

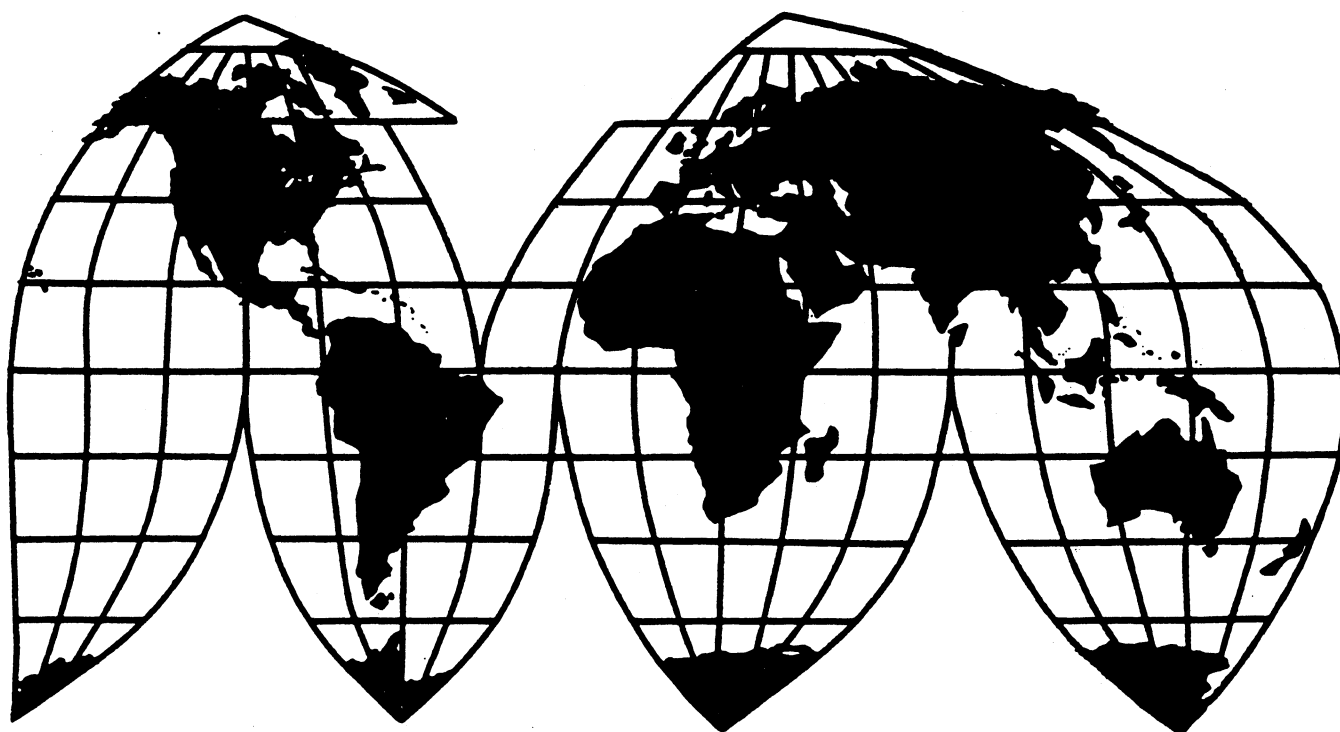
# **Certain Helical Spring Lockwashers From Taiwan**

Investigation No. 731-TA-625 (Final)

Publication 2651

June 1993

**U.S. International Trade Commission**



# **U.S. International Trade Commission**

## **COMMISSIONERS**

**Don E. Newquist, Chairman**  
**Peter S. Watson, Vice Chairman**  
**David B. Rohr**  
**Anne E. Brunsdale**  
**Carol T. Crawford**  
**Janet A. Nuzum**

---

**Robert A. Rogowsky**  
**Director of Operations**

---

### *Staff assigned:*

**Douglas Corkran, Office of Investigations**  
**James Brandon, Office of Industries**  
**Clark Workman, Office of Economics**  
**James Stewart, Office of Investigations**  
**Rachele Valente, Office of the General Counsel**  
  
**Vera Libeau, Supervisory Investigator**

**Address all communications to**  
**Secretary to the Commission**  
**United States International Trade Commission**  
**Washington, DC 20436**

# **U.S. International Trade Commission**

Washington, DC 20436

## **Certain Helical Spring Lockwashers From Taiwan**



**Publication 2651**

**June 1993**





## TABLE OF CONTENTS



## CONTENTS

	<u>Page</u>
Determination-----	1
Views of Chairman Newquist and Commissioner Rohr-----	3
Additional views of Commissioner Anne E. Brunsdale-----	21
Dissenting views of Vice Chairman Peter S. Watson and Commissioner Janet A. Nuzum-----	39
Information obtained in the investigations-----	I-1
Introduction-----	I-3
Institution-----	I-3
Background-----	I-3
The products-----	I-5
Description and uses-----	I-5
Manufacturing processes-----	I-6
Interchangeability-----	I-7
U.S. tariff treatment-----	I-8
The nature and extent of sales at LTFV-----	I-9
China-----	I-9
Taiwan-----	I-9
The domestic market-----	I-10
Apparent U.S. consumption-----	I-10
U.S. producers-----	I-12
U.S. importers-----	I-14
Channels of distribution-----	I-14
Consideration of alleged material injury to an industry in the United States-----	I-16
U.S. production, capacity, and capacity utilization-----	I-16
U.S. producers' shipments-----	I-17
U.S. producers' inventories-----	I-17
U.S. employment, wages, compensation, and productivity-----	I-18
Financial experience of U.S. producers-----	I-19
Overall establishment operations-----	I-20
Operations on helical spring lockwashers-----	I-20
Capital expenditures-----	I-21
Investment in productive facilities-----	I-21
Research and development expenses-----	I-22
Capital and investment-----	I-22
Consideration of the question of threat of material injury to an industry in the United States-----	I-22
U.S. importers' inventories-----	I-24
Ability of foreign producers to generate exports and availability of export markets other than the United States-----	I-26
The industry in China-----	I-26
The industry in Taiwan-----	I-27
Consideration of the causal relationship between imports of the subject merchandise and the alleged material injury-----	I-29
U.S. imports-----	I-29
China-----	I-30
Taiwan-----	I-30
Total imports-----	I-30
Market shares-----	I-31
Prices-----	I-31
Market characteristics-----	I-31
Questionnaire price data-----	I-34
Price trends-----	I-35
Producer/importer price comparisons-----	I-36
Producer/importer unit value comparisons-----	I-37
Purchaser price comparisons-----	I-39
Exchange rates-----	I-40
Lost sales and lost revenue-----	I-42

## CONTENTS--Continued

Page

## Appendixes

A. <u>Federal Register</u> notices of the Commission and Commerce-----	A-1
B. Witnesses appearing at the hearing-----	B-1
C. Summary data-----	C-1
D. Analysis of acquisition costs-----	D-1
E. Comments by the U.S. producers on the impact of imports of certain helical spring lockwashers from China and/or Taiwan on their growth, investment, ability to raise capital, and development and production efforts-----	E-1
F. Import data from official statistics-----	F-1
G. Volume of sales transactions-----	G-1

## Figures

G1. Helical spring lockwashers: Weighted-average largest quantity sales of products 1 and 2, by quarters, January 1990- December 1992-----	G-3
G2. Helical spring lockwashers: Weighted-average largest quantity sales of products 3 and 4, by quarters, January 1990- December 1992-----	G-3
G3. Helical spring lockwashers: Weighted-average largest quantity sales of products 5 and 6, by quarters, January 1990- December 1992-----	G-3

## Tables

1. Helical spring lockwashers: Previous and related investigations, 1975-92-----	I-4
2. Helical spring lockwashers: U.S. shipments of domestic product and U.S. shipments of imports, 1990-92-----	I-10
3. Helical spring lockwashers: U.S. capacity, production, and capacity utilization, 1990-92-----	I-16
4. Helical spring lockwashers: Shipments by U.S. producers, by types, 1990-92-----	I-17
5. Helical spring lockwashers: End-of-period inventories of U.S. producers, 1990-92-----	I-18
6. Average number of U.S. production and related workers producing helical spring lockwashers, hours worked, wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs, 1990-92-----	I-18
7. Income-and-loss experience of Shakeproof on its overall establishment operations in which helical spring lockwashers are produced, 1990-92-----	I-20
8. Income-and-loss experience of U.S. producers on their operations producing helical spring lockwashers, 1990-92-----	I-20

## CONTENTS--Continued

Page

## Tables--Continued

9. Income-and-loss experience (on a per-pound basis) of U.S. producers on their operations producing helical spring lockwashers, 1990-92-	I-20
10. Income-and-loss experience of U.S. producers, by firms, on their operations producing helical spring lockwashers, 1990-92-----	I-21
11. Details of Shakeproof's cost of goods sold for its operations producing helical spring lockwashers, 1990-92-----	I-21
12. Value of assets of Shakeproof for its overall establishment and helical spring lockwasher operations, 1990-92-----	I-22
13. Helical spring lockwashers: End-of-period inventories of U.S. importers, by sources, 1990-92-----	I-24
14. Certain helical spring lockwashers: Hangzhou's capacity, production, inventories, capacity utilization, and shipments, 1990-92 and 1993-94 (projected)-----	I-27
15. Certain helical spring lockwashers: Likunog's capacity, production, inventories, capacity utilization, and shipments, 1990-92 and 1993-94 (projected)-----	I-28
16. Helical spring lockwashers: U.S. imports, by products and by sources, 1990-92-----	I-29
17. Helical spring lockwashers: U.S. market shares, 1990-92-----	I-31
18. F.o.b. prices of product 1 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-35
19. F.o.b. prices of product 2 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-35
20. F.o.b. prices of product 3 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-35
21. F.o.b. prices of product 4 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-35
22. F.o.b. prices of product 5 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-36
23. F.o.b. prices of product 6 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-36
24. Average unit values of shipments of product 1 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-37
25. Average unit values of shipments of product 2 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-38
26. Average unit values of shipments of product 3 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-38

## CONTENTS--Continued

Page

## Tables--Continued

27. Average unit values of shipments of product 4 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-38
28. Average unit values of shipments of product 5 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-38
29. Average unit values of shipments of product 6 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992-----	I-38
30. Exchange rates: Indexes of nominal and real exchange rates of the Taiwan dollar and indexes of producer prices in the United States and Taiwan, by quarters, January 1990-December 1992-----	I-41
C1. Carbon steel helical spring lockwashers: Summary data concerning the U.S. market, 1990-92-----	C-3
C2. Stainless steel helical spring lockwashers: Summary data concerning the U.S. market, 1990-92-----	C-3
C3. Subject helical spring lockwashers: Summary data concerning the U.S. market, 1990-92-----	C-3
C4. Other metallic helical spring lockwashers: Summary data concerning the U.S. market, 1990-92-----	C-3
C5. All helical spring lockwashers: Summary data concerning the U.S. market, 1990-92-----	C-3
C6. Carbon steel helical spring lockwashers: Likunog's capacity, production, inventories, capacity utilization, and shipments, 1990-92 and 1993-94 (projected)-----	C-4
C7. Stainless steel helical spring lockwashers: Likunog's capacity, production, inventories, capacity utilization, and shipments, 1990-92 and 1993-94 (projected)-----	C-4
F1. Imports from China: Imports of product classified under HTS item 7318.21.0000, by months, January 1990-March 1993-----	F-3
F2. Imports from Taiwan: Imports of product classified under HTS item 7318.21.0000, by months, January 1990-March 1993-----	F-3

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

## UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-625 (Final)

CERTAIN HELICAL SPRING LOCKWASHERS FROM TAIWAN

Determination

On the basis of the record<sup>1</sup> developed in the subject investigation, the Commission determines,<sup>2</sup> pursuant to section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) (the Act), that an industry in the United States is materially injured<sup>3</sup> or threatened with material injury<sup>4</sup> by reason of imports from Taiwan of certain helical spring lockwashers, provided for in subheading 7318.21.00 of the Harmonized Tariff Schedule of the United States, that have been found by the Department of Commerce to be sold in the United States at less than fair value (LTFV).

