

April 16, 1998

UNITED STATES INTERNATIONAL TRADE COMMISSION
Washington, DC 20436

MEMORANDUM TO THE COMMITTEE ON FINANCE OF THE OF THE UNITED STATES
SENATE ON PROPOSED TARIFF LEGISLATION¹

Bill no., sponsor, and sponsor's state: S.1187 (105th Congress), Senator Lautenberg, NJ²

Companion bill: H.R. 2334 (105th Congress), Representative Frelinghuysen, NJ

Title as introduced: To suspend temporarily the duty on ferroboron.

Summary of bill:³

The bill amends the Harmonized Tariff Schedule of the United States (HTS) by providing a temporary duty suspension for U.S. imports of ferroboron through December 31, 2000.

Effective date: 15 days following the date of enactment.

Retroactive effect: None.

Statement of purpose:

Senator Lautenberg, for himself and on behalf of Senator Hollings and Senator Thurmond, stated in the *Congressional Record*,⁴ that--

ferroboron is a key and costly raw material used in the production of amorphous metal electrical power distribution transformer cores. Transformers using these cores are more expensive by 20 to 30 percent, but reduce energy losses and associated greenhouse gas emissions by 60 to 80 percent compared to other transformer core technologies. Reducing the cost of ferroboron by suspending the import duty would help ensure the cost-competitiveness of the amorphous metal strip used in transformer cores. He stated that there is no U.S. manufacture of ferroboron, and no adverse impact on the domestic industry is anticipated from tariff suspension.

¹Industry analyst: Charles Yost (205-3432); attorney: Leo Webb (205-2599).

²Senator Lautenberg introduced S.1187 together with Senators Hollings and Thurmond, SC.

³See appendix A for definitions of tariff and trade agreement terms.

⁴*Congressional Record*, Sept. 17, 1997, pp. S9519-20.

Sponsor's staff⁵ reiterated these remarks. These factors were noted also as reasons for introducing the temporary duty suspension bill for ferroboron by Representative Frelinghuysen (H.R. 2334) in the *Congressional Record*.⁶

Product description and uses:

Ferroboron: Standard grades of ferroboron have a boron content between 17 and 19.5 percent and specify low levels of certain impurities, including carbon (0.10 to 1.5 percent), silicon (0.30 to 4 percent), aluminum (0.5 to 8 percent), sulfur (0.10 percent), and phosphorus (0.10 percent).⁷ The remainder is iron. Allied Signal's purchase specification for ferroboron appears to be the most restrictive among consumers worldwide regarding specific impurities and their maximum content.

Boron is alloyed with steels and cast irons to enhance certain properties while the iron acts as a carrying agent into the molten steel. Boron increases the hardenability of steel and enhances the electrical properties of iron-based materials. Most specifications for boron steels define the allowable limits as 0.0005 to 0.007 percent, while 0.003 percent boron appears to be the most common maximum. Ferroboron also is added to cast steels for tools, where its content may be as high as 1.5 percent, but these steels cannot be forged or machined. The single largest U.S. consumer of ferroboron, Allied Signal, alloys high-quality ferroboron with steel to produce its iron-based amorphous metal strip (called, metglas amorphous alloy).⁸

Tariff treatment:⁹

<u>Product</u>	<u>HTS subheading</u>	<u>Col. 1-general rate of duty</u>
Ferroboron.....	7202.99.50.40 ¹⁰	5 %

Structure of domestic industry (including competing products):

Ferroboron: There are no known U.S. producers of ferroboron. One U.S. company ceased producing

⁵USITC staff telephone conversation with Cathy Carpino of Sen. Lautenberg's staff on Mar. 9, 1998.

⁶*Congressional Record*, Aug. 1, 1997, p. E1614.

