, indicating that it produces these products in separate plants.[12]

Subject imports from Japan

Based on available information, producers of NOES from Japan have the ability to respond to changes in demand with small-to-moderate changes in the quantity of shipments of NOES to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the ability to shift shipments from their home market or alternate export markets, and the ability to shift production to or from alternate products. Factors mitigating Japanese producers' responsiveness of supply include the limited availability of unused capacity or inventories.

The responding Japanese producers' capacity utilization increased from *** percent to *** percent during 2014-19, while their overall capacity decreased by *** percent. Inventories as a ratio to total shipments remained below *** percent between 2014 and 2019. Japanese producers' home market shipments represented slightly less than *** of its total shipments in 2019, while the other *** were to other non-U.S. export markets,

[12] Hearing transcript, p. 177 (Schmidtz, Eberly).

including ***; there were no reported shipments to the U.S. market in 2019. Other products that the responding Japanese producers can reportedly produce on the same equipment as NOES are ***.

Subject imports from Sweden

Based on available information, producers of NOES from Sweden have the ability to respond to changes in demand with moderate-to-large changes in the quantity of shipments of NOES to the U.S. market. The main contributing factors to this degree of responsiveness of supply are the availability of unused capacity and the ability to shift shipments from alternate export markets. Factors mitigating the Swedish producer's responsiveness of supply include a decrease in reported capacity, the limited availability inventories, and no reported ability to shift production to or from alternate products.

The responding Swedish producer's capacity utilization decreased by *** percentage points between 2014 and 2019, while its overall capacity decreased by *** percent.[13] Inventories as a ratio to total shipments remained at *** percent or less between 2014 and 2019. The Swedish producer's shipments to other non-U.S. export markets represented the large majority of its total shipments in 2019. It reported *** as its primary market destinations for its shipments to the European Union, Asia, and all other markets, adding that it ***. It *** on the same equipment as NOES.

Imports from nonsubject sources

Imports from nonsubject sources accounted for 93.0 percent of U.S. imports of NOES in 2019, up from 45.9 percent in 2014 and 6.3 percent in 2013.[14] The largest sources of nonsubject imports in 2019 were France (38.0 percent),[15] Austria (23.6 percent), and India (17.8

[13] This reported reduction in capacity occurred ***.

[14] Original publication, pp. IV-4-5.

[15] ***.

In September 2020, Cleveland Cliffs announced that it had entered into a definitive agreement with ArcelorMittal S.A. to acquire "substantially all of the operations of ArcelorMittal USA LLC and its subsidiaries ("ArcelorMittal USA") for approximately $1.4 billion. Upon closure of the transaction,

(*continued*...)

percent).[16] The most cited nonsubject import sources were Austria (4 firms), Brazil and France (3 firms each), India and Slovenia (2 firms each), and Australia, Belgium, Mexico, Russia, Slovakia, Vietnam, and the United Kingdom (1 firm each).

Supply constraints

U.S. producer AK Steel *** supply constraints,[17] and 4 of 13 importers and 4 of 14 purchasers reported that they experienced supply constraints. All four importers cited difficulty in either procuring or supplying imported product due to the AD/CVD duties on NOES and section 232 steel tariffs. Foreign producer Thyssenkrupp also testified that it experienced a six-week shutdown in Germany as a result of the COVID-19 pandemic, as did other "Tier 1" manufacturers in the auto industry, but that its production and demand had returned "more or less {to} the same level as before COVID started."[18] Among purchasers, one firm stated that when the AD/CVD duties were first implemented there were some items it could not get from import sources, and one firm stated that JFE (Japan) would only sell to it finished goods that were not subject to the AD/CVD duties. Another purchaser stated that domestic firms require minimum purchase quantities that are larger than its demand, and another reported that it has been unable to buy from domestic producer AK Steel since 2004/2005 for several reasons, including insufficient purchase volumes, a refusal by AK Steel to accept certain government (defense) contractual clauses, the discontinuation of a specific

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Cleveland-Cliffs will be the largest flat-rolled steel producer in North America, with combined shipments of approximately 17 million net tons in 2019." Cleveland Cliffs website, *Cleveland-Cliffs Inc. to Acquire ArcelorMittal USA*, http://www.clevelandcliffs.com/English/news-center/news-releases/news-releases-details/2020/Cleveland-Cliffs-Inc.-to-Acquire-ArcelorMittal-USA/default.aspx, retrieved October 19, 2020. "***." Email from ***, October 27, 2020. ArcelorMittal USA ***. Email correspondence with ***, October 27, 2020 and Email correspondence with ***, October 27, 2020.

[16] For more on nonsubject import sources and their share of total imports, see Part IV. (See Thyssenkrupp's prehearing brief, p. 5).

[17] When asked specifically about the impact of the COVID-19 pandemic, AK Steel stated that it did not have any COVID-related shutdowns, and that as of the middle of July all of its staff had been recalled. Hearing transcript, p. 102 (Smith); AK Steel's posthearing brief, pp. 50-51.

[18] Hearing transcript, p. 147 (Schmidtz).

qualified coating ("***") and move toward its own coating that required constant re-qualification, and an inability to produce NOES wider than 48 inches.[19]

When asked if there had been any changes in the availability of supply, most firms (including AK Steel, all 11 responding importers, and 10 of 14 purchasers) reported that there had not been any change in the availability of domestic NOES. Responses regarding the availability of subject imported NOES were more mixed. Most importers (7 of 10) reported that there had been no change in the availability of NOES from subject countries, while AK Steel, 3 of 10 importers, and most purchasers (7 of 12) reported that there had been. Most of these firms highlighted the AD/CVD duties or other tariffs as the reason for fewer imports from subject countries since 2014. Regarding changes in the availability of supply from nonsubject sources, most importers (8 of 10) and purchasers (7 of 11) reported that there had not been any changes, while AK Steel, 2 importers, and 4 purchasers reported that nonsubject imports from Brazil, India, and France had increased, with *** citing the imposition of the AD/CVD duties as the reason.

New suppliers

Four of 14 purchasers indicated that new suppliers entered the U.S. market since January 1, 2014, and 7 of 13 expect additional entrants. Purchasers cited Big River Steel (United States) and Voestalpine (Austria) (2 firms each), as well as ArcelorMittal and POSCO (Korea) (1 firm each) as new market entrants. Among the firms expecting additional entrants, three firms cited Big River Steel, one firm cited Nucor, and one firm expects additional entrants that will serve the electric vehicle market.

U.S. demand

Based on available information, the overall demand for NOES is likely to experience moderate changes in response to changes in price. NOES represents a somewhat substantial cost share of downstream products, and while there are substitute products, their substitutability for NOES may be limited.

[19] AK Steel stated that it has a minimum order quantity of a "mother coil, or master coil, or a slab… typically around 18,000 to 20,000 pounds." Hearing transcript, pp. 102-3 (Konstantinidis); AK Steel's posthearing brief, p. 49. Thyssenkrupp reported that it has a minimum order quantity of ***. Thyssenkrupp's posthearing brief, Responses to Commissioners' Questions, p. 10.

End uses and cost share

U.S. demand for NOES depends on the demand for U.S.-produced downstream products. Common end uses identified by firms in the original investigation included motors, generators, and transformers, with cost shares ranging from 10-65 percent for motors, 20-40 percent for generators, and 25-40 percent for transformers.[20] Most firms (11 of 12 importers and 6 of 9 purchasers) reported no changes in end uses since 2014, and most firms (all 11 importers and 6 of 8 purchasers) do not anticipate future changes. However, *** reported growth in the production of electric vehicles and the e-mobility market which use NOES as a raw material, and purchaser *** reported less use of NOES due to energy efficiency regulations.[21]

Business cycles

Most firms indicated that the market was not subject to business cycles (the U.S. producer, all 11 importers, and 11 of 14 purchasers) or conditions of competition (the U.S. producer, 10 of 11 importers, and 11 of 14 purchasers). *** cited business cycles in the energy and agriculture sectors, however, and *** reported that the NOES market is subject to distinct conditions of competition due to the impact of the AD/CVD duties and other tariffs, while *** cited the implications of a single domestic producer on supply and prices for NOES.

Demand trends

A plurality of firms (including *** 6 of 10 purchasers) reported a decrease in U.S. demand for NOES since January 1, 2014 (table II-6). The firms reporting a decrease in demand cited a greater demand for NOES manufactured overseas (***), higher domestic prices due to the AD/CVD duties (***), an inability to compete with imported finished goods (***), and a general economic decline as a result of the COVID-19 pandemic (***).[22] Thyssenkrupp stated that the combination of the

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[20] Original publication, p. II-13.

[21] *** reported previously purchasing imports ***, but that it has not purchased since the AD/CVD duties took effect.

[22] AK Steel estimated that between 2014 and 2018 ***, but that demand in 2019 and

(*continued*...)

AD/CVD duties, the section 232 tariff, and the section 301 tariff have "driven U.S. NOES consumers offshore," either to produce or acquire downstream products that incorporate NOES.[23]

An equal number of importers (3 of 10 firms) reported an increase in U.S. demand for NOES, however, with importer *** citing increased demand from electric vehicle motor manufacturers. Purchaser *** also reported an increase in demand due to an increase in "rehab on generators." Foreign producer *** reported a steady increase in U.S. demand without citing a reason, while foreign producer *** reported an increase in demand for "xEV traction motors" in its home market. A plurality of purchasers (4 of 10) also reported a fluctuation in demand for their final products since 2014. When asked whether the demand for their final end use products had affected their demand for NOES, 8 of 10 purchasers reported that it had (2 reported that it had not). Purchasers generally reported that their demand for NOES fluctuates with market trends and prices.

Responses regarding future U.S. demand reported by firms were mixed; U.S. producer AK Steel, a plurality of importers, and *** anticipate an increase in demand, while a plurality of purchasers and 3 of 10 importers anticipate a decrease in demand. Reasons for anticipating an increase in future demand included an increase in demand for electric vehicles (AK Steel ***),[24] an increase in demand

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2020 "may have flattened or declined because of the coronavirus." AK Steel's posthearing brief, Exhibit 2, para. 2.

[23] Thyssenkrupp's prehearing brief, p. 6.

[24] AK Steel stated that demand for NOES is likely to increase "in the reasonably foreseeable future," reflecting the growth in the production of electric vehicles (which require NOES), and that it is "currently working closely with a number of automotive companies to develop and produce the NOES needed for the production of electric vehicles." AK Steel's prehearing brief, pp. 38-39; hearing transcript, pp. 14 (Reynolds), 27 (Smith), 34 (Pfeiffer), 39 (Konstantinidis), 85 (Pfeiffer); and AK Steel's posthearing brief, p. 3, Exhibit 1 (Answers to Commissioner Questions), pp. 21, 26-29, 32-33, Exhibit 2, and Exhibit 3.

Thyssenkrupp argues that while there will likely be an increase in global demand for NOES "as auto companies ramp up production of EVs in the United States and around the world… this trend does not mean that demand for NOES in the United States will increase." According to Thyssenkrupp, most of the production of EV motor laminations will continue to take place outside the United States, and there is no evidence to suggest that Tesla or other EV makers will produce motor laminations in the United States in order to meet the expected increase in demand. Thyssenkrupp's prehearing brief, p. 9; hearing transcript, pp. 125-127 (Wichert), 134-135, and 178-179 (Eberly).

***

(*continued*...)

for completed cores as long as the AD/CVD duties remain in place (***), and economic recovery from the COVID-19 pandemic (***).[25] Reasons for anticipating a decrease in future demand included an increase in demand for renewable energy such as solar (***), and "companies continuing to leave the United States" if tariffs continue and domestic prices remain high (***).

Table II-6
NOES: Firms' responses regarding U.S. demand, by number of firms

Item	Increase	No change	Decrease	Fluctuate
Demand in the United States				
U.S. producers	***	***	***	***
Importers	3	2	3	2
Purchasers	1	---	6	3
Foreign producers	***	***	***	***
Anticipated future demand				
U.S. producers	***	***	***	***
Importers	4	2	3	1
Purchasers	2	1	5	3
Foreign producers	***	***	***	***
Demand for purchasers' final products since 2014				
Purchasers	3	---	3	4

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

In the original investigations, petitioner AK Steel described NOES demand as following general U.S. economic growth as well as trends in certain specific end use markets, such as large motors for mining equipment and locomotives.[26] [27] In describing demand trends for NOES

***.

[25] AK Steel stated that it experienced a "demand shock beginning in March/April of 2020 as a result of the COVID-19 pandemic, where people didn't need product… {but that} everything is back up and running… and we see that demand coming back. We're probably getting very close to pre-COVID shipment levels of all of our products across the board." Hearing transcript, p. 102 (Smith); AK Steel's posthearing brief, pp. 50-51.

[26] Original publication, p. II-15. In the current reviews, AK Steel indicated that NOES "predominantly go{es} into markets such as locomotive, oil and gas, mining, and industrial motors." Hearing transcript, p. 62 (Konstantinidis).

[27] In the current reviews, AK Steel reported that most of the NOES it supplies to the U.S. market goes toward ***. AK Steel's posthearing brief (Answers to Commissioner Questions), p. 34. It also stated that NOES is used by the oil and gas industries "mostly in deep oil well pumps." Hearing transcript, p. 107 (Konstantinidis).

(*continued*...)

during the current review, AK Steel stated that ***.[28] Thyssenkrupp stated that the decline in domestic demand for NOES is due to the combination of the AD/CVD duties, the section 232 tariffs, and the section 301 tariffs, which have "driven NEOS consumers offshore, to either make or acquire downstream NOES products outside the United States."[29]

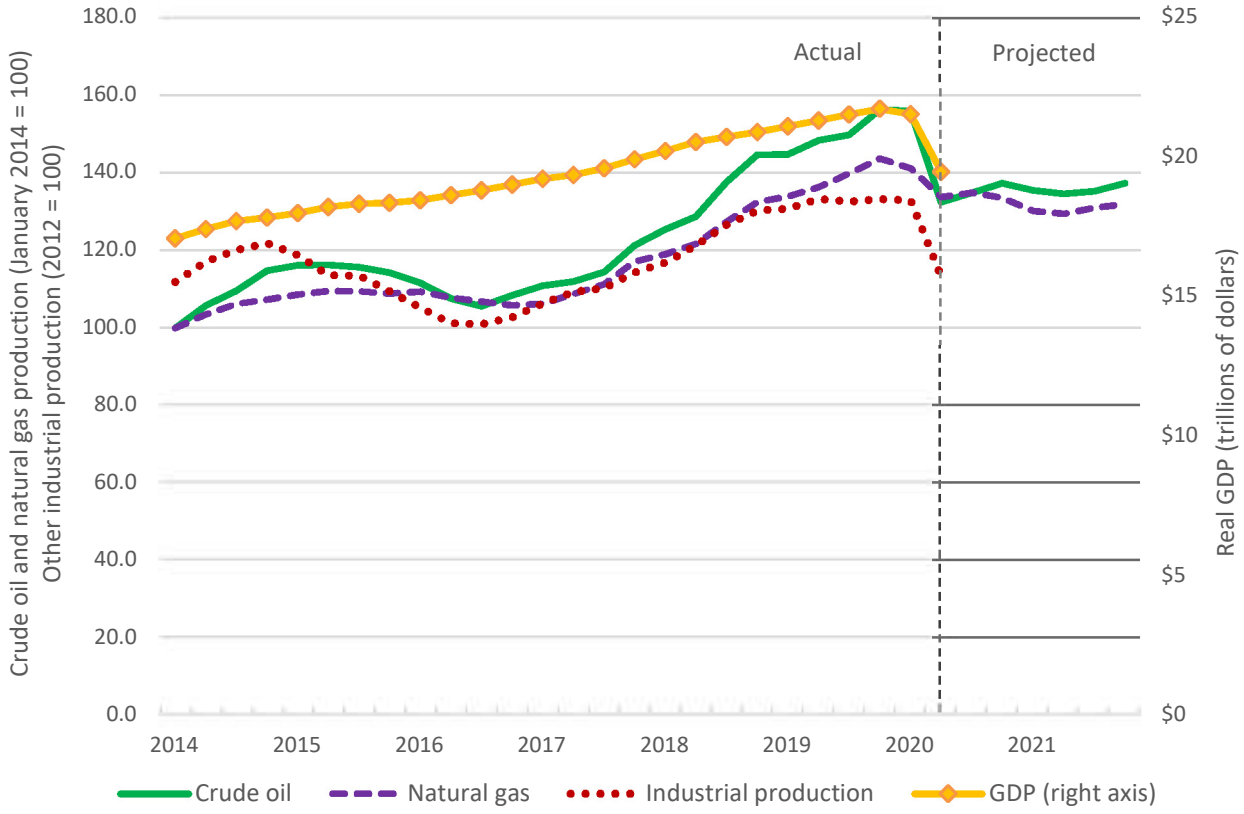
As shown in figure II-1, in general, crude oil, natural gas, and industrial production (including mining) all increased intermittently between the first quarter of 2014 and the last quarter of 2019, while GDP rose steadily. Each of these metrics fell slightly in the first quarter of 2020 and more precipitously in the second quarter of 2020. The U.S. Energy Information Administration ("EIA") projects that crude oil and natural gas production will remain relatively stable through 2020 and 2021.

Respondent Thyssenkrupp reported that it sells NOES ***, but that it does not sell NOES to customers involved in the oil and gas industry. Thyssenkrupp's posthearing brief, Responses to Commissioners' Questions, p. 8.

[28] Email from ***, September 21, 2020; hearing transcript, pp. 27-28 (Smith), 33, 43, 49-51, and 106 (Pfeiffer).

[29] Thyssenkrupp's prehearing brief, pp. 6-7.

Figure II-1
Oil, gas, and industrial production and GDP: Indexes of crude oil (million barrels per day), natural gas (wet, billion cubic feet), and industrial (mining, quarrying, and oil and gas extraction, seasonally adjusted) production, and GDP (real GDP, chained 2012 dollars, not seasonally adjusted) in the United States, quarterly, first quarter of 2014 – second quarter of 2020 (actual) and third quarter of 2020 – fourth quarter of 2021 (projected)

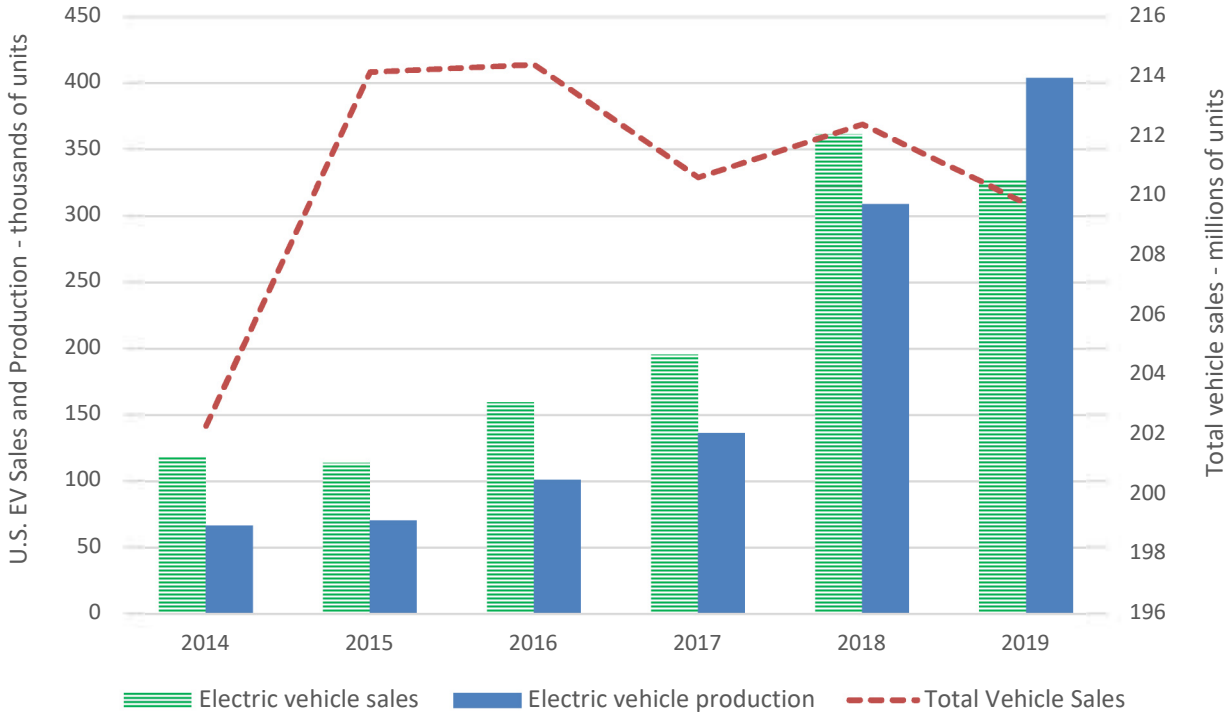


Source: U.S. Energy Information Administration and St. Louis FRED, accessed October 21, 2020.

Trends and developments in the e-mobility sector

As shown in figure II-2, total vehicle production in the United States increased between 2014 and 2015, then fluctuated but decreased overall thereafter. Conversely, EV production increased year over year during 2014-19, with the largest increase (126.5 percent) occurring between 2017 and 2018. With the exception of 2014-15 and 2018-19, EV sales also increased year over year during 2014-19 by between 22.5 and 84.7 percent. Between 2014 and 2019, EV sales and EV production in the United States increased by 174.8 percent and 505.6 percent, respectively. However, electric vehicles remain a small portion of total vehicle sales in the United States (less than 0.2 percent in 2019).

Figure II-2
Total vehicle sales, EV sales, and EV production: Total vehicle sales (seasonally adjusted rate), electric vehicle sales, and electric vehicle production (selected models) in the United States, annually, 2014-19



Sources: U.S. Department of Energy, U.S. Plug-In Electric Vehicle Sales by Model; Wards Intelligence; St. Louis FRED, accessed October 21, 2020.

Figure II-3 shows monthly production data for six of the most popular EV models.[30] As shown in the figure, the overall number of electric vehicles produced in the United States increased intermittently between 2014 and 2017, then increased more substantially between the first and third quarters of 2018. Between the third quarter of 2018 and the first quarter of 2020, EV production fluctuated but remained high, then fell to zero in April 2020 as plants shut down due to the COVID-19 pandemic. By August 2020, EV production generally returned to pre-pandemic levels.

[30] As shown in the figure, ***. The Tesla Model 3, as well as the Model S and Model X and the "vast majority of the vehicles' components," are produced in Tesla's Fremont, California factory. Tesla website, *Tesla Factory*, https://www.tesla.com/factory, retrieved November 2, 2020.

Figure II-3
EV production: Electric vehicle production in the United States (selected models), monthly, January 2014-August 2020

* * * * * * *

Source: Wards Intelligence, accessed September 22, 2020.

U.S. producers, importers, and purchasers were asked about the trends and developments in the United States with respect to NOES products related to the production of motors for electric vehicles (i.e. the e-mobility sector), as well as their ability to supply NOES for these applications. In general, firms stated that demand for and production of electric vehicles ("EVs") have increased, and they expect it to continue to increase, and that demand for the NOES used in these applications is expected to increase along with it. U.S. producer AK Steel testified that "the U.S. market is… a little bit behind the rest of the world with the adoption of the electric vehicle, but there's no doubt that the technology is the way of the future on some level."[31] It added that ***

[31] Hearing transcript, pp. 103-104 (Pfeiffer).

***.[32] *** reported that it has "full capacity" to supply this developing trend, and *** stated that as EV motor production increases in the United States it will have the ability to supply NOES for such uses. Importer *** indicated that while there has been an increase in EV production, supply of NOES in the U.S. market has been limited due to the AD/CVD duties. *** reported that stamped and bonded cores are being imported to serve the growing EV market, and that while it can supply this type of product the volumes exceed the firm's capacities. *** reported that AK Steel is the only domestic producer of NOES, and that one domestic producer will not be able to keep up with demand to fill this growing market.

Substitute products

In the original investigations, most firms stated that there were no substitutes for NOES.[33] Several substitutes were reported, including CRML and GOES in transformers and motors, though their ability to substitute for NOES may be limited in certain applications. AK Steel noted that NOES is used primarily in rotating machinery such as motors and generators (in which the direction of the magnetic flux in the apparatus is constantly changing), whereas GOES is used primarily in static equipment such as transformers,[34] and stated that "***."[35] One firm also named thin-gauge NOES as a substitute in transformers and motors, and another named cold-rolled steel as a substitute in less complex uses.[36]

In the current reviews, most firms (including ***) reported that there were no changes in substitutes, and most (including ***) did not anticipate any future changes in substitutes. Among the firms that did report changes, *** reported that coated CRML has been trialed with limited success, and *** reported that a lower cost alternative of CRML became available. Among the three purchasers that anticipate future

[32] AK Steel reported that the EV market represented ***. AK Steel's posthearing brief, p. 34. Respondent Thyssenkrupp reported that it "first began delivering significant quantities of NOES to e-mobility customers in the EU in 2018" and that such shipments made up *** percent of its total sales in 2020. It projected that e-mobility products will account for *** percent of its total NOES sales by 2021. Thyssenkrupp's posthearing brief, Responses to Commissioners' Questions, pp. 1-2.

[33] Original publication, p. II-17.

[34] AK Steel's prehearing brief, p. 13.

[35] Email from ***, September 21, 2020.

[36] Original publication, p. II-17.

changes, *** anticipates potential engineering changes to NOES, *** anticipates additional types of NOES alternatives to be developed, and *** expects more higher grades of NOES to become available.

Substitutability issues

The degree of substitution between domestic and imported NOES depends upon such factors as relative prices, quality (e.g., grade standards, defect rates, etc.), and conditions of sale (e.g., price discounts/rebates, lead times between order and delivery dates, reliability of supply, product services, etc.). In the original investigations, questionnaire respondents usually described U.S. and subject country product as at least frequently interchangeable, with a few firms noting that particular products were not available from the U.S. producer. In the current review, firms rated U.S.-produced NOES and NOES imported from subject countries as comparable on most factors, and the large majority of purchasers and most importers rated U.S.-produced and subject country NOES as at least frequently interchangeable for most comparisons. Based on these data, staff believes that there is a moderate-to-high degree of substitutability between domestically produced NOES and NOES imported from subject sources.

Lead times

NOES is primarily produced-to-order, with *** reporting that their produced-to-order shipments represented *** of their commercial shipments during 2019. Lead times for *** percent of its commercial shipments came from inventories, with average lead times of *** days. Importers reported that *** percent of their commercial shipments came from inventories, with lead times averaging *** days.

Knowledge of country sources

Twelve of 14 responding purchasers indicated they had marketing/pricing knowledge of domestic product, 5 of product from China, 4 of product from Germany, 8 of product from Japan, 5 of product from Korea, 5 of product from Sweden, 6 of product from Taiwan, and 9 of product from nonsubject countries (including France and Russia (4 firms each), Austria and India (3 firms), Brazil (2 firms), and Slovakia and Vietnam (1 firm each)).

As shown in table II-7, most purchasers and their customers either sometimes or never make purchasing decisions based on the producer or country of origin. Purchaser ***

indicated that it would consider the producer in its decision if the product met its technical and contractual requirements, and *** reported that it prefers to use domestic NOES but there is only one domestic producer and the purchasing decision ultimately comes down to price. Other reasons for sometimes making purchasing decisions based on the producer or country of origin included quality, application, cost, mill-specific requirements, and domestic requirements based on Defense Federal Acquisition Regulation Supplement ("DFARS") rules, "Made in America" laws, or other domestic preferences.[37] Of the 4 purchasers that reported that they always make decisions based on the manufacturer, one firm (***) cited known performance in the application.

Table II-7
NOES: Purchasing decisions based on producer and country of origin

Purchaser/customer decision	Always	Usually	Sometimes	Never
Purchaser makes decision based on producer	4	---	5	5
Purchaser's customers make decision based on producer	2	---	6	5
Purchaser makes decision based on country	3	1	4	6
Purchaser's customers make decision based on country	2	---	7	5

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

Factors affecting purchasing decisions

The most often cited top three factors firms consider in their purchasing decisions for NOES were price and quality (12 firms each), followed by availability of supply/lead time/delivery (9 firms) (table II-8). Price was the most frequently cited first-most important factor (cited by 6 firms), followed by quality (5 firms); price and quality were the most frequently cited second-most important factors (4 firms each); and availability/lead time/delivery was the most frequently reported third-most important factor (6 firms).

[37] Among the purchasers reporting that they and/or their customers never make decisions based on the producer or country of origin, only one firm (***) elaborated, indicating that it "would consider the producer… if the material was available and met {its} technical and contractual requirements." It stated that it does not currently consider the producer because there are no domestic suppliers of the material it requires.

Table II-8
NOES: Ranking of factors used in purchasing decisions as reported by U.S. purchasers, by factor

Factor	First	Second	Third	Total
Price	6	4	2	12
Quality	5	4	3	12
Availability/lead time/delivery	1	2	6	9
Other	2	4	3	9

Note: Other factors included "the ability to offer and maintain long-term dual-loop," administrative requirements, contract, credit/consignment, design/redesign assistance, extended payment terms, historical reliability, inventory management, payment terms, pricing clarity, product, technical requirements, and transportation.

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

The majority of purchasers (8 of 14 firms) reported that they usually purchase the lowest-priced product. Two firms each reported that they always do (***), they sometimes do (***), and they never do (***).

When asked if certain grades, types, or sizes of NOES were only available from certain country sources, most purchasers (8 of 13) reported that they were not. Five purchasers reported that they were, however. *** listed several types of grades, thicknesses, sizes, and coatings that are only available from Swedish manufacturers, and *** reported that U.S. producers cannot or will not produce some grades, types, or sizes of NOES. *** also stated that "high end electric vehicle steels are very unique," but did not indicate which country source(s) that applied to.

Importance of specified purchase factors

Purchasers were asked to rate the importance of 18 factors in their purchasing decisions (table II-9). The factors that half or more of responding purchasers rated as very important were overall availability and product consistency (14 firms each), delivery time and reliability of supply (13 firms each), price and quality meets industry standards (12 firms each), delivery terms (10 firms), technical support/service (9 firms), quality exceeds industry standards (8 firms), and discounts offered, inventory management, payment terms, and U.S. transportation costs (7 firms each). The factors rated as not important by a majority of responding firms were availability of NOES for e-mobility applications (10 firms) and cut-to-length for the customer (8 firms).

Table II-9
NOES: Importance of purchase factors, as reported by U.S. purchasers, by factor

Factor	Very important	Somewhat important	Not important
Availability (overall)	14	---	---
Availability of NOES for e-mobility applications	3	1	10
Cut-to-length for customer	3	2	8
Delivery terms	10	4	---
Delivery time	13	1	---
Discounts offered	7	5	2
Inventory management	7	3	4
Minimum quantity requirements	6	6	2
Packaging	5	8	1
Payment terms	7	6	1
Price	12	2	---
Product consistency	14	---	---
Product range	3	9	2
Quality meets industry standards	12	2	---
Quality exceeds industry standards	8	4	2
Reliability of supply	13	1	---
Technical support/service	9	4	1
U.S. transportation costs	7	6	1

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

Supplier certification

Thirteen of 14 purchasers require their suppliers to become certified or qualified to sell NOES to their firm. The time to qualify a new supplier ranged from 2 to 180 days, and several purchasers reported that suppliers must be ISO certified. Certification processes often involve trials and testing, examining the product for quality, and meeting specifications, but can also include audits of supplier capabilities. Thirteen of 14 purchasers reported that no domestic or foreign producer had failed in its attempt to qualify its NOES or had lost its approved status since January 1, 2014. One purchaser (***) did report that foreign suppliers *** have had difficulties producing a product that is completely interchangeable with some grades from Asia.

Changes in purchasing patterns

Purchasers were asked about changes in their purchasing patterns from different sources since 2014 (table II-10). Most firms reported not purchasing NOES from subject countries. The main reasons reported for changes in sourcing included changes in prices related to the AD/CVD orders on NOES in 2014 and the implementation of section 232 tariffs. A plurality of purchasers (4 of 13 firms) reported that their purchases of U.S.-produced NOES remained constant (with three firms reporting that they increased and three reporting that they decreased), while all responding purchasers reported that their purchases of NOES from

China, Germany, Japan, Korea, and Taiwan decreased since 2014. Regarding purchases of Swedish NOES, a majority of responding firms reported that such purchases remained constant. A plurality of purchasers also reported increasing their purchases from all other countries, citing pricing and product availability.

Table II-10
NOES: Changes in purchase patterns from U.S., subject, and nonsubject countries

Source of purchases	Did not purchase	Decreased	Increased	Constant	Fluctuated
United States	3	3	3	4	---
China	10	2	---	---	---
Germany	8	3	---	---	---
Japan	7	5	---	---	---
Korea	7	4	---	---	---
Sweden	6	1	---	4	1
Taiwan	8	3	---	---	---
All other countries	4	2	5	1	---
Sources unknown	7	1	---	---	---

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

Five of 14 purchasers reported that they had changed suppliers since January 1, 2014. Specifically, three firms dropped purchases from JFE (Japan) due to the AD/CVD duties. One purchaser reported adding suppliers due to the unavailability of NOES in the U.S. market. As noted earlier in this section, 4 of 14 purchasers reported new suppliers entering the market since January 2014, including ArcelorMittal, POSCO, and Voestalpine. Several firms expected Big River Steel to be a new market entrant, and one firm indicated that it expected domestic steel producer Nucor to enter the NOES market.