Background

The Commission instituted this investigation effective February 22, 1993, following a preliminary determination by the Department of Commerce that imports of certain helical spring lockwashers from Taiwan were being sold at LTFV within the meaning of section 733(b) of the Act (19 U.S.C. § 1673b(b)). Notice of the institution of the Commission's investigation and of a public hearing to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission,

---

<sup>1</sup> The record is defined in sec. 207.2(f) of the Commission's Rules of Practice and Procedure (19 CFR § 207.2(f)).

<sup>2</sup> Vice Chairman Watson and Commissioner Nuzum dissenting. Commissioner Crawford did not participate in the determination.

<sup>3</sup> Commissioner Brunsdale determines that an industry in the United States is materially injured.

<sup>4</sup> Chairman Newquist and Commissioner Rohr determine that an industry in the United States is threatened with material injury.

Washington, DC, and by publishing the notice in the Federal Register of March 10, 1993 (58 F.R. 13280). The hearing was held in Washington, DC, on May 13, 1993, and all persons who requested the opportunity were permitted to appear in person or by counsel.



## VIEWS OF CHAIRMAN NEWQUIST AND COMMISSIONER ROHR

Based on the record in this final investigation, we determine that an industry in the United States is threatened with material injury by reason of imports of carbon steel and stainless steel helical spring lockwashers from Taiwan that are sold at less than fair value ("LTFV").<sup>1 2</sup>

### I. Like Product and Domestic Industry

To determine whether a domestic industry is materially injured or threatened with material injury by reason of the subject imports, the Commission must first define the "like product" and the "industry." Section 771(4) (A) of the Tariff Act of 1930 (the "Act") defines the relevant domestic industry as "the domestic producers as a whole of a like product, or those producers whose collective output of the like product constitutes a major proportion of the total domestic production of that product . . . ."<sup>3</sup> In turn, section 771(10) of the Act defines "like product" as "a product which is like, or in the absence of like, most similar in characteristics and uses with, the article subject to an investigation. . . ."<sup>4</sup>

The Commission's like product determinations are factual, and the Commission applies case-by-case the statutory standard of "like" or "most similar in characteristics and uses."<sup>5</sup> Generally, the Commission disregards

---

<sup>1</sup> Commissioner Brunsdale determines that the domestic industry is materially injured by reason of the subject imports. See her Additional Views, infra. Vice-Chairman Watson and Commissioner Nuzum determine that the domestic industry is neither materially injured nor threatened with material injury by reason of the subject imports. See their Dissenting Views, infra. Commissioner Crawford did not participate in this investigation.

<sup>2</sup> 19 U.S.C. § 1673b(a). Material retardation of the establishment of an industry is not an issue in this investigation.

<sup>3</sup> 19 U.S.C. § 1677(4) (A).

<sup>4</sup> 19 U.S.C. § 1677(10).

<sup>5</sup> Asociacion Colombiana de Exportadores de Flores, et al. v. United States, 693 F. Supp. 1165, 1169 (Ct. Int'l Trade 1988). In analyzing which domestic products are "like" the class or kind of imported articles subject to investigation, the Commission considers factors including: (1) physical

(continued...)

minor variations among the articles subject to an investigation and looks for clear dividing lines between possible like products.<sup>6</sup> While the Commission accepts Commerce's determination as to which imported articles are within the class of merchandise sold at LTFV, the Commission determines which domestic products are like the ones in the class defined by Commerce.<sup>7</sup> The Commission may define the class of domestically-produced like products more broadly than the class of articles described by Commerce.<sup>8</sup>

In its final determination, Commerce defined the class or kind of imported merchandise subject to investigation as "circular washers of carbon steel, of carbon alloy steel, or of stainless steel, heat-treated or non-heat-treated, plated or non-plated, with ends that are off-line. . . . The scope does not include internal or external tooth washers, nor does it include spring lock washers made of other metals, such as copper."<sup>9</sup>

Helical spring lockwashers are flattened, ring-shaped metal devices whose ends are cut in an off-line manner to provide spring or tension to assembled parts when used as a seat for bolts, nuts, screws, and similar fasteners.<sup>10</sup> In addition to preventing movement or loss of tension between assembled parts, helical spring lockwashers are used to distribute load over

---

<sup>5</sup> (...continued)  
characteristics and uses; (2) interchangeability; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) common manufacturing facilities and production employees; and where appropriate, (6) price. Generally, the Commission requires "clear dividing lines among possible like products" and disregards minor variations among them. See Torrington v. United States, 747 F. Supp. 744, 748-749 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991).

<sup>6</sup> See S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979).

<sup>7</sup> See Algoma Steel Corp., Ltd. v. United States, 688 F. Supp. 639 (Ct. Int'l Trade 1988), aff'd, 865 F.2d 240 (Fed. Cir. 1989).

<sup>8</sup> See, e.g., Torrington Co. v. United States, 747 F. Supp. 744, 748 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991).

<sup>9</sup> 58 Fed. Reg. 27709 (May 11, 1993).

<sup>10</sup> Report of the Commission ("Report") at I-5.

an area greater than that provided by the fastener and to provide a hardened bearing surface that facilitates assembly and disassembly of fastened parts.<sup>11</sup>

In the preliminary investigations, the Commission determined that there was a single like product consisting of helical spring lockwashers of all sizes, whether made from carbon steel, stainless steel, or other metal.<sup>12</sup> In this final investigation, we have again considered whether there should be a single like product that includes all helical spring lockwashers, including both those made from carbon steel and those made from stainless steel.<sup>13</sup>

Several like product factors support including both carbon steel and stainless steel helical spring lockwashers in a single like product.<sup>14</sup> The record in this investigation demonstrates that helical spring lockwashers made from carbon steel and stainless steel, as well as those made from other metals, serve the same mechanical function in the same way (*i.e.*, providing a

---

<sup>11</sup> Report at I-5.

<sup>12</sup> Certain Helical Spring Lockwashers from the People's Republic of China and Taiwan, Invs. Nos. 731-TA-624 and 625 (Preliminary), USITC Pub. 2565 (October 1992) at 5.

<sup>13</sup> The vast majority of helical spring lockwashers are made of carbon steel or stainless steel. Report at I-5. Helical spring lockwashers made from other metals, such as copper, aluminum alloy, phosphor bronze and monel-nickel, are not within the scope of Commerce's investigation. *Id.* Neither the preliminary investigations, nor this final investigation have revealed detailed information on any unique physical characteristics or special uses of helical spring lockwashers made from other "exotic" metals, such as bronze and copper, as these are considered to be "a very secondary part of the business." Transcript of the Public Hearing (May 13, 1993) ("Hearing Transcript") at 106, 107, 170. Thus, the like product discussion is principally limited to carbon steel and stainless steel helical spring lockwashers.

<sup>14</sup> We note that all parties to this investigation agree that carbon steel and stainless steel helical spring lockwashers (as well as those made from other metals) comprise a single like product. Petitioner Shakeproof Industrial Products Division, Illinois Tool Works, Milwaukee, WI ("Petitioner") Pre-Hearing Brief at 14 and Post-Hearing Brief at 5; Respondents American Association of Fastener Importers ("AAFI") and Hangzhou Spring Washer Plant Pre-Hearing Brief at 4-6; Respondents Taiwan Industrial Fastener Institute ("TIFI, *et al.*") Post-Hearing Brief at 2. TIFI, *et al.* did not participate in the preliminary investigations.

spring action to maintain tension against the fastener assembly to prevent it from loosening).<sup>15</sup>

Moreover, the preliminary investigations demonstrated, and this final investigation confirmed, that channels of distribution for carbon steel and stainless steel helical spring lockwashers are fundamentally the same below the so-called importer/master distributor level.<sup>16</sup> Information obtained in this final investigation also indicates that some companies import and distribute both carbon steel and stainless steel helical spring lockwashers.<sup>17</sup> Thus, carbon steel and stainless steel helical spring lockwashers share common distribution channels, in some instances, at every level of distribution.

In addition, the record demonstrates that the same facilities, equipment

---

<sup>15</sup> See Report at I-5; Respondents AAFI and Hangzhou Spring Washer Plant Pre-Hearing Brief at 5.

<sup>16</sup> See Certain Helical Spring Lockwashers from the People's Republic of China and Taiwan, Invs. Nos. 731-TA-624 and 625 (Preliminary), USITC Pub. 2565 (October 1992) at 8; Report at I-14-15, 31-32; Petitioner's Pre-Hearing Brief at 15; Respondents AAFI and Hangzhou Spring Washer Plant Pre-Hearing Brief at 5. Parties have generally characterized the channels of distribution for helical spring lockwashers in terms of "tiers" or "levels," with importers or "master" distributors at the top of the chain (i.e., purchasing from manufacturers), and end-users (primarily original equipment manufacturers) at the bottom. See, e.g., Petitioner's Post-Conference Brief at 7; Petitioner's Pre-Hearing Brief at 10; Letter from counsel on behalf of Respondents AAFI and Hangzhou Spring Washer Plant dated October 8, 1992; Conference Transcript at 111, 137. There is disagreement between the parties as to the definition of a master distributor. In the preliminary investigations, Petitioner asserted that master distributors, as a distinct tier of distributors, competed with importers. In this final investigation, however, Petitioner has largely disavowed its assertion that a distinctly separate tier exists, conceding that it does not actually distinguish a master distributor from a distributor. Hearing Transcript at 51, 80 ("The reality is, in the marketing system, there really is no difference."), 52, 54-55, 79, 221; see Petitioner's Pre-Hearing Brief at 10, 15, Appendix 8; see Report at I-14 n.39. Respondents AAFI and Hangzhou Spring Washer Plant continue to distinguish master distributors from distributors. Post-Hearing Brief at 3-4.