⁷Ferroboron is classified for tariff purposes as a binary ferroalloy with a boron content of not less than 10 percent, and contains the following elements (each stated as a maximum) that are considered impurities: phosphorus - 3 percent, silicon - 8 percent, all others (except iron) - 10 percent, and iron comprises the balance. Industry specifications are more restrictive with respect to impurities and require a higher boron content.

⁸Metglas alloy is an amorphous metal with a structure in which the metallic molecules occur in a random pattern unlike the crystalline structure of silicon electric steel, which also is used for the cores in electricity transmission devices. According to product literature received from Allied Signal, a core's amorphous structure enables it to be easily magnetized and demagnetized, which in turn, reduces losses during transmission of electrical energy.

⁹See appendix B for column 1-special and column 2 duty rates.

¹⁰This statistical reporting number is a "basket" or residual category for ferroalloys. Besides ferroboron, it includes other ferroalloys that are not classified or listed elsewhere by name.

ferroboron because of cost factors and sold the facility in the early 1990s. Officials at the firm that purchased that facility stated that their company does not produce ferroboron in this country. According to industry and trade sources, imports account for all U.S. consumption of ferroboron.

There are no substitutes for ferroboron in Allied Signal's production of amorphous metal strip. There are a few substitutes for ferroboron in the production of steel or cast iron, including a handful of proprietary addition agents that contain between 0.5 and 2.5 percent boron with other elements (titanium, aluminum, zircon, and silicon, for example) and iron, but these are more expensive. The ferroboron covered by the bill competes only to a limited extent with these other alloying addition agents which would not benefit from the duty suspension.

Amorphous metal competes with silicon electrical steel in the production of transformer cores. However, this competition reportedly is limited and amorphous metals are generally used for only the smaller size wound core transformers, accounting for as little as 2 percent of the total transformer market.¹¹

Private-sector views:

The Commission contacted the trade association representing U.S. producers of ferroalloys, Allied Signal (on whose behalf the bill was introduced), and four companies which import ferroboron.¹² The firms had not submitted any written comments as of the date of preparation of this report.

¹¹Grain-oriented silicon electrical steel is used primarily in the production of the cores of large- and medium-sized electrical energy power transformers and distribution transformers, the designs of which effectively utilize the directional magnetic properties of the steel. Unlike grain-oriented silicon electrical steel, amorphous metal has a noncrystalline structure and exhibits less core loss than grain-oriented silicon electric steel. Power industry officials disagree over the share of the transformer market held by amorphous metals. See, USITC, Grain-Oriented Silicon Electric Steel from Italy and Japan, Investigation Nos. 701-TA-355 and 731-TA-660 (Final), Publication 2778, May 1994, pp. II-8 and II-9.

¹²Arthur J. Simonetti, Brad Roach, and Nick DeCristifaro of Allied Signal on Jan. 15, 16, 20, and 22, 1998; Joe Marino of Shieldalloy Metallurgical Corp. on Jan. 15, 1998; Gary Newman of Atomergic Chemetals Corp. on Jan. 22, 1998; John Hilbert of The Ferroalloys Association on Jan. 25, 1998; Jack Dworetzky of F.W. Winter on Jan. 26, 1998; Rodney Thompson of Elkem Metals on Jan. 29, 1998; and Jack Marshall of Galt Alloys on Feb. 3, 1998.

U.S. consumption:

Ferroboron:	<u>1994</u>	<u>1995</u>	<u>1996</u>
	------(1000 dollars)-----		
U.S. production.....	0	0	0
U.S. imports ¹	12,850	12,829	19,267
U.S. exports.....	0	0	0
Apparent U.S. consumption ¹	12,850	12,829	19,267

¹Estimated by the staff of the USITC based on information provided by industry officials.

Principal import sources: Japan, United Kingdom, and China
Principal export markets: None.

Effect on customs revenue:¹³

Future (1998-2000) effect:

	Estimated average annual <u>revenue loss</u> ¹		
	<u>1998</u> ²	<u>1999</u>	<u>2000</u>
	------(1,000 dollars)----		
Ferroboron.....	1,000	1,100	1,200

¹Estimated by the staff of the USITC based on statistical projections of historical import data.