Importance of purchasing domestic product

Ten of 13 responding purchasers reported that most or all of their purchases did not have any domestic requirement, while the other three reported that at least some of their purchases (between *** percent) had no domestic requirement. Overall, purchases with no domestic requirement represented an estimated 72.0 percent of purchases. Three purchasers reported that domestic product was required by law (for 5 to 15 percent of their purchases), five reported it was required by their customers (for 2 to 98 percent of their purchases), and three reported other preferences for domestic product. Reasons cited for preferring domestic product included: DFARS, lead times, weldability of steel without porosity, motor rating requirements for better core steel, and to meet customer specifications for rating and efficiencies.

Comparisons of domestic products, subject imports, and nonsubject imports

Purchasers were asked a number of questions comparing NOES produced in the United States, subject countries, and nonsubject countries. First, purchasers were asked for a country-by-country comparison on the same 18 factors, for which they were asked to rate the importance (tables II-11a and II-11b). Of the thirteen purchasing factors rated as very important by more than half of the responding purchasers,[38] U.S.-produced NOES was most commonly reported as superior to NOES from subject countries in delivery time (table II-11a).[39] U.S.-produced NOES was most frequently reported by purchasers as comparable to NOES from subject countries in overall availability, delivery terms, discounts offered,[40] inventory management, payment terms,[41] product consistency, quality meets industry standards, quality exceeds industry standards, reliability of supply, technical support/service, and U.S. transportation costs. Most purchasers reported that U.S.-produced NOES was inferior on price to NOES from each subject country except Sweden, which most firms rated as comparable to U.S.-produced NOES.

When comparing U.S.-produced NOES and NOES imported from subject countries to NOES imported from nonsubject sources, the vast majority of comparisons were rated as comparable for all factors (table II-11b). Regarding price, U.S.-produced NOES was rated as inferior to NOES from nonsubject sources, and an equal number of purchasers (2 each) rated NOES from Sweden as comparable and inferior to NOES from nonsubject sources. Regarding the availability of NOES for e-mobility applications, the sole responding purchaser rated Chinese NOES as superior to nonsubject NOES, and an equal number (1 each) rated NOES from Korea as superior and comparable to nonsubject NOES.

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[38] The factors rated as very important were overall availability and product consistency (14 firms each), delivery time and reliability of supply (13 firms each), price and quality meets industry standards (12 firms each), delivery terms (10 firms), technical support/service (9 firms), quality exceeds industry standards (8 firms), and discounts offered, inventory management, payment terms, and U.S. transportation costs (7 firms each).

[39] Purchasers were evenly split in their comparisons of U.S.-produced NOES and NOES from Korea, with two purchasers each reporting that U.S.-produced NOES is superior, comparable, and inferior on delivery time. Most purchasers reported that delivery time of NOES from Sweden was comparable to that of U.S.-produced NOES.

[40] An equal number of purchasers reported that discounts offered on U.S.-produced NOES was comparable or inferior to NOES from China.

[41] An equal number of purchasers reported that payment terms on U.S.-produced NOES was comparable or inferior to NOES from Taiwan.

Table II-11a
NOES: Purchasers' comparisons between U.S.-produced and subject imported product

Factor	U.S. vs. China			U.S. vs. Germany			U.S. vs. Japan		
	S	C	I	S	C	I	S	C	I
Availability (overall)	1	5	---	1	5	---	1	6	1
Availability of NOES for e-mobility applications	---	1	2	---	2	1	---	3	1
Cut-to-length for customer	---	3	---	---	4	---	---	4	1
Delivery terms	---	4	1	---	4	1	1	5	---
Delivery time	4	---	2	3	---	2	6	---	1
Discounts offered	---	3	3	---	4	1	1	4	3
Inventory management	1	3	1	1	3	1	2	4	1
Minimum quantity requirements	2	3	---	1	4	---	2	4	---
Packaging	---	5	---	---	4	1	---	6	1
Payment terms	1	3	2	---	3	2	1	5	2
Price	---	---	6	1	1	2	2	---	6
Product consistency	---	6	---	---	4	1	1	5	2
Product range	---	6	---	---	3	1	1	5	2
Quality meets industry standards	1	5	---	---	5	---	1	7	---
Quality exceeds industry standards	1	5	---	---	5	---	1	5	2
Reliability of supply	---	4	1	---	5	---	1	7	---
Technical support/service	2	4	---	---	5	---	1	7	---
U.S. transportation costs	1	4	1	---	4	1	1	6	1

Factor	U.S. vs. Korea			U.S. vs. Sweden			U.S. vs. Taiwan		
	S	C	I	S	C	I	S	C	I
Availability (overall)	---	5	1	1	5	2	---	7	---
Availability of NOES for e-mobility applications	---	4	1	---	2	1	---	1	1
Cut-to-length for customer	---	3	1	---	4	---	---	1	1
Delivery terms	1	4	1	---	6	1	---	5	1
Delivery time	2	2	2	2	3	2	3	2	2
Discounts offered	1	4	1	---	6	---	---	3	2
Inventory management	1	3	1	---	5	1	1	3	2
Minimum quantity requirements	2	4	---	1	6	---	2	4	---
Packaging	---	6	---	---	6	1	---	6	---
Payment terms	---	5	1	1	5	1	1	3	3
Price	---	1	4	1	5	2	1	1	5
Product consistency	1	5	---	---	7	1	---	7	---
Product range	---	6	---	---	6	2	---	7	---
Quality meets industry standards	1	5	---	---	7	---	---	7	---
Quality exceeds industry standards	1	5	---	---	7	1	---	6	---
Reliability of supply	---	5	1	---	7	1	1	5	1
Technical support/service	2	3	---	---	7	1	1	6	---
U.S. transportation costs	2	3	1	1	6	1	---	5	1

Note: A rating of superior means that price/U.S. transportation costs is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.
Note: S=first listed country's product is superior; C=both countries' products are comparable; I=first list country's product is inferior.

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

Table II-11b
NOES: Purchasers' comparisons between U.S.-produced, subject imported, and nonsubject imported product

Factor	U.S. vs. nonsubject			China vs. nonsubject			Germany vs. nonsubject			Japan vs. nonsubject		
	S	C	I	S	C	I	S	C	I	S	C	I
Availability (overall)	1	5	1	---	3	---	---	3	---	---	3	2
Availability of NOES for e-mobility applications	---	3	1	1	---	---	---	2	---	1	2	---
Cut-to-length for customer	---	4	1	---	1	---	---	2	---	---	3	---
Delivery terms	1	5	1	---	3	---	---	3	---	---	5	---
Delivery time	3	4	---	---	3	---	---	3	---	---	5	---
Discounts offered	1	4	2	---	2	1	---	3	---	---	4	1
Inventory management	1	5	1	---	3	---	---	3	---	---	5	---
Minimum quantity requirements	2	5	---	---	3	---	---	3	---	---	5	---
Packaging	---	6	1	---	3	---	---	3	---	---	5	---
Payment terms	---	4	3	---	3	---	---	3	---	---	5	---
Price	1	1	4	1	2	---	---	3	---	---	3	2
Product consistency	---	6	1	---	3	---	---	3	---	---	5	---
Product range	---	5	2	1	2	---	---	3	---	1	4	---
Quality meets industry standards	---	7	---	---	3	---	---	3	---	---	5	---
Quality exceeds industry standards	---	6	1	---	3	---	---	3	---	1	4	---
Reliability of supply	1	5	1	1	2	---	---	3	---	---	4	1
Technical support/service	2	5	---	---	3	---	---	3	---	1	4	---
U.S. transportation costs	1	5	---	---	3	---	---	3	---	---	5	---

Factor	Korea vs. nonsubject			Sweden vs. nonsubject			Taiwan vs. nonsubject		
	S	C	I	S	C	I	S	C	I
Availability (overall)	---	4	---	---	3	2	---	3	---
Availability of NOES for e-mobility applications	1	1	---	---	---	---	---	2	---
Cut-to-length for customer	---	2	---	---	3	---	---	2	---
Delivery terms	---	4	---	---	3	1	---	3	---
Delivery time	---	4	---	---	3	1	---	3	---
Discounts offered	---	4	---	---	4	---	---	3	---
Inventory management	---	4	---	---	4	---	---	3	---
Minimum quantity requirements	---	4	---	---	4	1	---	3	---
Packaging	---	4	---	---	4	---	---	3	---
Payment terms	---	4	---	---	4	---	---	3	---
Price	---	3	---	---	2	2	---	3	---
Product consistency	---	4	---	---	3	1	---	3	---
Product range	1	3	---	---	4	1	---	3	---
Quality meets industry standards	---	4	---	---	4	1	---	3	---
Quality exceeds industry standards	---	4	---	1	3	1	---	3	---
Reliability of supply	1	3	---	1	3	1	---	3	---
Technical support/service	---	4	---	1	3	1	---	3	---
U.S. transportation costs	---	4	---	---	4	---	---	3	---

Note: A rating of superior means that price/U.S. transportation costs is generally lower. For example, if a firm reported "U.S. superior," it meant that the U.S. product was generally priced lower than the imported product.
Note: S=first listed country's product is superior; C=both countries' products are comparable; I=first list country's product is inferior.

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

Comparison of U.S.-produced and imported NOES

In order to determine whether U.S.-produced NOES can generally be used in the same applications as imports from China, Germany, Japan, Korea, Sweden, and Taiwan, U.S. producers, importers, and purchasers were asked whether the products can always, frequently, sometimes, or never be used interchangeably. As shown in table II-12, the U.S. producer described NOES from *** as *** interchangeable. Importers were more likely to describe NOES from various sources as frequently or sometimes interchangeable, although an equal number (2 each) described U.S.-produced NOES as either frequently or never interchangeable with NOES from Sweden. A majority of responding purchasers reported that U.S. product was always or frequently interchangeable with product from all subject countries, although equal number (4 each) described U.S.-produced NOES as either always or frequently interchangeable with NOES from Sweden.

When comparing the interchangeability of NOES among the subject countries, importers were more varied in their responses, but most reported comparability between subject sources. Purchasers rated almost all subject country comparisons as comparable. When comparing U.S. and subject country NOES to nonsubject NOES, firms' responses generally mirrored their comparisons of the various subject countries.

Table II-12
NOES: Interchangeability between NOES produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. China	***	***	***	***	1	2	2	1	2	6	1	---
U.S. vs. Germany	***	***	***	***	1	3	2	1	3	4	1	---
U.S. vs. Japan	***	***	***	***	1	5	1	1	4	5	1	---
U.S. vs. Korea	***	***	***	***	1	3	---	1	2	5	1	---
U.S. vs. Sweden	***	***	***	***	1	2	---	2	4	4	1	1
U.S. vs. Taiwan	***	***	***	***	1	2	1	1	3	5	---	---
Subject country comparisons:												
China vs. Germany	***	***	***	***	1	2	2	1	---	3	1	1
China vs. Japan	***	***	***	***	1	3	---	1	1	4	1	---
China vs. Korea	***	***	***	***	1	2	---	1	1	5	---	---
China vs. Sweden	***	***	***	***	1	1	---	2	1	2	2	---
China vs. Taiwan	***	***	***	***	2	2	---	1	2	3	---	---
Germany vs. Japan	***	***	***	***	1	3	2	1	1	5	---	---
Germany vs. Korea	***	***	***	***	1	2	2	1	---	4	1	---
Germany vs. Sweden	***	***	***	***	1	1	2	2	1	4	---	---
Germany vs. Taiwan	***	***	***	***	2	2	1	1	---	4	---	---
Japan vs. Korea	***	***	***	***	1	3	1	1	1	4	1	---
Japan vs. Sweden	***	***	***	***	1	1	1	2	2	4	---	---
Japan vs. Taiwan	***	***	***	***	1	3	---	1	1	4	---	---
Korea vs. Sweden	***	***	***	***	1	2	---	2	1	3	1	---
Korea vs. Taiwan	***	***	***	***	1	2	---	1	1	4	---	---
Sweden vs. Taiwan	***	***	***	***	1	2	---	1	1	2	1	---
Nonsubject countries comparisons:												
U.S. vs. nonsubject	***	***	***	***	1	3	1	1	2	5	1	---
China vs. nonsubject	***	***	***	***	1	3	---	1	1	4	---	1
Germany vs. nonsubject	***	***	***	***	1	2	2	1	---	6	---	---
Japan vs. nonsubject	***	***	***	***	1	3	---	1	1	5	1	---
Korea vs. nonsubject	***	***	***	***	1	2	---	1	1	3	1	---
Sweden vs. nonsubject	***	***	***	***	1	2	---	1	1	3	2	---
Taiwan vs. nonsubject	***	***	***	***	1	2	1	1	1	4	---	---

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

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

In additional comments, purchasers *** reported an unwillingness of U.S. producers to supply product to their specifications, forcing them to purchase NOES from overseas sources. Purchaser *** reported that some Chinese producers make product equivalent to other countries while others only provide lower grades. It added that the only Swedish producer makes high-performance versions of material similar to Japan, Korea, Germany, and the United States, but that it is not interchangeable in high-frequency or high-efficiency applications. Purchaser *** reported that Chinese product was of inferior quality. Importer *** reported that it sells slit NOES coil products to the U.S. and that these coils are not interchangeable.

As seen in table II-13, most responding purchasers reported that domestically produced and subject imported product "always" or "usually" met minimum quality specifications.

Table II-13
NOES: Ability to meet minimum quality specifications, by source

Source	Always	Usually	Sometimes	Rarely or never
United States	6	5	---	1
China	3	3	---	1
Germany	4	1	1	---
Japan	6	2	---	---
Korea	6	1	---	---
Sweden	6	2	1	---
Taiwan	3	3	---	---

Note: Purchasers were asked how often domestically produced or imported NOES meets minimum quality specifications for their own or their customers' uses.

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

In addition, U.S. producers, importers, and purchasers were asked to assess how often differences other than price were significant in sales of NOES from the United States, subject, or nonsubject countries. As seen in table II-14, the U.S. producer indicated that differences other than price were *** significant ***, while majorities or pluralities of importers and purchasers indicated that differences other than price were sometimes significant in almost all country comparisons. Exceptions were Germany and Sweden: an equal number of importers (3 each) indicated that differences other than price were either frequently or sometimes significant when comparing U.S. and German product, and a plurality of purchasers indicated that differences other than price were always significant when comparing U.S. and Swedish product. When comparing German product to Swedish product, an equal number of purchasers (2 each) indicated that differences other than price were either always or sometimes significant.

Table II-14
NOES: Significance of differences other than price between NOES produced in the United States and in other countries, by country pair

Country pair	Number of U.S. producers reporting				Number of U.S. importers reporting				Number of purchasers reporting			
	A	F	S	N	A	F	S	N	A	F	S	N
U.S. vs. subject countries:												
U.S. vs. China	***	***	***	***	1	2	3	---	3	---	6	---
U.S. vs. Germany	***	***	***	***	---	3	3	---	2	1	5	---
U.S. vs. Japan	***	***	***	***	---	2	6	---	3	2	5	---
U.S. vs. Korea	***	***	***	***	---	2	3	---	2	1	5	---
U.S. vs. Sweden	***	***	***	***	---	2	3	---	5	1	4	---
U.S. vs. Taiwan	***	***	***	***	1	2	4	---	2	---	6	---
Subject country comparisons:												
China vs. Germany	***	***	***	***	---	2	4	---	1	---	4	---
China vs. Japan	***	***	***	***	---	1	5	---	2	---	4	---
China vs. Korea	***	***	***	***	---	1	3	---	1	1	4	---
China vs. Sweden	***	***	***	***	---	1	3	---	2	---	3	---
China vs. Taiwan	***	***	***	***	---	1	5	---	---	---	5	---
Germany vs. Japan	***	***	***	***	---	1	6	---	1	---	4	1
Germany vs. Korea	***	***	***	***	---	1	4	---	1	1	3	---
Germany vs. Sweden	***	***	***	***	---	1	4	---	2	---	2	1
Germany vs. Taiwan	***	***	***	***	---	2	5	---	---	1	3	---
Japan vs. Korea	***	***	***	***	---	1	4	---	2	---	4	---
Japan vs. Sweden	***	***	***	***	---	1	3	---	2	---	3	1
Japan vs. Taiwan	***	***	***	***	---	1	5	---	1	---	4	---
Korea vs. Sweden	***	***	***	***	---	1	3	---	2	---	3	---
Korea vs. Taiwan	***	***	***	***	---	1	4	---	---	---	5	---
Sweden vs. Taiwan	***	***	***	***	---	1	4	---	1	---	3	---
Nonsubject countries comparisons:												
U.S. vs. nonsubject	***	***	***	***	---	3	4	---	2	2	4	---
China vs. nonsubject	***	***	***	***	---	1	5	---	1	---	4	---
Germany vs. nonsubject	***	***	***	***	---	1	6	---	1	---	4	1
Japan vs. nonsubject	***	***	***	***	---	1	5	---	2	---	4	1
Korea vs. nonsubject	***	***	***	***	---	1	4	---	1	---	5	---
Sweden vs. nonsubject	***	***	***	***	---	1	4	---	2	---	3	1
Taiwan vs. nonsubject	***	***	***	***	---	1	5	---	---	---	5	---

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

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

In additional comments, purchasers *** reported that domestic firms do not manufacture certain grades of NOES, with *** indicating that Sweden is the only country able to supply a product to its specific specifications. Importer *** stated that there are differing chemistries as to how some manufacturers get to specific core losses but did not elaborate on how that informs country comparison differences. Importer *** also suggested that the domestic manufacturer's "outdated technology and lack of investment" resulted in higher production costs, and purchaser *** stated that the length of the supply chain and logistics costs for NOES imported from Taiwan increases the amount of inventory costs.

Elasticity estimates

U.S. supply elasticity

The domestic supply elasticity for NOES measures the sensitivity of the quantity supplied by U.S. producers to changes in the U.S. market price of NOES. The elasticity of domestic supply depends on several factors, including the level of excess capacity, the ease with which producers can alter capacity, producers' ability to shift to production of other products, the existence of inventories, and the availability of alternate markets for U.S.-produced NOES. Analysis of these factors above indicates that the U.S. industry is likely to be able to greatly increase or decrease shipments to the U.S. market; an estimate in the range of 3 to 7 is suggested.

U.S. demand elasticity

The U.S. demand elasticity for NOES measures the sensitivity of the overall quantity demanded to a change in the U.S. market price of NOES. This estimate depends on factors discussed above such as the existence, availability, and commercial viability of substitute products, as well as the component share of the NOES in the production of any downstream products. Based on the available information, the aggregate demand for NOES is likely to be moderately inelastic; a range of -0.25 to -0.75 is suggested.

Substitution elasticity

The elasticity of substitution depends upon the extent of product differentiation between the domestic and imported products.[42] Product differentiation, in turn, depends upon such factors as quality (e.g., chemistry, appearance, etc.) and conditions of sale (e.g., availability, sales terms/discounts/promotions, etc.). Based on available information, the elasticity of substitution between U.S.-produced NOES and imported NOES is likely to be in the range of 2 to 4.[43]

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

[43] In the original final phase investigation, staff estimated the elasticity of substitution to be in the range of 2 to 4. Original publication, p. II-35.

Part III: Condition of the U.S. industry

Overview

The information in this section of the report was compiled from AK Steel's response to the Commission's U.S. producer questionnaire. As in the original investigations, AK Steel is believed to be the sole producer of NOES in the United States in 2019.[1]

Changes experienced by the industry

The domestic producer was asked to indicate whether it had experienced any plant openings, relocations, expansions, acquisitions, consolidations, closures, or prolonged shutdowns because of strikes or equipment failure; curtailment of production because of shortages of materials or other reasons, including revision of labor agreements; or any other change in the character of their operations or organization relating to the production of NOES since 2014. AK Steel reported an ***; its responses are presented in table III-1.

Table III-1
NOES: U.S. producer AK Steel's reported changes in operations, since January 1, 2014

Item / Firm	Reported changed in operations
***:	
***	***
***:	
***	***

Note: AK Steel's parent company Cleveland-Cliffs Inc. has entered an agreement to acquire the operations of ArcelorMittal USA and its subsidiaries. Cleveland-Cliff's rationale for the acquisition include ***. Email correspondence with ***, October 27, 2020.

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

[1] ***. Emails from ***, August 18, 2020; and October 19, 2020.

Recent developments

Table III-2 presents events in the U.S. industry since the original investigations.

Table III-2
NOES: Important industry events, since January 1, 2014

Year	Firm	Event
2018	Big River Steel ("BRS")	**Reported Expansion:** Reportedly citing market opportunities to produce advanced steels for autonomous and electric vehicles and electrical steels for electric motors and other electrical devices, BRS announced in March that it plans to add "semi-processed, non-grain-oriented silicon steels" to its existing electrical steel product line of motor lamination steels at its "Flex Mill" in Osceola, Arkansas.[1]
		Expansion: In June, BRS announced plans to double the annual production capacity at its Flex Mill™ located in Osceola, Arkansas, from 1.6 million short tons to 3.3 million short tons and enable the mill to produce even higher grades of electrical steels. Construction is anticipated to commence later in the year and continue for approximately 24 months.[2]
2019		**Expansion:** In March 2019, BRS finalized the purchase contract for the equipment to expand its annual production capacity, including a second electric-arc furnace and twin-ladle metallurgical furnace to the melt shop; a second strand line, tunnel furnace, and another down-coiler to the rolling mill; and another coiler to the continuous galvanizing line.[3]
		Expansion: In June, BRS obtained a $777-million ($487-million of 30-year corporate debt and $290-million of equity) financing arrangement to expand annual production capacity, which in-turn, "...sets the stage for an incremental downstream investment which will allow the company to produce even higher grades of electrical steels."[4]
	U.S. Steel	**Acquisition:** In October, U.S. Steel announced the completion of its $700-million acquisition of a minority (49.9 percent) joint-venture ownership share of BRS. Until U.S. Steel exercises its option to acquire BRS's remaining majority (50.1 percent) share within four years, at a previously agreed-upon pricing formula, BRS will continue operating as an independent firm.[5]
2020	AK Steel/Cleveland-Cliffs Inc.	**Acquisition:** In March, Cleveland Cliffs Inc. announced that it has successfully completed the acquisition of AK Steel Holding Corporation. The new company's assets include two efficient integrated blast furnace steel mills, two electric arc furnace plants, a new state-of-the-art HBI plant and several other highly technologically developed facilities.[6]
	AK Steel/Cleveland-Cliffs Inc./ArcelorMittal USA	**Acquisition:** Cleveland-Cliffs Inc. announced it would acquire the operations of ArcelorMittal USA LLC and its subsidiaries ("ArcelorMittal USA") for approximately $1.4 billion.[7]

Sources continued on next page.

Table III-2—Continued
NOES: Important industry events, since January 1, 2014
[1] Triplett, Timothy, "Big River Sees Expansion, Electrical Steel in Its Future," Steel Market Update, March 25, 2018, https://bigriversteel.com/wp-content/uploads/2018/03/Big-River-Sees-Expansion-Electrical-Steel-in-its-Future-Steel-Market-Update.pdf.
[2] BRS, "Big River Steel Expanding Arkansas Flex Mill," News release, June 29, 2018, https://bigriversteel.com/wp-content/uploads/2018/06/Big-River-Steel-Announces-Expansion-of-Osceola-Flex-Mill-FINAL.pdf.
[3] Association for Iron and Steel Technology ("AIST"), "Big River Chooses Technology Supplier for Arkansas Expansion," Steel News, March 25, 2019, https://www.aist.org/news/steel-news/2019/march/25-29-march-2019/big-river-chooses-technology-supplier-for-arkansas.
[4] AIST, "Big River Steel Has Finalized Financing for Its Mill Expansion. Here's How Much," Steel News, June 4, 2019, https://www.aist.org/news/steel-news/2019/june/3-7-june-2019/big-river-steel-has-finalized-financing-for-its-mi.
[5] U.S. Steel, "United States Steel Corporation Completes Strategic Investment in Big River Steel," press release, October 31, 2019, https://www.globenewswire.com/news-release/2019/10/31/1939077/0/en/United-States-Steel-Corporation-Completes-Strategic-Investment-in-Big-River-Steel.html; AIST, "U.S. Steel Cements Stake in Big River Steel," Steel News, November 6, 2019, https://www.aist.org/news/steel-news/2019/4-8-november-2019/4-8-november-2019/u-%c2%a0-s-steel-cements-stake-in-big-river-steel.
[6] Cliffs, "Cleveland Cliffs Completes Acquisition of AK Steel," March 13, 2020, http://www.clevelandcliffs.com/English/news-center/news-releases/news-releases-details/2020/Cleveland-Cliffs-Completes-Acquisition-of-AK-Steel/default.aspx
[7] Business Wire, "Cleveland-Cliffs Inc. to Acquire ArcelorMittal USA," September 28, 2020, https://www.businesswire.com/news/home/20200927005083/en/Cleveland-Cliffs-Inc.-to-Acquire-ArcelorMittal-USA.

Anticipated changes in operations

The Commission asked the domestic producer to report anticipated changes in the character of its operations relating to the production of NOES. AK Steel reported *** anticipated changes in operations, noting that ***.[2]

[2] *** U.S. producer questionnaire response, section II-2b.

U.S. production, capacity, and capacity utilization

Table III-3 and figure III-1 present AK Steel's production, capacity, and capacity utilization. AK Steel's capacity remained *** throughout the period for which data were collected. AK Steel's production decreased by *** percent between 2014 and 2016, then increased by *** percent from 2016 to 2018, then decreased by *** percent from 2018 to 2019. Overall, AK Steel's production of NOES decreased by *** percent during 2014-19. AK Steel's production was lower in the 2020 January to June interim period ("interim") compared to the 2019 interim by *** percent.[3]

During 2014-16, capacity utilization decreased by *** percentage points from *** percent to *** percent. From 2016 to 2018, capacity utilization increased by *** percentage points, from *** percent to *** percent, but then fell to *** percent in 2019. Overall, AK Steel's capacity utilization decreased by *** percentage points during 2014-19. Capacity utilization was *** percentage points lower in interim 2020 compared to interim 2019.

Table III-3
NOES: U.S. producer AK Steel's production, capacity, and capacity utilization, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
Capacity	***	***	***	***	***	***	***	***
Production	***	***	***	***	***	***	***	***
	Ratios (percent)							
Capacity utilization	***	***	***	***	***	***	***	***

Note: According to AK Steel, ***. Emails from Neal Reynolds, Counsel for AK Steel, September 14, 2020 and September 21, 2020.

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

[3] ***. Email correspondence with ***, August 31, 2020.

Figure III-1
NOES: U.S. producer AK Steel's production, capacity, and capacity utilization, 2014-19, January to June 2019, and January to June 2020

* * * * * * *

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

Constraints on capacity

AK Steel reported that its production of NOES is constrained by the ***.[4] According to AK Steel: ***.[5] AK Steel observed that although the annealing process is a *** on NOES production, throughout the period for which data were collected AK Steel had ***.[6]

[4] AK Steel's U.S. producer questionnaire response, section II-3d.
[5] Email from ***, September 8, 2020.
[6] Ibid.

Alternative products

Table III-4 presents data on AK Steel's overall combined capacity and production of products on the same machinery used to produce NOES. Although AK Steel produces gain-oriented electrical steel ("GOES") on *** machinery used to produce NOES, AK Steel notes that its ***.[7] AK Steel reported that it has ***.[8] AK Steel's overall capacity *** during the period for which data were collected. AK Steel's production of GOES fluctuated during 2014-19, but overall decreased by *** percent. AK Steel's production of GOES was lower in the 2020 interim period compared to the 2019 interim by *** percent.

[7] *** U.S. Producer questionnaire response, section II-3e.

[8] Ibid.

Table III-4
NOES: U.S. producer AK Steel's overall capacity and production of products on the same machinery as NOES, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
Overall capacity	***	***	***	***	***	***	***	***
Production: NOES	***	***	***	***	***	***	***	***
Out-of-scope production: GOES	***	***	***	***	***	***	***	***
Cold-rolled magnetic lam	***	***	***	***	***	***	***	***
Other products	***	***	***	***	***	***	***	***
Total out-of-scope merchandise	***	***	***	***	***	***	***	***
Total production	***	***	***	***	***	***	***	***
	Ratios and shares (percent)							
Capacity utilization	***	***	***	***	***	***	***	***
Production: NOES	***	***	***	***	***	***	***	***
Out-of-scope production: GOES	***	***	***	***	***	***	***	***
Cold-rolled magnetic lam	***	***	***	***	***	***	***	***
Other products	***	***	***	***	***	***	***	***
Total out-of-scope merchandise	***	***	***	***	***	***	***	***
Total production	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: On September 8, 2014 and November 4, 2014 the Commission issued negative determinations in the final phase investigations of grain-oriented electrical steel from Germany, Japan, and Poland; and China, Czech Republic, Korea, and Russia, respectively. 79 FR 54744, September 12, 2014; and 79 FR 66739, November 10, 2014.

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

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

Table III-5 presents AK Steel's U.S. shipments, export shipments, and total shipments. During 2014-19, the quantity and value of AK Steel's U.S. shipments decreased by *** percent and *** percent, respectively. AK Steel's U.S. shipments, in terms of quantity, were *** percent lower in interim 2020 compared to interim 2019 and *** percent lower in terms of value. From 2014 to 2016, the unit value of AK Steel's U.S. shipments decreased by $*** per short ton then increased by $*** per short ton from 2016 to 2019. Overall, during 2014-19, the unit value of AK Steel's U.S. shipments increased by $*** per short ton to $*** per short ton. The unit value of AK Steel's U.S. shipments in interim 2020 was $*** per short ton less compared to interim 2019.

Overall, the quantity and value of during 2014-19, AK Steel's export shipments decreased by *** percent and *** percent, respectively. AK Steel's export shipments, in terms of quantity, were *** percent lower in interim 2020 compared to interim 2019 and *** percent lower in terms of value. AK Steel's export shipments accounted for less than *** percent of its total shipments during 2014-19, January to June 2019 and January to June 2020.

Table III-5
NOES: U.S. producer AK Steel's U.S. shipments, export shipments, and total shipments, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
U.S. shipments	***	***	***	***	***	***	***	***
Export shipments	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***
	Value (1,000 dollars)							
U.S. shipments	***	***	***	***	***	***	***	***
Export shipments	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***
	Unit value (dollars per short ton)							
U.S. shipments	***	***	***	***	***	***	***	***
Export shipments	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***
	Share of quantity (percent)							
U.S. shipments	***	***	***	***	***	***	***	***
Export shipments	***	***	***	***	***	***	***	***
Total shipments	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)							
U.S. shipments	***	***	***	***	***	***	***	***
Export shipments	***	***	***	***	***	***	***	***
Total shipments	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: AK Steel reported *** internal consumption or transfers of NOES, and exports reflect shipments to ***. *** U.S. producer questionnaire, section II-7.

Note: According to AK Steel, ***. Emails from Neal Reynolds, Counsel for AK Steel, September 14, 2020 and September 21, 2020.

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

U.S. producer's inventories

Table III-6 presents AK Steel's end-of-period inventories and the ratio of these inventories to production, U.S. shipments, and total shipments**.** AK Steel's end-of-period inventories decreased from 2014 to 2016 then increased from 2016 to 2018 and decreased again in 2019. Overall, during 2014-19, AK Steel's end-of-period inventories decreased by *** percent. End-of-period inventories were *** percent lower in the 2020 interim period compared to the 2019 interim period. AK Steel's end-of-period inventories as a ratio to U.S. production, U.S. shipments, and total shipments fluctuated during 2014-19. Overall, during 2014-19, AK Steel's end-of-period inventories as a ratio to U.S. production increased by *** percentage points while AK Steel's end-of-period inventories as a ratio to U.S. shipments and total shipments decreased by *** percent points and by *** percentage points, respectively. AK Steel's end-of-period inventories as a ratio to U.S. production, U.S. shipments, and total shipments were all greater in the 2020 interim period compared to the 2019 interim period.

Table III-6
NOES: U.S. producer AK Steel's inventories, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
U.S. producer's end-of-period inventories	***	***	***	***	***	***	***	***
	Ratio (percent)							
Ratio of inventories to.-- U.S. production	***	***	***	***	***	***	***	***
U.S. shipments	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***

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

U.S. producer's imports and purchases

AK Steel *** import or purchase NOES during the period for which data were collected.[9]

U.S. employment, wages, and productivity

Table III-7 shows U.S. producer AK Steel's employment-related data during 2014-19, January to June 2019, and January to June 2020. During 2014-19, the number of production and related workers ("PRWs") fluctuated but overall decreased by *** percent (*** PRWs).[10] The number of PRWs was lower in interim 2020 compared to interim 2019 by *** percent (*** PRWs). Total hours worked also fluctuated during 2014-19 but overall decreased by *** percent. Total hours worked was *** percent lower in interim 2020 compared to interim 2019.