<sup>17</sup> See, e.g., Hearing Transcript at 78, 115. According to the questionnaire responses, certain importers/master distributors which are members of AAFI reported imports of both stainless steel and carbon steel helical spring lockwashers. See Report at I-32.

and labor force are used to produce helical spring lockwashers of carbon steel and stainless steel, as well as those made from other metals.<sup>18</sup> Only minor retooling is necessary when switching from one metal to another.<sup>19</sup> The manufacturing processes are similar for both carbon steel and stainless steel helical spring lockwashers, although carbon steel washers may undergo additional treatment.<sup>20</sup>

There are some physical differences between helical spring lockwashers made of carbon steel and stainless steel. Helical spring lockwashers made of carbon steel can be heat-treated or hardened, and plated with zinc to inhibit corrosion.<sup>21</sup> Stainless steel helical spring lockwashers are not plated (because stainless steel does not rust), nor are they heat-treated.<sup>22</sup>

Cost considerations and special applications may encourage the use of one metal over another. Stainless steel helical spring lockwashers are required in applications calling for non-corrosive or non-magnetic properties.<sup>23</sup> Plating carbon steel helical spring lockwashers with zinc, however, lessens the differences between stainless steel and carbon steel helical spring lockwashers in some applications, as plating reduces susceptibility to corrosion.<sup>24</sup> Stainless steel helical spring lockwashers can

---

<sup>18</sup> Report at I-6, 7, 13, 17, 19, 28; Petitioner's Pre-Hearing Brief at 15; Respondents AAFI and Hangzhou Spring Washer Plant Pre-Hearing Brief at 51; TIFI, et al., Post-Hearing Brief at 13.

<sup>19</sup> Report at I-17.

<sup>20</sup> Report at I-6.

<sup>21</sup> See Report at I-6; Hearing Transcript at 19. Plain carbon steel helical spring lockwashers may be coated with an oil-based liquid to promote shelf life; however, they are not considered corrosion-resistant. Hearing Transcript at 19.

<sup>22</sup> See Report at I-6 n.11; Petition at 6.

<sup>23</sup> See Petitioner's Post-Hearing Brief at 6; Respondents AAFI and Hangzhou Spring Washer Plant Pre-Hearing Brief at 5; Respondents TIFI, et al., Pre-Hearing Brief at 10-11.

<sup>24</sup> See Petitioner's Pre-Hearing Brief at 16, Post-Hearing Brief at 6; Hearing Transcript at 19.

be used where carbon steel helical spring lockwashers would be just as suitable, although the higher cost of stainless steel may discourage a user from doing so.<sup>25</sup> Many importers and distributors of helical spring lockwashers do not perceive carbon steel and stainless steel helical spring lockwashers to be generally substitutable, citing the different resistance to corrosion, the need for metal compatibility with the fastener assembly, and price.<sup>26</sup> We note, however, that complete interchangeability is not required to include products in one like product.<sup>27</sup>

Based upon the overlap in mechanical function and end uses, channels of distribution, common manufacturing facilities, production processes, equipment and employees, and interchangeability of products for some applications, we define the like product to be all helical spring lockwashers.

Based on our definition of the like product, we determine that the domestic industry consists of all producers of helical spring lockwashers.

---

<sup>25</sup> See, e.g., Respondents AAFI and Hangzhou Spring Washer Plant Pre-Hearing Brief at 17.

<sup>26</sup> Report at I-7 n.15. Information gathered in these final investigations confirms that significant price differentials exist between carbon steel (either plain or plated) and stainless steel helical spring lockwashers of the same size. See Report at I-35, 36, Tables 18-23. However, consistent with past Commission practice, we do not consider price differences to be dispositive when defining the like product. See Steel Wire Rope from the Republic of Korea and Mexico, Invs. Nos. 731-TA-546 and 547 (Final), USITC Pub. 2613 (March 1993) at 10, citing, Steel Wire Rope from Argentina and Mexico, Invs. Nos. 731-TA-476 and 479 (Final), USITC Pub. 2410 (Aug. 1991) at 9.

<sup>27</sup> See, e.g., Polyethylene Terephthalate Film, Sheet, and Strip from Japan, the Republic of Korea and Taiwan, Invs. Nos. 731-TA-458-460 (Preliminary), USITC Pub. 2292 (June 1990) at 8 n.17, citing, Industrial Nitrocellulose from Brazil, Japan, People's Republic of China, Republic of Korea, United Kingdom, West Germany, and Yugoslavia, Invs. Nos. 731-TA-439-445 (Preliminary), USITC Pub. 2231 (Nov. 1989); Steel Wire Rope from the Republic of Korea and Mexico, Invs. Nos. 731-TA-546 and 547 (Final), USITC Pub. 2613 (March 1993) at 10, citing, Steel Wire Rope from Argentina and Mexico, Invs. Nos. 731-TA-476 and 479 (Final), USITC Pub. 2410 (Aug. 1991) at 9.

## II. Condition of the Domestic Industry

In determining whether there is material injury to a domestic industry by reason of LTFV imports, the Commission is directed to consider "all relevant economic factors which have a bearing on the state of the industry in the United States . . . ." <sup>28</sup> We consider, among other relevant factors, consumption, output, shipments, inventories, capacity utilization, market share, employment, wages, productivity, financial performance, ability to raise capital, and research and development. <sup>29</sup> No single factor is dispositive and the Commission considers all relevant factors "within the context of the business cycle and conditions of competition that are distinctive to the affected industry." <sup>30 31</sup> In evaluating the condition of the domestic industry, we look at the domestic industry as a whole. <sup>32</sup>

---

<sup>28</sup> 19 U.S.C. § 1677(7)(C)(iii).

<sup>29</sup> Id. Because the domestic industry consists predominantly of only one producer, certain factors regarding the condition of the industry are discussed in general terms to avoid disclosing business proprietary information.

<sup>30</sup> Id.

<sup>31</sup> None of the parties described the existence of a "business cycle" unique to this industry. Respondents asserted that helical spring lockwashers are purchased by two "cyclically sensitive sectors of the economy" (*i.e.*, manufacturers of consumer durables, *e.g.*, appliances and automobiles; and capital goods, *e.g.*, machinery), and described how the recession, flat economic growth and general downturn in the economy adversely affect the derived demand for helical spring lockwashers. See Respondents AAFI and Hangzhou Spring Washer Plant Post-Conference Brief at 5-6; Respondents TIFI, *et al.*, Pre-Hearing Brief at 5. Both Petitioner and Respondents asserted that sales of helical spring lockwashers used for maintenance and repair of existing equipment temper the decline in demand derived from the manufacture of original equipment. Transcript of the Public Conference (September 30, 1993) ("Conference Transcript") at 49-50, 112-113; Report at I-11, 12.

<sup>32</sup> Welded Steel Pipe from Malaysia, Inv. No. 731-TA-644 (Preliminary), USITC Pub. 2620 (April 1993) at 19-20 and n.79 ("The Commission may take into account the departures from an industry or the unique circumstances of individual companies, but ultimately must assess the condition of the industry as a whole, and not on a company-by-company basis."), citing, Metallwerken Nederland B.V. v. United States, 728 F. Supp. 730, 735 (Ct. Int'l Trade 1989).

During the period of investigation, a restructuring of the domestic helical spring lockwasher industry, i.e., consolidating production in fewer producers, took place. Five different firms, including Petitioner, produced helical spring lockwashers during 1990 to 1992.<sup>33</sup> The domestic industry consisted of four firms in 1990 and, even with the entrance of Petitioner in 1991, it decreased to only two producers in 1992.<sup>34</sup>

Petitioner played a large role in the industry's restructuring. Petitioner entered the helical spring lockwasher industry in April 1991 when it acquired the Mellowes Company.<sup>35</sup> Petitioner purchased the assets of Beall Manufacturing's helical spring lockwasher division in 1991,<sup>36</sup> and Crest Products' helical spring lockwasher division in 1992.<sup>37</sup> Standard Lock Washers & Mfg. Co., Inc. (Stanlok), which ceased production of helical spring lockwashers in 1988, also sold its equipment to Petitioner, which converted Stanlok into a distributor.<sup>38</sup> The restructuring of the domestic helical spring lockwasher industry is a condition of competition in this industry.

The various indicators of domestic industry's performance during the period of investigation, 1990-1992, were mixed.<sup>39</sup> On a volume basis, domestic

---

<sup>33</sup> Report at I-12.

<sup>34</sup> Report at I-12, 13. One new producer entered the domestic industry in May 1993; thus, there are currently three domestic producers of helical spring lockwashers. See Report at I-12, 14.

<sup>35</sup> Report at I-12, 13.

<sup>36</sup> Report at I-12.

<sup>37</sup> Report at I-12; Conference Transcript at 145; Petition at Appendix 1.

<sup>38</sup> Report at I-13; Conference Transcript at 91, 92, 109, 144-145.

<sup>39</sup> In this final investigation, Petitioner suggested that we depart from administrative practice and use 1989 as the "base period" to evaluate import trends and to provide data for an additional "pre-restructuring" year. See Petitioner's Pre-Hearing Brief at 2-4. We have determined not to do so, and have utilized our standard period of investigation. This period consists of the most recent three calendar years, plus interim periods where applicable. See Kenda Rubber Industrial Co. v. United States, 630 F. Supp. 354, 359 (Ct. Int'l Trade 1986). The three year period achieves a balance between the

(continued...)



production decreased between 1990 and 1991, and then increased in 1992 (to a level below that of 1990).<sup>40</sup> Capacity remained relatively stable between 1990 and 1991, then dipped slightly in 1992.<sup>41</sup> <sup>42</sup> Capacity utilization decreased between 1990 and 1991, then increased in 1992 (to a level slightly above that of 1990).<sup>43</sup> U.S. shipments of helical spring lockwashers decreased by quantity and value between 1990 and 1991, then increased in 1992 (to a level below that of 1990).<sup>44</sup> Unit values of U.S. shipments increased between 1990 and 1991, then decreased in 1992.<sup>45</sup> End-of-period inventories for U.S. producers increased each year from 1990 to 1992, both absolutely and in relation to production and shipments.<sup>46</sup>

Domestic consumption of helical spring lockwashers decreased slightly by volume and value between 1990 and 1991, then increased in 1992 (to a level above that of 1990).<sup>47</sup> The U.S. producers' market share decreased by volume and value throughout 1990 to 1992.<sup>48</sup>

The average number of production and related workers producing all varieties of helical spring lockwashers declined between 1990 and 1992.<sup>49</sup>

---

<sup>39</sup> (...continued)

burden on questionnaire recipients and the Commission's need for sufficient information for its analysis of material injury by reason of LTFV imports. Certain Carbon Steel Butt-Weld Pipe Fittings from China and Thailand, Invs. Nos. 731-TA-520 and 521 (Final), USITC 2528 (June 1992) at 18 n.57.

