

Billing Code 3390-F3

OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE

Docket Number USTR-2024-0007

Request for Comments on Proposed Modifications and Machinery Exclusion

Process in Four-Year Review of Actions Taken in the Section 301 Investigation:

China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation

AGENCY: Office of the United States Trade Representative (USTR).

ACTION: Request for comments.

SUMMARY: In a notice published September 8, 2022 (87 FR 55073), the Office of the United States Trade Representative (USTR) announced that the July 6, 2018, and the August 23, 2018, actions, as modified, in the Section 301 investigation of China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation did not terminate on their four-year anniversary dates and would continue. The notice also announced that, in accordance with section 307(c)(3) of the Trade Act of 1974, as amended (Trade Act) (19 U.S.C. 2417(c)(3)), the U.S. Trade Representative (Trade Representative) would conduct a review of the actions. In connection with that review, and in accordance with section 307(c) and 307(a)(1) of the Trade Act (19 U.S.C. 2417(c), (a)(1)) and the specific direction of the President, the Trade Representative is proposing modifications to the actions. The Trade Representative is proposing modifying the actions by adding or increasing section 301 *ad valorem* rates of duty, as directed by the President, for certain products of China in strategic sectors. In addition, the Trade Representative is proposing subheadings eligible for an exclusion process by which

interested persons may request that particular machinery used in domestic manufacturing be temporarily excluded from section 301 tariffs. The Trade Representative is also proposing to modify the actions by granting 19 temporary exclusions for certain solar manufacturing equipment. The products subject to these proposed modifications and the products being proposed for the exclusion process are set out in annexes to this notice. USTR is seeking public comments regarding the proposed modifications and exclusion process.

DATES:

May 29, 2024, at 12:01 a.m. EDT: The public docket on the web portal at <https://comments.ustr.gov> will open for interested persons to submit comments.

June 28, 2024, at 11:59 p.m. EST: To be assured of consideration, submit written comments on the public docket by this date.

ADDRESSES: You must submit all comments through the online portal:

<https://comments.ustr.gov>.

FOR FURTHER INFORMATION CONTACT: For questions about this notice, contact Philip Butler and Megan Grimball, Chairs of the Section 301 Committee, (202) 395-5725.

SUPPLEMENTARY INFORMATION:

A. Background

On August 24, 2017, the U.S. Trade Representative initiated an investigation into certain acts, policies, and practices of the Government of China related to technology transfer, intellectual property, and innovation under Section 301 of the Trade Act (19 U.S.C. 2411). *See* 82 FR 40213. In a notice published on April 6, 2018, the U.S. Trade

Representative determined that acts, policies, and practices of the Government of China related to technology transfer, intellectual property, and innovation were unreasonable or discriminatory, and burdened or restricted U.S. commerce, and thus were actionable under section 301(b) of the Trade Act (19 U.S.C. 2411(b)). *See* 83 FR 14906.

Following a notice and comment process on the proposed action to be taken in the investigation, the U.S. Trade Representative took two actions under section 301 of the Trade Act: the July 6, 2018, action, covering an approximate annual trade value of \$34 billion (List 1), and the August 23, 2018, action, covering an approximate annual trade value of \$16 billion (List 2). *See* 83 FR 28710 (July 6, 2018 action) and 83 FR 40823 (August 23, 2018 action). These actions subsequently were modified by imposing additional duties on supplemental lists of products, known as Lists 3 and 4, as well as by the temporary removal of duties on certain products through product exclusions.

On May 5, 2022, USTR announced that, under section 307(c)(2) of the Trade Act (19 U.S.C. 2417(c)(2)), the July 6, 2018, and August 23, 2018, actions, as modified, were subject to possible termination on their respective four-year anniversary dates (*i.e.*, July 6, 2022, and August 23, 2022, respectively) and of the opportunity for representatives of domestic industries that benefit from the trade actions to request continuation of the actions during the last sixty days of such four-year periods. *See* 87 FR 26797.

On September 8, 2022, USTR announced that the July 6, 2018, and August 23, 2018, actions, as modified, would remain in effect because at least one representative of a domestic industry that benefits from each action submitted to the U.S. Trade Representative a request for continuation of the actions. *See* 87 FR 55073. The notice also announced that, in accordance with Section 307(c)(3) of the Trade Act (19 U.S.C.

2417(c)(3)), the U.S. Trade Representative would conduct a review of the July 6, 2018, and August 23, 2018, actions, as modified. *See* 87 FR 55073.

To aid in this review, on November 15, 2022, USTR opened a docket for interested persons to submit comments with respect to a number of considerations concerning the review. *See* 87 FR 62914. USTR received approximately 1,500 comments.

Pursuant to Section 307(c)(3) of the Trade Act (19 U.S.C. 2417(c)(3)), and based on information obtained during the review, including the written submissions, USTR, in consultation with the Section 301 Committee, prepared a comprehensive report, which included findings on the effectiveness of the July 6, 2018, and August 23, 2018, actions, as modified, in achieving the objectives of the investigation, other actions that could be taken, and the effects of such actions on the United States economy, including consumers. The report, *Four-Year Review of Actions Taken in the Section 301 Investigation: China's Acts, Policies, and Practices Related to Technology Transfer, Intellectual Property, and Innovation* (the "report"), was published on May 14, 2024, and is available on the USTR website at [https://ustr.gov/sites/default/files/05.14.2024%20Four%20Year%20Review%20of%20China%20Tech%20Transfer%20Section%20301%20\(Final\).pdf](https://ustr.gov/sites/default/files/05.14.2024%20Four%20Year%20Review%20of%20China%20Tech%20Transfer%20Section%20301%20(Final).pdf). The report is incorporated into this notice by reference.

As detailed in the report, the Trade Representative has found that:

- The section 301 actions have been effective in encouraging China to take steps toward eliminating some of its technology transfer-related acts, policies, and

practices, and have reduced some of the exposure of U.S. persons and businesses to these technology transfer-related acts, policies, and practices.

- China has not eliminated many of its technology transfer-related acts, policies, and practices, which continue to impose a burden or restriction on U.S. commerce.

Instead of pursuing fundamental reform, China has persisted, and even become more aggressive, particularly through cyber intrusions and cybertheft, in its attempts to acquire and absorb foreign technology, which further burden or restrict U.S. commerce.

- Economic analyses generally find that the duties have had small negative effects on U.S. aggregate economic welfare, positive impacts on U.S. production in the ten sectors most directly affected by the duties, and minimal impacts on economy-wide prices and employment.
- Economic analyses including the principal U.S. Government analysis published by the U.S. International Trade Commission generally find that the section 301 tariffs have contributed to reducing U.S. imports of goods from China and increasing imports from alternate sources, including U.S. allies and partners, thereby potentially supporting U.S. supply chain diversification and resilience.

Based on these findings, the Trade Representative recommended to the President that section 301 tariffs on covered products be maintained. To further encourage China to eliminate the investigated acts, policies, and practices, the Trade Representative recommended enhancing the effectiveness of the tariff actions by adding or increasing section 301 tariffs on certain products in strategic sectors. The proposed modification

includes products targeted by China for dominance, or are products in sectors where the United States has recently made significant investments.

Taking into consideration the Trade Representative's findings and recommendations, on May 14, 2024, the President issued a Memorandum which directed the Trade Representative to: "maintain, as appropriate and consistent with this memorandum, the ad valorem rates of duty and lists of products subject to the [actions] taken under the section 301 investigation" and "[t]o further encourage China to eliminate the acts, policies, and practices at issue, and to counteract the burden or restriction of these acts, policies, and practices, the Trade Representative shall modify the [actions taken in the investigation] to increase section 301 ad valorem rates of duty" for certain specified products of China.

See <https://www.whitehouse.gov/briefing-room/presidential-actions/2024/05/14/memorandum-on-actions-by-the-united-states-related-to-the-statutory-4-year-review-of-the-section-301-investigation-of-chinas-acts-policies-and-practices-related-to-technology-transfer-intellectual-property/>. The President's Memorandum specified categories of products for proposed tariff increases, tariff rates for those products, and year for tariff increases.

The President also directed the Trade Representative to establish a process by which interested persons may request that particular machinery used in domestic manufacturing classified within a subheading under Chapters 84 and 85 of the Harmonized Tariff Schedule of the United States (HTSUS) be temporarily excluded from section 301 tariffs, and that the Trade Representative prioritize, in particular, exclusions for certain solar manufacturing equipment.

B. Proposed Modifications to the Actions

Pursuant to section 307(c) and section 307(a)(1) of the Trade Act (19 U.S.C. 2417(c), (a)(1)), the Trade Representative may modify or terminate any action, subject to the specific direction, if any, of the President with respect to such action, that is being taken under section 301 if the burden or restriction on United States commerce of the acts, policies, and practices that are the subject of such action has increased or decreased, or such action is being taken under section 301(b) and is no longer appropriate. Section 301(c)(3)(B) of the Trade Act (19 U.S.C. 2411(c)(3)(B)) authorizes the Trade Representative to take action against any goods or economic sector of the foreign country concerned regardless of whether or not such goods or economic sector are involved in the act, policy, or practice subject to investigation. In accordance with section 307(c) and section 307(a)(1)(B) and (C) of the Trade Act (19 U.S.C. 2417(c), (a)(1)(B) and (C)), and in accordance with the specific direction of the President, the Trade Representative is proposing certain modifications to the actions.

Consistent with the President's direction to increase section 301 tariff rates on certain categories of products, included in Annex A to this notice are 382 HTSUS subheadings and 5 statistical reporting numbers of the HTSUS, with an approximate annual trade value of \$18 billion (2023). The President has directed that increases for certain products take effect in 2024, 2025, and 2026. The Trade Representative is proposing that increases in 2024 be effective August 1, 2024, and that increases in 2025 and 2026 be effective January 1 of the corresponding year.

In addition to the proposed modifications in Annex A, consistent with the President's direction, the Trade Representative is establishing an exclusion process by

which interested persons may request that particular machinery used in domestic manufacturing and classified within certain subheadings under Chapters 84 and 85 of HTSUS be temporarily excluded from section 301 tariffs. The HTSUS subheadings eligible for consideration of temporary exclusion are set forth in Annex B to this notice. Procedures for requesting exclusions under this process will be published in a separate notice. Exclusions granted through this process will be effective through May 31, 2025.

Finally, to support domestic production and decrease reliance on China in a strategic sector, the Trade Representative is proposing 19 temporary exclusions for solar manufacturing equipment. The proposed temporary exclusions are set forth in Annex C to this notice. The proposed exclusions will be effective the date of this notice and through May 31, 2025.

C. Request for Public Comments

In accordance with section 307(a)(2) of the Trade Act (19 U.S.C. 2417(a)(2)), USTR invites comments from interested persons with respect to the proposed modifications. To be assured of consideration, you must submit written comments by June 28, 2024.

With respect to USTR's proposed modification for adding or increasing section 301 tariff rates on certain products from China listed in Annex A, interested persons are invited to comment on:

- The effectiveness of the proposed modification in obtaining the elimination of or in counteracting China's acts, policies, and practices related to technology transfer, intellectual property, and innovation.
- The effects of the proposed modification on the U.S. economy, including consumers.

- The scope of the product description to cover ship-to-shore cranes under subheading 8426.19.00 (Transporter cranes, gantry cranes and bridge cranes).
- With respect to facemasks, medical gloves, and syringes and needles, whether the tariff rates should be higher than the proposed rates.
- With respect to facemasks, whether additional statistical reporting codes under tariff subheading 6307.90.98 should be included.
- Whether the tariff subheadings identified for each product and sector adequately cover the products and sectors included in the President's direction to the Trade Representative.

With respect to the exclusion process, USTR seeks comments on whether the subheadings listed in Annex B should or should not be eligible for consideration in the machinery exclusion process and whether Annex B omits certain subheadings under Chapters 84 and 84 that cover machinery used in domestic manufacturing and should be included.

With respect to the proposed solar manufacturing machinery exclusions in Annex C, USTR requests comments on the scope of each exclusion, including any suggested amendments to the product description.

In order to facilitate preparation of comments prior to the May 29 opening of the web portal, USTR intends to post a copy of questions for the docket by May 24, 2024.

The questions will be posted at <https://comments.ustr.gov>.

D. Procedures for Written Submissions

You must submit written comments using the appropriate docket on the portal at <https://comments.ustr.gov/>. To submit written comments, use the docket on the portal

entitled “Request for Comments: Proposed Modifications to the Section 301 Actions and Proposed Exclusion Process”, docket number USTR–2024–0007.