Hourly wages fluctuated during 2014-19 and were highest in 2015 at $*** per hour. Overall, during 2014-19, hourly wages decreased by *** percent to $*** per hour in 2019. Hourly wages were lower by $*** per hour in interim 2020 compared to interim 2019. Productivity, measured by shorts tons per 1,000 hours worked, decreased during 2014-19 and was lower in interim 2020 compared to interim 2019 as AK Steel tried to maintain its highly skilled workforce despite decreases in production.[11]

[9] AK Steel's parent company Cleveland-Cliffs Inc. has entered an agreement to acquire the operations of ArcelorMittal USA and its subsidiaries. ArcelorMittal USA ***. Email correspondence with ***, October 27, 2020 and Email correspondence with ***, October 27, 2020.

[10] Since the ***. Email correspondence with ***, October 27, 2020.

[11] Email correspondence with ***, August 31, 2020.

Table III-7
NOES: U.S. producer AK Steel's employment related data, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
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 1,000 hours)	***	***	***	***	***	***	***	***
Unit labor costs (dollars per short tons)	***	***	***	***	***	***	***	***

Note: AK Steel's wages ***. Email from ***, August 31, 2020.

Note: AK Steel's interim 2020 employment data ***. Email from ***, November 3 2020.

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

Financial Experience of U.S. Producers

Background

AK Steel, the sole known U.S. producer of NOES, provided usable financial data on its operations producing NOES.[12] The firm reported financial data based on ***. AK Steel reported *** of NOES. AK Steel reported *** of NOES.

Operations on NOES

Income-and-loss data for AK Steel's NOES operations are presented in table III-8. Table III-9 presents corresponding changes in average per short ton values.

[12] AK Steel Holding Corporation ("AK Holding") is a producer of flat-rolled carbon, stainless and electrical steel products, primarily for the automotive, infrastructure and manufacturing, and distributors and converters markets through its wholly owned subsidiary, AK Steel. Other subsidiaries also provide customer solutions with carbon and stainless-steel tubing products, advanced-engineered solutions, tool design and build, hot and cold-stamped steel components, and complex assemblies. Automotive manufacturers have been increasing their development of hybrid/electric vehicles ("H/EVs") in order to meet the Corporate Average Fuel Economy standards and growing customer adoption of H/EVs. According to AK Holding, many motors used in H/EVs being sold in the U.S. are imported from foreign suppliers, but more local sourcing and manufacturing of motors are expected to occur in the future. As the only North American producer of high-efficiency NOES, which is a critical component of H/EV motors, AK Holding considers itself to be positioned to potentially benefit from the growth of H/EVs going forward. AK Holding reported net sales of $6.4 billion and operating profit of $209.3 million in 2019. The stainless and electrical steel product line reported net sales of $1.6 billion in 2019, accounting for approximately 25.4 percent of AK Holding's total sales by product line. AK Holding's 2019 Form 10-K, p. 1, 2, 43, and 53 (as filed). ***. Email from ***, October 26, 2020.

Table III-8

NOES: Results of operations of AK Steel, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
Net sales	***	***	***	***	***	***	***	***
	Value (1,000 dollars)							
Net sales	***	***	***	***	***	***	***	***
Cost of goods sold.-- Raw materials	***	***	***	***	***	***	***	***
Direct labor	***	***	***	***	***	***	***	***
Other factory costs	***	***	***	***	***	***	***	***
Total COGS	***	***	***	***	***	***	***	***
Gross profit (loss)	***	***	***	***	***	***	***	***
SG&A expense	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***
All other expenses, net	***	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***	***
Depreciation/amortization	***	***	***	***	***	***	***	***
Cash flow	***	***	***	***	***	***	***	***
	Unit value (dollars per short ton)							
Net sales	***	***	***	***	***	***	***	***
Cost of goods sold.-- Raw materials	***	***	***	***	***	***	***	***
Direct labor	***	***	***	***	***	***	***	***
Other factory costs	***	***	***	***	***	***	***	***
Average COGS	***	***	***	***	***	***	***	***
Gross profit	***	***	***	***	***	***	***	***
SG&A expense	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***	***

Table continued on next page.

Table III-8—Continued

NOES: Results of operations of AK Steel, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Ratio to COGS (percent)							
Cost of goods sold.-- Raw materials	***	***	***	***	***	***	***	***
Direct labor	***	***	***	***	***	***	***	***
Other factory costs	***	***	***	***	***	***	***	***
Total COGS	***	***	***	***	***	***	***	***
	Ratio to net sales (percent)							
Cost of goods sold.-- Raw materials	***	***	***	***	***	***	***	***
Direct labor	***	***	***	***	***	***	***	***
Other factory costs	***	***	***	***	***	***	***	***
Total COGS	***	***	***	***	***	***	***	***
Gross profit (loss)	***	***	***	***	***	***	***	***
SG&A expense	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***	***
	Number of firms reporting							
Operating losses	***	***	***	***	***	***	***	***
Net losses	***	***	***	***	***	***	***	***
Data	1	1	1	1	1	1	1	1

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

Table III-9

NOES: Changes in average unit values, between fiscal years and between partial year periods

Item	Between fiscal years						January to June
	2014-19	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
	Changes in AUVSs (percent)						
Commercial shipments	***	***	***	***	***	***	***
Cost of goods sold.-- Raw materials	***	***	***	***	***	***	***
Direct labor	***	***	***	***	***	***	***
Other factory costs	***	***	***	***	***	***	***
Average COGS	***	***	***	***	***	***	***
	Changes in unit values (dollars per short ton)						
Commercial shipments	***	***	***	***	***	***	***
Cost of goods sold.-- Raw materials	***	***	***	***	***	***	***
Direct labor	***	***	***	***	***	***	***
Other factory costs	***	***	***	***	***	***	***
Average COGS	***	***	***	***	***	***	***
Gross profit	***	***	***	***	***	***	***
SG&A expense	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***

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

Net sales

As shown in table III-8, the total net sales volume and value of NOES declined irregularly by *** percent and *** percent from 2014 to 2019, respectively. ***.[13] In January-June 2020 compared to January-June 2019, the total net sales volume and value were lower. The unit value of total net sales declined from $*** in 2014 to $*** in 2016, then increased to $*** by 2019. The unit value of total net sales was lower in January-June 2020 at $*** per short ton compared to the same period in 2019 at $*** per short ton. ***.[14]

Cost of goods sold and gross profit or (loss)

As seen in table III-8, the average cost of goods sold ("COGS") to net sales ratio ranged from *** percent (in 2019) to *** percent (in 2016) during the full year period. The COGS to net sales ratio was higher in January-June 2020 compared to the same period in 2019.

Other factory costs were the largest component of COGS throughout 2014-19 and during both interim periods. They accounted for between *** percent in 2014 and *** percent in January-June 2020 of total COGS. Other factory costs consisted of ***.[15] The average other factory costs per unit consistently increased from $*** in 2014 to $*** in 2019 and were higher in interim 2020 than in interim 2019.[16]

[13] Email from ***, September 14, 2020.
[14] Email from ***, September 3, 2020.
[15] Email from ***, September 3, 2020.
[16] ***. Email from ***, September 3, 2020.

Raw material costs were the second largest component of COGS throughout the reporting period. They accounted for between *** percent in January-June 2020 and *** percent in 2014 of total COGS. The average raw material costs per unit declined from $*** in 2014 to $*** in 2016, then increased irregularly to $*** in 2019. The average raw material costs per unit were lower in interim 2020 than in interim 2019.[17] Table III-10 presents a break-out of the raw material costs, by type, for fiscal year 2019.

Table III-10
NOES: AK Steel' raw materials, by type, 2019

Raw materials	Calendar 2019		
	Value (1,000 dollars)	Unit value (dollars per short ton)	Share of value (percent)
Scrap steel	***	***	***
Ferrosilicon	***	***	***
Other raw materials	***	***	***
Total, raw materials	***	***	***

Note: Other raw materials comprised ***.

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

Lastly, direct labor costs accounted for between *** percent in 2014 and *** percent in 2016 of COGS. The average direct labor costs per unit increased irregularly from $*** in 2014 to $*** in 2019 and were higher in interim 2020 than in interim 2019.

Because the decline in COGS driven by the reduction in raw materials and other factory costs exceeded the decline in revenue, gross profit improved irregularly from $*** in 2014 to $*** in 2019 while gross profit ratio (gross profit to net sales ratio) worsened from *** percent in 2014 to *** percent in 2016 then improved irregularly to *** percent in 2019. AK Steel reported *** gross profit and gross profit ratio in January-June 2020 compared to *** gross profit and gross profit ratio in January-June 2019, due to the greater decline in revenue than in COGS.

[17] See the discussion in "Net sales" regarding AK Steel's raw material costs.

SG&A expenses and operating income

Total SG&A expenses declined from 2014 to 2019 and were lower in January-June 2020 compared to January-June 2019. The SG&A expense ratio (SG&A expenses as a share of sales) irregularly declined from 2014 to 2019 but was higher in January-June 2020 compared to January-June 2019.[18]

Operating income improved from $*** in 2014 to $*** in 2019. The *** operating income worsened in January-June 2020 compared to the same period in 2019. The operating income margin (operating income as a ratio to net sales) worsened from *** in 2014 to *** percent in 2016 then improved to *** percent in 2019. The *** operating income margin was worse in January-June 2020 compared to January-June 2019.

Other expenses and net income

Classified below the operating income level are interest expense, other expense, and other income. In table III-8, these items are aggregated and only the net amount is shown. The net "all other expenses" increased irregularly from 2014 to 2019 but were lower in January-June 2020 compared to January-June 2019.[19]

Net income improved from $*** in 2014 to $*** in 2019. The *** net income narrowed in January-June 2020 compared to the same period in 2019. The net income margin (net income as a ratio to net sales) worsened from *** percent in 2014 to *** percent in 2016 then improved to *** in 2019. The *** net income margin was worse in January-June 2020 compared to January-June 2019.

[18] ***. Email from ***, October 14, 2020.
[19] ***. Email from ***, September 3, 2020.

Variance analysis

The variance analysis presented in table III-11 is based on the data in table III-8.[20] The analysis shows that AK Steel's *** operating income improved from 2014 to 2019 primarily attributable to ***. Between the comparable interim periods, AK Steel's worse *** operating income in January-June 2020 is primarily attributable to ***.

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

Table III-11

NOES: Variance analysis on the operations of AK Steel, between fiscal years and between partial year periods

Item	Between fiscal years						January to June
	2014-19	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Net sales:							
Price variance	***	***	***	***	***	***	***
Volume variance	***	***	***	***	***	***	***
Net sales variance	***	***	***	***	***	***	***
Cost of sales:							
Cost/expense variance	***	***	***	***	***	***	***
Volume variance	***	***	***	***	***	***	***
Total cost of sales variance	***	***	***	***	***	***	***
Gross profit variance	***	***	***	***	***	***	***
SG&A expenses:							
Cost/expense variance	***	***	***	***	***	***	***
Volume variance	***	***	***	***	***	***	***
Total SG&A expense variance	***	***	***	***	***	***	***
Operating income variance	***	***	***	***	***	***	***
Summarized as:							
Price variance	***	***	***	***	***	***	***
Net cost/expense variance	***	***	***	***	***	***	***
Net volume variance	***	***	***	***	***	***	***

Note.--Unfavorable variances are shown in parenthesis; all others are favorable.

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

Capital expenditures and research and development expenses

Table III-12 presents capital expenditures and research and development ("R&D") expenses for AK Steel. Capital expenditures and R&D expenses declined irregularly from 2014 to 2019 and were lower in January-June 2020 than in the same period in 2019.

Table III-12

NOES: Capital expenditures and research and development expenses for AK Steel, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Value (1,000 dollars)							
Capital expenditures	***	***	***	***	***	***	***	***
R&D expenses	***	***	***	***	***	***	***	***

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

Assets and return on assets

Table III-13 presents data on AK Steel's total assets and its operating return on assets (operating income divided by total assets).[21] Total net assets declined irregularly from 2014 to 2019.[22] AK Steel's operating return on assets irregularly worsened from 2014 to 2019.

Table III-13
NOES: Value of assets used in production, warehousing, and sales, and return on investment for AK Steel, fiscal years 2014-19

Firm	Calendar year					
	2014	2015	2016	2017	2018	2019
	Value (1,000 dollars)					
Net assets	***	***	***	***	***	***
	Ratio (percent)					
Operating return on assets	***	***	***	***	***	***

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

[21] With respect to a company's overall operations, staff notes that total asset value (i.e., the bottom line number on the asset side of a company's balance sheet) reflects an aggregation of a number of assets which are generally not product specific. Accordingly, high level corporate allocations may be required in order to report a total asset value for NOES.

[22] ***. Email from ***, September 3, 2020.

Part IV: U.S. imports and the foreign industries

U.S. imports

Overview

The Commission issued questionnaires to 61 potential importers of NOES. Thirteen firms provided data and information in response to the questionnaires, while thirteen firms indicated that they had not imported NOES since January 1, 2014. Based on official Commerce statistics for imports of NOES, importers' questionnaire data accounted for more than 80 percent of total U.S. imports in 2019 and more than 70 percent of total subject imports during 2019. In 2019, *** accounted for the largest share of reported U.S. imports from NOES nonsubject sources (*** percent). Firms responding to the Commission's questionnaire accounted for the following shares of individual subject country's subject imports (as a share of official import statistics, by value) during 2019.

- There were no U.S. imports of NOES from China reported during 2018-19. Reported data were equivalent to more than 80 percent of the subject imports from China during 2017.
- There were no U.S. imports of NOES from Germany reported during 2016-19. Reported data were equivalent to more than 75 percent of the subject imports from Germany during 2015.
- Reported data were equivalent to more than 10 percent and more than 95 percent of the subject imports from Japan during 2019 and 2018, respectively.
- There were no U.S. imports of NOES from Korea reported during 2017-19. Reported data were equivalent to more than 50 percent of the subject imports from Korea during 2016.
- There were no U.S. imports of NOES from Sweden reported during 2015-19. Reported data were equivalent to more than 55 percent of the subject imports from Sweden during 2014.
- Reported data were equivalent to more than 95 percent of the subject imports from Taiwan during 2019.

In light of the generally high, but mixed, data coverage by the Commission's questionnaires, import data in this report are based on official Commerce statistics for NOES.[1]

[1] HTS statistical reporting numbers used to generate import data throughout this report are: 7225.19.0000, 7226.19.1000, and 7226.19.9000. HTS subheading 7225.19.00 includes NOES of a width of 600 mm or more; HTS subheading 7226.19.10 includes NOES of a width of 300 mm or more but less

(*continued*...)

Imports from subject and nonsubject countries

Table IV-1 and figure IV-1 present information on U.S. imports of NOES from China, Germany, Japan, Korea, Sweden, Taiwan, and all other sources over the period for which data were collected. U.S. imports of NOES from subject sources, by quantity and by value, declined in each year between 2014 and 2018. During 2018-19, U.S. imports of NOES from subject sources, in terms of quantity and in terms of value, increased slightly. Overall, during 2014-19, the quantity and value of U.S. imports of NOES from subject sources decreased by 94.0 percent and by 90.3, respectively. In terms of quantity, U.S. imports of NOES from Taiwan represented the largest share of subject imports during 2014 and during 2016-19. In 2019, U.S. imports of NOES from Taiwan, in terms of quantity, accounted for 71.0 percent and 5.0 percent of subject imports and total imports, respectively.

As discussed in greater detail below, during 2014-19, U.S. imports of NOES from nonsubject sources fluctuated. Overall, during 2014-19, U.S. imports of NOES from nonsubject countries decreased by 7.0 percent in terms of quantity but increased by 10.6 percent, in terms of value.

(…*continued*)
than 600 mm; and 7226.19.90 includes NOES of a width of less than 300 mm. HTSUS (2020) Basic Edition, USITC Publication 5011, January 2020, ch. 72, pp. 38-39.

Table IV-1
NOES: U.S. imports, by source, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
U.S. imports from.--								
China	2,188	12	4	17	78	25	---	48
Germany	2,304	181	179	12	14	12	11	4
Japan	8,571	5,166	800	398	50	105	87	30
Korea	1,841	3,162	883	263	---	177	177	41
Sweden	4,700	228	760	323	502	184	91	68
Taiwan	9,477	2,118	3,160	2,760	572	1,228	578	382
Subject sources	29,082	10,867	5,787	3,772	1,215	1,731	945	572
Nonsubject sources	24,656	35,095	22,766	28,882	25,078	22,923	12,272	8,438
All import sources	53,738	45,962	28,554	32,655	26,293	24,655	13,217	9,010
	Value (1,000 dollars)							
U.S. imports from.--								
China	1,840	21	8	21	115	26	---	33
Germany	2,538	170	233	32	41	30	27	19
Japan	11,400	6,302	1,007	625	88	197	169	52
Korea	1,776	2,930	1,028	333	---	196	196	50
Sweden	7,563	1,650	2,159	1,660	1,795	1,532	1,114	603
Taiwan	7,664	1,581	2,052	1,990	547	1,189	580	356
Subject sources	32,782	12,654	6,487	4,661	2,587	3,169	2,085	1,114
Nonsubject sources	27,876	37,481	22,854	31,264	34,054	30,826	16,815	11,276
All import sources	60,658	50,134	29,341	35,925	36,641	33,996	18,901	12,390
	Unit value (dollars per short ton)							
U.S. imports from.--								
China	841	1,816	1,757	1,243	1,483	1,036	---	693
Germany	1,102	941	1,296	2,691	3,025	2,507	2,466	4,981
Japan	1,330	1,220	1,259	1,572	1,770	1,879	1,938	1,706
Korea	965	927	1,165	1,268	---	1,104	1,104	1,235
Sweden	1,609	7,247	2,839	5,133	3,574	8,333	12,189	8,931
Taiwan	809	746	649	721	957	968	1,003	934
Subject sources	1,127	1,164	1,121	1,235	2,129	1,831	2,207	1,947
Nonsubject sources	1,131	1,068	1,004	1,082	1,358	1,345	1,370	1,336
All import sources	1,129	1,091	1,028	1,100	1,394	1,379	1,430	1,375

Table continued on next page.

Table IV-1—Continued
NOES: U.S. imports, by source, 2014-19, January to June 2019, and January to June 2020

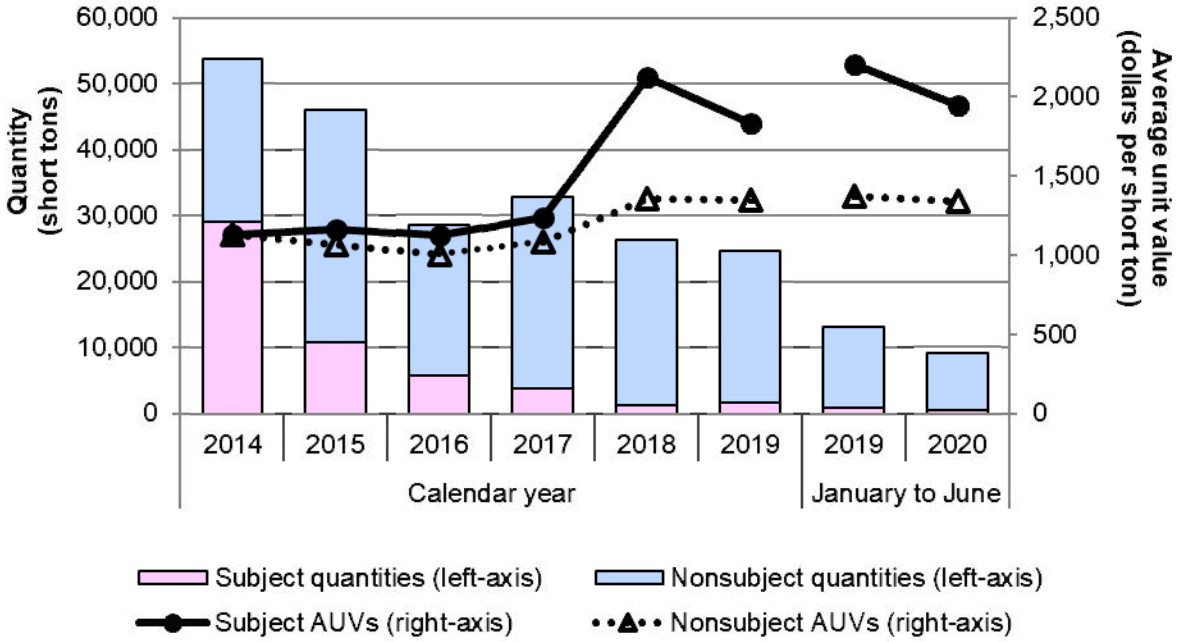
Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Share of quantity (percent)							
U.S. imports from.--								
China	4.1	0.0	0.0	0.1	0.3	0.1	---	0.5
Germany	4.3	0.4	0.6	0.0	0.1	0.0	0.1	0.0
Japan	15.9	11.2	2.8	1.2	0.2	0.4	0.7	0.3
Korea	3.4	6.9	3.1	0.8	---	0.7	1.3	0.5
Sweden	8.7	0.5	2.7	1.0	1.9	0.7	0.7	0.7
Taiwan	17.6	4.6	11.1	8.5	2.2	5.0	4.4	4.2
Subject sources	54.1	23.6	20.3	11.6	4.6	7.0	7.2	6.3
Nonsubject sources	45.9	76.4	79.7	88.4	95.4	93.0	92.8	93.7
All import sources	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)							
U.S. imports from.--								
China	3.0	0.0	0.0	0.1	0.3	0.1	---	0.3
Germany	4.2	0.3	0.8	0.1	0.1	0.1	0.1	0.2
Japan	18.8	12.6	3.4	1.7	0.2	0.6	0.9	0.4
Korea	2.9	5.8	3.5	0.9	---	0.6	1.0	0.4
Sweden	12.5	3.3	7.4	4.6	4.9	4.5	5.9	4.9
Taiwan	12.6	3.2	7.0	5.5	1.5	3.5	3.1	2.9
Subject sources	54.0	25.2	22.1	13.0	7.1	9.3	11.0	9.0
Nonsubject sources	46.0	74.8	77.9	87.0	92.9	90.7	89.0	91.0
All import sources	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Ratio to U.S. production (percent)							
U.S. imports from.--								
China	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***
Japan	***	***	***	***	***	***	***	***
Korea	***	***	***	***	***	***	***	***
Sweden	***	***	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***

Note: Shares and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent.

Note: ***.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed August 9, 2020.

Figure IV-1
NOES: U.S. imports, by source, 2014-19, January to June 2019, and January to June 2020



Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed August 9, 2020.

Table IV-2 presents data on U.S imports of NOES (shown in descending order, by quantity, for 2019) from nonsubject sources. In 2019, imports from France, Austria, and India accounted for 38.0 percent, 23.6 percent, and 17.8 percent of total U.S. imports of NOES, respectively. In the first half of 2020, however, Romania was the leading source of U.S. imports of NOES.

Table IV-2
NOES: U.S. imports from nonsubject sources, by source, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
U.S. imports from.--								
France	15,891	19,925	7,502	11,965	11,328	9,361	4,802	1,223
Austria	3,148	7,828	7,918	11,411	9,456	5,813	2,615	2,144
India	1,798	1,202	4,082	2,770	1,878	4,377	2,762	1,559
Romania	---	36	---	171	960	2,315	1,180	2,731
Slovakia	19	179	1,021	1,475	1,354	790	650	745
All other sources	3,801	5,925	2,243	1,091	102	267	264	35
Nonsubject sources	24,656	35,095	22,766	28,882	25,078	22,923	12,272	8,438
	Share of all import sources quantity (percent)							
U.S. imports from.--								
France	29.6	43.4	26.3	36.6	43.1	38.0	36.3	13.6
Austria	5.9	17.0	27.7	34.9	36.0	23.6	19.8	23.8
India	3.3	2.6	14.3	8.5	7.1	17.8	20.9	17.3
Romania	---	0.1	---	0.5	3.7	9.4	8.9	30.3
Slovakia	0.0	0.4	3.6	4.5	5.1	3.2	4.9	8.3
All other sources	7.1	12.9	7.9	3.3	0.4	1.1	2.0	0.4
Nonsubject sources	45.9	76.4	79.7	88.4	95.4	93.0	92.8	93.7

Note: Shares and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent.

Note: In 2014 and 2015, Brazil and Russia accounted for a majority of U.S. imports of NOES from “all other” nonsubject sources.

Source: Official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed August 9, 2020.

Cumulation considerations

In assessing whether U.S. imports from the subject countries are likely to compete with each other and with the domestic like product, the Commission has generally considered four factors: (1) fungibility, (2) presence of sales or offers to sell in the same geographical markets, (3) common or similar channels of distribution, and (4) simultaneous presence in the market. Information regarding channels of distribution, market areas, and interchangeability appear in Part II. Additional information concerning fungibility, geographical markets, and simultaneous presence in the market is presented below.

Fungibility

Table IV-3 present data on AK Steel's and U.S. importers' shipments of semiprocessed NOES and fully processed NOES. In its semiprocessed form, NOES is finished to a final thickness and the physical form by the steel producer, but it must be annealed by the customer after it is fabricated into a part, in order to develop its final magnetic quality.[2] In its fully processed form, the magnetic properties of NOES are completely developed by the steel producer and is ready for use without any additional processing required.[3]

During 2014-19, between *** percent and *** of AK Steel's U.S. shipments of NOES were fully processed. During 2014-19 and during the two interim periods, U.S. shipments of NOES from the subject countries and nonsubject countries were *** fully processed. In the original investigations, *** imports of NOES[4] were fully processed and between *** percent of AK Steel's sales were semiprocessed.[5]

[2] Original publication, pp. III-3-III-4.

[3] Original publication, p. III-3.

[4] In the original investigations AK Steel contended that if duties were in place only on fully processed NOES, importers could evade the duties with imports of semiprocessed NOES. Original publication, p. II-1.

[5] Original confidential report, p. II-1.

Table IV-3
NOES: U.S. producer's and importers' U.S. shipments by type, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
U.S. shipments: U.S. producers Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Value (1,000 dollars)							
U.S. shipments: U.S. producers Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Unit value (dollars per short ton)							
U.S. shipments: U.S. producers Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Share of quantity (percent)							
U.S. shipments: U.S. producers Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)							
U.S. shipments: U.S. producers Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table continued on next page.

Table IV-3—Continued
NOES: U.S. producer's and U.S. importers' U.S. shipments by type, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
U.S. shipments: Subject sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Value (1,000 dollars)							
U.S. shipments: Subject sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Unit value (dollars per short ton)							
U.S. shipments: Subject sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Share of quantity (percent)							
U.S. shipments: Subject sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)							
U.S. shipments: Subject sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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Table IV-3—Continued
NOES: U.S. producer's and U.S. importers' U.S. shipments by type, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
U.S. shipments: Nonsubject sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Value (1,000 dollars)							
U.S. shipments: Nonsubject sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Unit value (dollars per short ton)							
U.S. shipments: Nonsubject sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Share of quantity (percent)							
U.S. shipments: Nonsubject sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)							
U.S. shipments: Nonsubject sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table continued on next page.

Table IV-3—Continued
NOES: U.S. producer's and U.S. importers' U.S. shipments by type, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
U.S. shipments: All import sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Value (1,000 dollars)							
U.S. shipments: All import sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Unit value (dollars per short ton)							
U.S. shipments: All import sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	***	***	***	***	***	***	***	***
	Share of quantity (percent)							
U.S. shipments: All import sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	Share of value (percent)							
U.S. shipments: All import sources								
Fully processed	***	***	***	***	***	***	***	***
Semiprocessed	***	***	***	***	***	***	***	***
All product types	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

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

Geographical markets

Table IV-4 presents information concerning U.S. imports by border of entry in 2019. Subject imports from China and Japan entered through borders of entry in the North[6] followed by borders of entry in the South[7] while subject imports from Germany and Sweden entered through borders of entry in the North followed by borders of entry in the East.[8] The vast majority of subject imports from Taiwan entered through borders of entry in the East followed by borders of entry in the North. Subject imports from Korea only entered through borders of entry in the South. Imports from nonsubject sources entered through borders of entry primarily in the East, followed by borders of entry in the North and borders of entry in the South. NOES did not enter through any border of entry in the West[9] in 2019.

[6] The "North" includes the following Customs entry districts: Chicago, Illinois; Cleveland, Ohio; Detroit, Michigan; Great Falls, Montana; Minneapolis, Minnesota; and St. Louis, Missouri.

[7] The "South" border of entry includes the following Customs entry districts: Dallas-Fort Worth, Texas; Houston-Galveston, Texas; Miami, Florida; New Orleans, Louisiana; and Tampa, Florida.

[8] The "East" includes the following Customs entry districts Baltimore, Maryland; Boston, Massachusetts; Charleston, South Carolina; New York, New York; Ogdensburg, New York; Philadelphia, Pennsylvania; Portland, Maine; San Juan, Puerto Rico; St. Albans, Vermont; and Virgin Islands.

[9] The "West" includes the following Customs entry districts: Columbia-Snake, Oregon; Honolulu, Hawaii; Los Angeles, California; Nogales, Arizona; San Diego, California; San Francisco, California; and Seattle, Washington.

Table IV-4
NOES: U.S. imports by border of entry, 2019

Item	Border of entry				
	East	North	South	West	All borders
	Quantity (short tons)				
U.S. imports from.--					
China	---	14	12	---	25
Germany	4	8	---	---	12
Japan	---	58	46	---	105
Korea	---	---	177	---	177
Sweden	45	139	---	---	184
Taiwan	1,221	8	---	---	1,228
Subject sources	1,269	227	235	---	1,731
Nonsubject sources	12,947	7,664	2,313	---	22,923
All import sources	14,216	7,891	2,548	---	24,655
	Share across (percent)				
U.S. imports from.--					
China	---	53.9	46.1	---	100.0
Germany	30.3	69.7	---	---	100.0
Japan	---	55.6	44.4	---	100.0
Korea	---	---	100.0	---	100.0
Sweden	24.3	75.7	---	---	100.0
Taiwan	99.4	0.6	---	---	100.0
Subject sources	73.3	13.1	13.6	---	100.0
Nonsubject sources	56.5	33.4	10.1	---	100.0
All import sources	57.7	32.0	10.3	---	100.0
	Share down (percent)				
U.S. imports from.--					
China	---	0.2	0.5	---	0.1
Germany	0.0	0.1	---	---	0.0
Japan	---	0.7	1.8	---	0.4
Korea	---	---	7.0	---	0.7
Sweden	0.3	1.8	---	---	0.7
Taiwan	8.6	0.1	---	---	5.0
Subject sources	8.9	2.9	9.2	---	7.0
Nonsubject sources	91.1	97.1	90.8	---	93.0
All import sources	100.0	100.0	100.0	---	100.0

Note: Shares and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent.

Source: Official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed August 9, 2020.

Presence in the market

Table IV-5 and figure IV-2, present monthly U.S. imports for China, Germany, Japan, Korea, Sweden, Taiwan, and nonsubject sources while figure IV-3 presents monthly U.S. imports from subject and nonsubject sources. Overall, total monthly imports, when present in the U.S. market, fell to their lowest level in June 2020, dipping below 1,000 short tons for only the third time since January 2014. Imports were not present in the market during July and August 2020.

U.S. imports from China were present in the market for 25 of 80 months between January 2014 and August 2020. U.S. imports from Germany were also present in the market for 25 of 80 months. U.S. imports from Japan were present in the market for 54 of 80 months. U.S. imports from Korea were present in the market for 31 of 80 months. U.S. imports from Sweden were present in the market for 78 out of 80 months. U.S. imports from Taiwan were present in the market for 48 of 80 months. U.S. imports from nonsubject sources were present in the market for 78 out of 80 months.

Table IV-5
NOES: U.S. imports by month historical, January 2014 through August 2020

U.S. imports	China	Germany	Japan	Korea	Sweden	Taiwan
	Quantity (short tons)					
2014: January	37	1,078	1,211	1,263	713	620
2014: February	1,629	803	1,295	64	372	1,712
2014: March	79	251	778	21	1,106	918
2014: April	3	137	516	27	703	4,997
2014: May	---	13	981	448	388	---
2014: June	---	---	188	---	2	444
2014: July	8	---	732	---	5	---
2014: August	---	---	532	---	39	---
2014: September	---	---	222	---	1,223	---
2014: October	433	22	954	18	6	502
2014: November	---	---	684	---	124	---
2014: December	---	---	478	---	19	284
2015: January	---	---	719	20	7	---
2015: February	---	---	543	167	10	171
2015: March	---	---	638	---	21	---
2015: April	---	20	751	101	26	402
2015: May	4	20	345	40	4	219
2015: June	---	---	236	201	18	341
2015: July	4	---	174	1,156	5	---
2015: August	---	---	43	1,087	39	269
2015: September	3	---	145	36	69	85
2015: October	---	---	10	327	20	522
2015: November	---	---	---	22	5	3
2015: December	---	142	1,563	7	5	106
2016: January	---	29	44	14	13	4
2016: February	---	36	311	185	11	112
2016: March	1	---	16	205	103	121
2016: April	---	---	8	53	25	263
2016: May	---	58	---	133	6	257
2016: June	---	---	9	---	107	275
2016: July	---	---	68	---	127	395
2016: August	3	---	109	---	14	342
2016: September	---	40	69	---	8	521
2016: October	---	---	128	12	5	---
2016: November	---	18	18	74	109	300
2016: December	---	---	20	206	233	571

Table continued on next page.