<sup>40</sup> Report at I-16, Table 3.

<sup>41</sup> Report at I-16, Table 3.

<sup>42</sup> The consolidation and restructuring of the domestic industry may have contributed to decreased capacity in the industry between 1990 and 1992. See Report at I-16, 17 and n.49; Petitioner's Pre-Hearing Brief at 22 n.63; Hearing Transcript at 25-26.

<sup>43</sup> Report at I-16, Table 3.

<sup>44</sup> Report at I-17, Table 4.

<sup>45</sup> Report at I-17, Table 4.

<sup>46</sup> Report at I-18, Table 5.

<sup>47</sup> Report at I-10, 11, Table 2.

<sup>48</sup> Report at I-10, 11, Table 2.

<sup>49</sup> Report at I-18, Table 6.

Hours worked by those workers also declined between 1990 and 1992.<sup>50</sup> Hourly wages and total hourly compensation remained stable between 1990 and 1991, then increased in 1992.<sup>51</sup> Productivity rose throughout 1990 to 1992.<sup>52</sup> Unit labor costs fell between 1990 and 1992.<sup>53</sup>

The net operating income of the domestic industry, as reported in response to the Commission's questionnaires, though positive throughout 1990 to 1992, decreased between 1990 and 1991, then increased significantly in 1992.<sup>54</sup> Net sales value decreased between 1990 and 1991, but increased in 1992 (to a level below that of 1990).<sup>55</sup> The ratio of net operating income to net sales decreased between 1990 and 1991, but increased in 1992.<sup>56</sup> The ratio of cost of goods sold to net sales value increased between 1990 and 1991, but decreased in 1992 (to a level slightly below that of 1990).<sup>57</sup>

Based upon examination of the relevant economic factors set forth in the statute, and consideration of the unique conditions of competition for this

---

<sup>50</sup> Report at I-18, Table 6.

<sup>51</sup> Report at I-18, Table 6.

<sup>52</sup> The consolidation and restructuring of the domestic industry may have contributed to decreased employment in the industry between 1990 and 1992. See Respondents TIFI, et al., Pre-Hearing Brief at 7; Conference Transcript at 144 (Petitioner acknowledged "there was no need for a duplicate sales force" following acquisition). While Respondents contend that Petitioner caused the contraction in the domestic industry, see, e.g., Conference Transcript at 90-92, 100-103, Petitioner responds that the companies which ceased production, and offered to sell assets to Petitioner, did so due to import competition. Petitioner's Pre-Hearing Brief at 3, Post-Hearing Brief at 9-10. Increased productivity and other increased efficiencies in this capital-intensive industry may also partially explain the decline in employment. See Report at I-18, 19.

<sup>53</sup> Report at I-18, Table 6.

<sup>54</sup> Report at I-20, Table 8. This trend reflects the financial data as reported by domestic producers. In verifying these data, Commission staff reviewed the details of acquisition costs incurred by Petitioner, and made adjustments to certain financial data to reflect these costs. Report at D-3. As adjusted, the financial data would not lead us to a contrary determination.

<sup>55</sup> Report at I-20, Table 8.

<sup>56</sup> Report at I-20, Table 8.

<sup>57</sup> Report at I-20, Table 8.

industry, i.e., its restructuring, we conclude that the industry is vulnerable to the continued adverse effects of unfair imports.<sup>58</sup>

### III. Cumulation

While it is appropriate to employ a formal cumulation analysis for the purpose of determining present material injury, the same is not necessarily true with regard to a threat analysis.<sup>59</sup> Nevertheless, under certain conditions, imports may have a collective impact on the domestic industry, and the Commission can exercise its discretion to cumulate imports in such circumstances.<sup>60 61</sup> These conditions include the traditional factors that the Commission looks at to determine whether cumulation is appropriate, i.e., competition between the imports and between the imports and the like product, temporal and geographical overlap, and that all the imports are subject to investigation.<sup>62</sup> In addition, other factors may be relevant, such as whether imports are increasing at similar rates in the same markets, and whether they

---

<sup>58</sup> Based on his examination of the economic factors, Commissioner Rohr determines that the domestic industry is not currently experiencing material injury.

<sup>59</sup> Commissioner Rohr notes a threat analysis involves the assessment by the Commission of the capabilities and intentions of foreign producers with regard to the domestic industry and domestic market. Formal cumulation, by ignoring differences in the trends in the various threat indicators, may raise the possibility that the capability or intentions of one set of foreign producers will be "assigned" to another set of foreign producers.

<sup>60</sup> Compare 19 U.S.C. § 1677(7)(F)(iv) (Commission "may" cumulate for threat analysis), with 19 U.S.C. § 1677(7)(C)(iv) (Commission "shall" cumulate for present injury analysis.); Asociacion Colombiana de Exportadores de Flores, et al. v. United States, 693 F. Supp. 1165, 1171-72 (Ct. Int'l Trade 1988); Certain Carbon Steel Butt-Weld Pipe Fittings from China and Thailand, Invs. Nos. 731-TA-520 and 521 (Final), USITC Pub. 2528 (June 1992) at 21.

<sup>61</sup> Commissioner Rohr notes that he utilizes his discretion to consider the collective impact of imports from multiple countries as another demonstrable adverse trend, factor VII of the statutory threat factors. See Additional Views of David B. Rohr, Sulfanilic Acid from the Republic of Hungary and India, Inv. No. 701-TA-818 (Preliminary) and Invs. Nos. 731-TA-560 and 561 (Preliminary), USITC Pub. 2526 (June 1992).

<sup>62</sup> 19 U.S.C. § 1677(7)(C)(iv)(I); Chapparral Steel Co. v. United States, 901 F.2d 1097, 1104-05 (Fed. Cir. 1990).

exhibit similar pricing patterns.

In this final investigation, we have assessed separately the price and volume effects of the subject imports from Taiwan and China.

#### IV. Threat of Material Injury by Reason of LTFV Imports

Section 771(7)(F) of the Tariff Act of 1930 directs the Commission to determine whether a U.S. industry is threatened with material injury by reason of imports "on the basis of evidence that the threat of material injury is real and that actual injury is imminent." Such a determination may not be based on mere conjecture or supposition.<sup>63</sup>

The Commission must consider ten factors in its threat analysis, including: (1) any increase in production capacity or existing unused or underutilized capacity in the exporting country likely to result in a significant increase in imports; (2) any rapid increase in United States market penetration and the likelihood that the penetration will increase to an injurious level; (3) the probability that imports of the merchandise will enter the United States at prices that will have a depressing or suppressing effect on domestic prices; (4) any substantial increase in inventories of the merchandise in the United States; and (5) any other demonstrable adverse trends that indicate the probability that importation (or sale for importation) of the merchandise (whether or not it is actually being imported at the time) will be the cause of actual injury.<sup>64 65</sup> The presence or absence

---

<sup>63</sup> 19 U.S.C. § 1677(7)(F)(ii).

<sup>64</sup> 19 U.S.C. § 1677(7)(F)(i)(I)-(X). Since this investigation does not involve either a subsidy or an agricultural product, factors I and IX are not applicable. Factor VIII concerns the potential for product shifting by foreign manufacturers from products that are subject to existing antidumping or countervailing duty investigations or orders to production subject to investigation here. This factor is not applicable, since the facility of the only Taiwanese producer for which information is available is not used to

(continued...)

of any single threat factor is not necessarily dispositive.<sup>66</sup>

Imports of the subject helical spring lockwashers from Taiwan rose markedly, nearly doubling in quantity and more than tripling in value between 1990 and 1992.<sup>67</sup> The volume and value of U.S. shipments of Taiwan imports increased dramatically between 1990 and 1992.<sup>68</sup> The volume and value of market share of the subject imports, based upon U.S. shipments, also increased steadily during the period of investigation.<sup>69</sup> End-of-period inventories of imports from Taiwan grew significantly, more than doubling between 1990 and 1992.<sup>70</sup>

Imports of subject helical spring lockwashers from China, which outnumbered imports from Taiwan by a ratio of 11 to 1 during 1990 to 1992, dropped significantly in 1993 as Commerce's preliminary investigation of subject imports from China neared its conclusion.<sup>71</sup> Demand in the United States, previously supplied by imports from China, is thus forced to find an alternate source. In the absence of antidumping duties on helical spring lockwashers from Taiwan, it is likely that the demand previously supplied by China would turn to imports from Taiwan, thus increasing the presence of the

---

<sup>64</sup> (...continued)

produce merchandise subject to any other final antidumping or countervailing duty orders or investigations.

<sup>65</sup> In addition, the Commission must consider whether dumping findings or antidumping remedies in markets of foreign countries against the same class or kind of merchandise suggest a threat of material injury to the domestic industry. 19 U.S.C. § 1677(7)(F)(iii)(I). However, we received no information that there are any dumping findings or remedies against the subject products in foreign markets.

<sup>66</sup> See, e.g., Rhone Poulenc, S.A., v. United States, 592 F. Supp. 1318, 1324 n.18 (Ct. Int'l Trade 1984).

<sup>67</sup> Report at I-29, Table 16.

<sup>68</sup> Report at I-10, 11, Table 2.

<sup>69</sup> Report at I-31, Table 17.

<sup>70</sup> Report at I-24, 25, Table 13.

<sup>71</sup> See Report at F-3, Table F-1; 58 Fed. Reg 26112 (April 30, 1993) (Commerce's preliminary determination).

unfair Taiwanese imports in the United States.<sup>72</sup>

Moreover, we find that existing unused capacity in Taiwan to produce the subject merchandise,<sup>73</sup> particularly in light of suspension of liquidation on Chinese imports, is likely to result in a significant increase in imports of the merchandise into the United States. The largest-identified Taiwanese producer is strongly export-oriented.<sup>74</sup> The data provided by counsel for this producer indicate a capability on the part of this producer to significantly increase exports to the United States, as well as a trend toward increased production and export shipments.<sup>75</sup> Further, we note that this single producer does not account for all of Taiwan's sales of helical spring lockwashers to its own market,<sup>76</sup> to the market in the United States,<sup>77</sup> or, apparently, to other national markets.<sup>78</sup> The existence of unaccounted for sales of Taiwan's production of subject helical spring lockwashers indicates a corresponding existence of unreported capacity.<sup>79</sup>

We find it likely that increased exports would be directed to the United States. The United States has been one of the primary markets, or the primary market, for exports from Taiwan over the period of investigation.<sup>80</sup> While Nigeria became the primary export market for Taiwan in 1992, U.S. imports from Taiwan nonetheless increased in 1992 relative to 1991.<sup>81</sup> The rapid and

---

<sup>72</sup> Counsel for TIFI, et al., has noted that the Taiwanese producers work on a per-order contract basis rather than a contract basis, and that there is a direct correlation between orders and production. Hearing Transcript at 185.