You do not need to establish an account to submit comments. The first screen of the docket allows you to enter identification and contact information. Third party organizations such as law firms, trade associations, or customs brokers, should identify the full legal name of the organization they represent, and identify the primary point of contact for the submission. Information fields are optional; however, your comment may not be considered if insufficient information is provided.

Fields with a gray Business Confidential Information (BCI) notation are for BCI information which will not be made publicly available. Fields with a green (Public) notation will be viewable by the public.

After entering the identification and contact information, you can complete the remainder of the comment, or any portion of it by clicking “Next.” You may upload documents at the end of the form and indicate whether USTR should treat the documents as business confidential or public information.

Any page containing BCI must be clearly marked ‘BUSINESS CONFIDENTIAL’ on the top of that page and the submission should clearly indicate, via brackets, highlighting, or other means, the specific information that is BCI. If you request business confidential treatment, you must certify in writing that disclosure of the information would endanger trade secrets or profitability, and that the information would not customarily be released to the public.

Parties uploading attachments containing BCI also must submit a public version of their comments. If these procedures are not sufficient to protect BCI or otherwise

protect business interests, please contact the USTR Section 301 support line at (202) 395-5725 to discuss whether alternative arrangements are possible.

USTR will post attachments uploaded to the docket for public inspection, except for properly designated BCI. You can view submissions on USTR's electronic portal at <https://comments.ustr.gov>.

Juan Millan,
Acting General Counsel,
Office of the United States Trade Representative.

Annex A
Proposed Modifications to Section 301 Tariffs

Battery Parts (Non-lithium-ion Batteries)

HTSUS Subheading	Product Description	Rate	Timing
8507.90.40	Parts of lead-acid storage batteries, including separators therefor	25%	2024

Electric Vehicles

HTSUS Subheading	Product Description	Rate	Timing
8702.40.31	Motor vehicles w/electric motor, to transport 16 or more persons, incl driver	100%	2024
8702.40.61	Motor vehicles w/electric motor, to transport 10 to 15 persons, incl driver	100%	2024
8702.90.31	Motor vehicles nesoi, to transport 16 or more persons, incl driver	100%	2024
8702.90.61	Motor vehicles nesoi, to transport 10 to 15 persons, incl driver	100%	2024
8703.60.00	Motor vehicles to transport persons, w/spark-ign. IC recip. piston engine & elec motor capable of charge by plug to external source	100%	2024
8703.70.00	Motor vehicles to transport persons, w/diesel engine & elec motor capable of charge by plug to external source	100%	2024
8703.80.00	Motor vehicles to transport persons, w/electric motor for propulsion	100%	2024

87039001	Motor vehicles to transport persons, nesoi	100%	2024
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Facemasks

HTSUS Subheading	Product Description	Rate	Timing
6307.90.9845	N95 Respirators of Textiles	25%	2024
6307.90.9850	Respirators of Textiles, Other than N95	25%	2024
6307.90.9875	Face Masks of Textiles, Other than Disposable	25%	2024

Lithium-ion Electrical Vehicle Batteries

HTSUS Subheading	Product Description	Rate	Timing
8507.60.0010	Lithium-ion batteries of a kind used as the primary source of electrical power for electrically powered vehicles of subheadings 870340, 870350, 870360, 870370 or 870380	25%	2024

Lithium-ion Non-electrical Vehicle Batteries

HTSUS Subheading	Product Description	Rate	Timing
8507.60.0020	Lithium ion batteries: Other	25%	2026

Medical Gloves

HTSUS Subheading	Product Description	Rate	Timing
4015.12.10	Medical or surgical gloves of vulcanized rubber other than hard rubber	25%	2026

Natural Graphite

HTSUS Subheading	Product Description	Rate	Timing
2504.10.10	Natural graphite, crystalline flake (not including flake dust)	25%	2026
2504.10.50	Natural graphite in powder or flakes (other than crystalline flake)	25%	2026
2504.90.00	Natural graphite, other than in powder or in flakes	25%	2026

Other Critical Minerals

HTSUS Subheading	Product Description	Rate	Timing
2602.00.00	Manganese ores and concentrates including ferruginous manganese ores & concentrates with manganese content over 20% calculated on dry weight	25%	2024
2605.00.00	Cobalt ores and concentrates	25%	2024
2606.00.00	Aluminum ores and concentrates	25%	2024
2608.00.00	Zinc ores and concentrates	25%	2024
2610.00.00	Chromium ores and concentrates	25%	2024
2611.00.60	Tungsten concentrates	25%	2024
2825.90.30	Tungsten oxides	25%	2024
2841.80.00	Tungstates (wolframates)	25%	2024
2844.41.00	Tritium and its compounds, alloys, dispersions, ceramic products and mixtures thereof	25%	2024
2844.42.00	Actinium, californium, curium, einsteinium, gadolinium, polonium, radium, uranium & their compounds, alloys, dispersions, ceramic products & mixtures	25%	2024
2844.43.00	Other radioactive elements, isotopes, compounds, nesoi; alloys, dispersions, ceramic products and mixtures thereof	25%	2024
2844.44.00	Radioactive residues	25%	2024
2849.90.30	Tungsten carbide	25%	2024
7202.60.00	Ferronickel	25%	2024
7202.93.40	Ferroniobium containing by weight less than 0.02 percent of phosphorus or sulfur or less than 0.4 percent of silicon	25%	2024
7202.93.80	Ferroniobium, nesoi	25%	2024
7901.11.00	Zinc (o/than alloy), unwrought, containing o/99.99% by weight of zinc	25%	2024
7901.12.10	Zinc (o/than alloy), unwrought, casting-grade zinc, containing at least 97.5% but less than 99.99% by weight of zinc	25%	2024
7901.12.50	Zinc (o/than alloy), unwrought, o/than casting-grade zinc, containing at least 97.5% but less than 99.99% by wt. of zinc	25%	2024
7901.20.00	Zinc alloy, unwrought	25%	2024
8001.10.00	Tin (o/than alloy), unwrought	25%	2024
8001.20.00	Tin alloy, unwrought	25%	2024
8101.10.00	Tungsten, powders	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
8103.20.00	Tantalum, unwrought (including bars and rods obtained simply by sintering); tantalum powders	25%	2024
8112.21.00	Chromium, unwrought; chromium powders	25%	2024
8112.92.30	Indium, unwrought; indium powders	25%	2024

Permanent Magnets

HTSUS Subheading	Product Description	Rate	Timing
8505.11.00	Permanent magnets and articles intended to become permanent magnets after magnetization, of metal	25%	2026

Semiconductors

HTSUS Subheading	Product Description	Rate	Timing
8541.10.00	Diodes, other than photosensitive or light-emitting diodes	50%	2025
8541.21.00	Transistors, other than photosensitive transistors, with a dissipation rating of less than 1 W	50%	2025
8541.29.00	Transistors, other than photosensitive transistors, with a dissipation rating of 1 W or more	50%	2025
8541.30.00	Thyristors, diacs and triacs, other than photosensitive devices	50%	2025
8541.49.10	Other photosensitive semiconductor diodes, other than light-emitting	50%	2025
8541.49.70	Photosensitive transistors	50%	2025
8541.49.80	Photosensitive semiconductor devices nesoi, optical coupled isolators	50%	2025
8541.49.95	Other photosensitive semiconductor devices, other than diodes or transistors, nesoi	50%	2025
8541.51.00	Other semiconductor-based transducers, other than photosensitive transducers	50%	2025
8541.59.00	Other semiconductor devices, other than semiconductor-based transducers, other than photosensitive devices, nesoi	50%	2025
8541.90.00	Parts of diodes, transistors, similar semiconductor devices, photosensitive semiconductor devices, LED's and mounted piezoelectric crystals	50%	2025

8542.31.00	Electronic integrated circuits: processors and controllers	50%	2025
8542.32.00	Electronic integrated circuits: memories	50%	2025
8542.33.00	Electronic integrated circuits: amplifiers	50%	2025
8542.39.00	Electronic integrated circuits: other	50%	2025
8542.90.00	Parts of electronic integrated circuits and microassemblies	50%	2025

Ship-to-Shore Cranes

Proposed Product Description	Rate	Timing
Ship-to-shore gantry cranes, configured as a high- or low-profile steel superstructure and designed to unload intermodal containers from vessels with coupling devices for containers, including spreaders or twist-locks (classified in subheading 8426.19.00)	25%	2024

Solar Cells (whether or not assembled into modules)

HTSUS Subheading	Product Description	Rate	Timing
8541.42.00	Photovoltaic cells, not assembled in modules or made up into panels	50%	2024
8541.43.00	Photovoltaic cells assembled in modules or made up into panels	50%	2024