Table IV-5—Continued
NOES: U.S. imports by month historical, January 2014 through August 2020

U.S. imports	China	Germany	Japan	Korea	Sweden	Taiwan
	Quantity (short tons)					
2017: January	---	---	11	---	36	---
2017: February	---	---	42	---	12	1,012
2017: March	---	---	---	---	74	130
2017: April	---	---	---	---	13	138
2017: May	2	1	70	---	12	---
2017: June	9	---	72	---	10	748
2017: July	---	---	65	---	85	100
2017: August	---	---	---	222	29	417
2017: September	---	---	33	---	16	211
2017: October	---	---	40	41	7	2
2017: November	---	11	19	---	22	2
2017: December	5	---	46	---	6	---
2018: January	53	---	21	---	17	3
2018: February	8	---	6	---	3	104
2018: March	---	---	---	---	21	---
2018: April	---	---	---	---	2	---
2018: May	2	---	---	---	25	216
2018: June	---	---	---	---	1	---
2018: July	2	4	23	---	5	247
2018: August	2	2	---	---	15	---
2018: September	7	---	0	---	9	---
2018: October	---	---	---	---	8	---
2018: November	---	5	---	---	7	---
2018: December	4	3	---	---	390	3
2019: January	---	6	---	85	27	---
2019: February	---	---	58	92	8	---
2019: March	---	---	26	---	18	---
2019: April	---	5	---	---	15	---
2019: May	---	---	3	---	11	---
2019: June	---	---	---	---	13	578
2019: July	14	---	---	---	71	301
2019: August	3	---	17	---	2	---
2019: September	---	1	---	---	7	6
2019: October	8	---	---	---	5	---
2019: November	---	---	---	---	4	343
2019: December	---	---	---	---	4	---
2020: January	---	1	14	40	32	374
2020: February	---	3	---	---	6	---
2020: March	---	---	---	1	18	6
2020: April	48	---	15	---	4	---
2020: May	---	---	1	---	2	2
2020: June	---	---	---	---	6	---
2020: July	---	---	---	---	---	---
2020: August	---	---	---	---	---	---

Table continued on next page.

Table IV-5—Continued
NOES: U.S. imports by month historical, January 2014 through August 2020

U.S. imports	Subject sources	Nonsubject sources	All import sources
	Quantity (short tons)		
2014: January	4,922	775	5,697
2014: February	5,874	18	5,892
2014: March	3,154	714	3,868
2014: April	6,382	95	6,477
2014: May	1,830	3,442	5,272
2014: June	634	2,755	3,388
2014: July	745	4,173	4,918
2014: August	571	2,520	3,092
2014: September	1,445	1,806	3,252
2014: October	1,935	1,159	3,094
2014: November	808	2,012	2,821
2014: December	781	5,187	5,968
2015: January	746	2,170	2,916
2015: February	890	581	1,472
2015: March	658	4,625	5,283
2015: April	1,298	1,114	2,412
2015: May	631	6,675	7,307
2015: June	795	4,382	5,177
2015: July	1,338	3,556	4,895
2015: August	1,438	2,392	3,830
2015: September	338	2,123	2,461
2015: October	879	1,696	2,575
2015: November	31	3,218	3,249
2015: December	1,822	2,563	4,385
2016: January	103	2,514	2,617
2016: February	654	848	1,502
2016: March	446	2,203	2,649
2016: April	349	1,200	1,549
2016: May	455	1,467	1,922
2016: June	390	3,588	3,978
2016: July	589	805	1,395
2016: August	468	1,640	2,108
2016: September	637	1,453	2,090
2016: October	146	1,285	1,430
2016: November	520	2,978	3,498
2016: December	1,030	2,787	3,816

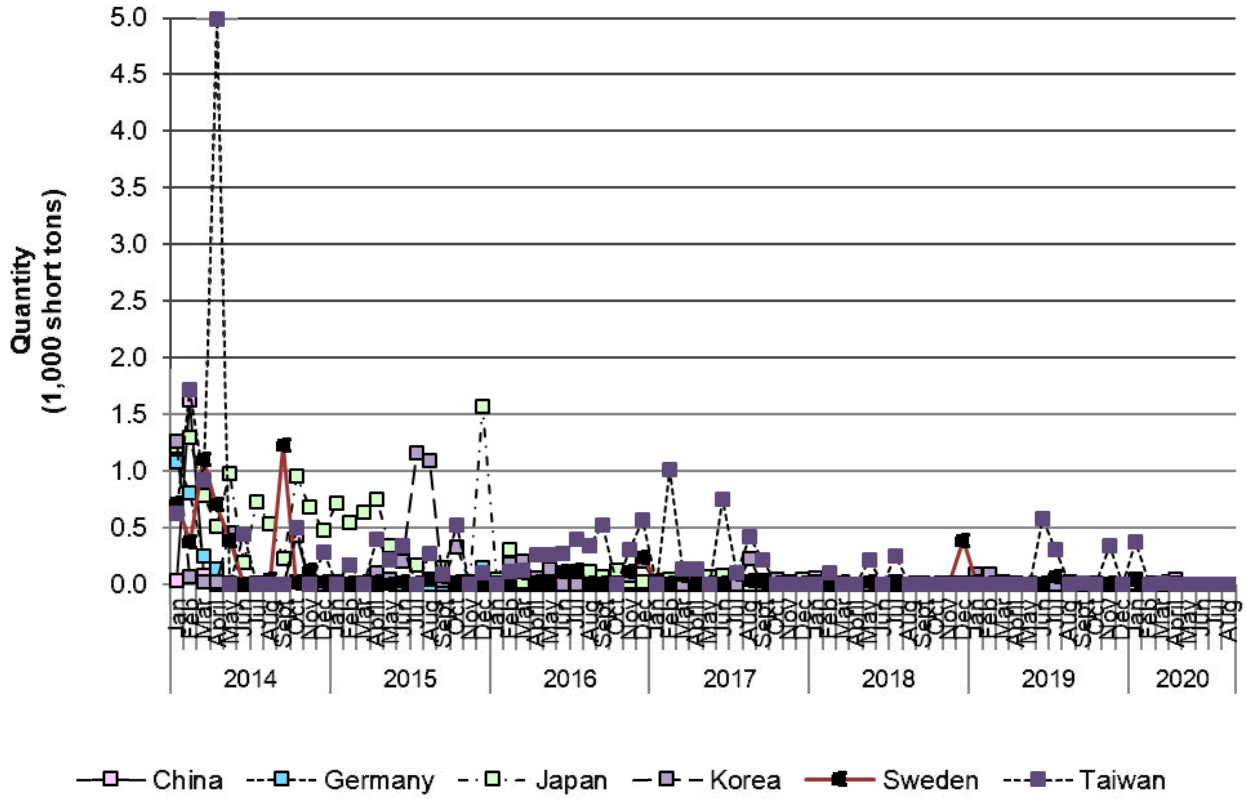
Table continued on next page.

Table IV-5—Continued
NOES: U.S. imports by month historical, January 2014 through August 2020

U.S. imports	Subject sources	Nonsubject sources	All import sources
	Quantity (short tons)		
2017: January	46	2,366	2,413
2017: February	1,066	647	1,713
2017: March	204	1,883	2,087
2017: April	151	3,796	3,948
2017: May	85	1,794	1,879
2017: June	840	522	1,362
2017: July	251	3,704	3,954
2017: August	669	1,826	2,495
2017: September	261	1,948	2,208
2017: October	89	4,254	4,343
2017: November	54	4,645	4,699
2017: December	57	1,498	1,555
2018: January	93	1,034	1,127
2018: February	120	1,871	1,991
2018: March	21	1,912	1,933
2018: April	2	3,308	3,310
2018: May	243	3,460	3,702
2018: June	1	1,855	1,856
2018: July	280	2,265	2,546
2018: August	20	2,998	3,017
2018: September	16	2,408	2,424
2018: October	8	783	791
2018: November	12	1,725	1,737
2018: December	400	1,459	1,859
2019: January	118	1,080	1,199
2019: February	159	1,127	1,285
2019: March	44	1,132	1,176
2019: April	20	4,117	4,136
2019: May	14	2,403	2,416
2019: June	591	2,414	3,005
2019: July	385	2,125	2,510
2019: August	22	2,507	2,530
2019: September	14	2,485	2,500
2019: October	13	1,671	1,684
2019: November	347	582	929
2019: December	4	1,282	1,285
2020: January	461	1,265	1,727
2020: February	8	1,484	1,493
2020: March	25	1,807	1,832
2020: April	67	1,495	1,563
2020: May	4	1,661	1,665
2020: June	6	725	731
2020: July	---	---	---
2020: August	---	---	---

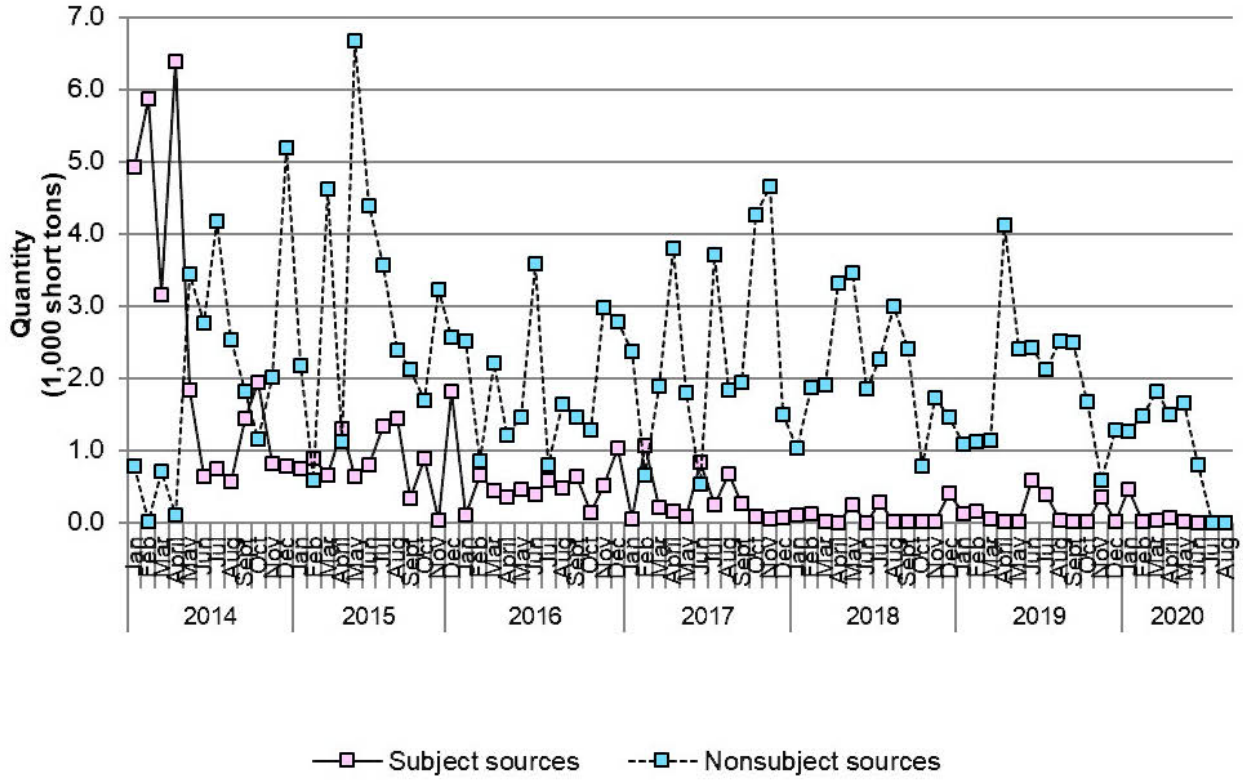
Source: Official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed October 20, 2020.

Figure IV-2
NOES: U.S. imports from individual subject sources, by month, January 2014 through August 2020



Source: Official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed October 20, 2020.

Figure IV-3
NOES: U.S. imports from aggregated subject and nonsubject sources, by month, January 2014 through August 2020



Source: Official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed October 20, 2020.

U.S. importers' imports subsequent to June 30, 2020

The Commission requested importers to indicate whether they had imported or arranged for the importation of NOES from China, Germany, Japan, Korea, Sweden, and Taiwan, as well as all other sources for delivery after June 30, 2020. Table IV-6 presents information on U.S. importers' arranged imports of NOES from all sources after June 30, 2020. Only three firms (***) reported arranged imports, all from nonsubject sources.

Table IV-6
NOES: U.S. importers' arranged imports

	Period				
Arranged U.S. imports from	**Jul-Sep 2020**	**Oct-Dec 2020**	**Jan-Mar 2021**	**Apr-Jun 2021**	**Total**
China	***	***	***	***	***
Germany	***	***	***	***	***
Japan	***	***	***	***	***
Korea	***	***	***	***	***
Sweden	***	***	***	***	***
Taiwan	***	***	***	***	***
Subject sources	***	***	***	***	***
Nonsubject sources	***	***	***	***	***
All import sources	***	***	***	***	***

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

U.S. importers' inventories

Table IV-7 presents data for inventories of U.S. imports of NOES from China, Germany, Japan, Korea, Sweden, Taiwan, and all other sources held in the United States. U.S. importers' end-of-period inventories from combined subject countries increased by *** percent from 2014 to 2015 then decreased by *** percent from 2015 to 2019. The increase in end-of-period inventories from subject countries in 2015 was largely due to end-of-period inventories from *** which accounted for *** percent and *** percent of combined subject import inventories. End-of-period inventories from subject countries were the same in interim 2020 compared to interim 2019. End-of-period inventories from subject countries as a ratio to U.S. imports, U.S. shipments, and total shipments increased by *** percentage points, by *** percentage points and by *** percentage points, respectively, from 2014 to 2015. Then from 2015 to 2019, end-of-period inventories from subject countries as a ratio to U.S. imports, U.S. shipments, and total shipments decreased by *** percentage points, by *** percentage points and by *** percentage points, respectively. The increase in end-of-period inventories from subject countries as a ratio U.S. imports, U.S. shipments, and total shipments in 2015 was driven by ***.[10]

U.S. importers' end-of-period inventories from nonsubject countries increased by *** percent from 2014 to 2017 then decreased by *** percent from 2017 to 2019. End-of-period inventories from nonsubject sources were *** percent higher in interim 2020 compared to interim 2019. End-of-period inventories from nonsubject countries as a ratio to U.S. imports, U.S. shipments, and total shipments fluctuated during 2014-19 but remained below *** percent. End-of-period inventories from nonsubject countries as a ratio to U.S. imports, U.S. shipments, and total shipments were all higher in interim 2020 compared to interim 2019.

[10] *** U.S. importer questionnaire, sections II-5a and II-10a.

Table IV-7
NOES: U.S. importers' end-of-period inventories of imports by source, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Inventories (short tons); Ratios (percent)							
Imports from China: Inventories	***	***	***	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***	***	***	***
Imports from Germany: Inventories	***	***	***	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***	***	***	***
Imports from Japan: Inventories	***	***	***	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***	***	***	***
Imports from Korea: Inventories	***	***	***	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***	***	***	***

Table continued on next page.

Table IV-7—Continued
NOES: U.S. importers' end-of-period inventories of imports by source, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Inventories (short tons); Ratios (percent)							
Imports from Sweden: Inventories	***	***	***	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***	***	***	***
Imports from Taiwan: Inventories	***	***	***	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***	***	***	***
Imports from subject sources: Inventories	***	***	***	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***	***	***	***
Imports from nonsubject sources: Inventories	***	***	***	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***	***	***	***
Imports from all import sources: Inventories	***	***	***	***	***	***	***	***
Ratio to U.S. imports	***	***	***	***	***	***	***	***
Ratio to U.S. shipments of imports	***	***	***	***	***	***	***	***
Ratio to total shipments of imports	***	***	***	***	***	***	***	***

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

Subject country producers

The industry in China

Overview

During the final phase of the original investigations, the Commission received foreign producer/exporter questionnaires from two firms (***) in China, whose exports to the United States accounted for approximately *** percent of total U.S. imports of NOES from China during
2011-13.[11]

Although the Commission did not receive a response to its notice of institution from any Chinese respondent interested party in these first five-year reviews, the domestic interested party provided a list of 25 possible producers of NOES in China in its response.[12] During the course of these reviews the Commission issued foreign producer/exporter questionnaires to 25 firms believed to produce and/or export NOES from China.[13] None of these firms provided a response.

Baosteel is a producer of NOES and other electrical steel products in China. The company sells NOES in a variety of grades and specifications for end use applications such as motors for electric vehicles.[14] In September 2019, Baosteel announced that it would build a production line and supporting facilities for high-grade NOES in Shanghai for $337.3 million. The facility will supply NOES to China's growing new energy vehicle (NEV) manufacturing industry (e.g. electric vehicles) and other emerging industries that use high-grade steel. In 2019, Baosteel had an annual production capacity of 2.8 million metric tons (3.1 million short tons) of NOES, including 400,000 metric tons (440,925 short tons) of high-grade NOES.[15]

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[11] Original confidential report, p. VII-3.

[12] AK Steel, Response to Notice of Institution, exh. 18.

[13] These firms were identified through a review of information submitted in the response to the notice of institution and contained in customs proprietary records.

[14] Baosteel Co., Ltd., "Electric Steel Sheet," http://esales.baosteel.com/baosteel_online/en/product/dgg_2.jsp, retrieved September 4, 2020.

[15] Tang Shihua, "Baosteel to Build USD 337.3 Million Non-Oriented Silicon Steel Plant in Shanghai," Yicai Global, September 10, 2019, https://www.yicaiglobal.com/news/baosteel-to-build-usd3373-million-non-oriented-silicon-steel-plant-in-shanghai.

Table IV-8 presents events of the industry in China since the original investigations.

Table IV-8
NOES: Recent developments in the industry in China

Item	Firm	Event
Resumed production	Baosteel	July 2017—Two NOES production lines previously moved from Baosteel's Shanghai facility to its Zhanjian facility a year ago were schedule to commence production. The other three NOES production lines remaining at the Shanghai facility continued in regular production.
Expansion	Baosteel	September 2019—Baosteel announced an investment of $337.3 million to construct a new 300,000 metric tons (330,693 short tons) per year production line for high-grade NOES to replace an existing low- and medium-grade NOES line at its production facility in Shanghai. Trial production is anticipated to commence by late-2021 and to be completed by June 2023. Baosteel currently has the capacity to produce 2.8 million metric tons (3.1 short tons) of NOES annually, including 400,000 metric tons (440,925 short tons) of high-grade products.
Acquisition	Baosteel and Wuhan	December 2016—Completion of the merger between Baosteel and financially distressed Wuhan, both of which produce NOES, created China's largest steelmaker, the new China Baowu Steel Group ("Baowu"). With combined annual crude-steel production capacity estimated at about 60 million metric tons (66 million short tons), Baowu became the world's second-largest steelmaker.
Acquisition	Baowu and Maanshan	June 2019—Baowu acquired a controlling share of Maanshan, another producer of NOES. Absorbing Maanshan increased Baowu's annual crude-steel production capacity from about 70 million metric tons (77 million short tons) to about 90 million metric tons (99 million short tons).
Acquisition	Baowu and Chongqing	December 2019—Chongqing announced an agreement for Baowu to purchase a controlling share of its firm that produces NOES with completion of this transaction anticipated by June 2020. Absorbing Chongqing brings Baowu closer to its goal (published back in November 2017) of expanding its annual crude-steel production capacity to 100 million metric tons (110 million short tons) by 2021.
New products	Angang	December 2018—Angang reported successful trial production of a new self-adhesive coated electrical steel product with high insulation strength, good corrosion resistance, good punching characteristics, and high bonding strength.
New products	Shagang	August 2016—Shagang became the first foreign-based firm that Castrip LLC granted a license for its ultra-thin strip direct-casting technology. Commissioning of Shagang's new Castrip facility was scheduled for the fourth quarter of 2017. April 2019—Shagang launched China's first Castrip ultra-thin strip line, which the firm plans to utilize for producing of high-quality magnetic steels for powering electric vehicles.

Sources continued on next page.

Table IV-8—Continued
NOES: Recent developments in the industry in China

Source: Asian Metal, “Baosteel Raises High-grade NGO Electrical Steel Prices for July Production,” June 14, 2017, http://www.asianmetal.com/news/data/1357727/; AK Steel, Response to Notice of Institution, p. 19; exh. 8:, Shihua Tang, “Baosteel to Build USD337.3 Million Non-Oriented Silicon Steel Plant in Shanghai,” Yicai Global, September 10, 2019; exh. 9: Tian Zhang, “China’s Baosteel to Invest 2.4 Bln Yuan to Build High-Grade Steel Plant,” Shanxi Fenwei Energy Information Services Co. Ltd., September 11, 2019; Tang, Shihua, “Baosteel to Build USD337.3 Million Non-Oriented Silicon Steel Plant in Shanghai,” Yicai Global, September 10, 2019, https://www.yicaiglobal.com/news/baosteel-to-build-usd3373-million-non-oriented-silicon-steel-plant-in-shanghai; Lin, David, and David Stanway, “China Completes Merger That Creates Nation’s Biggest Steel Company,” Reuters, December 1, 2016, https://www.reuters.com/article/us-china-steel-m-a-idUSKBN13Q3B0; Wu, Yiyao and Ziman Yang, “Big Merger Forms No 2 Steel Giant,” *China Daily*, December 2, 2016, https://usa.chinadaily.com.cn/business/2016-12/02/content_27545506.htm; Economist, “A Chinese Steel Merger, Wedding Bells,” September 22, 2016, https://www.economist.com/business/2016/09/22/welding-bells; AIST, “Chinese Steelmaker Could Become the World’s Largest Producer,” Steel News, January 6, 2020, https://www.aist.org/news/steel-news/2020/january/6-10-january-2020/chinese-steelmaker-could-become-the-world’s-larges;; ***; Wang, Ying, “Baowu Steel Set to Buy Majority Stake in Peer,” China Daily, December 31, 2019, https://www.chinadaily.com.cn/a/201912/31/WS5e0a9e03a310cf3e355819bb.html; Galaxy Steel, “Angang Steel Successfully Produce of a Special Coating Electrical Steel,” December 27, 2018, http://www.galaxy-steel.com/news/angang-steel-successfully-produce-of-a-special-19911085.html; AIST, “Chinese Steelmaker Acquires Castrip License,” Steel News, August 8, 2016, https://www.aist.org/news/steel-news/2016/1-5-august-2016/8-12-august-2016/chinese-steelmaker-acquires-castrip-license; XinhuaNet.com, “China’s Leading Steelmaker Shagang Enlists “Ultra” Production Line,” April 2, 2019, http://www.xinhuanet.com/english/2019-04/02/c_137943870.htm.

Exports

Data on China's exports of flat-rolled, silicon-electrical steel, other than grain oriented are presented in table IV-9. According to GTA, the leading export markets for flat-rolled, silicon-electrical steel, other than grain oriented from China are Mexico, Korea, Italy, and Vietnam. During 2019, Mexico accounted for 19.2 percent of China's total exports. Korea, Italy, and Vietnam accounted for 15.0 percent, 12.6 percent, and 10.4 percent of China's total exports, respectively. Overall, during 2014-19, exports from China of flat-rolled, silicon-electrical steel, other than grain oriented to Mexico increased in terms of quantity and value by 45.1 percent and by 26.0 percent, respectively.

Table IV-9
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from China by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	2,446	3,818	2,072	1,942	2,664	1,207
Mexico	45,413	46,772	33,074	59,890	87,724	65,896
Korea	51,247	47,455	54,915	52,725	55,476	51,522
Italy	58,529	52,640	57,625	73,816	82,927	43,256
Vietnam	9,723	27,577	14,328	14,741	22,132	35,769
India	16,271	22,534	34,439	31,397	25,613	33,393
Thailand	11,987	12,335	17,760	15,959	21,107	22,595
Bangladesh	8,968	9,837	8,372	6,952	11,762	16,118
Malaysia	13,543	17,511	13,504	15,057	20,282	15,991
All other destination markets	56,691	60,772	60,048	58,238	87,695	57,139
Total exports	274,816	301,252	296,137	330,717	417,381	342,886
	Value (1,000 dollars)					
United States	1,679	2,326	1,285	1,916	3,472	1,110
Mexico	34,053	28,124	17,772	40,560	61,047	42,893
Korea	35,177	25,707	27,433	37,557	42,429	35,668
Italy	35,716	24,301	24,518	48,004	56,415	25,660
Vietnam	7,220	15,011	6,818	9,582	16,081	28,600
India	11,371	11,554	16,314	21,667	28,135	31,565
Thailand	8,716	6,421	7,501	9,408	13,940	13,570
Bangladesh	5,780	5,247	3,940	4,223	7,961	10,552
Malaysia	8,769	8,941	6,409	10,706	15,323	10,993
All other destination markets	42,228	35,199	29,316	38,601	61,848	37,493
Total exports	190,710	162,832	141,305	222,225	306,652	238,104

Table continued on next page.

Table IV-9—Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from China by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	687	609	620	986	1,303	920
Mexico	750	601	537	677	696	651
Korea	686	542	500	712	765	692
Italy	610	462	425	650	680	593
Vietnam	743	544	476	650	727	800
India	699	513	474	690	1,098	945
Thailand	727	521	422	590	660	601
Bangladesh	644	533	471	607	677	655
Malaysia	648	511	475	711	756	687
All other destination markets	745	579	488	663	705	656
Total exports	694	541	477	672	735	694
	Share of quantity (percent)					
United States	0.9	1.3	0.7	0.6	0.6	0.4
Mexico	16.5	15.5	11.2	18.1	21.0	19.2
Korea	18.6	15.8	18.5	15.9	13.3	15.0
Italy	21.3	17.5	19.5	22.3	19.9	12.6
Vietnam	3.5	9.2	4.8	4.5	5.3	10.4
India	5.9	7.5	11.6	9.5	6.1	9.7
Thailand	4.4	4.1	6.0	4.8	5.1	6.6
Bangladesh	3.3	3.3	2.8	2.1	2.8	4.7
Malaysia	4.9	5.8	4.6	4.6	4.9	4.7
All other destination markets	20.6	20.2	20.3	17.6	21.0	16.7
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 7225.19 and 7226.19 as reported by China Customs in the Global Trade Atlas database, accessed August 9, 2020.

The industry in Germany

Overview

During the final phase of the original investigations, the Commission received foreign producer/exporter questionnaires from three[16] firms in Germany, whose exports to the United States accounted for approximately *** percent of total U.S. imports of NOES from Germany during 2011-13.[17]

ArcelorMittal Germany is a producer of NOES with a production facility located in Eisenhüttenstadt, Germany.[18] Eisenhüttenstadt is a fully integrated facility that operates in a closed supply chain.[19] One of the firm's principal customers is Miele, a global manufacturer of household appliances. Arcelor's NOES products are used in electric motor applications for Miele's products. ArcelorMittal also supplies Miele with NOES products from its facility in St-Chély d'Apcher, France.[20]

CDW is a producer of NOES in Germany. CDW supplies NOES strip compliant with EN 10303 for electric motor applications to a minimum nominal thickness of 0.1mm (0.004 inches). Delivery types for CDW's NOES products include coils and cut-to-length sheets, among others.[21]

During the course of these reviews the Commission issued foreign producer/exporter questionnaires to three firms believed to produce and/or export NOES from Germany.[22] Of these three firms, Thyssenkrupp[23] provided a response to the Commission's questionnaire. Thyssenkrupp estimates that it accounted for *** percent of German production of NOES in

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[16] During 2013, ***. Original confidential report, p. VII-6.

[17] Original confidential report, p. VII-6.

[18] ArcelorMittal, "ArcelorMittal electrical steels power the motors in Miele appliances," https://industry.arcelormittal.com/marketsegments/appliances/applianceprojectgallery/mielemotors, retrieved October 20, 2020.

[19] ArcelorMittal, "ArcelorMittal Eisenhüttenstadt," https://germany.arcelormittal.com/Our-sites/ArcelorMittal-Europe-Flat-Products/broker.jsp?uMen=ad9700cd-a513-dd31-c8fb-939607d7b2f2, retrieved October 20, 2020.

[20] ArcelorMittal's St-Chély d'Apcher operations are addressed in "The Industry in France" section of this report. ArcelorMittal, "ArcelorMittal electrical steels power the motors in Miele appliances," https://industry.arcelormittal.com/marketsegments/appliances/applianceprojectgallery/mielemotors, retrieved October 20, 2020.

[21] Waelzholz, "NO Grades," https://www.waelzholz.com/en/steel-materials/electrical-steel-strip/no-grades.html, retrieved October 20, 2020.

[22] These firms were identified through a review of information submitted in the response to the notice of institution and contained in customs proprietary records.

[23] Thyssenkrupp is ***. Thyssenkrupp's foreign producer questionnaire response, section I-6.

2019. Table IV-10 presents information on the NOES operations of the Thyssenkrupp in Germany during 2019.

Table IV-10
NOES: Summary data on producer Thyssenkrupp in Germany, 2019

Firm	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)
Thyssenkrupp	***	***	***	***	***	***
Total	***	100.0	***	***	***	***

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

Changes in operations

As presented in table IV-11, Thyssenkrupp reported operational and organizational changes since January 1, 2014.

Table IV-11
NOES: Reported changes in operations by producer Thyssenkrupp in Germany

Item / Firm	Narrative
***:	
***	***
***:	
***	***
Other:	
***	***

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

Operations on NOES

Table IV-12 presents production, capacity, and capacity utilization data for Thyssenkrupp during 2014-19, January to June 2019, and January to June 2020. Overall, during 2014-19, capacity and production decreased by *** percent and by *** percent, respectively. Capacity and production were both lower in the 2020 interim period compared to the 2019 interim period by *** percent and by *** percent, respectively. Thyssenkrupp's end-of-period inventories fluctuated during 2014-18 then decreased in 2019. Overall, during 2014-19, Thyssenkrupp's inventories decreased by *** percent. In each year during 2014-18, Thyssenkrupp's capacity utilization remained above *** percent, but then in 2019, Thyssenkrupp's capacity utilization dropped to *** percent. Thyssenkrupp's capacity utilization was *** percentage points lower in interim 2020 compared to interim 2019. In 2019, about *** of Thyssenkrupp's shipments were to its home market while slightly less than *** of its shipments were to other countries in Europe. Thyssenkrupp shipped *** percent of shipments to Asia.

In its hearing testimony, Thyssenkrupp testified that it produces "every kind of NOES grade, fully finished grade and semi-processed grade".[24] Thyssenkrupp indicated that it is focused on ***.[25] Additionally, Thyssenkrupp reports, its German competitors, ***.[26]

[24] Hearing transcript, p. 174 (Schmidtz).
[25] Thyssenkrupp's posthearing brief, p. 5.
[26] Thyssenkrupp's posthearing brief, appendix to posthearing brief, p. 5.

Table IV-12
NOES: Data on German producer Thyssenkrupp, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
Capacity	***	***	***	***	***	***	***	***
Production	***	***	***	***	***	***	***	***
End-of-period inventories	***	***	***	***	***	***	***	***
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***
	Value (1,000 dollars)							
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***

Table continued on next page.

Table IV-12—Continued
NOES: Data on German producer Thyssenkrupp, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Unit value (dollars per short ton)							
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***
	Ratios and shares (percent)							
Capacity utilization	***	***	***	***	***	***	***	***
Inventories/production	***	***	***	***	***	***	***	***
Inventories/total shipments	***	***	***	***	***	***	***	***
Share of total shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Thyssenkrupp identifies its principal other export markets as *** Thyssenkrupp's foreign producer questionnaire, section II-11.

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

Alternative products

Thyssenkrupp *** report producing other products on the same machinery used to produce NOES during the period for which data were collected.

Exports

According to GTA, the leading export markets for flat-rolled, silicon-electrical steel, other than grain oriented from Germany are Italy, France, and Hungry (table IV-13). During 2019, the United States was not one of the top 8 export markets for flat-rolled, silicon-electrical steel, other than grain oriented from Germany, accounting for less than 0.05 percent. Italy was the largest destination, accounting for 41.3 percent, followed by France, accounting for 12.6 percent, and Hungry, accounting for 8.2 percent.