<sup>73</sup> Report at I-27, 28, Table 15.

<sup>74</sup> Report at I-28, Table 15.

<sup>75</sup> Report at I-28, Table 15.

<sup>76</sup> Report at I-28, Table 15.

<sup>77</sup> Report at I-28, note 83.

<sup>78</sup> Report at I-28.

<sup>79</sup> We note that no data were reported by or for three Taiwanese producers of the subject merchandise. Report at I-28.

<sup>80</sup> See Report at I-28 and Table 15.

<sup>81</sup> Report at I-28, 29, Table 16.

sizeable increase in exports of helical spring lockwashers to Nigeria, at the same time imports to the United States increased, indicates a flexibility on the part of the helical spring lockwasher industry in Taiwan (for which the Commission has verifiable data for only one producer) to direct exports to multiple national markets and to redirect exports in response to prevailing market conditions.

Pricing data provide mixed guidance on the likelihood that LTFV imports from Taiwan will have price suppressing or depressing effects. Price movements showed no clear trends.<sup>82</sup> Moreover, price comparisons are complicated because Petitioner's prices were usually based on much larger transactions than those for imported merchandise;<sup>83</sup> some important importers could not provide data in the form requested by the Commission;<sup>84</sup> some purchasers could not determine the national origin of imports purchased;<sup>85</sup> and very little price data were available on sales of carbon steel helical spring lockwashers from Taiwan to U.S. distributors.<sup>86</sup> However, purchaser data derived from questionnaire responses and investigations of lost sales allegations indicate that Taiwanese imports of stainless steel helical spring lockwashers were priced lower when they entered the United States than the domestic product.<sup>87</sup> Accordingly, we give less weight to the pricing data as providing evidence of a likely adverse impact on domestic prices, than to evidence of increasing volumes and inventories. However, we are satisfied that because there exists a sufficient degree of substitutability among the

---

<sup>82</sup> See Report at I-35, 36, Tables 18-23.

<sup>83</sup> Report at I-37.

<sup>84</sup> Report at I-34.

<sup>85</sup> Report at I-35.

<sup>86</sup> Report at I-34.

<sup>87</sup> Report at I-39-40, 43-44.

domestic and the imported products,<sup>88</sup> that the volume and inventories of the imports signal a likely adverse impact on domestic prices.

Based on our analysis of the record, and, in particular, that imports, U.S. shipments of imports, and U.S. inventories, are rapidly rising; that domestic and imported products are substitutable; that existing unused or underutilized capacity in Taiwan, and any increases in that capacity, will likely result in an increase in both the volume and domestic market share of imports; that unidentified and unquantified capacity producing for export to the United States and other markets appears to exist in Taiwan; that suspension of liquidation of subject imports from China is likely to stimulate even greater production and export of helical spring lockwashers, we determine that unfair imports from Taiwan pose a real threat of imminent material injury.

In accordance with 19 U.S.C. § 1673d(b) (4) (B), we must make an additional finding as to whether material injury by reason of the subject imports would have been found but for the suspension of liquidation of entries of such imports.<sup>89</sup> This finding is required so that Commerce may impose

---

<sup>88</sup> See Report at I-7 and n.14 (fifty out of 53 responding importers noted that helical spring lockwashers from the United States, China and Taiwan are used interchangeably); see also Report at I-32 and n.90 (Petitioner and importers generally agree that helical spring lockwashers from China and Taiwan are comparable in quality with the domestic product and interchangeable in their end uses.)

<sup>89</sup> The Department of Commerce determined, on the basis of best information available, that critical circumstances exist with respect to LTFV imports of subject helical spring lockwashers from Taiwan. 58 Fed. Reg. 27709 (May 11, 1993). If the Commission finds either threat of material injury or no material injury, it need make a critical circumstances determination under 19 U.S.C. § 1673d(b) (4) (A) (i). See, e.g., Certain Carbon Steel Butt-Weld Pipe Fittings from China and Thailand, Invs. Nos. 731-TA-520 and 521 (Final), USITC Pub. 2528 (June 1992) at 31. Since our affirmative determination is based upon threat of material injury by reason of LTFV imports, not on present injury, we do not reach the critical circumstances issue. Moreover, a finding

(continued...)



dumping duties as of the appropriate date. Suspension of liquidation on subject imports from Taiwan became effective on February 23, 1993, the date of Commerce's preliminary affirmative determination.<sup>90</sup> While the industry was in a vulnerable condition, its performance had not deteriorated to the point where imports during the relevant period would have resulted in material injury. Accordingly, we do not find that, had there not been suspension of liquidation, the domestic industry would have been materially injured by reason of the subject imports.

#### CONCLUSION

For the reasons set forth above, we determine that the domestic helical spring lockwasher industry is threatened with material injury by reason of the subject imports from Taiwan.

---

<sup>89</sup> (...continued)

that retroactive imposition of antidumping duties is necessary to prevent recurrence of material injury would be inconsistent with our finding that the industry is only threatened with material injury at this time. See 19 U.S.C. § 1673d(b) (4) (A); Carbon Steel Butt-Weld Pipe Fittings, USITC Pub. 2528 at 31 n.114.

<sup>90</sup> 58 Fed. Reg. 11027, 11028 (February 23, 1993).



**ADDITIONAL VIEWS OF COMMISSIONER ANNE E. BRUNSDALE**

**Certain Helical Spring Lockwashers from Taiwan  
Inv. No. 731-TA-624 (Final)**

Based on the record in this final investigation, I find that an industry in the United States is materially injured by reason of imports of certain helical spring lockwashers from Taiwan that the Department of Commerce has determined are being sold at less than fair value. However, I do not find critical circumstances requiring the retroactive application of the antidumping order.

The views of my colleagues Chairman Newquist and Commissioner Rohr deal with the issues of like product, definition of the domestic industry, and condition of the industry. I have little to add to that discussion. I agree that there is a single like product consisting of all helical spring lockwashers regardless of the metal of which they are made. I also agree that the domestic industry consists of all firms producing helical spring lockwashers. I accept as accurate the description of the condition of the industry presented in the Views of Chairman Newquist and Commissioner Rohr. However, while I find the discussion of the condition of the domestic industry helpful in determining whether any injury resulting from dumped imports is material, I do not believe that an independent legal determination of material injury based on the condition of the industry is either required by the statute or useful in

determining whether a domestic industry is materially injured by reason of dumped imports.<sup>1</sup>

Here I set forth my views on the issue of cumulation, on the statutorily directed issue of whether "an industry in the United States is materially injured ... by reason of [the dumped] imports",<sup>2,3</sup> and on whether critical circumstances exist.

#### Cumulation

In making my determination, I must decide whether to cumulate imports from Taiwan with those from the People's Republic of China, which are subject to an ongoing investigation.<sup>4</sup> The

---

<sup>1</sup> See Certain Light-Walled Rectangular Pipes and Tubes from Taiwan, Inv. No. 731-TA-410 (Final), USITC Pub. 2169 (March 1989) at 10-15 (Views of Chairman Brunsdale and Vice Chairman Cass).

<sup>2</sup> 19 U.S.C. 1673d(b)(1).

<sup>3</sup> I note the statement by counsel for the Taiwan respondents that the issue the Commission is to address is not whether the domestic industry would be doing better if there were no unfair imports but rather whether or not the domestic industry is suffering material injury. (Hearing Transcript at 179 (Testimony of William E. Perry, Esq., Miller, Canfield, Paddock, & Stone)) If, as it appears, counsel was suggesting that the only correct analysis under our statute is a so-called bifurcated analysis in which a determination is made concerning the health of the domestic industry independent of the effect of the subject imports, I strongly disagree with him. The plain words of our statute call for a single determination on whether the subject imports are causing material injury to the domestic industry. There is no suggestion in the language of the statute that an industry that is doing well is not entitled to relief if it is still being materially injured by reason of unfair imports.

<sup>4</sup> Imports from both China and Taiwan were both included in the petition that was filed by Shakeproof Industrial Products Division of Illinois Tool Works on September 8, 1992. (Report at (continued...))

statute provides two exceptions to the general requirement that imports from two or more countries be cumulated: (1) if the imports from two countries do not compete with each other or with the domestic like product<sup>5</sup> or (2) if the imports from a country "are negligible and have no discernable adverse impact on the domestic industry."<sup>6</sup>

In the current investigations, only the first of these issues is of any relevance. Respondents assert that imports of the subject helical spring lockwashers from Taiwan and China should not be cumulated because subject lockwashers from China are all carbon steel, while those from Taiwan are "mainly" or "exclusively" stainless steel.<sup>7</sup> They further argue that the two types of helical spring lockwashers do not compete with each other, since stainless steel is too expensive to be used in place

---

<sup>4</sup>(...continued)

I-4) On January 26, 1993, the Department of Commerce delayed its determination with respect to China based on a finding that the investigation was "extraordinarily complicated". (See 58 Fed. Reg. 6619 (February 1, 1993).) As result, our decision as to whether imports of dumped lockwashers from China are causing material injury was delayed.

<sup>5</sup> 19 U.S.C. 1677(7)(C)(iv)(I).

<sup>6</sup> 19 U.S.C. 1677(7)(C)(v).

<sup>7</sup> See, e.g., Pre-Hearing Brief of American Association of Fastener Importers and the Hangzhou Spring Washer Plant at 16-17, Post-Hearing Brief of American Association of Fastener Importers and the Hangzhou Spring Washer Plant at 9; Prehearing Brief on Behalf of Respondents Taiwan Industrial Fastener Institute, Cemiko Industrial Company, Ltd., Spring Lake Enterprise Company, Ltd., Siqur Hardware Industry Company, Ltd., and Likunog Industrial Company, Ltd., at 9-10.

of carbon steel, and carbon steel cannot be used in place of stainless steel for applications which require non-corrosive properties.<sup>8</sup>

Contrary to respondents' assertions, the record in this investigation establishes that helical spring lockwasher imports from Taiwan are not "almost exclusively" stainless steel.<sup>9</sup> In fact, carbon steel helical spring lockwashers from Taiwan represent nearly one-half of all helical spring lockwasher imports from Taiwan for 1990-1992.<sup>10</sup> Therefore, cumulation is mandated whether or not the level of competition between carbon steel and stainless steel lockwashers is alone sufficient to justify it.

Material Injury by Reason of Dumped Helical Spring Lockwashers

In determining that the domestic industry producing helical spring lockwashers is materially injured by reason of dumped imports,<sup>11</sup> I consider, as the statute directs, the volume of subject imports, the effects of these imports on the price of the

---

<sup>8</sup>Id.

<sup>9</sup>Respondents concede that, "There is a reasonable overlap between Taiwan and China as suppliers, to the extent that both supply some carbon steel product. If that is the reasonable overlap you are looking for, that would give you the nexus between the two." Hearing Transcript at 151.

<sup>10</sup>Report at I-29, Table 16.