Steel and Aluminum Products

HTSUS Subheading	Product Description	Rate	Timing
7206.10.00	Iron and nonalloy steel ingots	25%	2024
7206.90.00	Iron and nonalloy steel in primary forms (o/than ingots)	25%	2024
7207.11.00	Iron or nonalloy steel semifinished products, w/less than 0.25% carbon, w/rect. cross sect.(incl. sq.), w/width less than twice thickness	25%	2024
7207.12.00	Iron or nonalloy steel semifinished products, w/less than 0.25% carbon, w/rect. cross sect. (exclud. sq.), nesoi	25%	2024
7207.19.00	Iron or nonalloy steel semifinished products, w/less than 0.25% carbon, o/than w/rect. cross section	25%	2024
7207.20.00	Iron or nonalloy steel semifinished products, w/0.25% or more of carbon	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7208.10.15	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, w/patterns in relief, in coils, pickled, not clad/plated/coated	25%	2024
7208.10.30	Iron/nonalloy steel, width 600mm+,hot-rolled flat-rolled product, in coil,w/pattern in relief, w/thick 4.75mm+,not pickld,not clad/plated/coatd	25%	2024
7208.10.60	Iron/nonalloy steel,width 600mm+,hot-rolled flat-rolled product,in coil,w/pattern in relief,w/thick <4.75mm,not pickld,not clad/plated/coatd	25%	2024
7208.25.30	Nonalloy hi-strength steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick 4.75mm+, pickled, not clad/plated/coated	25%	2024
7208.25.60	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick 4.7mm or more, pickled, not clad/plated/coated	25%	2024
7208.26.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick 3mm or mor but less 4.75mm, pickled, not clad/plated	25%	2024
7208.27.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick less than 3mm, pickled, not clad/plated/coated	25%	2024
7208.36.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick o/10mm, not pickled/clad/plated/coated	25%	2024
7208.37.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick 4.75mm or more & n/o 10mm, not pickled/clad/plated	25%	2024
7208.38.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick 3mm or more & less 4.75mm, not pickld/clad/plated	25%	2024
7208.39.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick less than 3mm, not pickled/clad/plated/coated	25%	2024
7208.40.30	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, w/pattern in relief, not coils, w/thick 4.75 or more, n/clad/plated/coated	25%	2024
7208.40.60	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, w/pattern in relief, not coils, w/thick < 4.75mm, not clad/plated/coated	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7208.51.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, nesoi, not in coils, w/thick o/10mm, not clad/plated/coated	25%	2024
7208.52.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, neosi, not in coils, w/thick 4.75mm+ but n/o 10mm, not clad/plated/	25%	2024
7208.53.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, neosi, not in coils, w/thick 3mm+ but < 4.75mm, not clad/plated/coated	25%	2024
7208.54.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, neosi, not in coils, w/thick less than 3mm, not clad/plated/coated	25%	2024
7208.90.00	Iron/nonalloy steel, width 600mm+, hot-rolled flat-rolled products, nesoi, not clad/plated/coated	25%	2024
7209.15.00	Iron/nonalloy steel, width 600mm+, cold-rolled flat-rolled products, in coils, w/thick 3mm+, not clad/plated/coated	25%	2024
7209.16.00	Iron/nonalloy steel, width 600mm+, cold-rolled flat-rolled products, in coils, w/thick o/1mm but less than 3mm, not clad/plated/coated	25%	2024
7209.17.00	Iron/nonalloy steel, width 600mm+, cold-rolled flat-rolled products, in coils, w/thick 0.5mm or more but n/o 1mm, not clad/plated/coated	25%	2024
7209.18.15	Nonalloy hi-strength steel, width 600mm+, cold-rolled flat-rolled products, in coils, w/thick less than 0.5mm, not clad/plated/coated	25%	2024
7209.18.25	Nonalloy steel(blackplate), width 600mm+, cold-rolled flat-rolled products, in coils, w/thick less than 0.361mm, not clad/plated/coated	25%	2024
7209.18.60	Iron/nonalloy steel, width 600mm+, cold-rolled flat-rolled products, in coils, w/thick 0.361mm+ but less 5mm, not clad/plated/coated	25%	2024
7209.25.00	Iron/nonalloy steel, width 600mm+, cold-rolled flat-rolled products, not in coils, w/thick 3mm or more, not clad/plated/coated	25%	2024
7209.26.00	Iron/nonalloy steel, width 600mm+, cold-rolled flat-rolled products, not in coils, w/thick o/1mm but less than 3mm, not clad/plated/coated	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7209.27.00	Iron/nonalloy steel, width 600mm+, cold-rolled flat-rolled products, not in coils, w/thick 0.5mm+ but n/o 1mm, not clad/plated/coated	25%	2024
7209.28.00	Iron/nonalloy steel, width 600mm+, cold-rolled flat-rolled products, not in coils, w/thick less than 0.5mm, not clad/plated/coated	25%	2024
7209.90.00	Iron/nonalloy steel, width 600mm+, flat-rolled products further worked than cold-rolled, not clad/plated/coated, nesoi	25%	2024
7210.11.00	Iron/nonalloy steel, width 600mm+, flat-rolled products, plated or coated with tin, w/thick. 0.5 mm or more	25%	2024
7210.12.00	Iron/nonalloy steel, width 600mm+, flat-rolled products, plated or coated with tin, less than 0.5 mm thick	25%	2024
7210.20.00	Iron/nonalloy steel, width 600mm+, flat-rolled products, plated or coated with lead, including terneplate	25%	2024
7210.30.00	Iron/nonalloy steel, width 600mm+, flat-rolled products, electrolytically plated or coated with zinc	25%	2024
7210.41.00	Iron/nonalloy steel, width 600mm+, flat-rolled products, plated or coated with zinc (other than electrolytically), corrugated	25%	2024
7210.49.00	Iron/nonalloy steel, width 600mm+, flat-rolled products, plated or coated with zinc (other than electrolytically), not corrugated	25%	2024
7210.50.00	Iron/nonalloy steel, width 600mm+, flat-rolled products, plated or coated with chromium oxides or with chromium and chromium oxides	25%	2024
7210.61.00	Iron/nonalloy steel, width 600mm+, flat-rolled products, plated or coated with aluminum-zinc alloys	25%	2024
7210.69.00	Iron/nonalloy steel, width 600mm+, flat-rolled products, plated or coated with aluminum o/than aluminum-zinc alloy	25%	2024
7210.70.30	Iron/nonalloy steel, width 600mm+, flat-rolled products, painted/varnished or coated w/plastic but not plated/coated or clad w/metal	25%	2024
7210.70.60	Iron/nonalloy steel, width 600mm+, flat-rolled products, painted/varnished or coated w/plastic, nesoi	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7210.90.10	Iron/nonalloy steel, width 600mm+, flat-rolled products, clad	25%	2024
7210.90.60	Iron/nonalloy steel, width 600mm+, flat-rolled products, electrolytically coated or plated with base metal, nesoi	25%	2024
7210.90.90	Iron/nonalloy steel, width 600mm+, flat-rolled products, plated or coated, nesoi	25%	2024
7211.13.00	Iron/nonalloy steel, width less th/600mm, hot-rolled flat-rolled universal mill plate, not clad/plated/coated	25%	2024
7211.14.00	Iron/nonalloy steel, width less th/600mm, hot-rolled flat-rolled products, nesoi, w/thick of 4.75mm or more, not clad/plated/coated	25%	2024
7211.19.15	Nonalloy hi-strength steel, width less th/300mm, hot-rolled flat-rolled products, not clad/plated/coated	25%	2024
7211.19.20	Iron/nonalloy steel, neosi, width less th/300mm, hot-rolled flat-rolled products, w/thick o/1.25 mm but n/o 4.75 mm, n/clad/plated/coated	25%	2024
7211.19.30	Iron/nonalloy steel, neosi, width less th/300mm, hot-rolled flat-rolled products, w/thick 1.25mm or less, not clad/plated/coated	25%	2024
7211.19.45	Nonalloy hi-strength steel, width 300mm+ but less th/600mm, hot-rolled flat-rolled products, not clad/plated/coated	25%	2024
7211.19.60	Iron/nonalloy steel, neosi, width 300mm+ but less th/600mm, hot-rolled flat-rolled products, pickled, not clad/plated/coated	25%	2024
7211.19.75	Iron/nonalloy steel, neosi, width 300mm+ but less th/600mm, hot-rolled flat-rolled products, not pickled, not clad/plated/coated	25%	2024
7211.23.15	Nonalloy hi-strength steel, width less th/300mm, cold-rolled flat-rolled, <0.25% carbon, w/thick o/1.25mm, not clad/plated/coated	25%	2024
7211.23.20	Iron/nonalloy steel, nesoi, width less th/300mm, cold-rolled flat-rolled, <0.25% carbon, w/thick o/1.25mm, not clad/plated/coated	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7211.23.30	Iron/nonalloy steel, nesoi, width less th/300mm, cold-rolled flat-rolled, <0.25% carbon, w/thick o/0.25mm n/o 1.25mm, not clad/plated	25%	2024
7211.23.45	Iron/nonalloy steel, nesoi, width less th/300mm, cold-rolled flat-rolled, <0.25% carbon, w/thick n/o 0.25mm, not clad/plated/coated	25%	2024
7211.23.60	Iron/nonalloy steel, nesoi, width 300mm+ but less th/600mm, cold-rolled flat-rolled, <0.25% carbon, not clad/plated/coated	25%	2024
7211.29.20	Iron/nonalloy steel, width less th/300mm, cold-rolled flat-rolled, w/0.25% or more carbon, w/thick o/0.25mm, not clad/plated/coated	25%	2024
7211.29.45	Iron/nonalloy steel, width less th/300mm, cold-rolled flat-rolled, w/0.25% or more carbon, w/thick 0.25mm or less, not clad/plated/coated	25%	2024
7211.29.60	Iron/nonalloy steel, width 300mm+ but less th/600mm, cold-rolled flat-rolled, w/0.25% or more carbon, not clad/plated/coated	25%	2024
7211.90.00	Iron/nonalloy steel, width less th/600mm, flat-rolled further worked than cold-rolled, not clad, plated or coated	25%	2024
7212.10.00	Iron/nonalloy steel, width less th/600mm, flat-rolled products, plated or coated with tin	25%	2024
7212.20.00	Iron/nonalloy steel, width less th/600mm, flat-rolled products, electrolytically plated or coated with zinc	25%	2024
7212.30.10	Iron/nonalloy steel, width less th/300mm, flat-rolled products, plated/coated with zinc (other than electrolytically), w/thick o/0.25mm	25%	2024
7212.30.30	Iron/nonalloy steel, width less th/300mm, flat-rolled products, plated/coated w/zinc (other than electrolytically), w/thick 0.25mm or less	25%	2024
7212.30.50	Iron/nonalloy steel, width 300+ but less th/600mm, flat-rolled products, plated or coated with zinc (other than electrolytically)	25%	2024
7212.40.10	Iron/nonalloy steel, width less th/300mm, flat-rolled products, painted, varnished or coated w/plastic	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7212.40.50	Iron/nonalloy steel, width 300+ but less th/600mm, flat-rolled products, painted, varnished or coated w/plastic	25%	2024
7212.50.00	Iron/nonalloy steel, width less th/600mm, flat-rolled products, plated or coated nesoi	25%	2024
7212.60.00	Iron/nonalloy steel, width less th/600mm, flat-rolled products, clad	25%	2024
7213.10.00	Iron/nonalloy, concrete reinforcing bars and rods in irregularly wound coils, hot-rolled	25%	2024
7213.20.00	Free-cutting steel, bars and rods in irregularly wound coils, hot-rolled	25%	2024
7213.91.30	Iron/nonalloy steel, nesoi, hot-rolled bars & rods in irregularly wound coils, w/cir. x-sect. diam. <14mm, n/tempered/treated/partly mfd	25%	2024
7213.91.45	Iron/nonalloy steel, nesoi, hot-rolled bars & rods in irregularly wound coils, w/cir. x-sect. diam. <14mm, w/0.6%+ of carbon, nesoi	25%	2024
7213.91.60	Iron/nonalloy steel, nesoi, hot-rolled bars & rods in irregularly wound coils, w/cir. x-sect. diam. <14mm, w/less th/0.6% carbon, nesoi	25%	2024
7213.99.00	Iron/nonalloy steel, nesoi, hot-rolled bars & rods, w/cir. x-sect. diam 14+mm or non-circ. x-sect., in irregularly wound coils, nesoi	25%	2024
7214.20.00	Iron/nonalloy steel, concrete reinforcing bars and rods, not further worked than hot-rolled, hot-drawn or hot-extruded, n/coils	25%	2024
7214.30.00	Free-cutting steel, bars and rods, not further worked than hot-rolled, hot-drawn or hot-extruded, n/coils, nesoi	25%	2024
7214.91.00	Iron/nonalloy steel, bars and rods, not further worked than hot-rolled, hot-drawn or hot-extruded, w/rectangular (o/than square) X-section	25%	2024
7214.99.00	Iron/nonalloy steel, bars and rods, not further worked than hot-rolled, hot-drawn or hot-extruded, w/non-rectangular X-sect, not in coils	25%	2024
7215.10.00	Free-cutting steel, bars and rods, not further worked than cold-formed or cold-finished, not in coils	25%	2024
7215.50.00	Iron/nonalloy steel nesoi, bars and rods, not further wkd. than cold-formed or cold-finished, not in coils	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7215.90.10	Iron/nonalloy steel, bars and rods, not cold-formed, plated or coated with metal	25%	2024
7215.90.30	Iron/nonalloy steel, bars and rods, cold-formed, plated or coated with metal	25%	2024
7215.90.50	Iron/nonalloy steel, bars and rods, further worked than cold-formed or cold-finished, nesoi	25%	2024
7216.10.00	Iron/nonalloy steel, U,I or H-sections, not further worked than hot-rolled, hot-drawn or extruded, w/height under 80 mm	25%	2024
7216.21.00	Iron/nonalloy steel, L-sections, not further worked than hot-rolled, hot-drawn or extruded, w/height under 80 mm	25%	2024
7216.22.00	Iron/nonalloy steel, T-sections, not further worked than hot-rolled, hot-drawn or extruded, w/height under 80 mm	25%	2024
7216.31.00	Iron/nonalloy steel, U-sections, not further worked than hot-rolled, hot-drawn or extruded, w/height of 80 mm or more	25%	2024
7216.32.00	Iron/nonalloy steel, I-sections (standard beams), not further worked than hot-rolled, hot-drawn or extruded, w/height 80 mm or more	25%	2024
7216.33.00	Iron/nonalloy steel, H-sections, not further worked than hot-rolled, hot-drawn or extruded, w/height 80 mm or more	25%	2024
7216.40.00	Iron/nonalloy steel, L or T-sections, not further worked than hot-rolled, hot-drawn or extruded, w/height 80 mm or more	25%	2024
7216.50.00	Iron/nonalloy steel, angles, shapes & sections nesoi, not further worked than hot-rolled, hot-drawn or extruded	25%	2024
7216.99.00	Iron/nonalloy steel, angles, shapes & sections nesoi, further wkd. than cold-formed or cold-finished and not from flat-rolled products	25%	2024
7217.10.10	Iron/nonalloy steel, flat wire, <0.25% carbon, not plated or coated, w/thick n/o 0.25 mm	25%	2024