²Represents 10 months, March-December.

Retroactive effect: None.

Technical comments: None.

¹³Actual revenue loss may be understated in the event of a significant increase in imports over the duty suspension period. However, such revenue loss may be overstated because products made from ferroboron that are exported are eligible for duty drawback. An estimate of the amount of U.S. imports that would be eligible for duty drawback has been withheld to avoid disclosing confidential business information.

APPENDIX A

TARIFF AND TRADE AGREEMENT TERMS

In the **Harmonized Tariff Schedule of the United States** (HTS), chapters 1 through 97 cover all goods in trade and incorporate in the tariff nomenclature the internationally adopted Harmonized Commodity Description and Coding System through the 6-digit level of product description. Subordinate 8-digit product subdivisions, either enacted by Congress or proclaimed by the President, allow more narrowly applicable duty rates; 10-digit administrative statistical reporting numbers provide data of national interest. Chapters 98 and 99 contain special U.S. classifications and temporary rate provisions, respectively. The HTS replaced the **Tariff Schedules of the United States** (TSUS) effective January 1, 1989.

Duty rates in the **general** subcolumn of HTS column 1 are most-favored-nation (MFN) rates, many of which have been eliminated or are being reduced as concessions resulting from the Uruguay Round of Multilateral Trade Negotiations. Column 1-general duty rates apply to all countries except those enumerated in HTS general note 3(b) (Afghanistan, Cuba, Laos, North Korea, and Vietnam), which are subject to the statutory rates set forth in **column 2**. Specified goods from designated MFN-eligible countries may be eligible for reduced rates of duty or for duty-free entry under one or more preferential tariff programs. Such tariff treatment is set forth in the **special** subcolumn of HTS rate of duty column 1 or in the general notes. If eligibility for special tariff rates is not claimed or established, goods are dutiable at column 1-general rates. The HTS does not enumerate those countries as to which a total or partial embargo has been declared.

The **Generalized System of Preferences** (GSP) affords nonreciprocal tariff preferences to developing countries to aid their economic development and to diversify and expand their production and exports. The U.S. GSP, enacted in title V of the Trade Act of 1974 for 10 years and extended several times thereafter, applies to merchandise imported on or after January 1, 1976 and before the close of June 30, 1998. Indicated by the symbol "A", "A*", or "A+" in the special subcolumn, the GSP provides duty-free entry to eligible articles the product of and imported directly from designated beneficiary developing countries, as set forth in general note 4 to the HTS.

The **Caribbean Basin Economic Recovery Act** (CBERA) affords nonreciprocal tariff preferences to developing countries in the Caribbean Basin area to aid their economic development and to diversify and expand their production and exports. The CBERA, enacted in title II of Public Law 98-67, implemented by Presidential Proclamation 5133 of November 30, 1983, and amended by the Customs and Trade Act of 1990, applies to merchandise entered, or withdrawn from warehouse for consumption, on or after January 1, 1984. Indicated by the symbol "E" or "E*" in the special subcolumn, the CBERA provides duty-free entry to eligible articles, and reduced-duty treatment to certain other articles, which are the product of and imported directly from designated countries, as set forth in general note 7 to the HTS.

Free rates of duty in the special subcolumn followed by the symbol "IL" are applicable to products of Israel under the **United States-Israel Free Trade Area Implementation Act** of 1985 (IFTA), as provided in general note 8 to the HTS.

Preferential nonreciprocal duty-free or reduced-duty treatment in the special subcolumn followed by the symbol "J" or "J*" in parentheses is afforded to eligible articles the product of designated beneficiary countries under the **Andean Trade Preference Act** (ATPA), enacted as title II of Public Law 102-182 and implemented by Presidential Proclamation 6455 of July 2, 1992 (effective July 22, 1992), as set forth in general note 11 to the HTS.