<sup>11</sup> Of course, the dumped imports could be eliminated by raising the price of those imports to the point where they are no longer being dumped.

like product, and the effects on the domestic industry producing the like product.<sup>12</sup> As is obvious from these statutory factors, and as I have stated so often in the past,<sup>13</sup> a coherent and transparent analysis of the kind demanded by the statute requires an assessment of the domestic market and an understanding of the role of the subject imports within that market. Economics, which is the study of markets and how they change, is an ideal source of the tools necessary for making that assessment.

Economic analysis involves little more than organizing and evaluating the evidence in the record in a manner that permits a Commissioner to assess the impact of the dumped imports in a rigorous fashion. These tools are not surrogates for the statutory factors. They simply permit me to analyze in a direct and open way the volume effect, the price effect, and the overall impact of the dumped imports on the domestic industry as the law specifically and unambiguously requires.

---

<sup>12</sup> 19 U.S.C. 1677(7)(B).

<sup>13</sup> See, e.g., New Steel Rails from Japan, Luxembourg, and the United Kingdom, Invs. Nos. 731-TA-557 - 559 (Preliminary), USITC Pub. 2524, at 43-44 (June 1992) (Dissenting Views of Vice Chairman Anne E. Brunsdale); Coated Groundwood Paper from Belgium, Finland, France, Germany, and the United Kingdom, Invs. Nos. 731-TA-487 through 490 and 494 (Final), USITC Pub. 2467, at 31-32 (Concurring Views of Acting Chairman Anne E. Brunsdale); Certain Residential Door Locks and Parts Thereof From Taiwan, Inv. No. 731-TA-433 (Final), USITC Pub. 2253, at 33-36 (January 1990) (Additional Views of Chairman Anne E. Brunsdale); and Color Picture Tubes from Canada, Japan, the Republic of Korea, and Singapore, Inv. Nos. 731-TA-367-370 (Final), USITC Pub. 2046, at 23-32 (December 1987) (Additional Views of Vice Chairman Anne E. Brunsdale).

Volumes and Prices of LTFV Imports. The first factors that we are directed to consider are the volume and prices of the LTFV imports. This directive -- which is of course consistent with an economic analysis of the effects of the dumped imports -- calls for examining the market share of the dumped imports and the margins of dumping.

The smaller the sales of the dumped imports as a share of the domestic market, the smaller the effect of those imports on the domestic market. Similarly, the smaller the dumping margin, the smaller the effect. The dumping margin measures the difference between the fair price of the imports and the unfair price at which they are being sold. The effect of the dumped imports will depend on how far below the fair price they are actually priced. The greater the difference, the greater the number of purchasers who will shift from the domestic like product to the dumped imports in order to obtain the benefits of a reduced price.

The Department of Commerce determined that the margin of dumping by Taiwan producers of helical spring lockwashers was 31.93 percent. This rate was established on the basis of best information available because no Taiwan producers provided information to the Department in connection with its investigation.<sup>14</sup> Commerce has not yet made its final margin

---

<sup>14</sup> 58 Fed. Reg. 27709 (May 11, 1993).



determination for imports from China. In its preliminary determination it put the margin of dumping at 128.63 percent, also based on best information available.<sup>15,16</sup>

The level of imports of helical spring lockwashers from China and Taiwan increased steadily throughout the period of investigation both in terms of quantity and value.<sup>17</sup> As a percent of U.S. consumption, the cumulated market shares of China and Taiwan were substantial throughout the period of investigation. Further, there was a substantial increase in import market share during the period of investigation.<sup>18</sup>

---

<sup>15</sup> 58 Fed. Reg. 26112 (April 30, 1993).

<sup>16</sup> That the margins in these investigations are based on best information available and not on an actual comparison of prices of imports in the United States with prices or costs in the home market increases my discomfort in using them. However, to conduct an economic analysis of the effects of the unfair imports, I must have some measure of how the prices that were charged compare to the fair price. Since the statute assigns the task of determining margins to the Department of Commerce and since the parties in these investigations have not seen fit to respond, at least not fully, to Commerce's inquiries, these margins are the only information available on this subject. In future cases, I would urge respondents in deciding whether to provide information sought by Commerce to consider the effect that the use of best information available has on the analysis performed at least by this ITC Commissioner.

<sup>17</sup> Report at I-29, Table 16.

<sup>18</sup> On a cumulated basis, subject imports accounted for [\*\*\*] percent of the value of U.S. consumption in 1990 and increased to [\*\*\*] percent by 1992. On a quantity basis, subject imports accounted for [\*\*\*] percent of U.S. consumption in 1990 and increased to [\*\*\*] percent in 1992. (Report at I-31, Table 17)

Effect on Domestic Prices and Volumes Sold. The substantial share of the U.S. market captured by the subject imports and the indication that the prices of these imports are substantially below a fair level suggest that these imports are likely to be causing material injury to the U.S. helical spring lockwasher industry. However, consideration of the dumping margins and import penetration figures alone is not sufficient to determine, as I must, the way in which the domestic industry producing helical spring lockwashers is affected by the dumped imports. In order to evaluate the effects on the volume of sales and on the prices at which these sales are made, I must know how purchasers and suppliers respond to changes in the prices of the imported product and the domestic like product. The key attribute of dumped imports is their unfairly low price; it is through this low price that the effects on the domestic industry are felt and must be evaluated.

In this investigation, the principal factor in understanding how the unfair imports affect the demand for domestic lockwashers is the substitutability between the imports and the domestic product -- that is, the extent to which a reduction in the price of the unfairly traded imports will lead U.S. buyers to purchase the unfair imports rather than the domestic like product.<sup>19</sup> If

---

<sup>19</sup> The degree of substitutability between products of different producers can be quantified using a concept that economists call the elasticity of substitution, which is defined as the percentage change in the relative quantities demanded of two  
(continued...)

purchasers believe the domestic and imported products are close substitutes, the dumped imports are more likely to cause material injury because a decrease in the price of the imported product may lead a large fraction of purchasers to switch from the domestic product to the unfairly traded import. If, on the other hand, substitutability is low, fewer purchasers will make the switch to the imported product, making material injury less likely.

Several considerations suggest that the substitutability between subject imports of helical spring lockwashers and the domestic like product is quite high. Both petitioner and respondents generally agreed that the quality of the subject imports is comparable to that of domestic lockwashers of the same sizes and made with the same metal and that lockwashers from the different sources were interchangeable in their end uses. Indeed, distributors responding to Commission questionnaires often had difficulty in determining the origin of the helical spring lockwashers they purchased. Further, there are no significant differences in the lead times required for delivery of imported and domestic standard lockwashers.<sup>20</sup>

---

<sup>19</sup> (...continued)

goods resulting from a 1 percent change in their relative prices. A high elasticity of substitution indicates that products are good substitutes, while a low elasticity indicates they are not.

<sup>20</sup> Report at I-32.

However, two characteristics of the lockwasher market lead me to believe that the substitutability between domestic lockwashers and the subject imports may be slightly lower than suggested by the above discussion. First, lockwashers are made of different metals and the substitutability among lockwashers made with different metals is limited. In particular, the record suggests that there is only limited substitutability between lockwashers made of carbon steel and those made of stainless steel. Stainless steel lockwashers are considerably more expensive than comparable washers made from carbon steel.<sup>21</sup> Thus, stainless steel lockwashers will only be used where the technical requirements of the product in which they are being used make such use necessary. Stainless steel washers are mainly used where the tendency of carbon steel lockwashers to corrode or the magnetic properties of such washers presents a problem.<sup>22</sup> However, while the substitutability between lockwashers of different metals may be fairly low, this has only a limited effect on the overall substitutability between subject imports and domestic lockwashers, since carbon steel lockwashers account

---

<sup>21</sup> Compare prices for stainless steel lockwashers (products 3 and 6) with those for regular carbon steel (products 1 and 4) and zinc-plated carbon steel (products 2 and 5) in the discussion of prices in the Report. (See Report at I-35 - I-36, Tables 18 - 23.)

<sup>22</sup> Report at I-7, n.15; Pre-Hearing Brief of the American Association of Fastener Importers and the Hangzhou Spring Washer Plant at 5; Prehearing Brief on Behalf of the Respondents Taiwan Industrial Fastener Institute, *et al.*, at 10.

for more than 90 percent of U.S. lockwasher consumption during the three-year period of investigation.<sup>23</sup>

The substitutability between domestic and imported lockwashers is also somewhat limited by the fact that importers sell only about 50 to 60 different sizes and types of lockwashers, whereas the domestic producers make over 2,000 different sizes and types.<sup>24</sup> The imports consist almost solely of standard sizes -- that is, sizes that are produced in large volumes and are shipped from inventories rather than being produced to order.<sup>25</sup> Sales of standard sizes of lockwashers also account for approximately 40 percent of the carbon steel lockwashers produced by Shakeproof,<sup>26</sup> by far the largest domestic producer of helical spring lockwashers,<sup>27</sup> and therefore standard sales account for well over one-half of all sales of helical spring lockwashers.

---

<sup>23</sup> Compare U.S. consumption of carbon steel helical spring lockwashers as reported in the Report at C-3, Table C-1, with consumption of lockwashers made of all metals as reported in Table C-5.

<sup>24</sup> Hearing Transcript at 27 (Testimony of Mr. Joseph Musuraca, General Manager, Shakeproof Industrial Products).

<sup>25</sup> Report at I-5 - I-6, n.7.

<sup>26</sup> Transcript at 27 (Testimony of Mr. Musuraca).

<sup>27</sup> Pre-Hearing Brief on Behalf of Petitioner Shakeproof Industrial Products Division of Illinois Tool Works at 16 ("The domestic industry producing the like product is effectively limited to Petitioner.")

Given the limited substitutability between standard and non-standard, or special, lockwashers, the Commission's Office of Economics places the substitutability between domestic and imported lockwashers in the moderate range and suggests that an elasticity of substitution in the range of 3 to 5 is appropriate.<sup>28</sup> I find that the degree of substitutability is likely to be near the middle or upper part of the range suggested by our economics staff. It certainly would be no lower than the bottom of the range they suggest.<sup>29</sup>

Because imported and domestic helical spring lockwashers are at least moderately good substitutes, I find that the domestic industry producing helical spring lockwashers is being materially injured by reason of the subject imports, which have captured a substantial share of the domestic market and have been found by the Department of Commerce to be sold in the United States at prices that are substantially below fair levels.<sup>30</sup> If helical

---

<sup>28</sup> Economics Memo at 15-16.

<sup>29</sup> The economics memo does not discuss the reduction in substitutability resulting from the limited substitutability between lockwashers made of different materials. However, given the dominance of carbon steel lockwashers, this does not lead me to reduce the substitutability below that suggested by the staff.