7217.10.20	Iron/nonalloy steel, flat wire, <0.25% carbon, not plated or coated, w/thick o/0.25mm but n/o 1.25 mm	25%	2024
7217.10.30	Iron/nonalloy steel, flat wire, <0.25% carbon, not plated or coated, w/thick o/1.25 mm	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7217.10.50	Iron/nonalloy steel, round wire, <0.25% carbon, not plated or coated, w/diameter of 1.5 mm or more	25%	2024
7217.10.60	Iron/nonalloy steel, wire (other than flat or round), <0.25% carbon, not plated or coated	25%	2024
7217.10.70	Iron/nonalloy steel, flat wire, w/0.25% or more carbon, not plated or coated	25%	2024
7217.10.80	Iron/nonalloy steel, round wire, w/0.25% or more carbon, not plated or coated	25%	2024
7217.10.90	Iron/nonalloy steel, wire (other than flat or round), w/0.25% or more of carbon, not plated or coated	25%	2024
7217.20.15	Iron/nonalloy steel, flat wire, plated or coated with zinc	25%	2024
7217.20.30	Iron/nonalloy steel, round wire, <0.25% carbon, plated or coated with zinc, w/diameter of 1.5 mm or more	25%	2024
7217.20.45	Iron/nonalloy steel, round wire, w/0.25% or more carbon and/or <1.5mm diam, plated or coated with zinc	25%	2024
7217.20.60	Iron/nonalloy steel, wire (other than flat or round), <0.25% carbon, plated or coated with zinc	25%	2024
7217.20.75	Iron/nonalloy steel, wire (other than flat or round), w/0.25% or more of carbon, plated or coated with zinc	25%	2024
7217.30.15	Iron/nonalloy steel, flat wire, plated or coated with base metal other than zinc	25%	2024
7217.30.30	Iron/nonalloy steel, round wire, <0.25% carbon, plated or coated with base metal other than zinc, w/diam. of 1.5 mm or more	25%	2024
7217.30.60	Iron/nonalloy steel, wire (other than flat or round), <0.25% carbon, plated or coated with base metal other than zinc	25%	2024
7217.30.75	Iron/nonalloy steel, wire (other than flat or round), w/0.25% or more of carbon, plated or coated with base metal other than zinc	25%	2024
7217.90.10	Iron/nonalloy steel, wire, coated with plastics	25%	2024
7217.90.50	Iron/nonalloy steel, wire, plated or coated with materials other than base metals or plastics	25%	2024
7218.10.00	Stainless steel, ingots and other primary forms	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7218.91.00	Stainless steel, semifinished products of rectangular (other than square) cross-section	25%	2024
7218.99.00	Stainless steel, semifinished products, other than of rectangular (other than square) cross-section	25%	2024
7219.11.00	Stainless steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thickness o/10 mm	25%	2024
7219.12.00	Stainless steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick. 4.75 mm or more but n/o 10 mm	25%	2024
7219.13.00	Stainless steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick. 3 mm or more but less than 4.75 mm	25%	2024
7219.14.00	Stainless steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thickness less than 3 mm	25%	2024
7219.21.00	Stainless steel, width 600mm+, hot-rolled flat-rolled products, not in coils, w/thickness o/10 mm	25%	2024
7219.22.00	Stainless steel, width 600mm+, hot-rolled flat-rolled products, not in coils, w/thick. 4.75 mm or more but n/o 10 mm	25%	2024
7219.23.00	Stainless steel, width 600mm+, hot-rolled flat-rolled products, not in coils, w/thick. 3 mm or more but less than 4.75 mm	25%	2024
7219.24.00	Stainless steel, width 600mm+, hot-rolled flat-rolled products, not in coils, w/thickness less than 3 mm	25%	2024
7219.31.00	Stainless steel, width 600mm+, cold-rolled flat-rolled products, w/thickness of 4.75 mm or more	25%	2024
7219.32.00	Stainless steel, width 600mm+, cold-rolled flat-rolled products, w/thickness of 3 mm or more but less than 4.75 mm	25%	2024
7219.33.00	Stainless steel, width 600mm+, cold-rolled flat-rolled products, w/thickness o/1 mm but less than 3 mm	25%	2024
7219.34.00	Stainless steel, width 600mm+, cold-rolled flat-rolled products, w/thickness of 0.5 mm or more but n/o 1 mm	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7219.35.00	Stainless steel, width 600mm+, cold-rolled flat-rolled products, w/thickness of less than 0.5 mm	25%	2024
7219.90.00	Stainless steel, width 600mm+, flat-rolled products, nesoi, further worked than cold-rolled	25%	2024
7220.12.10	Stainless steel, width 300m+ but less th/600mm, hot-rolled flat-rolled products, w/thickness of less than 4.75 mm	25%	2024
7220.12.50	Stainless steel, width less th/300mm, hot-rolled flat-rolled products, w/thickness of less than 4.75 mm	25%	2024
7220.20.10	Stainless steel, width 300+ but less th/600mm, cold-rolled flat-rolled products	25%	2024
7220.20.60	Stainless steel, width less th/300mm, cold-rolled flat-rolled products, w/thickness o/1.25 mm	25%	2024
7220.20.70	Stainless steel, width less th/300mm, cold-rolled flat-rolled products, w/ thickness of 0.25 mm but n/o 1.25 mm	25%	2024
7220.20.80	Stainless razor blade steel, width less th/300mm, cold-rolled flat-rolled, w/thickness n/o 0.25 mm	25%	2024
7220.90.00	Stainless steel, width less th/600mm, flat-rolled products further worked than cold-rolled	25%	2024
7221.00.00	Stainless steel, bars and rods in irregularly wound coils, hot-rolled	25%	2024
7222.11.00	Stainless steel, bars and rods, hot-rolled, hot-drawn or extruded, of circular cross-section	25%	2024
7222.19.00	Stainless steel, bars and rods, hot-rolled, hot-drawn or extruded, other than of circular cross-section	25%	2024
7222.20.00	Stainless steel, bars and rods, not further worked than cold-formed or cold-finished, nesoi	25%	2024
7222.30.00	Stainless steel, bars and rods, further worked than cold-formed or cold-finished, nesoi	25%	2024
7222.40.30	Stainless steel, angles, shapes & sections, hot-rolled, not drilled/punched or otherwise advanced	25%	2024
7222.40.60	Stainless steel, angles, shapes & sections, other than hot-rolled and not drilled/punched or otherwise advanced	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7223.00.10	Stainless steel, round wire	25%	2024
7223.00.50	Stainless steel, flat wire	25%	2024
7223.00.90	Stainless steel, wire (other than round or flat wire)	25%	2024
7224.10.00	Alloy (o/than stainless) steel, ingots and other primary forms	25%	2024
7224.90.00	Alloy (o/than stainless) steel, semifinished products	25%	2024
7225.11.00	Alloy silicon electrical steel (grain-oriented), width 600mm+, flat-rolled products	25%	2024
7225.19.00	Alloy silicon electrical steel (other than grain-oriented), width 600mm+, flat-rolled products	25%	2024
7225.30.11	Alloy tool steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick. of 4.75 mm or more	25%	2024
7225.30.30	Alloy (o/th stainless, silicon elect., hi-speed, or tool) steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick 4.75mm+	25%	2024
7225.30.51	Alloy tool steel, width 600mm+, hot-rolled flat-rolled products, in coils, w/thick. of less than 4.75 mm	25%	2024
7225.30.70	Alloy (o/th stainless, silicon elect., hi-speed, or tool) steel, width 600mm+, hot-rolled flat-rolled prod., in coils, w/thick less 4.75mm	25%	2024
7225.40.11	Alloy tool steel, width 600mm+, hot-rolled flat-rolled products, n/coils, w/thick. of 4.75 mm or more	25%	2024
7225.40.30	Alloy (o/th stainless, silicon elect., hi-speed, or tool) steel, width 600mm+, hot-rolled flat-rolled products, n/coils, w/thick 4.75mm+	25%	2024
7225.40.51	Alloy tool steel, width 600mm+, hot-rolled flat-rolled products, n/coils, w/thick. of less than 4.75 mm	25%	2024
7225.40.70	Alloy (o/th stainless, silicon elect., hi-speed, or tool) steel, width 600mm+, hot-rolled flat-rolled prod., n/coils, w/thick less 4.75mm	25%	2024
7225.50.11	Alloy tool steel, width 600mm+, cold-rolled flat-rolled products	25%	2024
7225.50.60	Alloy steel (o/ than tool), width 600mm+, cold-rolled flat-rolled products, w/thickness 4.75 mm or more	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7225.50.70	Alloy heat-resisting steel, width 600mm+, cold-rolled flat-rolled products, w/thickness less than 4.75 mm	25%	2024
7225.50.80	Alloy steel (o/th heat-resisting), width 600mm+, cold-rolled flat-rolled products, w/thickness less than 4.75 mm	25%	2024
7225.91.00	Alloy steel, width 600mm+, flat-rolled products further worked than cold-rolled, electrolytically plated or coated with zinc	25%	2024
7225.92.00	Alloy steel, width 600mm+, flat-rolled products further worked than cold-rolled, plated or coated with zinc (o/than electrolytically)	25%	2024
7225.99.00	Alloy steel, width 600mm+, flat-rolled products further worked than cold-rolled, nesoi	25%	2024
7226.11.10	Alloy silicon electrical steel (grain-oriented), width 300mm+ but less th/600mm, flat-rolled products	25%	2024
7226.11.90	Alloy silicon electrical steel (grain-oriented), width less th/300mm, flat-rolled products	25%	2024
7226.19.10	Alloy silicon electrical steel (o/than grain-oriented), width 300mm+ but less th/600mm, flat-rolled products	25%	2024
7226.19.90	Alloy silicon electrical steel (o/than grain-oriented), width less th/300mm, flat-rolled products	25%	2024
7226.20.00	Alloy high-speed steel, width less th/600mm, flat-rolled products of high-speed steel	25%	2024
7226.91.05	Alloy chipper knife tool steel (o/than hi-speed), width less th/600mm, hot-rolled flat-rolled products	25%	2024
7226.91.15	Alloy tool steel (o/than hi-speed/chipper knife), width 300mm+ but less th/600mm, hot-rolled flat-rolled products	25%	2024
7226.91.25	Alloy tool steel (o/than hi-speed/chipper knife), width less th/300mm, hot-rolled flat-rolled products	25%	2024
7226.91.50	Alloy steel (o/than silicon elect./tool), width less th/600mm, hot-rolled flat-rolled products, w/thickness of 4.75 mm or more	25%	2024
7226.91.70	Alloy steel (o/than silicon elect./tool), width 300mm+ but less th/600mm, hot-rolled flat-rolled products, w/thickness less than 4.75 mm	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7226.91.80	Alloy steel (o/than silicon elect./tool), width less th/300mm, hot-rolled flat-rolled products, w/thickness less than 4.75 mm	25%	2024
7226.92.10	Alloy tool steel (o/than hi-speed), width 300mm+ but less th/600mm, cold-rolled flat-rolled products	25%	2024
7226.92.30	Alloy tool steel (o/than hi-speed), width less th/300mm, cold-rolled flat-rolled products	25%	2024
7226.92.50	Alloy steel (o/than tool), width 300mm+ but less th/600mm, cold-rolled flat-rolled products	25%	2024
7226.92.70	Alloy steel (o/than tool), width less th/300mm, cold-rolled flat-rolled products, w/thickness n/o 0.25 mm	25%	2024
7226.92.80	Alloy steel (o/than tool), width less th/300mm, cold-rolled flat-rolled products, w/thickness o/0.25 mm	25%	2024
7226.99.01	Alloy steel, width less than 600mm, flat-rolled products further worked than cold-rolled, nesoi	25%	2024
7227.10.00	Alloy high-speed steel, bars and rods in irregularly wound coils, hmot-rolled	25%	2024
7227.20.00	Alloy silico-manganese steel, bars and rods in irregularly wound coils, hot-rolled	25%	2024
7227.90.10	Alloy tool steel (o/than hi-speed), bars & rods in irregular wound coils, hot-rolled, n/tempered, treated or partly manufactured	25%	2024
7227.90.20	Alloy tool steel (o/than hi-speed), bars and rods in irregularly wound coils, hot-rolled, nesoi	25%	2024
7227.90.60	Alloy steel (o/than hi-speed/silico-mang./tool) steel, bars and rods in irregularly wound coils, hot-rolled	25%	2024
7228.20.10	Alloy silico-manganese steel, bars and rods, not cold-formed, o/than hot-rolled and in irregularly wound coils	25%	2024
7228.20.50	Alloy silico-manganese steel, bars and rods, cold formed, o/than hot-rolled and in irregularly wound coils	25%	2024
7228.30.40	Alloy chipper knife tool steel, bars and rods, not cold-formed & not further worked than hot-rolled, hot-drawn or extruded	25%	2024
7228.30.60	Alloy tool steel (o/than ball-bearing/chipper knife), bars and rods, not further worked than hot-rolled, hot-drawn or extruded	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7228.30.80	Alloy steel (o/than hi-speed, silico-mang./tool), bars and rods, not further worked than hot-rolled, hot-drawn or extruded	25%	2024
7228.40.00	Alloy steel, bars and rods, not further worked than forged	25%	2024
7228.50.10	Alloy tool steel (o/than hi-speed), bars and rods, not further worked than cold-formed or cold-finished	25%	2024
7228.50.50	Alloy steel (o/than tool), bars and rods, not further worked than cold-formed or cold-finished	25%	2024
7228.60.10	Alloy tool steel (o/than hi-speed), bars and rods, further worked than hot-rolled, forged, cold-formed or cold-finished	25%	2024
7228.60.60	Alloy steel (o/than tool), bars and rods, further worked than hot-rolled, forged but not cold-formed	25%	2024
7228.60.80	Alloy steel (o/than tool), bars and rods, cold-formed	25%	2024
7228.70.30	Alloy steel, angles, shapes and sections, hot-rolled & not drilled/not punched and not otherwise advanced	25%	2024
7228.70.60	Alloy steel, angles, shapes and sections, o/than hot-rolled & not drilled/punched and not otherwise advanced	25%	2024
7229.20.00	Alloy silico-manganese steel, wire	25%	2024
7229.90.10	Alloy steel (o/than hi-speed/silico-mang.), flat wire	25%	2024
7229.90.50	Alloy steel (o/than hi-speed/silico-mang.), round wire	25%	2024
7229.90.90	Alloy steel (o/than hi-speed/silico-mang.), wire (o/than flat or round wire)	25%	2024
7301.10.00	Iron or steel sheet piling, whether or not drilled, punched or made from assembled elements	25%	2024
7302.10.10	Iron or nonalloy steel, rails for railway or tramway tracks	25%	2024
7302.10.50	Alloy steel, rails for railway or tramway tracks	25%	2024
7302.40.00	Iron or steel, fish plates and sole plates for jointing or fixing rails	25%	2024
7302.90.10	Sleepers (cross-ties) for railway or tramway track construction of iron or steel	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7302.90.90	Railway or tramway track construction material and other materials specialized for joining or fixing rails, of iron or steel, nesoi	25%	2024
7304.11.00	Stainless steel, seamless line pipe used for oil or gas pipelines	25%	2024