Table-IV-13
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Germany by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	1,783	193	---	3	13	6
Italy	124,572	131,868	140,136	126,939	99,991	92,114
France	28,853	30,017	28,519	26,156	23,591	27,980
Hungary	5,432	2,775	4,264	13,072	15,218	18,233
Switzerland	26,553	17,073	19,412	17,939	14,633	15,272
Spain	20,326	22,718	15,107	15,206	16,145	10,368
Czech Republic	7,252	5,968	4,219	3,596	8,740	10,265
Austria	6,952	8,072	6,982	6,834	7,377	8,979
Slovakia	5,839	6,853	9,421	6,916	6,228	8,301
All other destination markets	46,200	78,177	59,305	85,635	55,277	31,426
Total exports	273,762	303,714	287,364	302,296	247,213	222,945
	Value (1,000 dollars)					
United States	1,685	165	0	14	23	7
Italy	91,383	80,605	82,142	94,977	85,210	67,797
France	24,891	20,794	19,841	22,976	25,153	25,532
Hungary	5,242	2,407	3,140	11,293	15,582	17,261
Switzerland	26,553	13,562	15,372	18,656	18,150	18,359
Spain	17,200	15,612	10,002	12,744	15,230	8,832
Czech Republic	9,262	5,996	3,941	4,228	8,894	8,797
Austria	7,044	6,648	5,696	6,259	7,799	8,109
Slovakia	5,285	4,806	5,742	4,991	5,385	5,831
All other destination markets	41,611	51,937	44,705	65,987	50,316	27,943
Total exports	230,157	202,533	190,582	242,125	231,743	188,467

Table continued on next page.

Table-IV-13—Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Germany by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	945	856	---	4,435	1,850	1,095
Italy	734	611	586	748	852	736
France	863	693	696	878	1,066	913
Hungary	965	868	736	864	1,024	947
Switzerland	1,000	794	792	1,040	1,240	1,202
Spain	846	687	662	838	943	852
Czech Republic	1,277	1,005	934	1,176	1,018	857
Austria	1,013	824	816	916	1,057	903
Slovakia	905	701	610	722	865	702
All other destination markets	901	664	754	771	910	889
Total exports	841	667	663	801	937	845
	Share of quantity (percent)					
United States	0.7	0.1	---	0.0	0.0	0.0
Italy	45.5	43.4	48.8	42.0	40.4	41.3
France	10.5	9.9	9.9	8.7	9.5	12.6
Hungary	2.0	0.9	1.5	4.3	6.2	8.2
Switzerland	9.7	5.6	6.8	5.9	5.9	6.9
Spain	7.4	7.5	5.3	5.0	6.5	4.7
Czech Republic	2.6	2.0	1.5	1.2	3.5	4.6
Austria	2.5	2.7	2.4	2.3	3.0	4.0
Slovakia	2.1	2.3	3.3	2.3	2.5	3.7
All other destination markets	16.9	25.7	20.6	28.3	22.4	14.1
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Note: Shares and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent. United States is shown at the top, all remaining top export destinations shown in descending order of 2019 data.

Source: Official exports statistics under HS subheading 7225.19 and 7226.19.90 as reported by Eurostat in the Global Trade Atlas database, accessed August 9, 2020.

The industry in Japan

Overview

During the final phase of the original investigations, the Commission received foreign producer/exporter questionnaires from three[27] firms, whose exports to the United States accounted for approximately *** percent of total U.S. imports of NOES from Japan during 2011-13.[28] Although the Commission did not receive a response to its notice of institution from any Japanese respondent interested party in these first five-year reviews, the domestic interested party provided a list of five possible producers of NOES in Japan in its response.[29]

During the course of these reviews the Commission issued foreign producer/exporter questionnaires to five firms believed to produce and/or export NOES from Japan.[30] Of these firms JFE Steel Corporation ("JFE Steel") and Nippon Steel Corporation ("Nippon") provided responses to the Commission's questionnaire. JFE Steel and Nippon estimated that they accounted for *** percent of Japanese production of NOES in 2019. Table IV-14 presents information on the NOES operations of responding producers in Japan during 2019.

Table IV-14
NOES: Summary data on producers in Japan, 2019

Firm	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)
JFE Steel	***	***	***	***	***	***
Nippon	***	***	***	***	***	***
Total	***	100.0	***	***	***	***

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

[27] During 2013, ***. Original confidential report, p. VII-11.
[28] Original confidential report, p. VII-11.
[29] AK Steel, Response to Notice of Institution, exh. 18.
[30] These firms were identified through a review of information submitted in the response to the notice of institution and contained in customs proprietary records.

Changes in operations

As presented in table IV-15 *** reported an operational and organizational change since January 1, 2014.

Table IV-15
NOES: Reported changes in operations by firms in Japan

Item / Firm	Narrative
***:	
***	***

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

Operations on NOES

Table IV-16 presents production, capacity, and capacity utilization data for Japanese producers during 2014-19, January to June 2019 and January to June 2020. Overall, during 2014-19, capacity and production decreased by *** percent and by *** percent, respectively. Capacity was higher in the 2020 interim period compared to the 2019 interim period by *** percent, while production was lower in interim 2020 compared to interim 2019 by *** percent. End-of-period inventories fluctuated slightly during 2014-19 but were about the same in 2014 and 2019. End-of-period inventories were *** short tons fewer in the 2020 interim period compared to the 2019 interim period. During 2014-19, Japanese producers' capacity utilization fluctuated between *** percent and *** percent. Capacity utilization was *** percentage points lower in interim 2020 compared to interim 2019. In 2019, about *** of shipments were to the home market while *** percent of shipments were to Asia, and *** percent were to other markets.

Table IV-16
NOES: Data on industry in Japan, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
Capacity	***	***	***	***	***	***	***	***
Production	***	***	***	***	***	***	***	***
End-of-period inventories	***	***	***	***	***	***	***	***
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***
	Value (1,000 dollars)							
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***

Table continued on next page.

Table IV-16—Continued
NOES: Data on industry in Japan, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Unit value (dollars per short ton)							
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***
	Ratios and shares (percent)							
Capacity utilization	***	***	***	***	***	***	***	***
Inventories/production	***	***	***	***	***	***	***	***
Inventories/total shipments	***	***	***	***	***	***	***	***
Share of total shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: JFE Steel and Nippon identify their principal other export markets as *** JFE Steel's and Nippon's foreign producer questionnaire, section II-11.

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

Alternative products

As shown in table IV-17, responding firms from Japan produced other products[31] on the same equipment and machinery used to produce NOES. Production of out-of-scope products was highest in 2014 at *** short tons and decreased by *** percent to *** short tons in 2019. Meanwhile, overall, production of NOES during 2014-19 decreased by *** percent. Overall, during 2014-19, overall capacity decreased by *** percent. From 2014 to 2019, in-scope NOES accounted for between *** percent and *** percent of overall production and *** percent to *** percent of capacity. Capacity utilization based on overall capacity and production was consistently lower than the capacity utilization rates calculated for NOES production.

[31] ***. *** foreign producer questionnaire responses, II-3a.

Table IV-17

NOES: Overall capacity and production on the same equipment as in-scope production for firms in Japan, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
Overall capacity	***	***	***	***	***	***	***	***
Production: NOES	***	***	***	***	***	***	***	***
Out-of-scope productions: GOES	***	***	***	***	***	***	***	***
Cold-rolled magnetic lamination steel	***	***	***	***	***	***	***	***
Other products	***	***	***	***	***	***	***	***
Total out-of-scope merchandise	***	***	***	***	***	***	***	***
Total production	***	***	***	***	***	***	***	***
	Ratios and shares (percent)							
Capacity utilization	***	***	***	***	***	***	***	***
Share of production: NOES	***	***	***	***	***	***	***	***
Out-of-scope productions: GOES	***	***	***	***	***	***	***	***
Cold-rolled magnetic lam	***	***	***	***	***	***	***	***
Other products	***	***	***	***	***	***	***	***
Total out-of-scope merchandise	***	***	***	***	***	***	***	***
Total production	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: ***. *** foreign questionnaire responses, section II-3a.

Exports

According to GTA, the leading export markets for flat-rolled, silicon-electrical steel, other than grain oriented from Japan are China, Thailand, and Mexico (table IV-18). During 2019, the United States was not one of the top 8 export markets for flat-rolled, silicon-electrical steel, other than grain oriented from Japan, accounting for less than 0.05 percent. China was the largest destination, accounting for 43.7 percent, followed by Thailand, accounting for 28.2 percent, and Mexico, accounting for 7.5 percent. Overall, during 2014-19 exports of flat-rolled, silicon-electrical steel, other than grain oriented from Japan decreased in terms of quantity and value by 40.4 percent and by 39.3 percent, respectively.

Table IV-18
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Japan by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	6,215	1,851	567	152	24	109
China	208,306	158,066	174,065	162,372	158,401	122,150
Thailand	98,494	83,185	74,692	78,487	94,819	78,639
Mexico	24,205	19,951	13,057	14,840	23,719	20,946
Malaysia	37,941	38,225	36,550	36,001	25,452	17,557
Indonesia	11,306	11,972	8,774	7,796	10,170	8,903
Vietnam	21,217	20,640	15,291	11,682	8,880	7,242
Korea	10,334	10,757	5,464	8,081	7,554	7,096
Taiwan	15,802	9,132	12,073	19,101	22,210	6,406
All other destination markets	34,826	36,021	29,797	25,674	17,578	10,248
Total exports	468,646	389,799	370,330	364,185	368,808	279,295
	Value (1,000 dollars)					
United States	6,977	2,342	667	266	28	177
China	189,437	135,585	132,549	140,595	143,942	110,659
Thailand	81,065	67,840	56,945	64,357	86,083	70,654
Mexico	22,661	18,526	11,707	14,277	25,983	22,394
Malaysia	27,109	28,184	24,780	27,819	25,178	14,026
Indonesia	10,141	8,948	5,420	5,783	8,205	7,250
Vietnam	16,153	15,150	9,520	8,433	7,335	5,190
Korea	8,116	7,512	2,956	4,380	4,465	4,145
Taiwan	13,650	7,073	7,998	14,986	22,765	5,263
All other destination markets	37,563	32,539	24,798	23,391	19,099	10,914
Total exports	412,873	323,699	277,339	304,286	343,083	250,673

Table continued on next page.

Table IV-18—Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Japan by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	1,123	1,265	1,175	1,746	1,163	1,635
China	909	858	761	866	909	906
Thailand	823	816	762	820	908	898
Mexico	936	929	897	962	1,095	1,069
Malaysia	715	737	678	773	989	799
Indonesia	897	747	618	742	807	814
Vietnam	761	734	623	722	826	717
Korea	785	698	541	542	591	584
Taiwan	864	775	663	785	1,025	822
All other destination markets	1,079	903	832	911	1,087	1,065
Total exports	881	830	749	836	930	898
	Share of quantity (percent)					
United States	1.3	0.5	0.2	0.0	0.0	0.0
China	44.4	40.6	47.0	44.6	42.9	43.7
Thailand	21.0	21.3	20.2	21.6	25.7	28.2
Mexico	5.2	5.1	3.5	4.1	6.4	7.5
Malaysia	8.1	9.8	9.9	9.9	6.9	6.3
Indonesia	2.4	3.1	2.4	2.1	2.8	3.2
Vietnam	4.5	5.3	4.1	3.2	2.4	2.6
Korea	2.2	2.8	1.5	2.2	2.0	2.5
Taiwan	3.4	2.3	3.3	5.2	6.0	2.3
All other destination markets	7.4	9.2	8.0	7.0	4.8	3.7
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Note: Shares and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent. United States is shown at the top, all remaining top export destinations shown in descending order of 2019 data.

Source: Official exports statistics under HS subheading 7225.19, and 7226.19 as reported by Japan Ministry of Finance in the Global Trade Atlas database, accessed August 9, 2020.

The industry in Korea

Overview

During the final phase of the original investigations, the Commission received a foreign producer questionnaire from POSCO, the sole producer of NOES in Korea at that time.[32]

Although the Commission did not receive a response to its notice of institution from any Korean respondent interested party in these first five-year reviews, the domestic interested party provided a list of three possible producers of NOES in Korea in its response.[33] During the course of these reviews, the Commission issued foreign producer/exporter questionnaires to three firms believed to produce and/or export NOES from Korea.[34] None of these firms provided a response.

POSCO is a Korean producer of NOES and other electrical steel products. The company produces approximately 1 million metric tons (1.1 million short tons) of flat-rolled electrical steel products every year. Major end use applications for NOES products include large scale power generators, small precision motors, and cores of small and large rotators. POSCO's NOES products also meet a variety of international standard specifications, including ASTM 36F145, 47F165, and 64F200.[35]

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[32] Original publication, p. VII-7.

[33] AK Steel, Response to Notice of Institution, exh. 18.

[34] These firms were identified through a review of information submitted in the response to the notice of institution and contained in customs proprietary records.

[35] POSCO Products, "Electrical Steel," http://product.posco.com/homepage/product/eng/jsp/process/s91p2000710e.jsp, retrieved September 4, 2020.

Exports

Data on Korea's exports of flat-rolled, silicon-electrical steel, other than grain oriented are presented in table IV-19. According to GTA, the leading export markets for flat-rolled, silicon-electrical steel, other than grain oriented from Korea are India, China, Mexico, and Italy. During 2019, India accounted for 44.8 percent of Korea's total exports. China, Mexico, and Italy accounted for 10.6 percent, 10.1 percent, and 7.5 percent of Korea's total exports, respectively. Overall, during 2014-19, Korean exports of flat-rolled, silicon-electrical steel, other than grain oriented to India increased in terms of quantity and value by 1360.7 percent and by 995.3 percent, respectively. Additionally, overall, during 2014-19, Korean exports of flat-rolled, silicon-electrical steel, other than grain oriented to Mexico increased in terms of quantity and value by 69.1 percent and by 61.6 percent, respectively.

Table IV-19
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Korea by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	15,986	15,880	10,245	7,011	2,224	3
India	15,682	31,967	182,282	199,715	214,121	229,075
China	56,707	48,681	60,478	55,417	58,905	54,080
Mexico	30,398	36,441	26,126	29,825	43,842	51,412
Italy	72,806	66,418	59,671	51,938	44,723	38,454
Vietnam	18,080	16,003	18,177	19,400	27,411	31,239
Turkey	20,341	26,655	24,607	18,878	42,792	30,290
Japan	18,620	21,392	18,667	27,410	30,253	13,467
Slovenia	22,005	20,075	17,942	8,502	13,289	13,268
All other destination markets	134,628	126,878	92,483	59,145	65,415	49,864
Total exports	405,252	410,391	510,677	477,240	542,974	511,152
	Value (1,000 dollars)					
United States	12,640	11,378	6,055	5,266	1,832	5
India	12,162	13,252	76,557	112,830	134,749	133,206
China	37,046	26,815	30,823	38,221	40,079	36,312
Mexico	21,672	22,143	13,717	19,182	32,354	35,027
Italy	51,384	34,697	29,578	35,851	35,793	25,153
Vietnam	11,552	8,288	8,641	12,178	18,692	19,766
Turkey	13,155	14,030	10,963	11,527	29,642	18,424
Japan	12,813	12,213	10,964	17,733	20,287	9,848
Slovenia	16,085	11,125	9,544	6,230	10,788	8,666
All other destination markets	95,887	73,372	48,192	41,995	48,132	33,705
Total exports	284,395	227,313	245,033	301,014	372,349	320,111

Table continued on next page.

Table IV-19—Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Korea by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	791	717	591	751	824	1,625
India	776	415	420	565	629	581
China	653	551	510	690	680	671
Mexico	713	608	525	643	738	681
Italy	706	522	496	690	800	654
Vietnam	639	518	475	628	682	633
Turkey	647	526	446	611	693	608
Japan	688	571	587	647	671	731
Slovenia	731	554	532	733	812	653
All other destination markets	712	578	521	710	736	676
Total exports	702	554	480	631	686	626
	Share of quantity (percent)					
United States	3.9	3.9	2.0	1.5	0.4	0.0
India	3.9	7.8	35.7	41.8	39.4	44.8
China	14.0	11.9	11.8	11.6	10.8	10.6
Mexico	7.5	8.9	5.1	6.2	8.1	10.1
Italy	18.0	16.2	11.7	10.9	8.2	7.5
Vietnam	4.5	3.9	3.6	4.1	5.0	6.1
Turkey	5.0	6.5	4.8	4.0	7.9	5.9
Japan	4.6	5.2	3.7	5.7	5.6	2.6
Slovenia	5.4	4.9	3.5	1.8	2.4	2.6
All other destination markets	33.2	30.9	18.1	12.4	12.0	9.8
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Note: Shares and ratios shown as “0.0” represent values greater than zero, but less than “0.05” percent. United States is shown at the top, all remaining top export destinations shown in descending order of 2019 data.

Source: Official exports statistics under HS subheading 7225.19.00 and 7226.19 as reported by Korea Customs in the Global Trade Atlas database, accessed August 9, 2020.

The industry in Sweden

Overview

During the final phase of the original investigations, the Commission received a foreign producer questionnaire from Surahammars ("Surahammars Bruks AB"), the sole producer of NOES in Sweden at that time.[36]

Although the Commission did not receive a response to its notice of institution from any respondent interested party in Sweden during these first five-year reviews, the domestic interested party indicated in its response that Surahammars remains the only known producer of NOES in Sweden.[37] During the course of these reviews the Commission issued a foreign producer/exporter questionnaire to one firm believed to produce and/or export NOES from Sweden.[38] Surahammars provided a response to the Commission's questionnaire. Surahammars estimates that it accounts for *** Swedish production of NOES in 2019. Table IV-20 presents information on the NOES operations of Surahammars during 2019.

Table IV-20
NOES: Summary data on Swedish producer Surahammars, 2019

Firm	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)
Surahammars	***	***	***	***	***	***
Total	***	100.0	***	***	***	***

[36] Original publication, p. VII-8.
[37] AK Steel, Response to Notice of Institution, exh. 18.
[38] These firms were identified through a review of information submitted in the response to the notice of institution and contained in customs proprietary records.

Changes in Operations

Surahammar *** report any operational changes since January 1, 2014. Table IV-21 presents events of the industry in Sweden since the original investigations.

Table IV-21
NOES: Recent developments in the industry in Sweden

Item	Firm	Event
Expansion	Surahammars	January 2015—An environmental permit received early in the month allowed Surahammers to increase its production capacity of electrical steel sheet to 160,000 metric tons (176,370 short tons) per year.
Potential sale rescinded	Surahammers	September 2019—Tata Steel Europe announced its decision to retain ownership of Surahammers, rather than seeking potential buyers for this electrical steel producer and other non-core business units that supply products to niche markets, as it had announced in May 2018.

Source: AK Steel, Response to Notice of Institution, p. 23; exh. 13: Cogent Power Ltd., Surahammers Bruks AB, Annual Report, 2014/15, April 1, 2014 – March 31, 2015, no date, p. 4; Tata Steel Europe, "Tata Steel Europe Announces Outcome of Sales Process for Non-core Businesses," corporate news, September 2, 2019, https://www.tatasteeleurope.com/en_US/news/news/tata-steel-europe-announces-outcome-of-sales-process-for-non-core-businesses; "Tata Steel Europe Explores Potential Sale of Non-core Businesses," corporate news, May 8, 2019, https://www.tatasteeleurope.com/en/news/news/2018/tata-steel-europe-explores-potential-sale-of-non-core-businesses.

Operations on NOES

Table IV-22 presents production, capacity, and capacity utilization data for Surahammars during 2014-19, January to June 2019, and January to June 2020. Surahammars's capacity decreased by *** percent from 2014 to 2015 and then remained constant from 2015 to 2019. Overall, during 2014-19, production decreased by *** percent. Production was higher in the 2020 interim period compared to the 2019 interim period by *** percent while capacity remained constant during the interim periods. Surahammars's end-of-period inventories were highest in 2014 then fluctuated during 2015-19. Overall, during 2014-19, Surahammars's inventories decreased by *** percent. In each year during 2014-17, Surahammars's capacity utilization remained above *** percent, then in 2018, Surahammars's capacity dropped to *** percent and was *** percent in 2019. Surahammars's capacity utilization was *** percentage points higher in interim 2020 compared to interim 2019. In 2019, *** percent of Surahammars's shipments were to its home market, while *** percent of its shipments were to other countries in Europe, and *** percent of its shipments were to other markets.[39]

[39] Surahammars reported *** as its principal other export market. Surahammars's foreign producer questionnaire response, section II-11.

Table IV-22
NOES: Data on industry in Sweden, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
Capacity	***	***	***	***	***	***	***	***
Production	***	***	***	***	***	***	***	***
End-of-period inventories	***	***	***	***	***	***	***	***
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***
	Value (1,000 dollars)							
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***

Table continued on next page.

Table IV-22—Continued
NOES: Data on industry in Sweden, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Unit value (dollars per short ton)							
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	***	***	***	***	***	***	***	***
	Ratios and shares (percent)							
Capacity utilization	***	***	***	***	***	***	***	***
Inventories/production	***	***	***	***	***	***	***	***
Inventories/total shipments	***	***	***	***	***	***	***	***
Share of total shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

Alternative products

Surahammars *** report producing other products on the same machinery used to produce NOES during the period for which data were collected.

Exports

Data on Sweden's exports of flat-rolled, silicon-electrical steel, other than grain oriented are presented in table IV-23. According to GTA, the leading export markets for flat-rolled, silicon-electrical steel, other than grain oriented from Sweden are Estonia, Italy, and Poland. During 2019, Estonia, Italy, and Poland accounted for 19.1 percent, 18.0 percent, and 14.0 percent of Sweden's total exports, respectively.

Table IV-23
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Sweden by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	4,700	228	760	323	502	183
Estonia	3,436	3,818	7,443	11,931	5,549	3,486
Italy	1,140	753	335	475	685	3,288
Poland	4,974	4,933	5,867	4,438	4,525	2,566
Canada	957	1,289	1,292	1,359	1,097	1,498
Germany	1,956	1,885	988	1,149	1,541	1,320
South Africa	1,688	983	646	1,114	493	1,164
Czech Republic	1,596	1,720	1,724	1,289	1,483	1,155
India	1,991	1,757	2,048	1,211	1,221	654
All other destination markets	10,492	10,046	11,445	10,593	2,895	2,957
Total exports	32,930	27,412	32,548	33,882	19,991	18,273
	Value (1,000 dollars)					
United States	7,340	1,622	2,114	1,636	1,623	1,238
Estonia	3,330	3,527	2,717	5,131	3,578	2,473
Italy	1,038	734	534	562	1,089	4,848
Poland	4,949	3,868	4,365	3,699	4,023	2,257
Canada	1,536	1,841	1,798	2,172	1,523	2,087
Germany	2,292	1,631	905	1,172	1,800	1,392
South Africa	1,901	949	540	1,053	558	1,194
Czech Republic	1,622	1,311	1,427	1,400	2,018	1,447
India	2,512	2,065	2,091	1,231	1,435	799
All other destination markets	17,017	10,186	15,462	17,920	10,094	9,520
Total exports	43,538	27,735	31,952	35,976	27,739	27,255

Table continued on next page.

Table IV-23—Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Sweden by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	1,562	7,124	2,780	5,059	3,232	6,738
Estonia	969	924	365	430	645	709
Italy	910	975	1,592	1,183	1,589	1,474
Poland	995	784	744	833	889	879
Canada	1,605	1,428	1,392	1,598	1,388	1,394
Germany	1,172	866	916	1,020	1,168	1,054
South Africa	1,126	965	835	945	1,130	1,026
Czech Republic	1,017	762	828	1,086	1,361	1,252
India	1,262	1,175	1,021	1,016	1,176	1,222
All other destination markets	1,622	1,014	1,351	1,692	3,486	3,219
Total exports	1,322	1,012	982	1,062	1,388	1,492
	Share of quantity (percent)					
United States	14.3	0.8	2.3	1.0	2.5	1.0
Estonia	10.4	13.9	22.9	35.2	27.8	19.1
Italy	3.5	2.7	1.0	1.4	3.4	18.0
Poland	15.1	18.0	18.0	13.1	22.6	14.0
Canada	2.9	4.7	4.0	4.0	5.5	8.2
Germany	5.9	6.9	3.0	3.4	7.7	7.2
South Africa	5.1	3.6	2.0	3.3	2.5	6.4
Czech Republic	4.8	6.3	5.3	3.8	7.4	6.3
India	6.0	6.4	6.3	3.6	6.1	3.6
All other destination markets	31.9	36.6	35.2	31.3	14.5	16.2
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. United States is shown at the top, all remaining top export destinations shown in descending order of 2019 data.

Source: Official imports statistics of imports from Sweden (constructed export statistics for Sweden) under HS subheadings 7225.19 and 7226.19 as reported by various statistical reporting authorities in the Global Trade Atlas database, accessed October 28, 2020.

The industry in Taiwan

Overview

During the final phase of the original investigations, the Commission received a foreign producer/exporter questionnaire from China Steel, the sole producer of NOES in Taiwan at that time.[40]

Although the Commission did not receive a response to its notice of institution from any respondent interested party in Taiwan during these first five-year reviews, the domestic interested party provided a list of two possible producers of NOES in Taiwan in its response.[41] During the course of these reviews the Commission issued foreign producer/exporter questionnaires to two firms believed to produce and/or export NOES from Taiwan.[42] Neither of these firms provided a response.

China Steel Taiwan is a producer of NOES and other electrical steel products in Taiwan and has sales offices in Japan, Singapore, and India. The company has an annual production capacity of 1.8 million metric tons (2 million short tons) and sells NOES products that meet the following thickness and width specifications: thickness of 0.15 mm, 0.20 mm, 0.25 mm, 0.35 mm, 0.50 mm, and 0.65 mm (0.006 to 0.03 inches); a width range of 1,000 mm to 1,200 mm (39 to 47 inches).[43]

Table IV-24 presents events of the industry in Taiwan since the original investigations.

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[40] Original publication, p. VII-9.

[41] AK Steel, Response to Notice of Institution, exh. 18.

[42] These firms were identified through a review of information submitted in the response to the notice of institution and contained in customs proprietary records.

[43] China Steel, "Production," https://www.csc.com.tw/csc_e/pd/pd.html, retrieved September 4, 2020; China Steel, "Electrical Steel," https://www.csc.com.tw/csc_e/pd/doc/CSCI_ES_Catalog.pdf, retrieved September 4, 2020.

Table IV-24
NOES: Recent developments in the industry in Taiwan

Item	Firm	Event
Equipment upgrades	China Steel	April 2014—China Steel commissioned a newly installed 270-metric ton (298-short ton) twin-ladle furnace, along with the accompanying upgraded material-handling system, at its Kaohsiung integrated facility.
Equipment upgrades	China Steel	May 2014—Equipment upgrades were completed to the Hot Strip Mill No. 1 at China Steel's Kaohsiung integrated facility. Older DC-powered motors for the furnaces, roughing mill lines, and finishing mill lines were replaced with newer AC-powered and variable-frequency drives. Existing equipment controls were also upgraded with newer controllers.
Equipment upgrades	China Steel	February 2019—China Steel commenced production with an upgraded two-strand slab caster at its Kaohsiung integrated facility, designed for greater flexibility, improved product quality, and fewer potential molten-steel "breakouts."

Source: AIST, "Upgraded Slab Caster Enters Service at Taiwanese Plant," Steel News, February 19, 2019, https://www.aist.org/news/steel-news/2019/february/18-22-february-2019/upgraded-slab-caster-enters-service-at-taiwanese-p; AIST, "China Steel Commissions Twin-Ladle Furnace from SMS Mevac," *Steel News*, April 21, 2014, https://www.aist.org/news/steel-news/2014/april/china-steel-commissions-twin-ladle-furnace-from-sm; AIST, "TMEIC "TMEIC Completes Modernization of China Steel's Hot Strip Mill No. 1," Steel News, May 14, 2014, https://www.aist.org/news/steel-news/2014/may/tmeic-completes-modernization-of-china-steel%e2%80%99s-hot; CSC, "Product Introduction, Laminated Products," January 10, 2020, https://www.csc.com.tw/csc_e/pd/inta/inta.html#. See also the label for magnetic coil (non-oriented) in CSC, Product Manual, Electrical Steel, 2016, p. 13, https://www.csc.com.tw/csc/pd/doc/spec_es_e_2016.pdf.

Exports

Data on Taiwan's exports of flat-rolled, silicon-electrical steel, other than grain oriented are presented in table IV-25. According to GTA, the leading export markets for flat-rolled, silicon-electrical steel, other than grain oriented from Taiwan are China, India, Mexico, and Italy. During 2019, China accounted for 35.9 percent of Taiwan's total exports. India, Mexico, and Italy accounted for 15.0 percent, 11.1 percent, and 10.8 percent of Taiwan's total exports, respectively. Overall, during 2014-19, exports from Taiwan of flat-rolled, silicon-electrical steel, other than grain oriented to Mexico increased in terms of quantity and value by 64.1 percent and by 146.1 percent, respectively.

Table IV-25
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Taiwan by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	9,892	3,456	5,401	2,679	10,243	7,451
China	195,662	167,559	216,288	231,150	224,377	189,266
India	113,346	143,126	41,329	36,213	29,178	78,807
Mexico	35,492	39,208	29,188	45,360	49,328	58,245
Italy	44,673	45,744	54,042	45,038	27,608	57,019
Japan	21,439	20,849	19,378	28,334	36,384	34,432
Thailand	40,541	34,897	28,894	35,508	35,350	31,234
Vietnam	14,108	18,016	21,383	20,178	22,500	20,228
Indonesia	6,602	11,153	16,923	15,422	17,366	15,855
All other destination markets	87,419	52,272	36,283	51,405	38,220	33,973
Total exports	569,174	536,279	469,107	511,287	490,556	526,510
	Value (1,000 dollars)					
United States	7,566	2,451	3,032	2,290	12,978	8,542
China	127,473	91,079	105,957	161,997	155,335	117,565
India	71,237	67,381	19,123	21,433	20,166	40,532
Mexico	25,461	25,213	15,385	34,765	47,792	62,658
Italy	26,807	24,367	24,105	28,003	20,857	42,194
Japan	13,539	11,164	11,361	18,935	26,138	25,746
Thailand	26,091	20,165	14,360	22,182	25,734	22,478
Vietnam	10,394	11,591	10,394	12,666	15,403	12,900
Indonesia	5,028	6,926	9,068	10,143	12,813	11,267
All other destination markets	59,099	31,058	18,026	33,219	26,159	25,356
Total exports	372,693	291,396	230,810	345,632	363,374	369,235

Table continued on next page.

Table IV-25—Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Taiwan by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	765	709	561	855	1,267	1,146
China	651	544	490	701	692	621
India	628	471	463	592	691	514
Mexico	717	643	527	766	969	1,076
Italy	600	533	446	622	755	740
Japan	631	535	586	668	718	748
Thailand	644	578	497	625	728	720
Vietnam	737	643	486	628	685	638
Indonesia	762	621	536	658	738	711
All other destination markets	676	594	497	646	684	746
Total exports	655	543	492	676	741	701
	Share of quantity (percent)					
United States	1.7	0.6	1.2	0.5	2.1	1.4
China	34.4	31.2	46.1	45.2	45.7	35.9
India	19.9	26.7	8.8	7.1	5.9	15.0
Mexico	6.2	7.3	6.2	8.9	10.1	11.1
Italy	7.8	8.5	11.5	8.8	5.6	10.8
Japan	3.8	3.9	4.1	5.5	7.4	6.5
Thailand	7.1	6.5	6.2	6.9	7.2	5.9
Vietnam	2.5	3.4	4.6	3.9	4.6	3.8
Indonesia	1.2	2.1	3.6	3.0	3.5	3.0
All other destination markets	15.4	9.7	7.7	10.1	7.8	6.5
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Source: Official exports statistics under HS subheading 7225.19 and 7226.19 as reported by Taiwan Directorate General of Customs in the Global Trade Atlas database, accessed August 10, 2020.

Subject countries combined

Table IV-26 presents summary data on NOES operations of the reporting subject producers in the subject countries.

Table IV-26
NOES: Data on industry in subject sources, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
Capacity	1,116,676	1,033,495	1,021,081	1,033,593	995,867	936,238	454,906	455,526
Production	1,014,296	895,391	954,112	970,283	941,922	818,914	418,596	390,074
End-of-period inventories	***	***	***	***	***	***	***	***
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	998,877	899,987	957,080	957,661	938,117	860,220	429,429	404,909
	Value (1,000 dollars)							
Shipments: Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to: United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	916,504	704,395	727,282	756,568	769,574	814,382	400,979	375,318

Table continued on next page.