<sup>30</sup> In order to provide a complete picture of my analysis in this investigation, I need to discuss two other factors that help to determine the impact of the unfair imports on the domestic industry: the responsiveness of U.S. demand for lockwashers to a change in the price of the product, and the responsiveness of domestic supply to a change in price. The first of these is captured in the elasticity of aggregate demand. Since this elasticity (as well as the second factor which is discussed in  
(continued...)

spring lockwashers from Taiwan and China were being sold at fair prices, the domestic industry would be doing materially better than it is.<sup>31</sup>

Other Effects on the Domestic Industry. In addition to considering the impact of dumping on the volume of sales made by the domestic industry and the price at which those sales occurred, the statute directs us to examine "the impact of such merchandise on domestic producers of like products".<sup>32</sup> In conducting this examination, we are instructed to consider such

---

<sup>30</sup>(...continued)

the next footnote) is less important to the outcome of this case than the degree of substitutability, I deal with it only briefly.

According to the Office of Economics, the elasticity of aggregate demand for lockwashers is relatively low, being between 0.5 and 1.0. (Economics Memorandum at 20) This is because there are no close substitutes for helical spring lockwashers and because lockwashers account for a small share of most of the products in which they are used. (*Id.* at 18-20) I agree with this reasoning but think that the reasons given justify an elasticity closer to 0.5 than to 1.0.

<sup>31</sup> Determining how the quantity of lockwashers supplied by the domestic industry will respond to a change in price and therefore whether the effect of the dumping is felt primarily in reduced sales of the domestic like product, in reduced prices at which such sales occur, or in a combination of the two effects is complicated by the structure of the industry in this case. As noted above, a single firm accounts for the vast majority of domestic production in this industry. This raises the possibility that the industry would not perform as a competitive industry in the absence of the imports from Taiwan and China. While I find it difficult to determine whether the effect would be primarily in terms of quantity or in terms of price, I am convinced that it would rise to the level of material injury.

<sup>32</sup> 16 U.S.C. 1677(7)(B)(i)(III).

factors as industry employment, investment, and utilization of capacity.<sup>33</sup>

In general, dumping's effect on these factors follows from the effect on volume and price. For example, the effect on industry employment is directly related to the effect on volume, since the employment level in an industry will generally rise or fall with changes in the quantity produced. In the current case, the fact that output is lower than would be expected if imports were fairly traded suggests that employment is similarly lower than it would have otherwise been.

Investment levels depend on the expected future profitability of an industry. If dumping causes significant declines in industry prices or sales and if these declines are expected to persist into the future, firms may not find it profitable to engage in as much investment as they would absent the dumping. Again, the material impact on production and revenues may well have led to a significant reduction in investment.

#### Critical Circumstances

The Department of Commerce found that critical circumstances exist with respect to imports of certain helical spring lockwashers from Taiwan.<sup>34</sup> When Commerce makes an affirmative

---

<sup>33</sup> 19 U.S.C. 1677(7)(C)(iii).

<sup>34</sup> 58 Fed. Reg. 27709 (May 11, 1993)



critical circumstances determination, the Commission is required to determine, for each domestic industry for which it makes an affirmative injury determination, "whether retroactive imposition of antidumping duties on the merchandise appears necessary to prevent recurrence of material injury that was caused by massive imports of the merchandise over a relatively short period of time."<sup>35</sup> An affirmative critical circumstances determination is a finding that, absent retroactive application of the antidumping order, the surge of imports that occurred after the case was filed, but within the 90-day period prior to Commerce's preliminary determination, will prolong or cause a recurrence of material injury to the domestic industry.<sup>36</sup>

In this case, the petition was filed on September 8, 1992.<sup>37</sup> Commerce's preliminary determination appeared in the Federal Register on February 23, 1993.<sup>38</sup> Thus, a finding of critical circumstances would mean that duties would be applied to imports that entered the United States between November 25, 1992, and February 23, 1993, and the question I must answer is whether there was a surge of imports during this three month period that would prolong or cause a recurrence of the material injury that I have found.

---

<sup>35</sup> 19 U.S.C. 1673d(b)(4)(A)(i).

<sup>36</sup> 19 U.S.C. 1673d(c)(4).

<sup>37</sup> Report at I-3.

<sup>38</sup> 58 Fed. Reg. 11027 (February 23, 1993).

The record evidence does not support the existence of a surge of imports during this period. The available monthly data show that imports from Taiwan during the period December 1992 to February 1993 were not higher than imports for the same period of 1990-91, nor did they account for a larger percentage of annual Taiwan imports in the HTS category.<sup>39,40</sup> Further, while importers inventories of subject imports from Taiwan were higher at the end of 1992 than at the end of 1990 or 1991, as a percent of U.S. shipments from imports they were lower than in either of the prior two years.<sup>41</sup>

Based on this evidence, I find that retroactive application of the antidumping order is not necessary to avoid prolonging or to prevent a recurrence of the material injury being caused by imports of helical spring lockwashers from Taiwan.

---

<sup>39</sup> Report at F-3, Table F-2. For purposes of this comparison, I measure annual imports on a February to February basis.

<sup>40</sup> I note that these data include merchandise not subject to investigation in addition to subject helical spring lockwashers. The only monthly data available are the official Commerce Department import data. Subject imports are classified under subheading 7318.21.0000 of the Harmonized Tariff Schedule. (58 Fed. Reg. 11027 (February 23, 1993) This heading includes other lockwashers in addition to spring lock washers. In 1991 and 1992, approximately 50 percent of Taiwan imports under HTS subheading 7318.21.0000 appear to have been subject helical spring lockwashers. (Compare Report at I-30, Table 16, with F-3, Table F-2.)

<sup>41</sup> Report at I-24 - I-25, Table 13.

Conclusion

I find that the domestic industry producing helical spring lockwashers is being materially injured by reason of imports from Taiwan that are being sold at less than fair value. The dumping margins found by the Department of Commerce are substantial, suggesting that the price of the subject imports is substantially below fair levels. Further, the subject imports account for a substantial share of U.S. consumption of helical spring lockwashers. Finally, the record shows that domestic and imported lockwashers are at least moderately good substitutes. Taken together, these three facts lead to a conclusion that the domestic industry is being materially injured by reason of subject imports. However, I do not find critical circumstances requiring the retroactive application of the antidumping order.



DISSENTING VIEWS OF VICE CHAIRMAN PETER S. WATSON  
AND COMMISSIONER JANET A. NUZUM

Investigation No. 731-TA-625

On the basis of the record developed in this final investigation, we find that the industry in the United States producing helical spring lockwashers is neither materially injured nor threatened with material injury<sup>1</sup> by reason of imports of certain helical spring lockwashers from Taiwan that the U.S. Department of Commerce (Commerce) has determined are being sold at less than fair value (LTFV) in the United States.

Legal Standard

Under section 735(b) of the Tariff Act of 1930, as amended (the Act), the Commission determines whether "an industry in the United States is materially injured, or is threatened with material injury," by reason of imports of the merchandise found by Commerce to be sold at LTFV in the United States.<sup>2</sup> Section 771(7) (A) of the Act defines "material injury" as "harm which is not inconsequential, immaterial, or unimportant."<sup>3</sup>

In making this determination, the Commission is specifically required to consider the volume of imports, the effect of imports on prices in the United States, and the impact of the imports on domestic producers of the like product.<sup>4</sup> Many factors are considered by the Commission in its investigation under this framework; decisions are based on the record as a whole. "The presence or absence of any factor which the Commission is required to evaluate

---

<sup>1</sup> Material retardation of the establishment of an industry is not at issue in this investigation.

<sup>2</sup> 19 U.S.C. § 1671d(b).

<sup>3</sup> 19 U.S.C. § 1677(7) (A).

<sup>4</sup> 19 U.S.C. § 1677(7) (B).

. . . shall not necessarily give decisive guidance" with respect to our determination.<sup>5</sup>

In determining whether or not an industry is materially injured by reason of LTFV imports, the Commission may consider alternative causes of injury, but is not to weigh causes.<sup>6</sup> Furthermore, our determination must be based on positive evidence in the record; it may not be based on speculation or supposition. In evaluating the record, the Commission may weigh the evidence and selectively rely on certain evidence as more credible; however,

---

<sup>5</sup> 19 U.S.C. § 1677(7)(E)(ii).

<sup>6</sup> E.g., Citrosuco Paulista, S.A. v. United States, 704 F. Supp. 1075, 1101 (CIT 1988).

Commissioner Nuzum further notes that the Commission need not determine that the LTFV imports are "the principal, a substantial, or a significant cause of material injury." S. Rep. No. 249, 96th Cong., 1st Sess. 57, 74 (1979). Congress clearly indicated that to do so "has the undesirable result of making relief more difficult to obtain for industries facing difficulties from a variety of sources; industries that are often the most vulnerable to less-than-fair-value imports." Id. at 74-75. Rather, a finding that imports are a cause of material injury is sufficient. See, e.g., Metallwerken Nederland, B.V. v. United States, 728 F. Supp. 730, 741 (CIT 1989); Citrosuco Paulista, S.A. v. United States, 704 F. Supp. 1075, 1101 (CIT 1988).

Vice Chairman Watson notes that the courts have interpreted the statutory requirement that the Commission consider whether there is material injury "by reason of" the subject imports in a number of different ways. Compare, e.g., United Engineering & Forging v. United States, 779 F. Supp. 1375, 1391 (CIT 1991) ("rather it must determine whether unfairly-traded imports are contributing to such injury to the domestic industry. Such imports, therefore, need not be the only cause of harm to the domestic industry" (citations omitted)); Metallwerken Nederland B.V. v. United States, 728 F. Supp. 730, 741 (CIT 1989) (affirming a determination by two Commissioners that "the imports were a cause of material injury"); USX Corporation v. United States, 682 F. Supp. 60, 67 (CIT 1988) ("any causation analysis must have at its core, the issue of whether the imports at issue cause, in a non de minimis manner, the material injury to the industry...").

Accordingly, Vice Chairman Watson has decided to adhere to the standard articulated by Congress in the legislative history of the pertinent provisions, which states that the Commission must satisfy itself that, in light of all the information presented, there is a "sufficient causal link between the less-than-fair-value imports and the requisite injury." S. Rep. No. 249, 96th Cong., 1st Sess. 75 (1979).

the Commission's determination in the final analysis must be supported by substantial evidence on the record.<sup>7</sup>

#### Like Product and Domestic Industry

We concur with our colleagues that the like product in this investigation is all helical spring lockwashers (hereinafter "lockwashers") and that the domestic industry consists of all U.S. producers of lockwashers. We therefore join in the discussion of like product and domestic industry as expressed in the views of Chairman Newquist and Commissioner Rohr.<sup>8</sup>

#### Conditions of Competition Distinctive to the Domestic Industry

In evaluating the impact of dumped or subsidized imports on a domestic industry, the Commission is required to "evaluate all relevant economic factors . . . within the context of the business cycle and conditions of competition that are distinctive to the affected industry."<sup>9</sup> We find that a discussion of these particular conditions of competition, including a general understanding of the market forces at work in this industry, provides a useful starting point for our analysis. The following are particular conditions of competition which we have considered in our analysis.