7304.19.10	Iron (o/than cast) or nonalloy steel, seamless line pipe used for oil and gas pipelines	25%	2024
7304.19.50	Alloy (other than stainless) steel, seamless line pipe used for oil or gas pipelines	25%	2024
7304.22.00	Stainless steel, seamless drill pipe, of a kind used in drilling for oil or gas	25%	2024
7304.23.30	Iron (o/than cast) or nonalloy steel, seamless drill pipe, of a kind used in drilling for oil or gas	25%	2024
7304.23.60	Alloy (other than stainless) steel, seamless drill pipe, of a kind used in drilling for oil or gas	25%	2024
7304.24.30	Stainless steel, seamless casing pipe, threaded or coupled, of a kind used in drilling for oil or gas	25%	2024
7304.24.40	Stainless steel, seamless casing pipe, not threaded or coupled, of a kind used in drilling for oil or gas	25%	2024
7304.24.60	Stainless steel, seamless tubing, of a kind used in drilling for oil or gas	25%	2024
7304.29.10	Iron (o/than cast) or nonalloy steel, seamless casing pipe, threaded or coupled, of a kind used in drilling for oil or gas	25%	2024
7304.29.20	Iron (o/than cast) or nonalloy steel, seamless casing pipe, not threaded or coupled, of a kind used in drilling for oil or gas	25%	2024
7304.29.31	Alloy (other than stainless) steel, seamless casing pipe, threaded or coupled, of a kind used in drilling for oil or gas	25%	2024
7304.29.41	Alloy (other than stainless) steel, seamless casing pipe, not threaded or coupled, of a kind used in drilling for oil or gas	25%	2024
7304.29.50	Iron (o/than cast) or nonalloy, seamless tubing, of a kind used in drilling for oil or gas	25%	2024
7304.29.61	Alloy (other than stainless) steel, seamless tubing, of a kind used in drilling for oil or gas	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7304.31.30	Iron (o/than cast) or nonalloy steel, seamless, cold-drawn or cold-rolled, hollow bars w/circular cross section	25%	2024
7304.31.60	Iron (o/than cast) or nonalloy steel, seamless, cold-drawn or cold-rolled, tubes, pipes & hollow profiles, w/circular cross section, nesoi	25%	2024
7304.39.00	Iron (o/than cast) or nonalloy steel, seamless, not cold-drawn or cold-rolled, tubes, pipes and hollow prof., w/circular cross sect., nesoi	25%	2024
7304.49.00	Stainless steel, seamless, not cold-drawn/cold-rolled, tubes, pipes and hollow profiles, w/circular cross section	25%	2024
7304.51.10	Alloy steel (o/than stainless), seamless, cold-drawn/cold-rolled, tubes, pipes, etc., w/circ. cross sect., for mfr of ball/roller bearings	25%	2024
7304.51.50	Alloy steel (o/than stainless), seamless, cold-drawn/cold-rolled, tubes, pipes and hollow profiles, w/circular cross section, nesoi	25%	2024
7304.59.10	Alloy steel (o/than stainless), seamless, n/cold-drawn/cold-rolled, tubes, pipes, etc. w/circ. cross sect., for mfr ball/roller bearings	25%	2024
7304.59.20	Alloy steel (o/than stainless), seamless, n/cold-drawn/cold-rolled, tubes, pipes, etc. w/circ. cross sect., for boilers, heaters, etc	25%	2024
7304.59.60	Heat-resisting alloy steel (o/than stainless), seamless, n/cold-drawn/cold-rolled, tubes, pipes, etc., w/circ. cross sect., nesoi	25%	2024
7304.59.80	Alloy steel (o/than heat-resist or stainless), seamless, n/cold-drawn/cold-rolled, tubes, pipes and hollow prof., w/circ. cross sect., nesoi	25%	2024
7304.90.10	Iron (o/than cast) or nonalloy steel, seamless, tubes, pipes and hollow profiles, o/than circ. cross sect., w/wall thickness of 4 mm or more	25%	2024
7304.90.70	Alloy steel (o/than stainless), seamless, tubes, pipes and hollow profiles, o/than circ. cross sect., w/wall thickness less than 4 mm	25%	2024
7305.11.10	Iron or nonalloy steel, seamed, w/circ. cross sect. & ext. diam o/406.4mm, line pipe, long. submerg. arc weld., used for oil/gas	25%	2024
7305.11.50	Alloy steel, seamed, circ. w/cross sect. & ext. diam o/406.4mm, line pipe, long. submerg. arc weld., used for oil/gas pipelines	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7305.12.10	Iron or nonalloy steel, seamed, w/circ. cross sect. & ext. diam o/406.4mm, line pipe, long. welded nesoi, used for oil/gas	25%	2024
7305.12.50	Alloy steel, seamed, w/circ. cross sect. & ext. diam o/406.4mm, line pipe, long. welded nesoi, used for oil/gas pipelines	25%	2024
7305.19.10	Iron or nonalloy steel, seamed, w/circ. cross sect.& ext. diam o/406.4mm, line pipe, not long. welded, used for oil/gas	25%	2024
7305.19.50	Alloy steel, seamed, w/circ. cross sect. & ext. diam o/406.4mm, line pipe, not long. welded, used for oil/gas pipelines	25%	2024
7305.20.20	Iron or nonalloy steel, seamed, w/circ. cross sect. & ext. diam. o/406.4mm, casing pipe, threaded/coupled, of kind for drilling for oil/gas	25%	2024
7305.20.40	Iron or nonalloy steel, seamed, w/circ. cross sect. & ext. diam. o/406.4mm, casing pipe, n/threaded/coupled, of kind for drill. for oil/gas	25%	2024
7305.20.60	Alloy steel, seamed, w/circ. cross sect. & ext. diam. o/406.4mm, casing pipe, threaded/coupled, of kind for drilling for oil/gas	25%	2024
7305.20.80	Alloy steel, seamed, w/circ. cross sect. & ext. diam. o/406.4mm, casing pipe, n/threaded/coupled, of kind for drilling for oil/gas	25%	2024
7305.31.20	Steel, long. welded, w/circ. cross sect & ext. diam o/406.4mm, tapered pipes and tubes principally used as pts of illuminating arts.	25%	2024
7305.31.40	Iron or nonalloy steel, long. welded, w/circ. cross sect. & ext. diam. o/406.4mm, tubes and pipes, o/th used in oil/gas drill.etc	25%	2024
7305.31.60	Alloy steel, long. welded, w/circ. cross sect. & ext. diam. o/406.4mm, tubes and pipes, o/than used in oil/gas drill. or pipelines	25%	2024
7305.39.10	Iron or nonalloy steel, weld. o/than long. weld., w/circ. x-sect. & ext. diam. o/406.4mm, tubes and pipes, o/th used in oil/gas drill.etc	25%	2024
7305.39.50	Alloy steel, weld. o/than long. weld., w/circ. x-sect. & ext. diam. o/406.4mm, tubes and pipes, o/than used in oil/gas drill. or pipelines	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7305.90.10	Iron or nonalloy steel, seamed, w/circ. cross sect. & ext. diam. o/406.4mm, not welded, tubes and pipes, o/th used in oil/gas drill.etc	25%	2024
7305.90.50	Alloy steel, seamed, w/circ. cross sect. & ext. diam. o/406.4mm, not welded, tubes and pipes, o/than used in oil/gas drill. or pipelines	25%	2024
7306.11.00	Welded stainless steel, w/ext. diam 406.4mm or less or o/than circ. x-sect, line pipe of a kind used for oil and gas pipelines	25%	2024
7306.19.10	Iron or nonalloy steel, seamed, w/ext. diam. 406.4mm or less or o/than circ. x-sect, line pipe of a kind used for oil and gas pipelines	25%	2024
7306.19.51	Alloy steel, seamed (o/than welded stainless steel), w/ext. diam 406.4mm or less or o/than circ. x-sect, line pipe of a kind used for oil an	25%	2024
7306.21.30	Welded stainless steel, w/ext. diam 406.4mm or less or o/than circ. x-sect, threaded/coupled, casing of kind used in drilling for oil/gas	25%	2024
7306.21.40	Welded stainless steel, w/ext. diam 406.4mm or less or o/than circ. x-sect, n/threaded/coupled, casing of kind used in drilling for oil/gas	25%	2024
7306.21.80	Welded stainless steel, w/ext. diam 406.4mm or less or o/than circ. x-sect, tubing of a kind used for drilling for oil/gas	25%	2024
7306.29.10	Iron or nonalloy steel, seamed, w/ext. diam 406.4mm or less or o/than circ. x-sect, threaded/coupled, casing of kind used in drill. oil/gas	25%	2024
7306.29.20	Iron or nonalloy steel, seamed, w/ext. diam 406.4mm or less or o/than circ. x-sect, n/threaded/coupled, casing kind used drill for oil/gas	25%	2024
7306.29.31	Alloy steel, seamed (o/than welded stainless steel), w/ext. diam 406.4mm or less or o/than circ. x-sect, threaded/coupled, casing of kind us	25%	2024
7306.29.41	Alloy steel, seamed (o/than welded stainless steel), w/ext. diam 406.4mm or less or o/than circ. x-sect, n/threaded/coupled, casing of kind	25%	2024
7306.29.60	Iron or nonalloy steel, seamed, w/ext. diam. 406.4mm or less or o/than circ. x-sect, tubing of a kind used for drilling for oil/gas	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7306.29.81	Alloy steel, seamed (o/than welded stainless steel), w/ext. diam 406.4mm or less or o/than circ. x-sect, tubing of a kind used for drilling	25%	2024
7306.30.10	Iron or nonalloy steel, welded, w/circ. x-sect & ext. diam. 406.4mm or less, tubes, pipes, hollow profiles, w/wall thick. less than 1.65 mm	25%	2024
7306.30.30	Nonalloy steel, welded, w/circ. x-sect & ext. diam. 406.4mm or less, tapered pipes & tubes, w/wall thick. of 1.65 mm+, pts. of illum. arts.	25%	2024
7306.30.50	Iron or nonalloy steel, welded, w/circ. x-sect & ext. diam. 406.4mm or less, pipes, tubes & holl. prof., w/wall thick. of 1.65 mm or more	25%	2024
7306.40.10	Stainless steel, welded, w/circ. x-sect & ext. diam. 406.4mm or less, tubes, pipes, hollow profiles, w/wall thick. less than 1.65 mm	25%	2024
7306.40.50	Stainless steel, welded, w/circ. x-sect & ext. diam. 406.4mm or less, tubes, pipes, hollow profiles, w/wall thick. of 1.65 mm or more	25%	2024
7306.50.10	Alloy steel (o/stainless), welded, w/circ. x-sect & ext. diam. 406.4mm or less, tubes, pipes, hollow prof., w/wall thick. less th/1.65 mm	25%	2024
7306.50.30	Alloy steel (o/stainless), welded, w/circ. x-sect & ext. diam. 406.4mm or less, tapered pipes & tubes, w/wall thick. of 1.65 mm+, pts. illum	25%	2024
7306.50.50	Alloy steel (o/stainless), welded, w/circ. x-sect & ext. diam. 406.4mm or less, tubes, pipes, hollow prof., w/wall thick. of 1.65 mm+	25%	2024
7306.61.10	Iron or nonalloy steel, welded, w/square or rectangular x-sect, tubes, pipes and hollow profiles, w/wall thickness of 4 mm or more	25%	2024
7306.61.30	Alloy steel, welded, w/square or rectangular x-sect, tubes, pipes and hollow profiles, w/wall thickness of 4 mm or more	25%	2024
7306.61.50	Iron or nonalloy steel, welded, w/square or rectangular x-sect, tubes, pipes and hollow profiles, w/wall thickness less than 4 mm	25%	2024
7306.61.70	Alloy steel, welded, w/square or rectangular x-sect, tubes, pipes and hollow profiles, w/wall thickness less than 4 mm	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7306.69.10	Iron or nonalloy steel, welded, w/other non-circ. x-sect, tubes, pipes and hollow profiles, w/wall thickness of 4 mm or more	25%	2024
7306.69.30	Alloy steel, welded, w/other non-circ. x-sect, tubes, pipes and hollow profiles, w/wall thickness of 4 mm or more	25%	2024
7306.69.70	Alloy steel, welded, w/other non-circ. x-sect, tubes, pipes and hollow profiles, w/wall thickness less than 4 mm	25%	2024
7306.90.10	Iron or nonalloy steel, seamed o/welded, w/non-circ. x-sect. or circ. x-sect. w/ext. diam. 406.4mm or less, tubes, pipes & hollow profiles	25%	2024
7306.90.50	Alloy steel, seamed o/than welded, w/non-circ. x-sect or circ. x-sect w/ext. diam. 406.4mm or less, tubes, pipes and hollow profiles	25%	2024
7601.10.30	Aluminum (o/than alloy), unwrought, in coils, w/uniform x-section throughout length & w/least cross-sectional dimension n/o 9.5 mm	25%	2024
7601.10.60	Aluminum (o/than alloy), unwrought nesoi	25%	2024
7601.20.30	Aluminum alloys, unwrought, in coils, w/uniform x-section throughout length & w/least cross-sectional dimension n/o 9.5 mm	25%	2024
7601.20.60	Aluminum alloys, w/25% or more by weight of silicon, unwrought nesoi	25%	2024
7601.20.90	Aluminum alloys nesoi, unwrought nesoi	25%	2024
7604.10.10	Aluminum (o/than alloy), profiles	25%	2024
7604.10.30	Aluminum (o/than alloy), bar and rods, with a round cross section	25%	2024
7604.10.50	Aluminum (o/than alloy), bar and rods, other than with a round cross section	25%	2024
7604.21.00	Aluminum alloy, hollow profiles	25%	2024
7604.29.10	Aluminum alloy, profiles (o/than hollow profiles)	25%	2024
7604.29.30	Aluminum alloy, bars and rods, having a round cross section	25%	2024
7604.29.50	Aluminum alloy, bars and rods, other than with a round cross section	25%	2024
7605.11.00	Aluminum (o/than alloy), wire, with a maximum cross-sectional dimension over 7 mm	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7605.19.00	Aluminum (o/than alloy), wire, with a maximum cross-sectional dimension of 7 mm or less	25%	2024
7605.21.00	Aluminum alloy, wire, with a maximum cross-sectional dimension over 7 mm	25%	2024
7605.29.00	Aluminum alloy, wire, with a maximum cross-sectional dimension of 7 mm or less	25%	2024
7606.11.30	Aluminum (o/than alloy), plates/sheets/strip, w/thick. o/0.2mm, rectangular (incl. sq), not clad	25%	2024
7606.11.60	Aluminum (o/than alloy), plates/sheets/strip, w/thick. o/0.2mm, rectangular (incl. sq), clad	25%	2024
7606.12.30	Aluminum alloy, plates/sheets/strip, w/thick. o/0.2mm, rectangular (incl. sq), not clad	25%	2024
7606.12.60	Aluminum alloy, plates/sheets/strip, w/thick. o/0.2mm, rectangular (incl. sq), clad	25%	2024
7606.91.30	Aluminum (o/than alloy), plates/sheets/strip, w/thick. o/0.2mm, o/than rectangular (incl. sq), not clad	25%	2024
7606.91.60	Aluminum (o/than alloy), plates/sheets/strip, w/thick. o/0.2mm, o/than rectangular (incl. sq), clad	25%	2024
7606.92.30	Aluminum alloy, plates/sheets/strip, w/thick. o/0.2mm, o/than rectangular (incl. sq), not clad	25%	2024
7606.92.60	Aluminum alloy, plates/sheets/strip, w/thick. o/0.2mm, o/than rectangular (incl. sq), clad	25%	2024
7607.11.30	Aluminum, foil, w/thickness n/o 0.01 mm, rolled but not further worked, not backed	25%	2024
7607.11.60	Aluminum, foil, w/thickness over 0.01 mm but n/o 0.15 mm, rolled but not further worked, not backed	25%	2024
7607.11.90	Aluminum, foil, w/thickness over 0.15 mm but n/o 0.2 mm, rolled but not further worked, not backed	25%	2024
7607.19.60	Aluminum, foil nesoi, w/thickness o/0.15mm but n/o 0.2 mm or 0.15mm or less & not cut to shape, not rolled, not backed, nesoi	25%	2024
7607.20.10	Aluminum, foil, w/thickness n/o 0.2 mm, backed, covered or decorated with a character, design, fancy effect or pattern	25%	2024
7608.10.00	Aluminum (o/than alloy), tubes and pipes	25%	2024
7608.20.00	Aluminum alloy, tubes and pipes	25%	2024