Preferential or free rates of duty in the special subcolumn followed by the symbol "CA" are applicable to eligible goods of Canada, and rates followed by the symbol "MX" are applicable to eligible goods of Mexico, under the **North American Free Trade Agreement**, as provided in general note 12 to the HTS and implemented effective January 1, 1994 by Presidential Proclamation 6641 of December 15, 1993. Goods must originate in the NAFTA region under rules set forth in general note 12(t) and meet other requirements of the note and applicable regulations.

Other special tariff treatment applies to particular **products of insular possessions** (general note 3(a)(iv)), **products of the West Bank and Gaza Strip** (general note 3(a)(v)), goods covered by the **Automotive Products Trade Act** (APTA) (general note 5) and the **Agreement on Trade in Civil Aircraft** (ATCA) (general note 6), **articles imported from freely associated states** (general note 10), **pharmaceutical products** (general note 13), and **intermediate chemicals for dyes** (general note 14).

The **General Agreement on Tariffs and Trade 1994** (GATT 1994), pursuant to the Agreement Establishing the World Trade Organization, is based upon the earlier GATT 1947 (61 Stat. (pt. 5) A58; 8 UST (pt. 2) 1786) as the primary multilateral system of disciplines and principles governing international trade. Signatories' obligations under both the 1994 and 1947 agreements focus upon most-favored-nation treatment, the maintenance of scheduled concession rates of duty, and national treatment for imported products; the GATT also provides the legal framework for customs valuation standards, "escape clause" (emergency) actions, antidumping and countervailing duties, dispute settlement, and other measures. The results of the Uruguay Round of multilateral tariff negotiations are set forth by way of separate schedules of concessions for each participating contracting party, with the U.S. schedule designated as Schedule XX.

Pursuant to the **Agreement on Textiles and Clothing** (ATC) of the GATT 1994, member countries are phasing out restrictions on imports under the prior "Arrangement Regarding International Trade in Textiles" (known as the **Multifiber Arrangement** (MFA)). Under the MFA, which was a departure from GATT 1947 provisions, importing and exporting countries negotiated bilateral agreements limiting textile and apparel shipments, and importing countries could take unilateral action in the absence or violation of an agreement. Quantitative limits had been established on imported textiles and apparel of cotton, other vegetable fibers, wool, man-made fibers or silk blends in an effort to prevent or limit market disruption in the importing countries. The ATC establishes notification and safeguard procedures, along with other rules concerning the customs treatment of textile and apparel shipments, and calls for the eventual complete integration of this sector into the GATT 1994 over a ten-year period, or by Jan. 1, 2005.

Rev. 8/12/97

APPENDIX B

**SELECTED PORTIONS OF THE
HARMONIZED TARIFF SCHEDULE OF THE UNITED STATES**

(Appendix not included in the electronic version of this report.)

105TH CONGRESS
1ST SESSION

S. 1187

To suspend temporarily the duty on ferroboron.

IN THE SENATE OF THE UNITED STATES

SEPTEMBER 17, 1997

Mr. LAUTENBERG (for himself, Mr. HOLLINGS, and Mr. THURMOND) introduced the following bill; which was read twice and referred to the Committee on Finance

A BILL

To suspend temporarily the duty on ferroboron.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. TEMPORARY SUSPENSION OF DUTY.**

4 (a) IN GENERAL.—Subchapter II of chapter 99 of
5 the Harmonized Tariff Schedule of the United States is
6 amended by inserting in numerical sequence the following
7 new heading:

“	9902.72.02	Ferroboron (provided for in subheading 7202.99.50)	Free		No change		No change		On or before 12/31/2000	”.
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8 (b) EFFECTIVE DATE.—The amendment made by
9 subsection (a) shall apply with respect to goods entered,

1 or withdrawn from warehouse for consumption, on or after
2 the date that is 15 days after the date of enactment of
3 this Act.

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