Table IV-26—Continued
NOES: Data on industry in subject sources, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Unit value (dollars per short ton)							
Shipments:								
Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to:								
United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	918	783	760	790	820	947	934	927
	Ratios and shares (percent)							
Capacity utilization	90.8	86.6	93.4	93.9	94.6	87.5	92.0	85.6
Inventories/production	***	***	***	***	***	***	***	***
Inventories/total shipments	***	***	***	***	***	***	***	***
Share of total shipments:								
Internal consumption/ transfers	***	***	***	***	***	***	***	***
Commercial home market shipments	***	***	***	***	***	***	***	***
Total home market shipments	***	***	***	***	***	***	***	***
Export shipments to:								
United States	***	***	***	***	***	***	***	***
European Union	***	***	***	***	***	***	***	***
Asia	***	***	***	***	***	***	***	***
All other markets	***	***	***	***	***	***	***	***
Exports to other than the US	***	***	***	***	***	***	***	***
Total exports	***	***	***	***	***	***	***	***
Total shipments	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

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

Third-country trade actions

Antidumping and countervailing duty orders imposed by third countries on imports of NOES from the subject sources, since the final investigations, are listed in table IV-27. Mexico currently does not have active antidumping or countervailing duty orders on imports of NOES.[44] In addition to the following antidumping orders, the European Union has active safeguard measures on imports of "electrical sheets, other than GOES", imported from Korea, China, Russia, Iran, and Brazil.[45]

Table IV-27
NOES: Antidumping or countervailing duty actions in third-country markets, 2014-19

Third country and subject product	Action and date	Subject sources	Order (rates)
Brazil: Non-oriented flat grain silicon steel ("GNO"). Common Nomenclature of Mercosur ("NCM") 7225.19.00 and NCM 7226.19.00.	Continued July 2019 for 1 year, which may be reapplied for a period totaling up to not more than five years (to July 2024).	China	Antidumping ($90.00-$166.32 per metric ton ($81.65-$150.88 per short ton))
		Korea	Antidumping ($132.50-$166.32 per metric ton ($120.20-$150.88 per short ton))
		Taiwan	Antidumping ($90.00-$166.32 per metric ton ($81.65-$150.88 short ton))
Brazil: Non-oriented flat grain silicon steel ("GNO"). NCM 7225.19.00 and NCM 7226.19.00.	Preliminary affirmative determination, October 2018	Germany	Antidumping (but no duties)
	Definitive orders imposed July 2019 for 5 years.		Antidumping ($166.32 per metric ton ($150.88 per short ton)

Source: Brazilian Ministry of Economy, Special Secretariat for Foreign Trade and International Affairs, "To Extend the Anti-dumping Duty on Brazilian Imports of GNO Steel from China, Korea, and Chinese Taipei for Up to Five Years and to Amend the Anti-dumping Duties on Imports of the Same Product and Origins," Ordinance No. 495, July 12, 2019, Official Diary of the Union, July 15, 2019, edn. 134, sec. 1, p. 45; Government of Brazil, "Semi-Annual Report Under Article 16.4 of the Agreement for the Period 1 January – 30 June 2019," World Trade Organization ("WTO"), Committee on Anti-Dumping Practices, G/ADP/N/323/BRA, October 29, 2019, p. 3; WTO, "Semi-Annual Report Under Article 16.4 of the Agreement, Brazil," October 29, 2019; WTO, "Definitive Anti-Dumping Measures in Force," semiannual reports of the tabulated third-counties; Global Trade Alert, "Brazil: Definitive Antidumping Duty on Imports of Non-oriented Electrical Steel from Germany," July 15, 2019.

[44] Mexico, "Semi-annual Report of Anti-dumping Actions for the period 1 January to 30 June 2020," G/ADP/N/342/MEX, September 18, 2020.

[45] The EU applies a tariff rate quota to imports of "electrical sheets, other than GOES." Once a quota limit is reached, these imports face an additional duty rate of 25 percent. "European Union, "Committee on Safeguards - Notification under Article 12 of the Agreement on Safeguards - European Union - Certain steel products – Supplement," G/SG/N/10/EU/1/Suppl.7, June 2, 2020.

Global market

Data on global exports of flat-rolled, silicon-electrical steel, other than grain oriented, by exporter, are presented in table IV-28. According to GTA, Taiwan, Korea, China, and Japan were the leading exporters of flat-rolled, silicon-electrical steel, other than grain oriented. During 2019, Taiwan was the leading global exporter—accounting for 18.4 percent of global exports, by quantity. Korea, China, and Japan accounted for 17.8 percent, 12.0 percent, and 9.7 percent of global exports, respectively.

Table IV-28
Flat-rolled, silicon-electrical steel, other than grain oriented: Global exports by exporter, 2014-19

Exporter	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	34,463	38,766	23,667	16,729	12,648	16,276
Taiwan	569,174	536,279	469,107	511,287	490,556	526,510
Korea	405,252	410,391	510,677	477,240	542,974	511,152
China	274,816	301,252	296,137	330,717	417,381	342,886
Japan	468,646	389,799	370,330	364,185	368,808	279,295
Germany	273,762	303,714	287,364	302,296	247,213	222,945
Sweden	32,930	27,412	32,548	33,882	19,991	18,273
Subject sources	2,024,581	1,968,848	1,966,163	2,019,607	2,086,924	1,901,061
Russia	266,235	282,484	281,389	300,698	282,974	209,017
Austria	10,601	28,669	184,190	205,308	175,887	175,813
Turkey	650	1,169	743	60,220	127,631	82,110
Slovakia	85,988	92,999	92,684	89,888	93,811	81,790
France	95,344	98,066	89,348	97,402	93,216	79,640
All other exporters	330,404	304,169	339,132	473,385	436,745	337,542
Nonsubject sources	789,222	807,555	987,486	1,226,901	1,210,265	965,911
Total exports	2,813,802	2,776,403	2,953,648	3,246,508	3,297,189	2,866,972
	Value (1,000 dollars)					
United States	43,818	56,187	29,782	20,713	21,965	26,242
Taiwan	372,693	291,396	230,810	345,632	363,374	369,235
Korea	284,395	227,313	245,033	301,014	372,349	320,111
China	190,710	162,832	141,305	222,225	306,652	238,104
Japan	412,873	323,699	277,339	304,286	343,083	250,673
Germany	230,157	202,533	190,582	242,125	231,743	188,467
Sweden	43,538	27,735	31,952	35,976	27,739	27,255
Subject sources	1,534,366	1,235,508	1,117,021	1,451,258	1,644,939	1,393,846
Russia	180,829	147,033	121,539	170,673	187,408	124,449
Austria	8,976	18,332	115,697	163,219	159,874	141,902
Turkey	718	874	559	32,131	74,400	43,632
Slovakia	72,921	72,849	56,981	68,820	82,153	67,833
France	100,249	86,014	70,758	87,641	97,364	75,946
All other exporters	273,443	241,873	242,672	361,075	419,211	290,687
Nonsubject sources	637,135	566,975	608,207	883,559	1,020,410	744,448
Total exports	2,171,501	1,802,484	1,725,228	2,334,817	2,665,349	2,138,295

Table continued on next page.

Table IV-28--Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Global exports by exporter, 2014-19

Exporter	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	1,271	1,449	1,258	1,238	1,737	1,612
Taiwan	655	543	492	676	741	701
Korea	702	554	480	631	686	626
China	694	541	477	672	735	694
Japan	881	830	749	836	930	898
Germany	841	667	663	801	937	845
Sweden	1,322	1,012	982	1,062	1,388	1,492
Subject sources	758	628	568	719	788	733
Russia	679	520	432	568	662	595
Austria	847	639	628	795	909	807
Turkey	1,104	747	753	534	583	531
Slovakia	848	783	615	766	876	829
France	1,051	877	792	900	1,045	954
All other exporters	828	795	716	763	960	861
Nonsubject sources	807	702	616	720	843	771
Total exports	772	649	584	719	808	746
	Share of quantity (percent)					
United States	1.2	1.4	0.8	0.5	0.4	0.6
Taiwan	20.2	19.3	15.9	15.7	14.9	18.4
Korea	14.4	14.8	17.3	14.7	16.5	17.8
China	9.8	10.9	10.0	10.2	12.7	12.0
Japan	16.7	14.0	12.5	11.2	11.2	9.7
Germany	9.7	10.9	9.7	9.3	7.5	7.8
Sweden	1.2	1.0	1.1	1.0	0.6	0.6
Subject sources	72.0	70.9	66.6	62.2	63.3	66.3
Russia	9.5	10.2	9.5	9.3	8.6	7.3
Austria	0.4	1.0	6.2	6.3	5.3	6.1
Turkey	0.0	0.0	0.0	1.9	3.9	2.9
Slovakia	3.1	3.3	3.1	2.8	2.8	2.9
France	3.4	3.5	3.0	3.0	2.8	2.8
All other exporters	11.7	11.0	11.5	14.6	13.2	11.8
Nonsubject sources	28.0	29.1	33.4	37.8	36.7	33.7
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. United States is shown at the top, all remaining top export destinations shown in descending order of 2019 data.

Source: Official exports statistics under HS subheading 7225.19 and 7226.19 as reported by various national statistical authorities in the Global Trade Atlas database, accessed August 9, 2020; and official imports statistics of imports from Sweden (constructed export statistics for Sweden) under HS subheadings 7225.19 and 7226.19 as reported by various statistical reporting authorities in the Global Trade Atlas database, accessed October 28, 2020.

The Market in Mexico

Global trade data presented earlier in Part IV and in the following trade tables indicate that Mexico is a growing destination market for global exports of flat-rolled, silicon-electrical steel, other than grain oriented. According to one source, Mexico does not possess an electrical steel manufacturing industry and all electrical steel are imported and then further processed locally.[46] On May 11, 2020, following inquiries and request from interested parties in the United States, including a manufacturer of grain-oriented electrical steel (GOES), the U.S. Department of Commerce initiated an investigation to determine the effects of imports of laminations for stacked cores for incorporation into transformers, electrical transformers, and transformer regulators on the national security of the United States. This investigation was initiated under section 232 of the Trade Expansion Act of 1962, as amended.[47] A representative from U.S. producer Cleveland-Cliffs noted that imports of such components from Mexico (and Canada) using Chinese-made electrical steel[48] increased significantly over the previous two years, impacting the profitability of the firm's plants in Butler, Pennsylvania and Zanesville, Ohio.[49]

Data on global exports of flat-rolled, silicon-electrical steel, other than grain oriented, to Mexico, by exporter are presented in table IV-29. According to GTA, China, Taiwan, Korea, and Japan were the leading exporters of flat-rolled, silicon-electrical steel, other than grain oriented to Mexico in 2019. During 2019, China accounted for 31.5 percent of global exports to Mexico, by quantity. Taiwan, Korea, and Japan accounted for 27.8 percent, 24.6 percent, and 10.0 percent of global exports to Mexico, respectively. Mexico applies a most favored nation ("MFN") rate of 0 percent ("free") to imports of GOES and NOES entering under HTS subheadings 7225.11, 7225.19, 7226.11, and 7226.19.[50]

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[46] Commodity Inside, "Calls for Circumvention Duties on Electrical Steel (GOES) Imports from Canada and Mexico," April 17, 2020, https://commodityinside.com/duties-on-electrical-steel-imports-from-canada-and-mexico/.

[47] 85 FR 29926, May 19, 2020.

[48] The term "electrical steel" is often used to refer to GOES and does not fully distinguish between GOES and NOES.

[49] Haddad, "U.S. to consider fresh tariffs on transformer component imports," Power Transformer News, May 6, 2020, https://www.powertransformernews.com/2020/05/06/u-s-to-consider-fresh-tariffs-on-transformer-component-imports/.

[50] World Integrated Trade Solution, "Mexico Tariff Schedule," https://wits.worldbank.org/tariff/trains/en/country/MEX/year/2018/partner/MEX/product/All/pagenumber/18/pageSize/200#, retrieved October 20, 2020.

Table IV-29
Flat-rolled, silicon-electrical steel, other than grain oriented: Global exports to Mexico by exporter, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	11,707	4,596	3,371	9,782	4,758	7,275
China	45,413	46,772	33,074	59,890	87,724	65,896
Taiwan	35,492	39,208	29,188	45,360	49,328	58,245
Korea	30,398	36,441	26,126	29,825	43,842	51,412
Japan	24,205	19,951	13,057	14,840	23,719	20,946
Russia	427	180	56	8,329	67	2,932
Belgium	---	7	---	---	26	1,132
France	579	---	277	1,117	139	781
Austria	---	---	91	4,883	3,498	234
All other sources	375	1,020	7,161	14,178	342	323
Total exports	148,596	148,175	112,401	188,204	213,444	209,177
	Value (1,000 dollars)					
United States	14,816	6,379	4,307	10,479	5,808	7,403
China	34,053	28,124	17,772	40,560	61,047	42,893
Taiwan	25,461	25,213	15,385	34,765	47,792	62,658
Korea	21,672	22,143	13,717	19,182	32,354	35,027
Japan	22,661	18,526	11,707	14,277	25,983	22,394
Russia	284	120	34	5,585	57	1,593
Belgium	---	4	---	---	24	805
France	285	---	153	846	119	648
Austria	---	---	53	3,609	2,915	198
All other sources	331	840	4,465	10,456	328	391
Total exports	119,562	101,350	67,592	139,760	176,427	174,010

Table continued on next page.

Table IV-29—Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Global exports to Mexico by exporter, 2014-19

Exporter	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	1,266	1,388	1,278	1,071	1,221	1,018
China	750	601	537	677	696	651
Taiwan	717	643	527	766	969	1,076
Korea	713	608	525	643	738	681
Japan	936	929	897	962	1,095	1,069
Russia	665	666	613	671	849	543
Belgium	---	609	---	---	898	711
France	492	---	552	758	859	829
Austria	---	---	581	739	833	846
All other sources	882	823	624	737	958	1,210
Total exports	805	684	601	743	827	832
	Share of quantity (percent)					
United States	7.9	3.1	3.0	5.2	2.2	3.5
China	30.6	31.6	29.4	31.8	41.1	31.5
Taiwan	23.9	26.5	26.0	24.1	23.1	27.8
Korea	20.5	24.6	23.2	15.8	20.5	24.6
Japan	16.3	13.5	11.6	7.9	11.1	10.0
Russia	0.3	0.1	0.0	4.4	0.0	1.4
Belgium	---	0.0	---	---	0.0	0.5
France	0.4	---	0.2	0.6	0.1	0.4
Austria	---	---	0.1	2.6	1.6	0.1
All other sources	0.3	0.7	6.4	7.5	0.2	0.2
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

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

Source: Official exports statistics under HS subheading 7225.19 and 7226.19 as reported by various national statistical reporting authorities in the Global Trade Atlas database, accessed September 19, 2020.

The Industry in Austria

The main producer in Austria is Voestalpine Stahl GmbH ("Voestalpine"),[51] the Linz-based producer of its brand-name ISOVAC® NOES.[52] In July 2015, Voestalpine announced a €100-million capital investment at its Linz facility to build a new continuous caster No. 8 ("CC8") to replace an existing continuous caster No. 3 ("CC3"). The new caster was to be capable of producing the high-quality steel slabs for high-strength steels, ultra-low carbon steels, and electrical steels. It was anticipated that CC8 would produce over 1.2 million metric tons (1.3 million short tons) annually starting in mid-2017.[53] Subsequently, Voestalpine announced in June 2018 that in its first three months of operation, CC8 successfully cast nearly all of the designated steel types, including electrical steels.[54] Exports of NOES from Austria have been primarily to Western and Eastern European countries and the United States.[55]

Data on Austria's exports of flat-rolled, silicon-electrical steel, other than grain oriented are presented in table IV-30. According to GTA, the leading export markets for flat-rolled, silicon-electrical steel, other than grain oriented from Austria are Italy, Germany, and France. During 2019, Italy accounted for 29.7 percent of Austria's total exports. Germany and France accounted for 15.3 percent and 13.4 percent of Austria's total exports, respectively.

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[51] Voestalpine, "Electrical Industry," ©2017, https://www.voestalpine.com/stahl/en/Segments/Electrical-industry/Electrical-industry.

[52] Voestalpine, "Fields of Application, Generator Manufacturing," https://www.voestalpine.com/isovac/en/Fields-of-application/Generator-manufacturing; "Fields of Application, E-mobility," https://www.voestalpine.com/isovac/en/Fields-of-application/E-mobility; "Isovac® Grades," https://www.voestalpine.com/isovac/en/Product-overview/isovac-R-grades.

[53] Voestalpine, "Voestalpine Invests in Continuous Caster for High Quality Steels," press release, July 17, 2015, https://www.voestalpine.com/group/en/media/press-releases/2015-07-17-voestalpine-invests-in-continuous-caster-for-high-quality-steels/.

[54] AIST, "Voestalpine Brings New Slab Caster Into Service," Steel News, June 11, 2018, https://www.aist.org/news/steel-news/2018/june/11-15-june-2018/voestalpine-brings-new-slab-caster-into-service.

[55] IHS Markit, Global Trade Atlas, HS subheadings 7225.19.00 and 7226.19. Accessed December 11, 2019.

Table IV-30
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Austria by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	417	1,745	6,738	8,747	8,866	4,691
Italy	5,493	11,352	69,378	77,284	63,820	52,147
Germany	1,454	7,226	48,584	38,724	27,855	26,900
France	---	1,274	10,680	16,747	19,530	23,605
Brazil	703	23	392	2,163	2,029	15,853
Hungary	618	494	8,248	8,670	9,748	11,048
Slovenia	71	117	2,811	6,651	10,541	10,622
Romania	912	648	4,573	6,239	7,825	9,884
Czech Republic	1	3,396	14,466	13,464	7,911	9,790
All other destination markets	932	2,393	18,321	26,619	17,764	11,273
Total exports	10,601	28,669	184,190	205,308	175,887	175,813
	Value (1,000 dollars)					
United States	396	1,599	6,113	8,738	11,534	6,619
Italy	4,348	6,253	37,144	57,150	52,588	35,937
Germany	1,377	4,936	32,604	31,860	26,609	22,922
France	---	1,200	8,853	15,101	20,119	22,642
Brazil	578	17	248	1,591	1,673	11,667
Hungary	602	337	5,630	6,971	8,437	8,213
Slovenia	72	86	2,056	6,072	10,790	9,748
Romania	717	401	2,607	4,083	5,919	7,011
Czech Republic	1	2,047	8,948	10,192	6,927	8,019
All other destination markets	885	1,458	11,494	21,462	15,278	9,125
Total exports	8,976	18,332	115,697	163,219	159,874	141,902

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Table IV-30--Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Austria by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	949	917	907	999	1,301	1,411
Italy	792	551	535	739	824	689
Germany	947	683	671	823	955	852
France	---	942	829	902	1,030	959
Brazil	821	735	632	736	824	736
Hungary	975	681	683	804	866	743
Slovenia	1,022	733	732	913	1,024	918
Romania	786	618	570	655	756	709
Czech Republic	1,989	603	619	757	876	819
All other destination markets	950	609	627	806	860	809
Total exports	847	639	628	795	909	807
	Share of quantity (percent)					
United States	3.9	6.1	3.7	4.3	5.0	2.7
Italy	51.8	39.6	37.7	37.6	36.3	29.7
Germany	13.7	25.2	26.4	18.9	15.8	15.3
France	---	4.4	5.8	8.2	11.1	13.4
Brazil	6.6	0.1	0.2	1.1	1.2	9.0
Hungary	5.8	1.7	4.5	4.2	5.5	6.3
Slovenia	0.7	0.4	1.5	3.2	6.0	6.0
Romania	8.6	2.3	2.5	3.0	4.4	5.6
Czech Republic	0.0	11.8	7.9	6.6	4.5	5.6
All other destination markets	8.8	8.3	9.9	13.0	10.1	6.4
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. United States is shown at the top, all remaining top export destinations shown in descending order of 2019 data.

Source: Official exports statistics under HS subheading 7225.19 and 7226.19 as reported by Eurostat in the Global Trade Atlas database, accessed September 8, 2020.

The Industry in France

ArcelorMittal is a producer of electrical steel with production facilities at Méditerranée - Fos sur Mer and Saint Chély d'Apcher. The Méditerranée - Fos sur Mer is an integrated facility that largely supplies the Mediterranean market, but also the United States and other countries. This facility specializes in the production of more than 120 grades of steel, including technical steel for pipelines and electrical steel. Approximately 50 percent of the facility's products are destined for the automotive industry. The Saint Chély d'Apcher produces fully processed electrical steels, particularly for high value products such as engines and turbines for automotive applications, as well as for energy applications and general steel.[56] ***.[57]

Data on France's exports of flat-rolled, silicon-electrical steel, other than grain oriented are presented in table IV-31. According to GTA, the leading export markets for flat-rolled, silicon-electrical steel, other than grain oriented from France are Germany, Italy, and Spain. During 2019, Germany accounted for 21.4 percent of France's total exports. Italy and Spain accounted for 14.0 percent and 13.3 percent of France's total exports, respectively.

[56] ArcelorMittal, "Interactive Map of Automotive Locations," https://automotive.arcelormittal.com/who_we_are/interactive_map, retrieved October 15, 2020.

[57] ***.

Table IV-31
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from France by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	16,664	18,441	6,590	10,353	10,134	8,999
Germany	22,907	30,196	27,980	20,441	18,652	17,076
Italy	2,280	1,985	4,837	12,969	10,417	11,117
Spain	13,163	12,462	12,857	12,370	13,674	10,560
China	7,871	8,076	8,426	9,630	11,679	8,538
Switzerland	5,305	5,849	8,225	8,842	8,205	6,496
Poland	7,209	9,655	9,790	8,171	5,494	4,903
Hungary	442	564	653	1,798	1,719	2,835
India	7,072	5,763	4,761	4,438	5,617	1,860
All other destination markets	12,432	5,076	5,228	8,389	7,624	7,257
Total exports	95,344	98,066	89,348	97,402	93,216	79,640
	Value (1,000 dollars)					
United States	16,365	16,858	5,971	9,834	11,117	8,908
Germany	25,216	26,472	22,673	19,490	20,757	16,389
Italy	2,627	1,717	2,755	10,479	8,889	10,788
Spain	11,662	8,979	8,425	9,713	12,842	8,956
China	9,846	8,341	7,330	9,188	12,139	9,196
Switzerland	6,033	5,343	6,331	8,227	8,848	6,358
Poland	7,650	8,642	8,292	7,549	6,019	4,962
Hungary	505	378	431	1,509	1,690	1,747
India	7,628	4,958	3,780	3,681	6,312	1,715
All other destination markets	12,717	4,327	4,769	7,972	8,751	6,926
Total exports	100,249	86,014	70,758	87,641	97,364	75,946

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Table IV-31--Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from France by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	982	914	906	950	1,097	990
Germany	1,101	877	810	953	1,113	960
Italy	1,152	865	570	808	853	970
Spain	886	720	655	785	939	848
China	1,251	1,033	870	954	1,039	1,077
Switzerland	1,137	913	770	930	1,078	979
Poland	1,061	895	847	924	1,096	1,012
Hungary	1,141	670	660	839	983	616
India	1,079	860	794	830	1,124	922
All other destination markets	1,023	852	912	950	1,148	954
Total exports	1,051	877	792	900	1,045	954
	Share of quantity (percent)					
United States	17.5	18.8	7.4	10.6	10.9	11.3
Germany	24.0	30.8	31.3	21.0	20.0	21.4
Italy	2.4	2.0	5.4	13.3	11.2	14.0
Spain	13.8	12.7	14.4	12.7	14.7	13.3
China	8.3	8.2	9.4	9.9	12.5	10.7
Switzerland	5.6	6.0	9.2	9.1	8.8	8.2
Poland	7.6	9.8	11.0	8.4	5.9	6.2
Hungary	0.5	0.6	0.7	1.8	1.8	3.6
India	7.4	5.9	5.3	4.6	6.0	2.3
All other destination markets	13.0	5.2	5.9	8.6	8.2	9.1
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Note: Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. United States is shown at the top, all remaining top export destinations shown in descending order of 2019 data.

Source: Official exports statistics under HS subheading 7225.19 and 7226.19 as reported by Eurostat in the Global Trade Atlas database, accessed September 8, 2020.

The Industry in Russia

The main producer in Russia is Novolipetsk Steel Co. (NLMK Group), a leading producer of both grain-oriented and non-oriented electrical steels.[58] NLMK was recognized in 2015 for developing three new grades of electrical steel, along with designing new manufacturing technologies to produce these more energy-efficient ("dynamo") steels for generators and turbines at hydro- and conventional-fueled electric power generating plants. NLMK supplies these new electrical steels to its own domestic market and major customers in Western European countries.[59] Hot-rolling operations were upgraded starting in July 2017 at the Lipetsk facility that produces NOES among other steel mill productions. A new advanced-technology, slab-reheating furnace No. 2 (with annual operating capacity of 2.25 million metric tons (2.48 million short tons) will not only replace two older, less-efficient furnaces but also improve rolled-steel product quality by reducing reheated-slab surface defects, reduce energy consumption, and allow for increased hot-strip mill rolling output by 110 kilotons (121,254 short tons) per year. Installation was scheduled to commence in the fourth quarter of 2017 with operation anticipated for the second half of 2019.[60] The NLMK Group entered into a strategic partnership agreement in July 2019 to supply both its grain-oriented and non-oriented electrical steels to the LTC Group, a leading regional producer of components for transformers and power-generation devices with production facilities in Italy and the United Arab Emirates.[61] Exports of NOES from Russia have been primarily to Turkey, Western and Eastern European countries, the United States, and Iran.[62]

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[58] The NLMK Group provided 81 percent of all electrical steel produced in Russia, as the only producer of grain-oriented electrical steel, from its facilities located in Lipetsk and Yekaterinburg, and a leading producer of NOES, from its Lipetsk facility. NLMK Group, "NLMK Group and LTC Group Ink Strategic Partnership Agreement," press release, July 24, 2019, https://lipetsk.nlmk.com/en/media-center/press-releases/nlmk-group-and-ltc-group-ink-strategic-partnership-agreement/.

[59] NLMK Group, "Group's Electrical steel Wins Gold Award at Metal-Expo'2015," press release, November 2015, https://lipetsk.nlmk.com/en/media-center/press-releases/group-s-electrical-steel-wins-gold-award-at-metal-expo-2015/.

[60] NLMK Group, "NLMK Lipetsk Upgrades Hot-rolling Operations," press release, July 19, 2017, https://lipetsk.nlmk.com/en/media-center/press-releases/nlmk-lipetsk-upgrades-hot-rolling-operations/.

[61] NLMK Group, "NLMK Group and LTC Group Ink Strategic Partnership Agreement," press release, July 24, 2019, https://lipetsk.nlmk.com/en/media-center/press-releases/nlmk-group-and-ltc-group-ink-strategic-partnership-agreement/.

[62] IHS Markit, Global Trade Atlas, HS subheadings 7225.19.00 and 7226.19. Accessed December 11, 2019.

Data on Russia's exports of flat-rolled, silicon-electrical steel, other than grain oriented are presented in table IV-32. According to GTA, the leading export markets for flat-rolled, silicon-electrical steel, other than grain oriented from Russia are Turkey, Finland, and Belarus. During 2019, Turkey accounted for 45.5 percent of Russia's total exports. Finland and Belarus accounted for 11.3 percent and 7.3 percent of Russia's total exports, respectively.

Table IV-32
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Russia by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Quantity (short tons)					
United States	1,670	1,362	704	3,427	14,962	4,943
Turkey	125,651	138,206	148,468	146,028	137,469	95,157
Finland	12,329	26,317	24,152	24,289	36,396	23,567
Belarus	21,108	21,353	18,718	14,456	17,212	15,312
Belgium	905	910	---	1,159	3,961	13,519
Azerbaijan	---	---	---	---	---	10,551
Ukraine	12,471	9,015	9,357	10,279	9,525	10,323
Germany	49,498	36,470	36,553	36,612	27,955	7,437
India	228	161	---	58	---	5,411
All other destination markets	42,375	48,691	43,438	64,389	35,496	22,798
Total exports	266,235	282,484	281,389	300,698	282,974	209,017
	Value (1,000 dollars)					
United States	942	694	282	1,900	9,291	2,665
Turkey	83,429	70,890	61,636	79,380	88,738	53,454
Finland	9,052	14,209	11,404	14,477	25,463	14,806
Belarus	14,529	10,925	9,248	8,710	11,425	10,027
Belgium	806	836	---	551	2,069	7,471
Azerbaijan	---	---	---	---	---	7,310
Ukraine	9,063	4,762	4,773	6,731	6,881	7,115
Germany	33,317	18,726	15,924	21,603	20,018	4,267
India	149	101	---	16	---	2,997
All other destination markets	29,543	25,890	18,271	37,306	23,523	14,337
Total exports	180,829	147,033	121,539	170,673	187,408	124,449

Table continued on next page.

Table IV-32-Continued
Flat-rolled, silicon-electrical steel, other than grain oriented: Exports from Russia by destination market, 2014-19

Destination market	Calendar year					
	2014	2015	2016	2017	2018	2019
	Unit value (dollars per short ton)					
United States	564	510	401	555	621	539
Turkey	664	513	415	544	646	562
Finland	734	540	472	596	700	628
Belarus	688	512	494	603	664	655
Belgium	891	919	---	475	522	553
Azerbaijan	---	---	---	---	---	693
Ukraine	727	528	510	655	722	689
Germany	673	513	436	590	716	574
India	652	626	---	279	---	554
All other destination markets	697	532	421	579	663	629
Total exports	679	520	432	568	662	595
	Share of quantity (percent)					
United States	0.6	0.5	0.3	1.1	5.3	2.4
Turkey	47.2	48.9	52.8	48.6	48.6	45.5
Finland	4.6	9.3	8.6	8.1	12.9	11.3
Belarus	7.9	7.6	6.7	4.8	6.1	7.3
Belgium	0.3	0.3	---	0.4	1.4	6.5
Azerbaijan	---	---	---	---	---	5.0
Ukraine	4.7	3.2	3.3	3.4	3.4	4.9
Germany	18.6	12.9	13.0	12.2	9.9	3.6
India	0.1	0.1	---	0.0	---	2.6
All other destination markets	15.9	17.2	15.4	21.4	12.5	10.9
Total exports	100.0	100.0	100.0	100.0	100.0	100.0

Note.--Shares and ratios shown as "0.0" represent values greater than zero, but less than "0.05" percent. United States is shown at the top, all remaining top export destinations shown in descending order of 2019 data.

Source: Official exports statistics under HS subheading 7225.19 and 7226.19 as reported by Customs Committee of Russia in the Global Trade Atlas database, accessed September 8, 2020.

Part V: Pricing data

Factors affecting prices

Raw material costs

U.S. producer AK Steel's primary raw material inputs in the production of NOES are scrap steel and ferrosilicon.[1] The total cost of AK Steel's raw materials as a ratio to the cost of goods sold ("COGS") decreased *** during 2014-19, and was lower in January-June 2020 than the same period during 2019. Overall, AK Steel's raw material cost share was highest in *** and lowest in ***;[2] between 2014 and 2019, AK Steel's raw material cost share decreased by *** percentage points.

As shown in figure V-1, both steel scrap and ferrosilicon (ferro-silicon) prices generally decreased intermittently from 2014 through the third quarter of 2016, then increased until the beginning of 2018 before decreasing *** through September 2020. Overall, steel scrap and ferrosilicon (ferro-silicon) prices were lower in December 2019 compared to January 2014 by *** percent and *** percent, respectively. Between December 2019 and September 2020, prices of steel scrap and ferrosilicon both increased by *** percent and *** percent, respectively.

[1] *Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan, Inv. Nos. 701-TA-506 & 508 and 731-TA-1238-1243 (Final)*, USITC Publication 4502, November 2014, p. V-1 ("Original publication").

[2] *** AK Steel's raw material cost share was ***.

Figure V-1
Raw material inputs: Indexed price trends of scrap steel (No1 heavy melt, consumer buying price, delivered mill Chicago,) and ferrosilicon (75% Si, in-whs Pittsburgh,), monthly, January 2014-September 2020

* * * * * * *

Source: ***, accessed October 27, 2020.

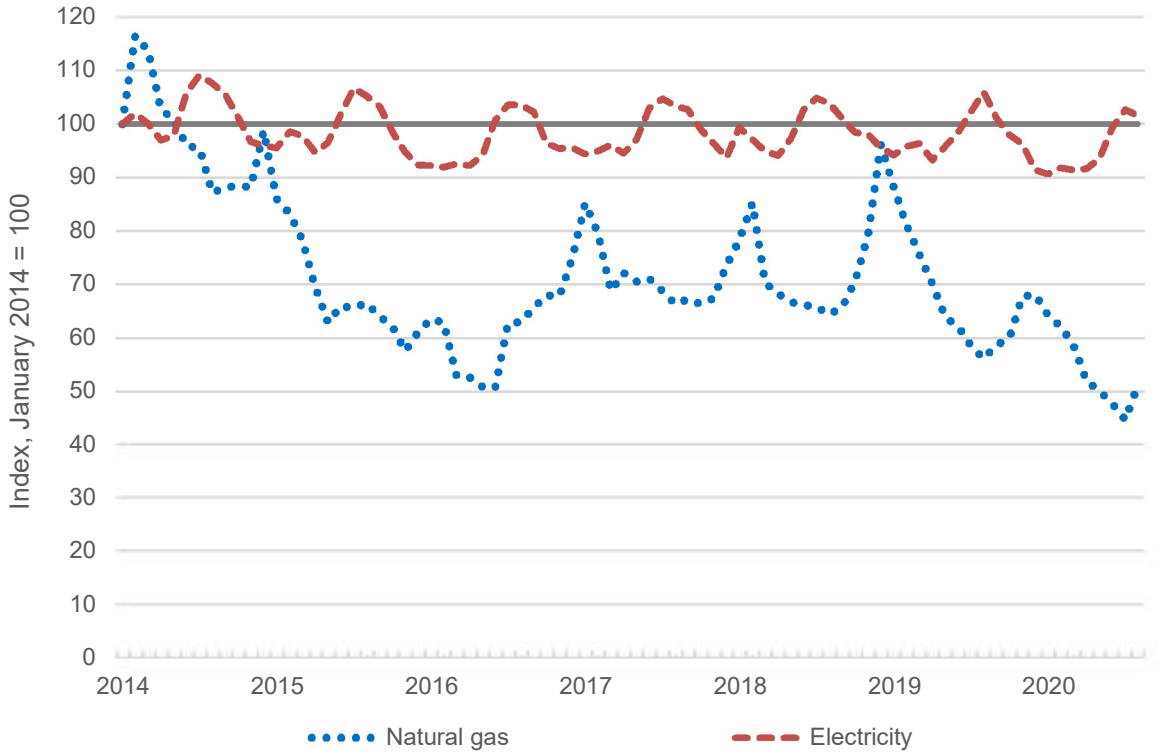
U.S. producers and importers provided mixed responses when asked how the prices of raw materials have changed since January 2014. *** 4 of 11 importers reported fluctuating prices, 4 importers reported increased prices, 1 reported decreased prices, and 2 reported unchanged prices. In additional comments, importers *** and *** stated that raw material costs influence NOES prices upward, with *** reporting that raw material price increases are passed through directly to customers, and one importer (***) stating simply that changes in raw material prices affect NOES prices. When asked if they were familiar with the prices for raw materials used in the production of NOES, a majority of purchasers (9 of 14) reported that they were. Most of these firms (9 of 13) indicated that raw material price information has not affected their negotiations or contracts to purchase NOES since 2014. Several purchasers, however, indicated that raw material prices influence the pricing of NOES, with *** stating that there is a slight impact on the processed steel, *** stating that domestic pricing has increased and the prices of imports has decreased, and *** stating that they caused fluctuations in surcharge costs.