HTSUS Subheading	Product Description	Rate	Timing
7609.00.00	Aluminum, fittings for tubes and pipes	25%	2024

Syringes and Needles

HTSUS Subheading	Product Description	Rate	Timing
9018.31.00	Syringes, with or without their needles; parts and accessories thereof	50%	2024
9018.32.00	Tubular metal needles and needles for sutures, used in medical, surgical, dental or veterinary sciences, and parts and accessories thereof	50%	2024

Annex B

Proposed Lines for Machinery Exclusion Process

HTSUS Subheading	Product Description
8417.10.00	Furnaces and ovens for the roasting, melting or other heat treatment of ores, pyrites or of metals
8417.80.00	Industrial or laboratory furnaces and ovens nesoi (not elsewhere specified or included), including incinerators, nonelectric
8418.69.01	Refrigerating or freezing equipment nesoi
8419.33.10	Lyophilization apparatus; freeze drying units; spray dryers, for agricultural products
8419.33.50	Lyophilization apparatus; freeze drying units; spray dryers, other than for agricultural products, nesoi
8419.34.00	Other dryers for agricultural products (other than lyophilization apparatus; freeze drying units; spray dryers)
8419.35.10	Dryers for wood
8419.35.50	Dryers for paper pulp, paper or paperboard
8419.39.02	Other dryers other than of a kind used for domestic purposes, nesoi (other than lyophilization apparatus; freeze drying units; spray dryers)
8419.40.00	Distilling or rectifying plant, not used for domestic purposes
8419.50.10	Brazed aluminum plate-fin heat exchangers
8419.50.50	Heat exchange units, nesoi
8419.60.10	Machinery for liquefying air or gas containing brazed aluminum plate-fin heat exchangers
8419.60.50	Machinery for liquefying air or gas, nesoi

HTSUS Subheading	Product Description
8419.89.10	Machinery and equipment for the treatment of materials (by a process which changes temperatures), for making paper pulp, paper or paperboard
8419.89.60	Industrial machinery, plant or equip. for the treat. of mat., involving a change in temp., for molten-salt-cooled acrylic acid reactors
8419.89.95	Industrial machinery, plant or equipment for the treatment of materials, by process involving a change in temperature, nesoi
8420.10.10	Textile calendering or rolling machines
8420.10.20	Calendering or similar rolling machines for making paper pulp, paper or paperboard
8420.10.90	Calendering or other rolling machines, other than for metals or glass, nesoi
8420.91.10	Cylinders for textile calendering or rolling machines
8420.91.20	Cylinders for paper pulp, paper or paperboard calendering or rolling machines
8420.91.90	Cylinders for calendering and similar rolling machines, nesoi
8422.19.00	Dishwashing machines other than of the household type
8422.20.00	Machinery for cleaning or drying bottles or other containers
8422.30.11	Can-sealing machines
8422.30.91	Machinery for filling, closing, sealing, capsuling or labeling bottles, cans, boxes or other containers; machinery for aerating beverages; nesoi
8422.40.11	Machinery for packing or wrapping pipe tobacco, candy and cigarette packages; combination candy cutting and wrapping machines
8422.40.91	Packing or wrapping machinery, nesoi
8429.11.00	Self-propelled bulldozers and angledozers, for track laying
8429.19.00	Self-propelled bulldozers and angledozers other than track laying
8429.20.00	Self-propelled graders and levelers
8429.30.00	Self-propelled scrapers
8429.40.00	Self-propelled tamping machines and road rollers
8429.51.10	Self-propelled front-end shovel loaders, wheel-type
8429.51.50	Self-propelled front-end shovel loaders, other than wheel-type
8429.52.10	Self-propelled backhoes, shovels, clamshells and draglines with a 360 degree revolving superstructure
8429.52.50	Self-propelled machinery with a 360 degree revolving superstructure, other than backhoes, shovels, clamshells and draglines

HTSUS Subheading	Product Description
8429.59.10	Self-propelled backhoes, shovels, clamshells and draglines not with a 360 degree revolving superstructure
8429.59.50	Self-propelled machinery not with a 360 degree revolving superstructure, other than backhoes, shovels, clamshells and draglines
8430.10.00	Pile-drivers and pile-extractors
8430.31.00	Self-propelled coal or rock cutters and tunneling machinery
8430.39.00	Coal or rock cutters and tunneling machinery, not self-propelled
8430.41.00	Self-propelled boring or sinking machinery
8430.49.40	Offshore oil and natural gas drilling and production platforms
8430.49.80	Boring or sinking machinery, not self-propelled, nesoi
8430.50.10	Self-propelled peat excavators
8430.50.50	Self-propelled machinery for working earth, minerals or ores, nesoi
8430.61.00	Tamping or compacting machinery, not self-propelled
8430.69.01	Machinery for working earth, minerals or ores, not self-propelled, nesoi
8432.10.00	Plows for soil preparation or cultivation
8432.21.00	Disc harrows for soil preparation or cultivation
8432.29.00	Harrows (other than disc), scarifiers, cultivators, weeders and hoes for soil preparation or cultivation
8432.31.00	No-till direct seeders, planters and transplanters
8432.39.00	Seeders, planters and transplanters, nesoi
8432.41.00	Manure spreaders
8432.42.00	Fertilizer distributors
8432.80.00	Agricultural, horticultural or forestry machinery for soil preparation or cultivation, nesoi; lawn or sports ground rollers
8433.30.00	Haymaking machinery other than mowers
8433.40.00	Straw or fodder balers, including pick-up balers
8433.51.00	Combine harvester-threshers
8433.52.00	Threshing machinery other than combine harvester-threshers
8433.53.00	Root or tuber harvesting machines
8433.59.00	Harvesting machinery or threshing machinery, nesoi
8433.60.00	Machines for cleaning, sorting or grading eggs, fruit or other agricultural produce
8435.10.00	Presses, crushers and similar machinery used in the manufacture of wine, cider, fruit juices or similar beverages

HTSUS Subheading	Product Description
8436.10.00	Machinery for preparing animal feeds
8436.21.00	Poultry incubators and brooders
8436.29.00	Poultry-keeping machinery
8436.80.00	Agricultural, horticultural, forestry or bee-keeping machinery, nesoi
8437.10.00	Machines for cleaning, sorting or grading seed, grain or dried leguminous vegetables
8437.80.00	Machinery used in the milling industry or for the working of cereals or dried leguminous vegetables, other than farm type machinery
8438.10.00	Bakery machinery and machinery for the manufacture of macaroni, spaghetti or similar products, nesoi
8438.20.00	Machinery for the manufacture of confectionery, cocoa or chocolate, nesoi
8438.30.00	Machinery for sugar manufacture, nesoi
8438.40.00	Brewery machinery, nesoi
8438.50.00	Machinery for the preparation of meat or poultry, nesoi
8438.60.00	Machinery for the preparation of fruits, nuts or vegetables, nesoi
8438.80.00	Machinery for the industrial preparation or manufacture of food or drink, nesoi
8439.10.00	Machinery for making pulp of fibrous cellulosic material
8439.20.00	Machinery for making paper or paperboard
8439.30.00	Machinery for finishing paper or paperboard
8441.10.00	Cutting machines of all kinds used for making up paper pulp, paper or paperboard
8441.20.00	Machines for making bags, sacks or envelopes of paper pulp, paper or paperboard
8441.30.00	Machines for making cartons, boxes, cases, tubes, drums or similar containers, other than by molding, of paper pulp, paper or paperboard
8441.40.00	Machines for molding articles in paper pulp, paper or paperboard
8441.80.00	Machinery for making up paper pulp, paper or paperboard, nesoi
8442.30.01	Machinery, apparatus and equipment of heading 8442
8442.50.10	Printing plates
8442.50.90	Printing type, blocks, cylinders and other printing components; blocks, cylinders and lithographic stones, prepared for printing purposes
8444.00.00	Machines for extruding, drawing, texturing or cutting man-made textile materials

HTSUS Subheading	Product Description
8445.11.00	Carding machines for preparing textile fibers
8445.12.00	Combing machines for preparing textile fibers
8445.13.00	Drawing or roving machines for preparing textile fibers
8445.19.00	Machines for preparing textile fibers, nesoi
8445.20.00	Textile spinning machines
8445.30.00	Textile doubling or twisting machines
8445.40.00	Textile winding (including weft-winding) or reeling machines
8445.90.00	Machinery for producing textile yarns nesoi; machines for preparing textile yarns for use on machines of heading 8446 or 8447
8446.10.00	Weaving machines (looms) for weaving fabrics of a width not exceeding 30 cm
8446.21.50	Shuttle type power looms for weaving fabrics of a width exceeding 30 cm, but not exceeding 4.9 m
8446.29.00	Weaving machines for weaving fabrics of a width exceeding 30 cm, shuttle type, nesoi
8446.30.10	Shuttleless type power looms, for weaving fabrics of a width exceeding 4.9 m, nesoi
8446.30.50	Shuttleless type weaving machines (looms), for weaving fabrics of a width exceeding 30 cm, nesoi
8447.11.10	Circular knitting machines with cylinder diameter not exceeding 165 mm, for knitting hosiery
8447.11.90	Circular knitting machines with cylinder diameter not exceeding 165 mm, other than for knitting hosiery
8447.12.10	Circular knitting machines with cylinder diameter exceeding 165 mm, for knitting hosiery
8447.12.90	Circular knitting machines with cylinder diameter exceeding 165 mm, other than for knitting hosiery
8447.20.20	V-bed flat knitting machines, power driven, over 50.8 mm in width
8447.20.30	V-bed flat knitting machines, nesoi
8447.20.40	Warp knitting machines
8447.20.60	Flat knitting machines, other than V-bed or warp; stitch-bonding machines
8447.90.10	Braiding and lace-braiding machines
8447.90.50	Embroidery machines
8447.90.90	Knitting machines other than circular or flat knitting; machines for making gimped yarn, tulle, trimmings or net; machines for tufting
8448.11.00	Dobbies and Jacquards, card reducing, copying, punching or assembling machines for use with machines of heading 8444, 8445, 8446 or 8447

HTSUS Subheading	Product Description
8448.19.00	Auxiliary machinery for machines of heading 8444, 8445, 8446 or 8447, nesoi
8448.31.00	Card clothing as parts and accessories of machines of heading 8445 or of their auxiliary machinery
8448.33.00	Spindles, spindle flyers, spinning rings and ring travellers of machines of heading 8445 or of their auxiliary machines
8448.42.00	Reeds for looms, healds and heald-frames of weaving machines (looms) or their auxiliary machinery
8448.51.10	Latch needles for knitting machines
8448.51.20	Spring-beard needles for knitting machines
8448.51.30	Needles for knitting machines other than latch needles or spring-beard needles
8448.51.50	Sinkers, needles and other articles used to form stitches, nesoi, for machines of heading 8447
8449.00.10	Finishing machinery for felt or nonwovens and parts thereof
8449.00.50	Machinery for making felt hats; blocks for making hats; parts thereof
8451.29.00	Drying machines for yarns, fabrics or made up textile articles, each of a dry linen capacity exceeding 10 kg
8451.30.00	Ironing machines and presses (including fusing presses) for textile fabrics or made up textile articles
8451.40.00	Washing, bleaching or dyeing machines for textile yarns, fabrics or made up textile articles
8451.50.00	Machines for reeling, unreeling, folding, cutting or pinking textile fabrics
8451.80.00	Machinery for the handling of textile yarns, fabrics or made up textile articles, nesoi
8452.21.10	Sewing machines specially designed to join footwear soles to uppers, automatic
8452.21.90	Sewing machines, automatic, nesoi
8452.29.10	Sewing machines, other than automatic, specially designed to join footwear soles to uppers
8452.29.90	Sewing machines, other than automatic, nesoi
8453.10.00	Machinery for preparing, tanning or working hides, skins or leather
8453.20.00	Machinery for making or repairing footwear
8453.80.00	Machinery, nesoi, for making or repairing articles of hides, skins or leather
8454.10.00	Converters of a kind used in metallurgy or in metal foundries
8454.20.00	Ingot molds and ladles, of a kind used in metallurgy or in metal foundries

HTSUS Subheading	Product Description
8454.30.00	Casting machines, of a kind used in metallurgy or in metal foundries
8455.10.00	Metal-rolling tube mills
8455.21.00	Metal-rolling mills, other than tube mills, hot or combination hot and cold
8455.22.00	Metal-rolling mills, other than tube mills, cold
8455.30.00	Rolls for metal-rolling mills
8456.11.10	Machine tools operated by laser, for working metal
8456.11.70	Machine tools operated by laser, of a kind used solely or principally for manufacture of printed circuits
8456.11.90	Machine tools operated by laser, nesoi
8456.12.10	Machine tools operated by light or photon beam processes, for working metal
8456.12.70	Machine tools operated by light or photon beam processes, of a kind used solely or principally for the manufacture of printed circuits
8456.12.90	Machine tools operated by light or photon beam processes, nesoi
8456.20.10	Machine tools operated by ultrasonic processes, for working metal
8456.20.50	Machine tools operated by ultrasonic processes, other than for working metal
8456.30.10	Machine tools operated by electro-discharge processes, for working metal
8456.30.50	Machine tools operated by electro-discharge processes, other than for working metal
8456.40.10	Machine tools operated by plasma arc process, for working metal
8456.40.90	Machine tools operated by plasma arc process, other than for working metal
8456.50.00	Water-jet cutting machines
8456.90.31	Machine tools operated by electro-chemical or ionic-beam processes, for working metal
8456.90.71	Machine tools operated by electro-chemical or ionic-beam processes, other than for working metal
8457.10.00	Machining centers for working metal
8457.20.00	Unit construction machines (single station), for working metal
8457.30.00	Multistation transfer machines for working metal
8458.11.00	Horizontal lathes (including turning centers) for removing metal, numerically controlled
8458.19.00	Horizontal lathes (including turning centers) for removing metal, other than numerically controlled

HTSUS Subheading	Product Description
8458.91.10	Vertical turret lathes (including turning centers) for removing metal, numerically controlled
8458.91.50	Lathes (including turning centers), other than horizontal or vertical turret lathes, for removing metal, numerically controlled
8458.99.10	Vertical turret lathes (including turning centers) for removing metal, other than numerically controlled
8458.99.50	Lathes (including turning centers), other than horizontal or vertical turret lathes, for removing metal, other than numerically controlled
8459.10.00	Way-type unit head machines for drilling, boring, milling, threading or tapping by removing metal, other than lathes of heading 8458
8459.21.00	Drilling machines, numerically controlled, nesoi
8459.29.00	Drilling machines, other than numerically controlled, nesoi
8459.31.00	Boring-milling machines, numerically controlled, nesoi
8459.39.00	Boring-milling machines, other than numerically controlled, nesoi
8459.41.00	Boring machines, numerically controlled, nesoi
8459.49.00	Boring machines, not numerically controlled, nesoi
8459.51.00	Milling machines, knee type, numerically controlled, nesoi
8459.59.00	Milling machines, knee type, other than numerically controlled, nesoi
8459.61.00	Milling machines, other than knee type, numerically controlled, nesoi
8459.69.00	Milling machines, other than knee type, other than numerically controlled, nesoi
8459.70.40	Other threading or tapping machines, numerically controlled
8459.70.80	Other threading or tapping machines nesoi
8460.12.00	Flat-surface grinding machines, numerically controlled
8460.19.01	Flat-surface grinding machines, not numerically controlled
8460.22.00	Centerless grinding machines, numerically controlled
8460.23.00	Other cylindrical grinding machines, numerically controlled
8460.24.00	Other grinding machines, numerically controlled
8460.29.01	Other grinding machines, other than numerically controlled
8460.31.00	Sharpening (tool or cutter grinding) machines for working metal or cermets, numerically controlled
8460.39.00	Sharpening (tool or cutter grinding) machines for working metal or cermets, other than numerically controlled
8460.40.40	Honing or lapping machines for working metal or cermets, numerically controlled

HTSUS Subheading	Product Description
8460.40.80	Honing or lapping machines for working metal or cermets, other than numerically controlled
8460.90.40	Other machine tools for deburring, polishing or otherwise finishing metal or cermets, nesoi, numerically controlled
8460.90.80	Other machine tools for deburring, polishing or otherwise finishing metal or cermets, nesoi, other than numerically controlled
8461.20.40	Shaping or slotting machines for working by removing metal or cermets, numerically controlled
8461.20.80	Shaping or slotting machines for working by removing metal or cermets, other than numerically controlled
8461.30.40	Broaching machines for working by removing metal or cermets, numerically controlled
8461.30.80	Broaching machines for working by removing metal or cermets, other than numerically controlled
8461.40.10	Gear cutting machines for working by removing metal or cermets
8461.40.50	Gear grinding or finishing machines for working by removing metal or cermets
8461.50.40	Sawing or cutting-off machines for working by removing metal or cermets, numerically controlled
8461.50.80	Sawing or cutting-off machines for working by removing metal or cermets, other than numerically controlled
8461.90.30	Machine-tools for working by removing metal or cermets, nesoi, numerically controlled
8461.90.60	Machine-tools for working by removing metal or cermets, nesoi, other than numerically controlled
8462.11.00	Hot forming machines for forging, die forging (including presses) and hot hammers, closed die forging machines
8462.19.00	Other hot forming machines for forging, die forging (including presses) and hot hammers (other than closed die forging machines), nesoi
8462.22.00	Profile forming machines
8462.23.00	Numerically controlled press brakes
8462.24.00	Numerically controlled panel benders
8462.25.00	Numerically controlled roll forming machines
8462.26.00	Other numerically controlled bending, folding, straightening or flattening machines (o/t press brakes, panel benders, roll forming machines)
8462.29.00	Other bending folding straightening or flattening machines (other than numerically controlled or profile forming machines), nesoi
8462.32.10	Numerically controlled sitting lines and cut-to-length lines

HTSUS Subheading	Product Description
8462.32.50	Sitting lines and cut-to-length lines (other than numerically controlled), nesoi
8462.33.00	Numerically controlled shearing machines
8462.39.00	Shearing machines (other than numerically controlled), nesoi
8462.42.00	Numerically controlled punching, notching or nibbling machines (excluding presses) for flat products
8462.49.00	Other punching, notching or nibbling machines (excluding presses) for flat products, other than numerically controlled
8462.51.00	Numerically controlled machines for working tube, pipe, hollow section and bar (excluding presses)
8462.59.00	Other machines for working tube, pipe, hollow section and bar (excluding presses), other than numerically controlled
8462.61.40	Hydraulic presses, numerically controlled
8462.61.80	Hydraulic presses, not numerically controlled
8462.62.40	Numerically controlled mechanical cold metal working presses
8462.62.50	Other mechanical cold metal working presses, other than numerically controlled
8462.63.40	Numerically controlled cold metal working servo-presses
8462.63.80	Other cold metal working servo-presses, other than numerically controlled
8462.69.40	Numerically controlled other cold metal working presses, nesoi
8462.69.80	Other cold metal working presses, other than numerically controlled, nesoi
8462.90.40	Other numerically controlled machines tools for working metal, nesoi
8462.90.80	Other machines tools for working metal, other than numerically controlled, nesoi
8463.10.00	Draw-benches for bars, tubes, profiles, wire or the like, for working metal or cermets, without removing material
8463.20.00	Thread rolling machines for working metal or cermets, without removing material
8463.30.00	Machines for working wire of metal or cermets, without removing material
8463.90.00	Machine tools for working metal or cermets, without removing material, nesoi
8464.10.01	Sawing machines for working stone, ceramics, concrete, asbestos-cement or like mineral materials or for cold working glass
8464.20.01	Grinding or polishing machines for working stone, ceramics, concrete, asbestos-cement or like mineral materials, or glass, nesoi
8464.90.01	Machine tools for working stone, ceramics, concrete, asbestos-cement or like mineral materials or for cold working glass, nesoi