When asked about their expectations for changes in raw material prices in the future, most firms indicated that they expect them to either fluctuate (***) or not change (***). Two importers indicated that they expect raw material prices to increase, and one indicated that it expects them to decrease.

Energy costs

Energy costs represent a sizeable portion of the cost of producing NOES.[3] As shown in figure V-2, electricity prices fluctuated within a narrow range, with higher prices in the summer months and lower prices in the winter months. Natural gas prices generally decreased from the first quarter of 2014 through mid-2016, then fluctuated intermittently. Overall, electricity prices were 8.7 percent lower and natural gas prices were 31.8 percent lower in December 2019 compared to January 2014.

Figure V-2
Energy inputs: Indexed average industrial retail prices of electricity and natural gas in the United States, monthly, January 2014-August 2020



Source: Energy Information Association, accessed November 2, 2020.

[3] Original publication, p. V-1.

Transportation costs to the U.S. market

Transportation costs for NOES shipped from subject countries to the United States averaged 2.6 percent for China, 39.8 percent for Germany, 3.5 percent for Japan, 0.9 percent for Korea, 0.4 percent for Sweden, and 8.5 percent for Taiwan during 2019. These estimates were derived from official import data and represent the transportation and other charges on imports.[4]

U.S. inland transportation costs

*** most importers (8 of 11 firms) reported that they typically arrange transportation to their customers. U.S. producer AK Steel reported that its U.S. inland transportation cost was *** percent of the total cost of NOES, while importers reported that their U.S. inland transportation costs ranged from 1 to 10 percent, for an average of 3.4 percent.

Pricing practices

Pricing methods

U.S. producer AK Steel reported setting prices using ***, while importers reported using primarily transaction-by-transaction negotiations, followed by contracts and then price lists (table V-1).[5]

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

Method	U.S. producer	Importers
Transaction-by-transaction	***	8
Contract	***	5
Set price list	***	2
Other	***	---
Responding firms	1	12

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.

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

[4] The estimated transportation costs were obtained by subtracting the customs value from the c.i.f. value of the imports for 2019 and then dividing by the customs value based on the HTS subheadings 7225.19.0000, 7226.19.1000, and 7226.19.9000.

[5] The two importers that reported using price lists were ***. ***.

U.S. producer AK Steel reported selling *** of its NOES through *** (table V-2). The responding importers reported selling most of their NOES in the spot market, with about ***. Foreign producer Thyssenkrupp testified that it sells NOES to electric vehicle manufacturers primarily through long-term agreements of "two, three, five, and other years."[6]

Table V-2
NOES: U.S. producers' and importers' shares of U.S. commercial shipments by type of sale, 2019

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

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

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

For U.S. producer AK Steel, ***. AK Steel reported that ***. Among responding importers, most reported that their short-term contracts do not allow for price renegotiations, all of them fix either price only or price and quantity, and none of their contacts are indexed to raw material prices. Importers reported short-term contract periods of 30-180 days.

Four purchasers reported that they purchase NOES weekly, six purchase monthly, one purchases quarterly, and one purchases bi-weekly. In addition, one purchaser reported purchasing based on multi-year supply agreements, and two reported purchasing NOES as needed or according to their customers' procurement schedules. Only one of 14 responding purchasers reported that it expected its purchasing patterns to change in the next two years; *** stated that if the tariffs remain in place and new tariffs are placed on finished goods, then it is hopeful that its demand will improve from "a depressed state." All other responding purchasers expect no change to their purchase patterns. Half of the responding purchasers (7 of 14) contact up to three suppliers before making a purchase. Two contact only 1 supplier, one contacts up to 2 suppliers, two contact up to 4 suppliers, one contacts up to 5 suppliers, and one contacts up to 6 suppliers.

[6] Hearing transcript, p. 177 (Schmidtz).

Sales terms and discounts

U.S. producer AK Steel reported that it typically quotes prices ***, and most importers (7 of 11) typically quote prices on a delivered basis. *** most importers (11 of 12 firms) reported having no discount policy. One importer reported offering total volume discounts.

Price leadership

Of the eight purchasers that reported price leaders in the NOES market, five listed AK Steel. One firm each also listed ArcelorMittal (Europe), Baosteel (China), Mapes & Sprowl (United States),[7] POSCO (Korea), and Voestalpine (Austria) as price leaders. In describing how AK Steel led the industry in pricing, almost all of the responding purchasers indicated that AK Steel is the only domestic producer of NOES.

Price data

The Commission requested U.S. producers and importers to provide quarterly data for the total quantity and f.o.b. value of the following NOES products shipped to unrelated U.S. customers during January 2014-June 2020.

Product 1.--M-19, 0.45-0.50mm thickness, fully processed, maximum core loss 2.90 W/kg (1.5T; 50Hz), 600mm or more wide, coated

Product 2.--M-22, 0.45-0.50mm thickness, fully processed, maximum core loss 3.10 W/kg (1.5T; 50Hz), 900mm or more wide, coated

Product 3.--M-36, 0.60-0.65mm thickness, fully processed, maximum core loss 4.10 W/kg (1.5T; 50Hz), 600mm or more wide, coated

Product 4.--M-43, 0.60-0.65mm thickness, fully processed, maximum core loss 4.35 W/kg (1.5T; 50Hz), 600mm or more wide, coated

[7] Mapes & Sprowl is a "service center specializing in enameling steel for porcelain-coating applications, silicon electrical steel for electrical applications, Agion® antimicrobial treated steel, and electrical steel cores." Its specialty services include "slitting, blanking, and custom electrical core manufacturing." See *Mapes & Sprowl website*, https://www.mapessprowl.com/, retrieved October 27, 2020, and *UPG website*, https://upgllc.com/mapes-sprowl-steel/, retrieved October 27, 2020.

Product 5.--M-45, 0.60-0.65mm thickness, fully processed, maximum core loss 4.80 W/kg (1.5T; 50Hz), 600mm or more wide, coated

Product 6.--0.20-0.35mm thickness, fully processed, maximum core loss 22.0 W/kg (1.0T; 400Hz), 600mm or more wide, coated

One U.S. producer and seven 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. commercial shipments of NOES and *** percent of reported U.S. commercial shipments of subject imports from Taiwan in 2019. No importer reported U.S. commercial shipments or pricing data for imports for China, Germany, Japan, Korea, or Sweden in 2019. No data were reported for any quarter during January 2014-June 2020 for the following pricing products from the following countries: product 1 from China, Korea, or Taiwan; product 2 from Germany or Sweden; product 3 from Japan; product 4 from any of the subject countries; product 5 from China, Germany, Japan, Korea, or Sweden; and product 6 from China, Germany, Korea, or Sweden.

Price data for products 1-6 are presented in tables V-3 to V-8 and figures V-3 to V-8.

[8] 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.

[9] *** reported several quarters of data of one or two short tons, indicating that these low volumes were rounded. Due to the distortive nature of rounding such low quantities, staff has removed these data from this pricing analysis.

Table V-3
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		China			Germany		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

Table continued on next page.

Table V-3—Continued
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		Japan			Korea		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

Table continued on next page.

Table V-3—Continued
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 1 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		Sweden			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

Note: Product 1: M-19, 0.45-0.50mm thickness, fully processed, maximum core loss 2.90 W/kg (1.5T; 50Hz), 600mm or more wide, coated.

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

Table V-4
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		China			Germany		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

Table continued on next page.

Table V-4—Continued
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		Japan			Korea		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

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Table V-4—Continued
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 2 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		Sweden			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

Note: Product 2: M-22, 0.45-0.50mm thickness, fully processed, maximum core loss 3.10 W/kg (1.5T; 50Hz), 900mm or more wide, coated.

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

Table V-5
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		China			Germany		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

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Table V-5—Continued
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		Japan			Korea		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

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Table V-5—Continued
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 3 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		Sweden			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

Note: Product 3: M-36, 0.60-0.65mm thickness, fully processed, maximum core loss 4.10 W/kg (1.5T; 50Hz), 600mm or more wide, coated.

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

Table V-6
NOES: Weighted-average f.o.b. prices and quantities of domestic product 4, by quarter, January 2014-June 2020

Period	United States	
	Price (dollars per short ton)	Quantity (short tons)
2014: Jan.-Mar.	***	***
Apr.-June	***	***
July-Sept.	***	***
Oct.-Dec.	***	***
2015: Jan.-Mar.	***	***
Apr.-June	***	***
July-Sept.	***	***
Oct.-Dec.	***	***
2016: Jan.-Mar.	***	***
Apr.-June	***	***
July-Sept.	***	***
Oct.-Dec.	***	***
2017: Jan.-Mar.	***	***
Apr.-June	***	***
July-Sept.	***	***
Oct.-Dec.	***	***
2018: Jan.-Mar.	***	***
Apr.-June	***	***
July-Sept.	***	***
Oct.-Dec.	***	***
2019: Jan.-Mar.	***	***
Apr.-June	***	***
July-Sept.	***	***
Oct.-Dec.	***	***
2020: Jan.-Mar.	***	***
Apr.-June	***	***

Note: Product 4: M-43, 0.60-0.65mm thickness, fully processed, maximum core loss 4.35 W/kg (1.5T; 50Hz), 600mm or more wide, coated.

Note: No import data were reported for product 4.

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

Table V-7
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		China			Germany		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

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Table V-7—Continued
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		Japan			Korea		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

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Table V-7—Continued
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 5 and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		Sweden			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

Note: Product 5: M-45, 0.60-0.65mm thickness, fully processed, maximum core loss 4.80 W/kg (1.5T; 50Hz), 600mm or more wide, coated.

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

Table V-8
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 6[1] and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		China			Germany		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

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Table V-8—Continued
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 6[1] and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		Japan			Korea		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

Table continued on next page.

Table V-8—Continued
NOES: Weighted-average f.o.b. prices and quantities of domestic and imported product 6[1] and margins of underselling/(overselling), by quarter, January 2014-June 2020

Period	United States		Sweden			Taiwan		
	Price (dollars per short ton)	Quantity (short tons)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)	Price (dollars per short ton)	Quantity (short tons)	Margin (percent)
2014: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2015: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2016: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2017: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2018: Jan.-Mar.	***	***	***	***		***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2019: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***
July-Sept.	***	***	***	***	***	***	***	***
Oct.-Dec.	***	***	***	***	***	***	***	***
2020: Jan.-Mar.	***	***	***	***	***	***	***	***
Apr.-June	***	***	***	***	***	***	***	***

Note: Product 6: 0.20-0.35mm thickness, fully processed, maximum core loss 22.0 W/kg (1.0T; 400Hz), 600mm or more wide, coated.

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

Figure V-3
NOES: Weighted-average prices and quantities of domestic and imported product 1, by quarter, January 2014-June 2020

* * * * * * *

* * * * * * *

Note: Product 1: M-19, 0.45-0.50mm thickness, fully processed, maximum core loss 2.90 W/kg (1.5T; 50Hz), 600mm or more wide, coated.

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

Figure V-4
NOES: Weighted-average prices and quantities of domestic and imported product 2, by quarter, January 2014-June 2020

* * * * * * *

* * * * * * *

Note: Product 2: M-22, 0.45-0.50mm thickness, fully processed, maximum core loss 3.10 W/kg (1.5T; 50Hz), 900mm or more wide, coated.

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

Figure V-5
NOES: Weighted-average prices and quantities of domestic and imported product 3, by quarter, January 2014-June 2020

* * * * * * *

* * * * * * *

Note: Product 3: M-36, 0.60-0.65mm thickness, fully processed, maximum core loss 4.10 W/kg (1.5T; 50Hz), 600mm or more wide, coated.

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

Figure V-6
NOES: Weighted-average prices and quantities of domestic and imported product 4, by quarter, January 2014-June 2020

* * * * * * *

* * * * * * *

Note: Product 4: M-43, 0.60-0.65mm thickness, fully processed, maximum core loss 4.35 W/kg (1.5T; 50Hz), 600mm or more wide, coated.

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

Figure V-7
NOES: Weighted-average prices and quantities of domestic and imported product 5, by quarter, January 2014-June 2020

* * * * * * *

* * * * * * *

Note: Product 5: M-45, 0.60-0.65mm thickness, fully processed, maximum core loss 4.80 W/kg (1.5T; 50Hz), 600mm or more wide, coated.

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

Figure V-8
NOES: Weighted-average prices and quantities of domestic and imported product 6, by quarter, January 2014-June 2020

* * * * * * *

* * * * * * *

Note: Product 6: 0.20-0.35mm thickness, fully processed, maximum core loss 22.0 W/kg (1.0T; 400Hz), 600mm or more wide, coated.

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

Price trends

In general, domestic prices increased during January 2014-June 2020 (table V-9).[10] As shown in the table, domestic prices increased for ***, while domestic prices decreased for ***.[11]

Table V-9
NOES: Summary of weighted-average f.o.b. prices for products 1-6 from the United States and subject countries

Item	Number of quarters	Low price (per short ton)	High price (per short ton	Change in price[1] (percent)
Product 1				
United States	***	***	***	***
Germany	***	***	***	***
Japan	***	***	***	***
Sweden	***	***	***	***
Product 2				
United States	***	***	***	***
China	***	***	***	***
Japan	***	***	***	***
Korea	***	***	***	***
Taiwan	***	***	***	***
Product 3				
United States	***	***	***	***
China	***	***	***	***
Germany	***	***	***	***
Korea	***	***	***	***
Sweden	***	***	***	***
Taiwan	***	***	***	***
Product 4				
United States	***	***	***	***
Product 5				
United States	***	***	***	***
Taiwan	***	***	***	***
Product 6				
United States	***	***	***	***
Japan	***	***	***	***
Taiwan	***	***	***	***

Note: Percentage change from the first quarter of 2014 to the second quarter of 2020.

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

[10] Too few quarterly instances of data were available for subject imported NOES to determine price trends for these countries.

[11] As noted earlier, no data were reported for any quarter during January 2014-June 2020 for the following pricing products from the following countries: product 1 from China, Korea, or Taiwan; product 2 from Germany or Sweden; product 3 from Japan; product 4 from any of the subject countries; product 5 from China, Germany, Japan, Korea, or Sweden; and product 6 from China, Germany, Korea, or Sweden.

Purchasers were asked if there has been a change in the price of NOES from the United States, China, Germany, Japan, Korea, Sweden, and/or Taiwan since January 2014. Most purchasers reported changes in the prices from each of these sources. Specifically, 8 of 10 purchasers reported that prices for NOES from the United States had changed, and most firms indicated that prices of NOES from most of the subject countries had changed, including China (3 of 4 firms), Germany (4 of 5 firms), Japan (5 of 6 firms), Korea (4 of 5 firms), and Taiwan (5 of 6 firms). For Sweden, three firms each reported that prices had and had not changed since January 2014.

Purchasers were also asked how the prices of NOES from the United States had changed relative to the prices of NOES from each subject country since 2014. With the exception of Germany, most firms reported that prices for NOES from the United States were higher than NOES from the other subject countries. Specifically, most reported that the prices were higher for U.S. product compared to NOES from China (3 of 4 firms), Japan (4 of 6 firms), Korea (3 of 4 firms), Sweden (3 of 5 firms), and Taiwan (5 of 6 firms). Two firms reported that prices for domestic NOES were higher than NOES from Germany, and two reported that German NOES was higher priced than domestic NOES.

Price comparisons

As shown in table V-10a, prices for NOES imported from subject countries were below those for U.S.-produced product in 17 of 38 instances (3,371 short tons); margins of underselling ranged from 1.2 to 29.6 percent, for an average of 13.4 percent. In the remaining 21 instances (1,175 short tons), prices for NOES from the subject countries were between 4.8 and 47.4 percent (for an average of 16.8 percent) above prices for the domestic product.[12]

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[12] In the original investigations, subject imports from China, Germany, Japan, Korea, Sweden, and Taiwan were below those for U.S.-produced NOES in 210 of 282 instances, with underselling margins of between 0.3 and 65.3 percent (for an average of 17.1 percent). In the other 72 instances, prices from the subject countries were above U.S.-produced NOES by between 0.1 and 127.1 percent (for an average of 19.8 percent). On a country-by-country basis, prices of NOES imported from China were below those for U.S.-produced product in 42 of 43 instances, with an average margin of underselling of 23.7 percent, while prices for Chinese product were above domestic prices in 1 instance, with a margin of overselling of 5.4 percent. Prices of NOES imported from Germany were below those for U.S.-produced product in 46 of 61 instances, with an average margin of underselling of 16.8 percent, while prices for German product were above domestic prices in the other 15 instances, with an average margin of overselling of 9.9 percent. Prices of NOES imported from Japan were below those for U.S.-produced product in 42 of 64 instances, with an average margin of underselling of 7.6 percent, while prices for Japanese product were above domestic prices in the other 22 instances, with an average

(*continued*...)

Overall, the number of quarterly instances of overselling exceeded the number of quarterly instances of underselling for the subject countries, while the quantity of underselling for the subject countries exceeded the quantity of overselling.

Table V-10a
NOES: Instances of underselling/overselling and the range and average of margins, by country, January 2014-June 2020

Source	Underselling				
	Number of quarters	Quantity[1] (short tons)	Average margin (percent)	Margin range (percent)	
				Min	Max
China	***	***	***	***	***
Germany	***	***	***	***	***
Japan	***	***	***	***	***
Korea	***	***	***	***	***
Sweden	***	***	***	***	***
Taiwan	***	***	***	***	***
Total, underselling	**17**	**3,371**	**13.4**	**1.2**	**29.6**
Source	**(Overselling)**				
	Number of quarters	**Quantity[1] (short tons)**	**Average margin (percent)**	**Margin range (percent)**	
				Min	**Max**
China	***	***	***	***	***
Germany	***	***	***	***	***
Japan	***	***	***	***	***
Korea	***	***	***	***	***
Sweden	***	***	***	***	***
Taiwan	***	***	***	***	***
Total, overselling	**21**	**1,175**	**(16.8)**	**(4.8)**	**(47.4)**

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

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margin of overselling of 15.3 percent. Prices of NOES imported from Korea were below those for U.S.-produced product in 20 of 22 instances, with an average margin of underselling of 24.9 percent, while prices for Korean product were above domestic prices in the other 2 instances, with an average margin of overselling of 42.8 percent. Prices of NOES imported from Sweden were below those for U.S.-produced product in 35 of 62 instances, with an average margin of underselling of 15.7 percent, while prices for Swedish product were above domestic prices in the other 27 instances, with an average margin of overselling of 30.3 percent. Prices of NOES imported from Taiwan were below those for U.S.-produced product in 25 of 30 instances, with an average margin of underselling of 13.9 percent, while prices for product from Taiwan were above domestic prices in the other 5 instances, with an average margin of overselling of 10.8 percent. Original publication, pp. V-11-12.

On a country-by-country basis, prices of NOES imported from China were below those for U.S.-produced product in *** instances (*** short tons), with margins of underselling of *** percent, while prices for Chinese product were above domestic prices in *** instances (*** short tons), with margins of overselling of *** percent. Prices of NOES imported from Germany were below those for U.S.-produced product in *** instances (*** short tons), with margins of underselling of *** percent, while prices for German product were above domestic prices in *** instances (*** short tons), with margins of overselling of *** percent. Prices of NOES imported from Japan were below those for U.S.-produced product in *** instances (*** short tons), with margins of underselling of *** percent, while prices for Japanese product were above domestic prices in *** instances (*** short tons), with margins of overselling of *** percent. Prices of NOES imported from Korea were below those for U.S.-produced product in *** instances (*** short tons), with margins of underselling of *** percent, while prices for Korean product were above domestic prices in *** instances (*** short tons), with margins of overselling of *** percent. Prices of NOES imported from Sweden were *** those for U.S.-produced product in *** instances (*** short tons), ***. Prices of NOES imported from Taiwan were below those for U.S.-produced product in *** instances (*** short tons), with margins of underselling of *** percent, while prices of NOES from Taiwan were above domestic prices in *** instances (*** short tons), with margins of overselling of *** percent.

As shown in table V-10b, there were a greater number of quarterly instances of underselling for pricing product 5, while pricing products 1 and 3 showed a greater number of quarterly instances of overselling. Pricing products 2 and 6 showed equal number of instances of underselling vs. overselling. In terms of quantity, products 2, 5, and 6 had a greater quantity of underselling, while pricing products 1 and 3 had a greater quantity of overselling.

Table V-10b
NOES: Instances of underselling/overselling and the range and average of margins, by pricing product, January 2014-June 2020

Source	Underselling				
	Number of quarters	Quantity[1] (short tons)	Average margin (percent)	Margin range (percent)	
				Min	Max
Product 1	***	***	***	***	***
Product 2	***	***	***	***	***
Product 3	***	***	***	***	***
Product 4	***	***	***	***	***
Product 5	***	***	***	***	***
Product 6	***	***	***	***	***
Total, underselling	**17**	**3,371**	**13.4**	**1.2**	**29.6**
Source	**(Overselling)**				
	Number of quarters	**Quantity[1] (short tons)**	**Average margin (percent)**	**Margin range (percent)**	
				Min	**Max**
Product 1	***	***	***	***	***
Product 2	***	***	***	***	***
Product 3	***	***	***	***	***
Product 4	***	***	***	***	***
Product 5	***	***	***	***	***
Product 6	***	***	***	***	***
Total, overselling	**21**	**1,175**	**(16.8)**	**(4.8)**	**(47.4)**

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

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
84 FR 58743 November 1, 2019	*Non-Oriented Electrical Steel From China, Germany, Japan, Korea, Sweden, and Taiwan; Institution of Five-Year Reviews*	https://www.govinfo.gov/content/pkg/FR-2019-11-01/pdf/2019-23799.pdf
84 FR 58687 November 1, 2019	*Initiation of Five-Year (Sunset) Reviews*	https://www.govinfo.gov/content/pkg/FR-2019-11-01/pdf/2019-23900.pdf
85 FR 8325, February 13, 2020	*Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan; Full Five-year Reviews*	https://www.govinfo.gov/content/pkg/FR-2020-02-13/pdf/2020-02854.pdf
85 FR 11337, February 27, 2020	*Non-Oriented Electrical Steel From People's Republic of China, Germany, Japan, Republic of Korea, Sweden, and Taiwan: Final Results of Expedited First Sunset Reviews of Antidumping Duty Orders*	https://www.govinfo.gov/content/pkg/FR-2020-02-27/pdf/2020-03999.pdf
85 FR 11339, February 27, 2020	*Non-Oriented Electrical Steel From the People's Republic of China: Final Results of the Expedited First Sunset Review of the Countervailing Duty Order*	https://www.govinfo.gov/content/pkg/FR-2020-02-27/pdf/2020-03987.pdf
85 FR 13135, March 6, 2020	*Non-Oriented Electrical Steel From Taiwan: Final Results of the Expedited Five-Year Sunset Review of the Countervailing Duty Order*	https://www.govinfo.gov/content/pkg/FR-2020-03-06/pdf/2020-04626.pdf
85 FR 33711, June 2, 2020	*Non-Oriented Electrical Steel From China, Germany, Japan, Korea, Sweden, and Taiwan; Scheduling of Full Five-Year Reviews*	https://www.govinfo.gov/content/pkg/FR-2020-06-02/pdf/2020-11763.pdf

the links can be found by search for the investigation at https://pubapps2.usitc.gov/sunset/caseProf/list?sort=caseTitle&order=asc

Note.–The press release announcing the Commission's determinations concerning adequacy and the conduct of full or expedited reviews can be found at https://www.usitc.gov/news_releases. The Commission's explanation of its determinations can be found at https://www.usitc.gov/sites/default/files/trade_remedy/731_ad_701_cvd/investigations/explanation_of_adq_8.pdf.

APPENDIX B

LIST OF HEARING WITNESSES

CALENDAR OF PUBLIC HEARING

Those listed below appeared in the United States International Trade Commission's hearing via videoconference:

Subject:	Non-Oriented Electrical Steel from China, Germany, Japan, Korea, Sweden, and Taiwan
Inv. Nos.:	701-TA-506 and 508 and 731-TA-1238-1243 (Review)
Date and Time:	October 8, 2020 - 9:30 a.m.

OPENING REMARKS:

In Support of Continuation (**Stephen P. Vaughn**, King & Spalding LLP)
In Opposition to Continuation (**J. Kevin Horgan**, deKieffer & Horgan, PLLC)

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

King & Spalding LLP
Washington, DC
on behalf of

AK Steel Corporation ("AK Steel")
Cleveland-Cliffs Inc.

Clifford Smith, Executive Vice President and Chief Operating Officer, Cleveland-Cliffs Inc.

Geoff Pfeiffer, General Manager, Specialty Steel Sales, AK Steel

Steve Konstantinidis, Corporate Manager, Electrical Steel Sales, AK Steel

Stephen P. Vaughn)
) – OF COUNSEL
Neal J. Reynolds)

In Opposition to the Continuation of
Antidumping and Countervailing Duty Orders:

deKieffer & Horgan, PLLC
Washington, DC
on behalf of

thyssenkrupp Steel Europe AG
thyssenkrupp Steel North America, Inc.
(collectively "thyssenkrupp")

Jörg Wichert, Head of Foreign Trade & Export Regulations, thyssenkrupp

Michael Schmidtz, Head of Sales, thyssenkrupp

Robert J. Holt, President, thyssenkrupp

Chad C. Eberly, General Manager, Sales and Order Management, thyssenkrupp

J. Kevin Horgan) – OF COUNSEL

REBUTTAL/CLOSING REMARKS:

In Support of Continuation (**Stephen P. Vaughn**, King & Spalding LLP)
In Opposition to Continuation (**J. Kevin Horgan**, deKieffer & Horgan, PLLC)

-END-

APPENDIX C

SUMMARY DATA

Table C-1
NOES: Summary data concerning the U.S. market, 2014-19, January to June 2019, and January to June 2020

(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data							
	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
U.S. consumption quantity:								
Amount	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***
Importers' share (fn1):								
China	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***
Japan	***	***	***	***	***	***	***	***
Korea	***	***	***	***	***	***	***	***
Sweden	***	***	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***
U.S. consumption value:								
Amount	***	***	***	***	***	***	***	***
Producers' share (fn1)	***	***	***	***	***	***	***	***
Importers' share (fn1):								
China	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***
Japan	***	***	***	***	***	***	***	***
Korea	***	***	***	***	***	***	***	***
Sweden	***	***	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***
All import sources	***	***	***	***	***	***	***	***
U.S. imports from:								
China:								
Quantity	2,188	12	4	17	78	25	---	48
Value	1,840	21	8	21	115	26	---	33
Unit value	$841	$1,816	$1,757	$1,243	$1,483	$1,036	---	$693
Ending inventory quantity	***	***	***	***	***	***	***	***
Germany:								
Quantity	2,304	181	179	12	14	12	11	4
Value	2,538	170	233	32	41	30	27	19
Unit value	$1,102	$941	$1,296	$2,691	$3,025	$2,507	$2,466	$4,981
Ending inventory quantity	***	***	***	***	***	***	***	***
Japan:								
Quantity	8,571	5,166	800	398	50	105	87	30
Value	11,400	6,302	1,007	625	88	197	169	52
Unit value	$1,330	$1,220	$1,259	$1,572	$1,770	$1,879	$1,938	$1,706
Ending inventory quantity	***	***	***	***	***	***	***	***
Korea:								
Quantity	1,841	3,162	883	263	---	177	177	41
Value	1,776	2,930	1,028	333	---	196	196	50
Unit value	$965	$927	$1,165	$1,268	---	$1,104	$1,104	$1,235
Ending inventory quantity	***	***	***	***	***	***	***	***
Sweden:								
Quantity	4,700	228	760	323	502	184	91	68
Value	7,563	1,650	2,159	1,660	1,795	1,532	1,114	603
Unit value	$1,609	$7,247	$2,839	$5,133	$3,574	$8,333	$12,189	$8,931
Ending inventory quantity	***	***	***	***	***	***	***	***
Taiwan:								
Quantity	9,477	2,118	3,160	2,760	572	1,228	578	382
Value	7,664	1,581	2,052	1,990	547	1,189	580	356
Unit value	$809	$746	$649	$721	$957	$968	$1,003	$934
Ending inventory quantity	***	***	***	***	***	***	***	***
Subject sources:								
Quantity	29,082	10,867	5,787	3,772	1,215	1,731	945	572
Value	32,782	12,654	6,487	4,661	2,587	3,169	2,085	1,114
Unit value	$1,127	$1,164	$1,121	$1,235	$2,129	$1,831	$2,207	$1,947
Ending inventory quantity	***	***	***	***	***	***	***	***

Table continued.

Table C-1--Continued
NOES: Summary data concerning the U.S. market, 2014-19, January to June 2019, and January to June 2020

(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short tons; Period changes=percent--exceptions noted)

	Period changes						
		Comparison years					January to June
	2014-19	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
U.S. consumption quantity:							
Amount	▼***	▼***	▼***	▲***	▼***	▼***	▼***
Producers' share (fn1)	▲***	▼***	▲***	▼***	▲***	▼***	▲***
Importers' share (fn1):							
China	▼***	▼***	▼***	▲***	▲***	▼***	▲***
Germany	▼***	▼***	▲***	▼***	▲***	▼***	▼***
Japan	▼***	▼***	▼***	▼***	▼***	▲***	▼***
Korea	▼***	▲***	▼***	▼***	▼***	▲***	▼***
Sweden	▼***	▼***	▲***	▼***	▲***	▼***	▲***
Taiwan	▼***	▼***	▲***	▼***	▼***	▲***	▼***
Subject sources	▼***	▼***	▼***	▼***	▼***	▲***	▼***
Nonsubject sources	▲***	▲***	▼***	▲***	▼***	▼***	▼***
All import sources	▼***	▲***	▼***	▲***	▼***	▲***	▼***
U.S. consumption value:							
Amount	▼***	▼***	▼***	▲***	▲***	▼***	▼***
Producers' share (fn1)	▲***	▼***	▲***	▼***	▼***	▲***	▼***
Importers' share (fn1):							
China	▼***	▼***	▼***	▲***	▲***	▼***	▲***
Germany	▼***	▼***	▲***	▼***	▲***	▼***	▲***
Japan	▼***	▼***	▼***	▼***	▼***	▲***	▼***
Korea	▼***	▲***	▼***	▼***	▼***	▲***	▼***
Sweden	▼***	▼***	▲***	▼***	▲***	▼***	▼***
Taiwan	▼***	▼***	▲***	▼***	▼***	▲***	▼***
Subject sources	▼***	▼***	▼***	▼***	▼***	▲***	▼***
Nonsubject sources	▲***	▲***	▼***	▲***	▲***	▼***	▲***
All import sources	▼***	▲***	▼***	▲***	▲***	▼***	▲***
U.S. imports from:							
China:							
Quantity	▼(98.9)	▼(99.5)	▼(61.8)	▲277.3	▲367.6	▼(67.7)	▲---
Value	▼(98.6)	▼(98.9)	▼(63.1)	▲166.9	▲458.0	▼(77.5)	▲---
Unit value	▲23.2	▲115.9	▼(3.2)	▼(29.2)	▲19.3	▼(30.2)	▲---
Ending inventory quantity	▼***	***	▼***	▲***	***	▼***	***
Germany:							
Quantity	▼(99.5)	▼(92.2)	▼(0.7)	▼(93.4)	▲14.6	▼(13.2)	▼(65.2)
Value	▼(98.8)	▼(93.3)	▲36.7	▼(86.2)	▲28.8	▼(28.1)	▼(29.7)
Unit value	▲127.6	▼(14.5)	▲37.7	▲107.6	▲12.4	▼(17.1)	▲102.0
Ending inventory quantity	▼***	▼***	▼***	▼***	***	***	***
Japan:							
Quantity	▼(98.8)	▼(39.7)	▼(84.5)	▼(50.3)	▼(87.5)	▲109.8	▼(65.1)
Value	▼(98.3)	▼(44.7)	▼(84.0)	▼(38.0)	▼(85.9)	▲122.6	▼(69.3)
Unit value	▲41.2	▼(8.3)	▲3.2	▲24.8	▲12.6	▲6.1	▼(12.0)
Ending inventory quantity	▼***	▲***	▼***	▼***	▼***	***	***
Korea:							
Quantity	▼(90.4)	▲71.8	▼(72.1)	▼(70.3)	▼(100.0)	▲***	▼(77.0)
Value	▼(89.0)	▲65.0	▼(64.9)	▼(67.6)	▼(100.0)	▲***	▼(74.2)
Unit value	▲14.4	▼(4.0)	▲25.7	▲8.9	▼(100.0)	▲***	▲11.9
Ending inventory quantity	▼***	▲***	▼***	▼***	▼***	▼***	***
Sweden:							
Quantity	▼(96.1)	▼(95.2)	▲234.0	▼(57.5)	▲55.3	▼(63.4)	▼(26.1)
Value	▼(79.7)	▼(78.2)	▲30.8	▼(23.1)	▲8.1	▼(14.6)	▼(45.8)
Unit value	▲417.9	▲350.4	▼(60.8)	▲80.8	▼(30.4)	▲133.2	▼(26.7)
Ending inventory quantity	***	***	***	***	***	***	***
Taiwan:							
Quantity	▼(87.0)	▼(77.7)	▲49.2	▼(12.7)	▼(79.3)	▲114.9	▼(34.0)
Value	▼(84.5)	▼(79.4)	▲29.8	▼(3.0)	▼(72.5)	▲117.4	▼(38.6)
Unit value	▲19.7	▼(7.7)	▼(13.0)	▲11.0	▲32.8	▲1.1	▼(6.9)
Ending inventory quantity	▼***	▼***	▼***	▼***	***	***	***
Subject sources:							
Quantity	▼(94.0)	▼(62.6)	▼(46.7)	▼(34.8)	▼(67.8)	▲42.5	▼(39.5)
Value	▼(90.3)	▼(61.4)	▼(48.7)	▼(28.2)	▼(44.5)	▲22.5	▼(46.6)
Unit value	▲62.4	▲3.3	▼(3.7)	▲10.2	▲72.3	▼(14.0)	▼(11.8)
Ending inventory quantity	▼***	▲***	▼***	▼***	▼***	▼***	***

Table continued.