HTSUS Subheading	Product Description
8465.10.00	Machines for working certain hard materials which can carry out different types of machining operations w/o tool change between operations
8465.20.10	Machine centers for sawing, planing, milling, molding, grinding, sanding, polishing, drilling or mortising
8465.20.50	Machine centers for bending or assembling
8465.20.80	Machine centers, nesoi
8465.91.00	Sawing machines for working wood, cork, bone, hard rubber, hard plastics or similar hard materials
8465.92.00	Planing, milling or molding (by cutting) machines for working wood, cork, bone, hard rubber, hard plastics or similar hard materials
8465.93.00	Grinding, sanding or polishing machines for working wood, cork, bone, hard rubber, hard plastics or similar hard materials
8465.94.00	Bending or assembling machines for working wood, cork, bone hard rubber, hard plastics or similar hard materials
8465.95.00	Drilling or mortising machines for working wood, cork, bone, hard rubber, hard plastics or similar hard materials
8465.96.00	Splitting, slicing or paring machines for working wood, cork, bone, hard rubber, hard plastics or similar hard materials
8465.99.02	Machine tools for working wood, cork, bone, hard rubber, hard plastics and similar hard materials, nesoi
8468.20.10	Gas-operated machinery, apparatus and appliances, hand-directed or -controlled, used for soldering, brazing, welding or tempering, nesoi
8468.20.50	Gas-operated machinery, apparatus and appliances, not hand-directed or -controlled, used for soldering, brazing, welding or tempering, nesoi
8468.80.10	Machinery and apparatus, hand-directed or -controlled, used for soldering, brazing or welding, not gas-operated
8468.80.50	Machinery and apparatus other than hand-directed or -controlled, used for soldering, brazing or welding, not gas-operated
8474.10.00	Sorting, screening, separating or washing machines for earth, stones, ores or other mineral substances in solid form
8474.20.00	Crushing or grinding machines for earth, stones, ores or other mineral substances
8474.31.00	Concrete or mortar mixers
8474.32.00	Machines for mixing mineral substances with bitumen
8474.39.00	Mixing or kneading machines for earth, stones, ores or other mineral substances, nesoi

HTSUS Subheading	Product Description
8474.80.00	Machinery for agglomerating, shaping or molding solid mineral fuels, or other mineral products; machines for forming sand foundry molds
8475.10.00	Machines for assembling electric or electronic lamps, tubes or flashbulbs, in glass envelopes
8475.21.00	Machines for making glass optical fibers and preforms thereof
8475.29.00	Machines for manufacturing or hot working glass or glassware, nesoi
8477.10.30	Injection-molding machines for manufacturing shoes of rubber or plastics
8477.10.40	Injection-molding machines for use in the manufacture of video laser discs
8477.10.90	Injection-molding machines of a type used for working or manufacturing products from rubber or plastics, nesoi
8477.20.00	Extruders for working rubber or plastics or for the manufacture of products from these materials, nesoi
8477.30.00	Blow-molding machines for working rubber or plastics or for the manufacture of products from these materials
8477.40.01	Vacuum-molding and other thermoforming machines for working rubber or plastics or for manufacture of products from these materials, nesoi
8477.51.00	Machinery for molding or retreading pneumatic tires or for molding or otherwise forming inner tubes
8477.59.01	Machinery for molding or otherwise forming rubber or plastics other than for molding or retreading pneumatic tires, nesoi
8477.80.01	Machinery for working rubber or plastics or for the manufacture of products from these materials, nesoi
8478.10.00	Machinery for preparing or making up tobacco, nesoi
8479.10.00	Machinery for public works, building or the like, nesoi
8479.20.00	Machinery for the extraction or preparation of animal or fixed vegetable fats or oils, nesoi
8479.30.00	Presses for making particle board or fiber building board of wood or other ligneous materials, and mach. for treat. wood or cork, nesoi
8479.40.00	Rope- or cable-making machines nesoi
8479.50.00	Industrial robots, nesoi
8479.81.00	Machines and mechanical appliances for treating metal, including electric wire coil-winders, nesoi
8479.82.00	Machines for mixing, kneading, crushing, grinding, screening, sifting, homogenizing, emulsifying or stirring, nesoi
8479.83.00	Cold isostatic presses, nesoi
8479.89.83	Machines for the manufacture of optical media

HTSUS Subheading	Product Description
8479.89.92	Automated electronic component placement machines for making printed circuit assemblies
8479.89.95	Other machines and mechanical appliances having individual functions, not specified or included elsewhere in chapter 84, nesoi
8486.10.00	Machines and apparatus for the manufacture of boules or wafers
8486.20.00	Machines and apparatus for the manufacture of semiconductor devices or electronic integrated circuits
8486.30.00	Machines and apparatus for the manufacture of flat panel displays
8486.40.00	Machines and apparatus for the manufacture of masks and reticles and for the assembly of electronic integrated circuits
8514.11.00	Hot isostatic presses
8514.19.00	Other resistance heated industrial or laboratory furnaces and ovens, other than hot isostatic presses
8514.20.40	Industrial or laboratory microwave ovens for making hot drinks or for cooking or heating food
8514.20.60	Industrial or laboratory microwave ovens, nesoi
8514.20.80	Industrial or laboratory furnaces and ovens (other than microwave) functioning by induction or dielectric loss
8514.31.10	Electron beam furnaces for making printed circuits or printed circuit assemblies
8514.31.90	Electron beam furnaces, other than for making printed circuits or printed circuit assemblies
8514.32.10	Plasma and vacuum arc furnaces for making printed circuits or printed circuit assemblies
8514.32.90	Plasma and vacuum arc furnaces, other than for making printed circuits or printed circuit assemblies
8514.39.10	Other industrial furnaces and ovens for making printed circuits or printed circuit assemblies
8514.39.90	Other industrial or laboratory electric industrial or laboratory furnaces and ovens nesoi
8514.40.00	Industrial or laboratory induction or dielectric heating equipment nesoi
8515.11.00	Electric soldering irons and guns
8515.19.00	Electric brazing or soldering machines and apparatus, other than soldering irons and guns
8515.21.00	Electric machines and apparatus for resistance welding of metal, fully or partly automatic
8515.29.00	Electric machines and apparatus for resistance welding of metal, other than fully or partly automatic
8515.31.00	Electric machines and apparatus for arc (including plasma arc) welding of metals, fully or partly automatic

HTSUS Subheading	Product Description
8515.39.00	Electric machines and apparatus for arc (including plasma arc) welding of metals, other than fully or partly automatic
8515.80.00	Electric welding apparatus nesoi, and electric machines and apparatus for hot spraying metals or sintered metal carbides
8543.30.20	Electrical machines and apparatus for electroplating, electrolysis, or electrophoresis for making printed circuits
8543.30.90	Other electrical machines and apparatus for electroplating, electrolysis, or electrophoresis
8543.70.20	Physical vapor deposition apparatus, nesoi
8543.70.60	Electrical machines and apparatus nesoi, designed for connection to telegraphic or telephonic apparatus, instruments or networks
8543.70.71	Electric luminescent lamps
8543.70.97	Plasma cleaner machines that remove organic contaminants from electron microscopy specimens and holders
8543.70.98	Other electrical machines and apparatus, having individual functions, nesoi

Annex C

Proposed Exclusions for Solar Manufacturing Equipment

Exclusion Product Description
[1] Silicon growth furnaces, including Czochralski crystal growth furnaces, designed for growing monocrystalline silicon ingots (boules) of a mass exceeding 700 kg, for use in solar wafer manufacturing (described in statistical reporting number 8486.10.0000).
[2] Band saws designed for cutting or slicing cylindrical monocrystalline silicon ingots (boules) of a mass exceeding 700 kg into square or rectangular ingots (boules), for use in solar wafer manufacturing (described in statistical reporting number 8486.10.0000).
[3] Machines designed to align and adhere monocrystalline silicon ingots (boules) of a mass exceeding 400 kg to plastic support boards on metal mounting plates to provide support during diamond wire sawing, for use in solar wafer manufacturing (described in statistical reporting number 8486.10.0000).
[4] Diamond wire saws designed for cutting or slicing silicon ingots (boules) of a mass exceeding 400 kg into solar wafers of a thickness not exceeding 200 micrometers (described in statistical reporting number 8486.10.0000).
[5] Wire guide roller machines, presented with diamond wire saws designed for slicing monocrystalline silicon ingots (boules) of a mass exceeding 400 kg into solar wafers of a thickness not exceeding 200 micrometers, all of the foregoing for use in solar wafer manufacturing (described in statistical reporting number 8486.10.0000).

Exclusion Product Description
[6] Coolant fluid recycling machines, presented with diamond wire saws designed for slicing monocrystalline silicon ingots (boules) of a mass exceeding 400 kg into solar wafers of a thickness not exceeding 200 micrometers, all of the foregoing for use in solar wafer manufacturing (described in statistical reporting number 8486.10.0000).
[7] Degumming machines designed to remove adhesives from solar wafers (described in statistical reporting number 8486.10.0000).
[8] Texturing and cleaning machines designed to repair, clean, and texture the solar wafer substrate, whether or not containing automation equipment for transferring solar wafers from one process station to the next, for use in solar wafer manufacturing (described in statistical reporting number 8486.20.0000).
[9] Thermal diffusion quartz-tube furnaces and boat loading machines, designed to diffuse dopant impurities into square or rectangular silicon wafers, for use in solar cell manufacturing (described in statistical reporting number 8486.20.0000).
[10] Plasma enhanced chemical vapor deposition machines designed to deposit amorphous or nanocrystalline layers on one or both surfaces of a solar wafer, whether or not containing automation equipment for transferring solar wafers from one process station to the next, for use in solar cell manufacturing (described in statistical reporting number 8486.20.0000).
[11] Physical vapor deposition (PVD) machines, designed to deposit a thin film of transparent conducting oxide on one or both surfaces of a solar wafer, whether or not containing automation equipment for transferring solar wafers from one process station to the next, for use in solar cell manufacturing (described in statistical reporting number 8486.20.0000).
[12] Screen printing line machines, including sintering furnaces for printing conducting contacts on both surfaces of a solar wafer, whether or not containing automation equipment for transferring solar wafers from one process station to the next, and whether or not containing equipment for solar cell testing, for use in solar cell manufacturing (described in statistical reporting number 8486.20.0000).
[13] Cell interconnection machines designed to electrically solder solar cells to each other to form a complete electrical circuit, for use in solar module manufacturing (described in statistical reporting number 8486.20.0000).
[14] Module encapsulant preparation machines designed for encapsulant cutting and placement, butyl dispensing equipment, and equipment for the transport of encapsulant materials, all the foregoing for use in solar module manufacturing (described in statistical reporting number 8486.20.0000).
[15] Machines designed to laminate an interconnected cell string and to attach junction boxes, all the foregoing for use in solar module manufacturing (described in statistical reporting number 8486.20.0000).
[16] Frame attachment machines designed for attaching metal frames to the perimeter or rear surface of solar modules (described in statistical reporting number 8486.20.0000).

Exclusion Product Description
[17] Machines designed for transporting polysilicon material to growth furnaces and machines designed for transporting monocrystalline ingots (boules) and wafers throughout the solar wafer manufacturing process, including machines for loading or unloading solar wafers during the diamond wire slicing process (described in statistical reporting number 8486.40.0030).
[18] Machines designed for lifting, handling, loading, or unloading of solar wafers of a thickness not exceeding 200 micrometers, for use in solar wafer manufacturing (described in statistical reporting number 8486.40.0030).
[19] Machines designed for lifting, handling, loading, or unloading in the assembly of solar modules (described in statistical reporting number 8486.40.0030).