Table C-1--Continued
NOES: Summary data concerning the U.S. market, 2014-19, January to June 2019, and January to June 2020

(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data							
	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
U.S. imports from:								
Nonsubject sources:								
Quantity	24,656	35,095	22,766	28,882	25,078	22,923	12,272	8,438
Value	27,876	37,481	22,854	31,264	34,054	30,826	16,815	11,276
Unit value	$1,131	$1,068	$1,004	$1,082	$1,358	$1,345	$1,370	$1,336
Ending inventory quantity	***	***	***	***	***	***	***	***
All import sources:								
Quantity	53,738	45,962	28,554	32,655	26,293	24,655	13,217	9,010
Value	60,658	50,134	29,341	35,925	36,641	33,996	18,901	12,390
Unit value	$1,129	$1,091	$1,028	$1,100	$1,394	$1,379	$1,430	$1,375
Ending inventory quantity	***	***	***	***	***	***	***	***
U.S. producers':								
Average capacity quantity	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***
Capacity utilization (fn1)	***	***	***	***	***	***	***	***
U.S. shipments:								
Quantity	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***
Export shipments:								
Quantity	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***
Inventories/total shipments (fn1)	***	***	***	***	***	***	***	***
Production workers	***	***	***	***	***	***	***	***
Hours worked (1,000s)	***	***	***	***	***	***	***	***
Wages paid ($1,000)	***	***	***	***	***	***	***	***
Hourly wages	***	***	***	***	***	***	***	***
Productivity (short tons per 1,000 hours)	***	***	***	***	***	***	***	***
Unit labor costs	***	***	***	***	***	***	***	***
Net sales:								
Quantity	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***
Cost of goods sold (COGS)	***	***	***	***	***	***	***	***
Gross profit of (loss)	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***
Net income or (loss)	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***
Research and development expenses	***	***	***	***	***	***	***	***
Net assets	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***
Unit net income or (loss)	***	***	***	***	***	***	***	***
COGS/sales (fn1)	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***
Net income or (loss)/sales (fn1)	***	***	***	***	***	***	***	***

Table continued.

Table C-1--Continued
NOES: Summary data concerning the U.S. market, 2014-19, January to June 2019, and January to June 2020

(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Period changes						
		Comparison years					January to June
	2014-19	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
U.S. imports from:							
Nonsubject sources:							
Quantity	▼(7.0)	▲42.3	▼(35.1)	▲26.9	▼(13.2)	▼(8.6)	▼(31.2)
Value	▲10.6	▲34.5	▼(39.0)	▲36.8	▲8.9	▼(9.5)	▼(32.9)
Unit value	▲18.9	▼(5.5)	▼(6.0)	▲7.8	▲25.4	▼(1.0)	▼(2.5)
Ending inventory quantity	▼***	▲***	▲***	▲***	▼***	▲***	▲***
All import sources:							
Quantity	▼(54.1)	▼(14.5)	▼(37.9)	▲14.4	▼(19.5)	▼(6.2)	▼(31.8)
Value	▼(44.0)	▼(17.3)	▼(41.5)	▲22.4	▲2.0	▼(7.2)	▼(34.4)
Unit value	▲22.2	▼(3.4)	▼(5.8)	▲7.1	▲26.7	▼(1.1)	▼(3.8)
Ending inventory quantity	▼***	▲***	▼***	▼***	▼***	▲***	▲***
U.S. producers':							
Average capacity quantity	***	***	***	***	***	***	***
Production quantity	▼***	▼***	▼***	▲***	▲***	▼***	▼***
Capacity utilization (fn1)	▼***	▼***	▼***	▲***	▲***	▼***	▼***
U.S. shipments:							
Quantity	▼***	▼***	▼***	▲***	▼***	▼***	▼***
Value	▼***	▼***	▼***	▲***	▲***	▼***	▼***
Unit value	▲***	▼***	▼***	▲***	▲***	▲***	▼***
Export shipments:							
Quantity	▼***	▼***	▼***	▲***	▼***	▼***	▼***
Value	▼***	▼***	▼***	▲***	▼***	▼***	▼***
Unit value	▲***	▼***	▼***	▲***	▲***	▲***	▼***
Ending inventory quantity	▼***	▼***	▼***	▲***	▲***	▼***	▼***
Inventories/total shipments (fn1)	▼***	▲***	▼***	▼***	▲***	▼***	▲***
Production workers	▼***	▼***	▼***	▲***	▼***	▲***	▼***
Hours worked (1,000s)	▼***	▼***	▼***	▲***	▼***	▲***	▼***
Wages paid ($1,000)	▼***	▼***	▼***	▲***	▼***	▲***	▼***
Hourly wages	▼***	▲***	▼***	▲***	▼***	▲***	▼***
Productivity (short tons per 1,000 hours)	▼***	▼***	▼***	▲***	▲***	▼***	▼***
Unit labor costs	▲***	▲***	▲***	▼***	▼***	▲***	▲***
Net sales:							
Quantity	▼***	▼***	▼***	▲***	▼***	▼***	▼***
Value	▼***	▼***	▼***	▲***	▼***	▼***	▼***
Unit value	▲***	▼***	▼***	▲***	▲***	▲***	▼***
Cost of goods sold (COGS)	▼***	▼***	▼***	▲***	▼***	▼***	▼***
Gross profit of (loss) (fn 2)	▼***	▼***	▲***	▼***	▲***	▼***	▼***
SG&A expenses	▼***	▼***	▼***	▼***	▼***	▼***	▼***
Operating income or (loss) (fn 2)	▼***	▼***	▼***	▼***	▼***	▼***	▲***
Net income or (loss) (fn 2)	▼***	▼***	▼***	▼***	▼***	▼***	▼***
Capital expenditures	▼***	▲***	▼***	▼***	▲***	▼***	▼***
Research and development expenses	▼***	▲***	▼***	▼***	▲***	▼***	▼***
Net assets	▼***	▼***	▼***	▲***	▼***	▲***	***
Unit COGS	▲***	▼***	▲***	▲***	▲***	▼***	▲***
Unit SG&A expenses	▲***	▲***	▲***	▼***	▼***	▲***	▼***
Unit operating income or (loss) (fn 2)	▼***	▲***	▲***	▼***	▼***	▼***	▲***
Unit net income or (loss) (fn 2)	▲***	▲***	▲***	▼***	▼***	▼***	▲***
COGS/sales (fn1)	▼***	▲***	▲***	▼***	▲***	▼***	▲***
Operating income or (loss)/sales (fn1)	▲***	▼***	▼***	▲***	▲***	▲***	▼***
Net income or (loss)/sales (fn1)	▼***	▼***	▼***	▲***	▲***	▲***	▼***

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 "---". Shares preceded by a "▲" represent an increase, while shares 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.

Source: Compiled from data submitted in response to Commission questionnaires and official U.S. import statistics using HTS statistical reporting numbers 7225.19.0000, 7226.19.1000, and 7226.19.9000, accessed August 9, 2020.

HISTORICAL DATA

Table C-1
NOES: Summary data concerning the U.S. market, 2011-13, January to June 2013, and January to June 2014
(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year			January to June		Calendar year			Jan-Jun
	2011	2012	2013	2013	2014	2011-13	2011-12	2012-13	2013-14
U.S. consumption quantity:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***
Importers' share (1):									
China	***	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***	***
Japan	***	***	***	***	***	***	***	***	***
Korea	***	***	***	***	***	***	***	***	***
Sweden	***	***	***	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***
U.S. consumption value:									
Amount	***	***	***	***	***	***	***	***	***
Producers' share (1)	***	***	***	***	***	***	***	***	***
Importers' share (1):									
China	***	***	***	***	***	***	***	***	***
Germany	***	***	***	***	***	***	***	***	***
Japan	***	***	***	***	***	***	***	***	***
Korea	***	***	***	***	***	***	***	***	***
Sweden	***	***	***	***	***	***	***	***	***
Taiwan	***	***	***	***	***	***	***	***	***
Subject sources	***	***	***	***	***	***	***	***	***
Nonsubject sources	***	***	***	***	***	***	***	***	***
Total imports	***	***	***	***	***	***	***	***	***
U.S. imports from:									
China:									
Quantity	16,401	14,042	12,724	8,217	1,747	(22.4)	(14.4)	(9.4)	(78.7)
Value	19,702	15,305	12,231	7,912	1,498	(37.9)	(22.3)	(20.1)	(81.1)
Unit value	$1,201	$1,090	$961	$963	$858	(20.0)	(9.3)	(11.8)	(10.9)
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Germany:									
Quantity	14,385	9,568	7,493	3,795	2,282	(47.9)	(33.5)	(21.7)	(39.9)
Value	19,492	11,224	8,342	4,163	2,512	(57.2)	(42.4)	(25.7)	(39.7)
Unit value	$1,355	$1,173	$1,113	$1,097	$1,101	(17.8)	(13.4)	(5.1)	0.4
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Japan:									
Quantity	22,747	18,540	15,916	6,887	4,969	(30.0)	(18.5)	(14.2)	(27.9)
Value	29,889	23,625	20,035	8,500	7,037	(33.0)	(21.0)	(15.2)	(17.2)
Unit value	$1,314	$1,274	$1,259	$1,234	$1,416	(4.2)	(3.0)	(1.2)	14.7
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Korea:									
Quantity	6,880	7,331	4,622	1,357	1,823	(32.8)	6.6	(36.9)	34.3
Value	7,605	6,830	4,207	1,311	1,752	(44.7)	(10.2)	(38.4)	33.7
Unit value	$1,105	$932	$910	$966	$961	(17.7)	(15.7)	(2.3)	(0.5)
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Sweden:									
Quantity	8,599	9,359	7,068	3,559	3,162	(17.8)	8.8	(24.5)	(11.2)
Value	14,467	15,394	10,556	5,283	4,684	(27.0)	6.4	(31.4)	(11.3)
Unit value	$1,682	$1,645	$1,494	$1,484	$1,482	(11.2)	(2.2)	(9.2)	(0.2)
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Taiwan:									
Quantity	5,203	17,136	9,768	2,637	8,691	87.7	229.4	(43.0)	229.6
Value	6,459	18,231	8,745	2,485	7,009	35.4	182.2	(52.0)	182.1
Unit value	$1,242	$1,064	$895	$942	$806	(27.9)	(14.3)	(15.8)	(14.4)
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Subject sources:									
Quantity	74,215	75,977	57,591	26,453	22,674	(22.4)	2.4	(24.2)	(14.3)
Value	97,615	90,608	64,116	29,654	24,494	(34.3)	(7.2)	(29.2)	(17.4)
Unit value	$1,315	$1,193	$1,113	$1,121	$1,080	(15.4)	(9.3)	(6.6)	(3.6)
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Nonsubject sources:									
Quantity	6,790	6,242	3,879	1,168	8,001	(42.9)	(8.1)	(37.9)	585.1
Value	11,087	8,066	4,956	1,621	9,441	(55.3)	(27.2)	(38.6)	482.4
Unit value	$1,633	$1,292	$1,278	$1,388	$1,180	(21.8)	(20.9)	(1.1)	(15.0)
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Total imports:									
Quantity	81,005	82,219	61,470	27,620	30,675	(24.1)	1.5	(25.2)	11.1
Value	108,702	98,674	69,072	31,275	33,936	(36.5)	(9.2)	(30.0)	8.5
Unit value	$1,342	$1,200	$1,124	$1,132	$1,106	(16.3)	(10.6)	(6.4)	(2.3)
Ending inventory quantity	***	***	***	***	***	***	***	***	***

Table continued next page.

Table C-1--Continued

NOES: Summary data concerning the U.S. market, 2011-13, January to June 2013, and January to June 2014

(Quantity=short tons; Value=1,000 dollars; Unit values, unit labor costs, and unit expenses=dollars per short ton; Period changes=percent--exceptions noted)

	Reported data					Period changes			
	Calendar year			January to June		Calendar year			Jan-Jun
	2011	2012	2013	2013	2014	2011-13	2011-12	2012-13	2013-14
U.S. producers':									
Average capacity quantity	***	***	***	***	***	***	***	***	***
Production quantity	***	***	***	***	***	***	***	***	***
Capacity utilization (1)	***	***	***	***	***	***	***	***	***
U.S. shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Export shipments:									
Quantity	***	***	***	***	***	***	***	***	***
Value	***	***	***	***	***	***	***	***	***
Unit value	***	***	***	***	***	***	***	***	***
Ending inventory quantity	***	***	***	***	***	***	***	***	***
Inventories/total shipments (1)	***	***	***	***	***	***	***	***	***
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 of (loss)	***	***	***	***	***	***	***	***	***
SG&A expenses	***	***	***	***	***	***	***	***	***
Operating income or (loss)	***	***	***	***	***	***	***	***	***
Capital expenditures	***	***	***	***	***	***	***	***	***
Unit COGS	***	***	***	***	***	***	***	***	***
Unit SG&A expenses	***	***	***	***	***	***	***	***	***
Unit operating income or (loss)	***	***	***	***	***	***	***	***	***
COGS/sales (1)	***	***	***	***	***	***	***	***	***
Operating income or (loss)/sales (1)	***	***	***	***	***	***	***	***	***

Notes:

(1)--Reported data are in percent and period changes are in percentage points.
(2)--Undefined.

Source: Official statistics of the U.S. Department of Commerce and from data submitted in response to Commission questionnaires.

APPENDIX D

LIKELY EFFECT OF REVOCATION

Table D-1
NOES: Firms' narratives on the impact of the orders and the likely impact of revocation

Item / Firm	Narrative
U.S. producer: Effect of order on firm:	
***	***
U.S. producer: Likely impact of revocation on firm:	
***	***
U.S. importers: Effect of order on firm:	
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***

Table continued on next page.

Table D-1—Continued
NOES: Firms' narratives on the impact of the orders and the likely impact of revocation

Item / Firm	Narrative
U.S. importers: Likely impact of revocation on firm:	
***	***
***	***
***	***
***	***
***	***
***	***
U.S. purchasers: Effect of order on firm:	
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***

Table continued on next page.

Table D-1—Continued
NOES: Firms' narratives on the impact of the orders and the likely impact of revocation

Item / Firm	Narrative
U.S. purchasers: Likely impact of revocation on firm:	
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
***	***
Foreign producers or exporters: Effect of order on firm:	
***	***
***	***
***	***
***	***

Table continued on next page.

Table D-1—Continued
NOES: Firms' narratives on the impact of the orders and the likely impact of revocation

Item / Firm	Narrative
Foreign producers or exporters: Likely impact of revocation on firm:	
***	***
***	***
***	***

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

APPENDIX E

SECTION 232 and SECTION 301 MEASURES

Appendix table E-1
Section 232 actions: Presidential proclamations affecting imports of steel articles, since 2018

Item	Action and duration (effective dates)	Federal Register Notice
General action	The President implemented 25 percent ad valorem national-security duties on U.S. steel imports— March 23, 2018 to present.	83 FR 11625[1]
Argentina	Exempted from duties— March 23, 2018 to April 30, 2018.	83 FR 13361[2]
	Exemption from duties continued— May 1, 2018 to May 31, 2018.	83 FR 20683[3]
	Exemption from duties continued, but subject to annual quota limits— June 1, 2018 to present.	83 FR 25857[4]
Australia	Exempted from duties— March 23, 2018 to April 30, 2018.	83 FR 13361[2]
	Exemption from duties continued— May 1, 2018 to May 31, 2018.	83 FR 20683[3]
	Exemption from duties continued— June 1, 2018 to present.	83 FR 40429[5]
Brazil	Exempted from duties— March 23, 2018 to April 30, 2018	83 FR 13361[2]
	Exemption from duties continued— May 1, 2018 to May 31, 2018	83 FR 20683[3]
	Exemption from duties continued, but subject to annual quota limits— June 1, 2018 to present.	83 FR 25857[4]
Canada	Exempted from duties— March 23, 2018 to May 31, 2018.	83 FR 11625[1]
	Exemption from duties not continued— June 1, 2018 to May 19, 2019.	83 FR 20683[3]
	Exemption from duties reinstated— May 20, 2019 to present.	84 FR 23987[6]
European Union ("EU") member countries	Exempted from duties— March 23, 2018 to April 30, 2018.	83 FR 13361[2]
	Exemption from duties continued— May 1, 2018 to May 31, 2018.	83 FR 20683[3]
	Exemption from duties not continued— June 1, 2018 to present.	83 FR 20683[3]
Korea	Exempted from duties— March 23, 2018 to April 30, 2018.	83 FR 13361[2]
	Exemption from duties continued, but subject to annual quota limits— May 1, 2018 to present.	83 FR 20683[3]
Mexico	Exempted from duties— March 23, 2018 to May 31, 2018.	83 FR 11625[1]
	Exemption from duties not continued— June 1, 2018 to May 19, 2019.	83 FR 20683[3]
	Exemption from duties reinstated— May 20, 2019 to present.	84 FR 23987[6]
Turkey	Duty rate doubled to 50 percent ad valorem— August 13, 2018 to May 20, 2019.	83 FR 40429[5]
	Duty rate reduced from 50 percent to 25 percent ad valorem— May 21, 2019 to present.	84 FR 23421[7]

Source continued on next page.

Appendix table E-1—Continued
Section 232 actions: Presidential proclamations affecting imports of steel articles, since 2018

[1] *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9705, March 8, 2018, 83 FR 11625, March 15, 2018.
[2] *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9711, March 22, 2018, 83 FR 13361, March 28, 2018.
[3] *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9740, April 30, 2018, 83 FR 20683, May 7, 2018.
[4] *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9759, May 31, 2018, 83 FR 25857, June 5, 2018.
[5] *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9772, August 10, 2018, 83 FR 40429, August 15, 2018.
[6] *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9894, May 19, 2019, 84 FR 23987, May 23, 2019.
[7] *Adjusting Imports of Steel Into the United States*, Presidential Proclamation 9886, May 16, 2019, 84 FR 23421, May 21, 2019.

Note.--Presidential Proclamation 9705 (clause (1)) defined ”steel articles” at the Harmonized Tariff Schedule of the United States (“HTS”) 6-digit level as: 7206.10 through 7216.50, 7216.99 through 7301.10, 7302.10, 7302.40 through 7302.90, and 7304.10 through 7306.90, including any subsequent revisions to these HTS classifications. Annual quota limits for silicon electrical steel sheets and strip, provided for in subheadings 7225.11.00, 7225.19.00, 7226.11.10, 7226.11.90, 7226.19.10 or 7226.19.90 (including NOES) are as follows: Argentina (0 short tons); Brazil (2,410 short tons); Korea (8,274 short tons).[1]

[1] This CBP quota product category includes products such as GOES that are not subject to these investigations. Subject NOES may also fall under other quota product categories not listed here (see table I-4). U.S. Customs and Border Protection (“CBP”), “QB 20-602 2020 2QTR Absolute Quota for Steel Mill Articles: Argentina, Brazil and South Korea,” https://www.cbp.gov/trade/quota/bulletins/qb-20-602-2020-2qtr-absolute-quota-steel-mill-articles-argentina-brazil-and-south-korea, retrieved September 22, 2020.

Table E-2
Section 301 actions: Office of the United States Trade Representative ("USTR") proceedings, 2018-20

Product list	Effective date	Action
Tranche 1	July 6, 2018	**Enacted:** Additional 25 percent ad valorem duties on approximately $34 billion of imports classifiable under 818 HTS tariff subheadings (Annex A to 83 FR 28710).[1]
Tranche 2	August 23, 2018	**Enacted:** Additional 25 percent ad valorem duties on approximately $16 billion of imports classifiable under 279 HTS tariff subheadings (Annex A to 83 FR 40823).[2]
Tranche 3	September 24, 2018	**Enacted:** Additional 10 percent ad valorem duties on approximately $200 billion of imports classifiable under 5,745 HTS tariff subheadings and partial subheadings (Annex A to 83 FR 47974), which are scheduled to increase to 25 percent on January 1, 2019 (Annex B to 83 FR 47974).[3]
Tranche 3	October 1, 2018	**Amendment:** Fourteen HTS tariff subheadings in chapter 44 (under Annex A to 83 FR 47974, September 21, 2018) were removed and replaced by 38 corresponding new HTS subheadings to conform to the International Convention on the Harmonized Commodity Description and Coding System.[4]
Tranche 3	March 2, 2019	**Postponed:** Duty increases from 10 percent to 25 percent were rescheduled (83 FR 65198).[5]
Tranche 3	Not applicable	**Postponed:** Additional ad valorem duties to remain at 10 percent until further notice (84 FR 7966).[6]
Tranche 3	May 10, 2019	**Enacted:** Duty increases from 10 percent to 25 percent ad valorem were rescheduled (84 FR 20459).[7]
Tranche 3	Prior to June 1, 2019	**Enacted:** Delayed duty increases from 10 percent to 25 percent ad valorem enacted May 10, 2019 on certain products exported from China before May 10, 2019, that enter into the United States before June 1, 2019 (84 FR 21892).[8]
Tranche 3	Prior to June 15, 2019	**Enacted:** The date was extended for the delayed duty increase from 10 percent to 25 percent ad valorem on certain products exported from China before May 10, 2019 that enter into the United States before June 15, 2019 (84 FR 26930).[9]
Tranche 4, List 1	September 1, 2019	**Enacted:** Additional 10 percent ad valorem duties on imports classifiable under 3,229 full HTS tariff subheadings and 4 partial HTS subheadings (Annexes A and B to 84 FR 43304). Imports on products classifiable under HTS subheadings on lists 1 and 2 totaled approximately $300 billion.[10]
Tranche 4, List 2	December 15, 2019	**Enacted:** Additional 10 percent ad valorem duties on imports classifiable under 542 full HTS tariff subheadings and 8 partial HTS subheadings (Annexes C and D to 84 FR 43304). Imports on products classifiable under HTS subheadings on lists 1 and 2 totaled approximately $300 billion.[10]
Tranche 4, List 1	September 1, 2019	**Amendment:** Additional 10 percent ad valorem duties were increased to 15 percent ad valorem on products covered by Annex A (84 FR 45821).[11]
Tranche 4, List 2	December 15, 2019	**Amendment:** Additional 10 percent ad valorem duties were increased to 15 percent ad valorem on products covered by Annex C (84 FR 45821).[11]

Table continued on next page.

Table E-2—Continued
Section 301 actions: Office of the United States Trade Representative ("USTR") proceedings, 2018-20

Product list	Effective date	Action
Tranches 1, 2, and 3	October 1, 2019	**Proposed:** Additional 25 percent ad valorem duties to be increased 30 percent ad valorem on products covered by Annex A – List 1, Annex B – List 2, Annex C – List 3, Parts 1 and 2 (84 FR 46212).[12]
Tranche 4, List 2	December 15, 2019	**Amendment:** Additional 15 percent ad valorem duties to be suspended on products covered by List 2 (84 FR 69447).[13]
Tranche 4, List 1	February 14, 2020	**Amendment:** Additional 15 percent ad valorem duties to be reduced to 7.5 percent on product covered by List 1 (85 FR 3741).[14]

[1] USTR, *Notice of Action and Request for Public Comment Concerning Proposed Determination of Action Pursuant to Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 28710, June 20, 2018.

[2] USTR, *Notice of Action Pursuant to Section 301: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 40823, August 16, 2018.

[3] USTR, *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 47974, September 21, 2018.

[4] USTR, *Conforming Amendment and Modification to Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 49153, September 28, 2018.

[5] USTR, *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 83 FR 65198, December 19, 2018.

[6] USTR, *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 7966, March 5, 2019.

[7] USTR, *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 20459, May 9, 2019.

[8] USTR, *Implementing Modification to Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 21892, May 15, 2019

[9] USTR, *Additional Implementing Modification to Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation,* 84 FR 26930, June 10, 2019.

[10] USTR, *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 43304, August 20, 2019.

[11] USTR, *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 45821, August 30, 2019.

[12] USTR, *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 46212, September 3, 2019.

[13] USTR, *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 84 FR 69447, December 18, 2019. Amendment of the additional 15 percent ad valorem duties on products covered by List 1 to be announced in a subsequent notice published in the *Federal Register*.

[14] USTR, *Notice of Modification of Section 301 Action: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation*, 85 FR 3741, January 22, 2020.

APPENDIX F

U.S. IMPORTS OF GRAIN-ORIENTED ELECTRICAL STEEL ("GOES")

Table F-1
GOES: U.S. imports, by source, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Quantity (short tons)							
U.S. imports from.--								
Brazil	961	1,697	2,838	1,235	1,561	2,393	1,226	468
China	343	502	3,596	9,988	5,080	1,152	629	543
Czech Republic	1,829	3,042	4,082	4,739	1,010	413	413	14
France	5,250	1,151	---	255	43	---	---	---
Germany	846	439	25	17	49	276	---	---
Japan	3,943	10,698	11,461	28,156	19,016	7,255	4,967	1,886
Korea	477	4,544	5,810	20,798	25,126	13,134	5,258	4,853
Oman	---	---	---	---	---	---	---	---
Poland	227	155	203	1,119	1,821	1,014	706	264
Russia	305	4,163	6,284	4,555	2,728	705	438	906
Sweden	40	---	---	28	19	---	---	2
Taiwan	26	---	11	17	---	---	---	---
Turkey	---	---	---	---	---	---	---	---
All other	6,477	3,715	3,052	3,039	8,111	3,162	2,892	127
All import sources	20,724	30,106	37,361	73,946	64,565	29,503	16,529	9,063
	Value (1,000 dollars)							
U.S. imports from.--								
Brazil	1,650	3,053	4,776	1,779	2,532	4,114	2,180	703
China	767	1,058	6,538	16,015	8,103	2,613	1,470	996
Czech Republic	3,100	6,090	7,030	7,472	1,736	804	804	28
France	11,972	3,450	---	562	65	---	---	---
Germany	1,510	886	30	52	107	689	---	---
Japan	9,473	26,319	27,859	66,398	46,729	17,561	11,807	4,498
Korea	1,040	9,171	11,901	34,602	43,806	23,972	9,677	8,608
Oman	---	---	---	---	---	---	---	---
Poland	438	391	394	2,098	3,598	2,094	1,439	542
Russia	661	9,648	13,374	11,448	5,175	1,776	1,056	1,668
Sweden	384	---	---	61	50	---	---	5
Taiwan	40	---	15	27	---	---	---	---
Turkey	---	---	---	---	---	---	---	---
All other	14,501	8,558	7,035	7,711	11,357	2,886	2,583	231
All import sources	45,537	68,624	78,953	148,226	123,259	56,510	31,016	17,280

Table continued on next page.

Table F-1—Continued
GOES: U.S. imports, by source, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Unit value (dollars per short ton)							
U.S. imports from.--								
Brazil	1,716	1,799	1,683	1,441	1,622	1,720	1,777	1,503
China	2,238	2,106	1,818	1,603	1,595	2,269	2,338	1,833
Czech Republic	1,695	2,002	1,722	1,577	1,720	1,949	1,949	2,011
France	2,281	2,998	---	2,207	1,510	---	---	---
Germany	1,785	2,020	1,222	3,052	2,171	2,495	---	---
Japan	2,403	2,460	2,431	2,358	2,457	2,421	2,377	2,386
Korea	2,182	2,018	2,048	1,664	1,743	1,825	1,840	1,774
Oman	---	---	---	---	---	---	---	---
Poland	1,928	2,524	1,946	1,874	1,976	2,066	2,038	2,053
Russia	2,168	2,317	2,128	2,513	1,897	2,520	2,411	1,841
Sweden	9,546	---	---	2,170	2,685	---	---	2,086
Taiwan	1,556	---	1,445	1,602	---	---	---	---
Turkey	---	---	---	---	---	---	---	---
All other	2,239	2,304	2,305	2,538	1,400	912	893	1,816
All import sources	2,197	2,279	2,113	2,005	1,909	1,915	1,876	1,907
	Share of quantity (percent)							
U.S. imports from.--								
Brazil	4.6	5.6	7.6	1.7	2.4	8.1	7.4	5.2
China	1.7	1.7	9.6	13.5	7.9	3.9	3.8	6.0
Czech Republic	8.8	10.1	10.9	6.4	1.6	1.4	2.5	0.2
France	25.3	3.8	---	0.3	0.1	---	---	---
Germany	4.1	1.5	0.1	0.0	0.1	0.9	---	---
Japan	19.0	35.5	30.7	38.1	29.5	24.6	30.0	20.8
Korea	2.3	15.1	15.5	28.1	38.9	44.5	31.8	53.5
Oman	---	---	---	---	---	---	---	---
Poland	1.1	0.5	0.5	1.5	2.8	3.4	4.3	2.9
Russia	1.5	13.8	16.8	6.2	4.2	2.4	2.6	10.0
Sweden	0.2	---	---	0.0	0.0	---	---	0.0
Taiwan	0.1	---	0.0	0.0	---	---	---	---
Turkey	---	---	---	---	---	---	---	---
All other	31.3	12.3	8.2	4.1	12.6	10.7	17.5	1.4
All import sources	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table continued on next page.

Table F-1—Continued
GOES: U.S. imports, by source, 2014-19, January to June 2019, and January to June 2020

Item	Calendar year						January to June	
	2014	2015	2016	2017	2018	2019	2019	2020
	Share of value (percent)							
U.S. imports from.--								
Brazil	3.6	4.4	6.0	1.2	2.1	7.3	7.0	4.1
China	1.7	1.5	8.3	10.8	6.6	4.6	4.7	5.8
Czech Republic	6.8	8.9	8.9	5.0	1.4	1.4	2.6	0.2
France	26.3	5.0	---	0.4	0.1	---	---	---
Germany	3.3	1.3	0.0	0.0	0.1	1.2	---	---
Japan	20.8	38.4	35.3	44.8	37.9	31.1	38.1	26.0
Korea	2.3	13.4	15.1	23.3	35.5	42.4	31.2	49.8
Oman	---	---	---	---	---	---	---	---
Poland	1.0	0.6	0.5	1.4	2.9	3.7	4.6	3.1
Russia	1.5	14.1	16.9	7.7	4.2	3.1	3.4	9.7
Sweden	0.8	---	---	0.0	0.0	---	---	0.0
Taiwan	0.1	---	0.0	0.0	---	---	---	---
Turkey	---	---	---	---	---	---	---	---
All other	31.8	12.5	8.9	5.2	9.2	5.1	8.3	1.3
All import sources	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

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

Source: Official U.S. import statistics using HTS statistical reporting numbers 7225.11.0000, 7226.11.1000, 7226.11.9030, 7226.11.9060, accessed October 19, 2020.