#### Structure of the domestic industry

The domestic industry underwent substantial restructuring during 1990-92. The petitioner, the Shakeproof Industrial Products Division of Illinois Tool Works, Inc. (Shakeproof), entered the industry in April 1991 with the

---

<sup>7</sup> 19 U.S.C. § 1516a(b) (1) (B) .

<sup>8</sup> See Views of Chairman Newquist and Commissioner Rohr at 3-19.

<sup>9</sup> 19 U.S.C. § 1677(7) (C) (iii). We have not identified a business cycle distinctive to this industry.

purchase of the assets of an existing lockwasher producer, Mellowes Co.<sup>10</sup> Shakeproof acquired the assets of two additional producers, Beall Manufacturing and Crest Products, in November 1991 and July 1992, respectively.<sup>11</sup> At the end of 1992, the industry consisted of Shakeproof and one other small producer, MW Industries;<sup>12</sup> however, another firm, Marvec, Inc., began domestic production of lockwashers in May 1993.<sup>13</sup>

Restructuring has made possible some significant increases in efficiencies and reductions in costs.<sup>14</sup> The petitioner suggests that, to the extent that material injury by reason of imports exists but is not reflected in the data for the domestic industry, improvements related to restructuring "mask the injury."<sup>15</sup> A determination of present material injury by reason of imports must be based, however, on positive evidence in the record.

We find no credible indication in the record that the various exits from the industry during the period of investigation were related to import

---

<sup>10</sup> Report of the Commission (Report) at I-13.

<sup>11</sup> Id. \*\*\* Shakeproof purchased the lockwasher production equipment of Standard Lock Washer & Mfg. Co., which had ceased actual production in 1988. Id. at I-13 - I-14.

<sup>12</sup> Id. at I-13.

<sup>13</sup> Id. at I-14.

<sup>14</sup> See Transcript of the Commission's hearing in this investigation (Transcript) at 31; Petitioner's posthearing brief at App. 3 (answer to a question from Vice Chairman Watson). Shakeproof indicated that \*\*\*. \* \* \*. Report at I-12 n.28.

<sup>15</sup> Petitioner's posthearing brief at 3.



competition.<sup>16</sup> At the same time, two firms entered the industry in the face of a sizeable and increased import presence.<sup>17</sup>

#### Concentration of competition in "standard" lockwashers

Competition between the domestic like product and the subject imported product is concentrated in relatively high-volume lockwasher varieties characterized by the petitioner as "standards."<sup>18</sup> In contrast, there were reportedly few or no imports from the subject countries of "specials" -- lockwashers that are generally not high-volume sales items and which tend to be produced to order rather than held in, and sold from, inventory.<sup>19</sup> We have considered information on the record regarding changes in domestic product between standards and specials.<sup>20</sup>

#### Apparent U.S. consumption

As an input to many manufactured goods, demand for lockwashers tends to follow fluctuations in levels of general economic activity. Apparent U.S.

---

<sup>16</sup> Beall Manufacturing \*\*\*. Report at I-13 n.31. Crest Products \*\*\*. *Id.* at n.32. (See discussion of specials and standards *infra.*) Since these companies produced only specials (report at I-13), it is not clear what impact imports of standards from China or Taiwan could have had.

<sup>17</sup> We note that Shakeproof \*\*\*. Report at D-3.

\* \* \* \* \*

We find that \*\*\* weakens their contention that they are the "last survivor" in the industry who has purchased the "few remaining assets of companies that are going out of business..." Transcript at 81-82. Report at D-3.

<sup>18</sup> See, e.g., Petitioner's prehearing brief at 6-7.

<sup>19</sup> For purposes of addressing the petitioner's arguments regarding the impact of unfair import competition, we use the terms "standards" and "specials" as employed by the petitioner. We note, however, that other parties to the investigation defined these terms somewhat differently.

<sup>20</sup> According to petitioner's data, carbon steel standards accounted for \*\*\*. Stainless steel standards accounted for \*\*\*. We consider these changes to have been \*\*\*. Petitioner's posthearing brief at Tab 4.

consumption of lockwashers declined slightly from 1990 to 1991, and then rebounded in 1992, for an overall net increase.<sup>21</sup>

### Cumulation

In determining whether there is material injury by reason of LTFV imports, the Commission is required to assess cumulatively the volume and price effects of imports from two or more countries subject to investigation if the imports "compete with each other and with like products of the domestic industry in the United States market."<sup>22</sup> Cumulation for present injury analysis is not required, however, when LTFV imports from a subject country are negligible and have no discernible adverse impact on the domestic industry.<sup>23</sup> In evaluating whether LTFV imports compete with each other and with the domestic like product, the Commission traditionally has considered several factors;<sup>24</sup> only a "reasonable overlap" of competition is required.<sup>25</sup>

---

<sup>21</sup> Apparent U.S. consumption of lockwashers declined by \*\*\* percent from 1990 to 1991, then grew by \*\*\* percent from 1991 to 1992, with an overall increase of \*\*\* percent. Report at I-10 - I-11, Table 2.

<sup>22</sup> 19 U.S.C. § 1677(7)(C)(iv)(I); Chaparral Steel Co. v. United States, 901 F.2d 1097, 1105 (Fed. Cir. 1990).

<sup>23</sup> 19 U.S.C. § 1677(7)(C)(v).

<sup>24</sup> Specifically, these four factors are:

- (1) the degree of fungibility between the imports from different countries and between imports and the domestic like product, including consideration of specific customer requirements and other quality related questions;
- (2) the presence of sales or offers to sell in the same geographic markets of imports from different countries and the domestic like product;
- (3) the existence of common or similar channels of distribution for imports from different countries and the domestic like product; and
- (4) whether the imports are simultaneously present in the market.

See Fundicao Tupy, S.A. v. United States, 678 F. Supp. 898, 902 (CIT), aff'd per curiam, 859 F.2d 915 (Fed. Cir. 1988). No single factor is determinative, and the list of factors is not exclusive. See, e.g., Granges Metallverken AB v. United States, 716 F. Supp. 17 (CIT 1989).

For purposes of examining whether the domestic industry is experiencing present injury by reason of the LTFV imports from Taiwan, we have cumulated those imports from Taiwan with imports from the People's Republic of China (China) that are also subject to investigation. We join the discussion by Commissioner Brunsdale on this issue.<sup>26</sup>

In analyzing whether unfair imports pose a threat of material injury to a domestic industry, the Commission is not required, but has the discretion, to cumulate the volume and price effects of imports from two or more countries.<sup>27</sup> In this investigation, we have decided not to cumulate the LTFV imports from Taiwan with those from China for purposes of our threat determination. Our reasoning is presented below in our discussion of threat of injury.

#### Volume of the Subject Imports

The Commission is required to consider the volume of the subject imports, and whether "the volume of imports of the merchandise, or any increase in that volume, either in absolute terms or relative to production or consumption in the United States, is significant."<sup>28</sup>

In terms of quantity, U.S. imports of the subject imports from China and Taiwan increased significantly over the period of investigation. Cumulated imports increased from 6.6 million pounds in 1990 to 7.6 million pounds in 1991, then to 8.8 million pounds in 1992, for an overall increase in volume of

---

<sup>25</sup> See, e.g., Wieland Werke, AG v. United States, 718 F. Supp. 50, 52 (CIT 1989).

<sup>26</sup> See Views of Commissioner Anne E. Brunsdale at 23-24.

<sup>27</sup> 19 U.S.C. § 1677(7) (F) (iv).

<sup>28</sup> 19 U.S.C. § 1677(7) (C) (i).

32.2 percent.<sup>29</sup> In terms of value, imports increased at a greater rate, 52.2 percent, reflecting some shift in product mix towards higher value stainless steel lockwashers.<sup>30</sup> Given the expanding market, however, we find it more probative to evaluate these increases in volume relative to domestic production or consumption rather than by absolute levels.

U.S. shipments of the subject imports expanded their share of the U.S. market from 1990 to 1991, and then lost a small portion of that gain in 1992.<sup>31</sup> The cumulated market share remained at significant levels throughout the period. However, although market shares of the subject imports increased during 1990-92, these increases occurred predominantly from 1990 to 1991, not from 1991 to 1992. In fact, from 1991 to 1992, while apparent U.S. consumption increased, cumulated subject imports lost market share<sup>32</sup> to nonsubject imports while the domestic industry maintained its percentage of the market.<sup>33</sup> Thus, despite a significant gain in subject import market share from 1990 to 1991, that trend reversed somewhat in 1992.

---

<sup>29</sup> Report at I-29, Table 16.

<sup>30</sup> Id. Unit values for the subject imports increased from \$0.55 per pound in 1990 to \$0.59 per pound in 1991 and 1992. Id. We note that the product mix between carbon and stainless steel had an impact on the combined unit values of the subject imports. The unit value of each individual metal type declined between 1990 and 1991, then surpassed its 1990-level unit value in 1992, partly due to an increasing percentage of stainless steel lockwashers from Taiwan. Report at I-30.

<sup>31</sup> The cumulated market share by quantity was \*\*\* percent in 1989, \*\*\* percent in 1990, and \*\*\* percent in 1991. Report at I-31, Table 17.

<sup>32</sup> The share of apparent consumption held by the cumulated subject imports declined by \*\*\* percent from 1991 to 1992. Report at I-31, Table 17.

<sup>33</sup> U.S. producers' share of consumption declined by \*\*\* percent from 1991 to 1992, by volume. The share of apparent U.S. consumption held by nonsubject imports increased from \*\*\* percent in 1991 to \*\*\* percent in 1992. Id.

### Price Effects of the Subject Imports

The Commission is also required to consider the effect of the subject imports on prices in the United States for the like product. In evaluating this effect, the Commission must consider whether there has been significant price underselling by the subject imports, and whether the subject imports either depress prices to a significant degree, or prevent price increases which otherwise would have occurred to a significant degree.<sup>34</sup>

#### Underselling

The analysis of underselling in this investigation is complicated by differing levels of trade. The domestic industry sells to both large and small distributors as well as to some end users. In addition to buying from domestic producers, some large distributors also import directly from the subject countries. These large distributors resell to smaller distributors, retailers, and end users.<sup>35</sup> The Commission's traditional underselling analysis compares reported prices paid by purchasers to domestic producers and importers. These data in this investigation show a preponderance of overselling by the imports.<sup>36</sup>

---

<sup>34</sup> 19 U.S.C. § 1677(7)(C)(ii).

<sup>35</sup> Report at I-15.

<sup>36</sup> In comparing the largest sales of the six products for which the Commission gathered pricing information, imported lockwashers from China undersold comparable lockwashers from Shakeproof in \*\*\* out of \*\*\* comparisons, with margins of underselling \*\*\* and with margins of overselling \*\*\*. Imported lockwashers from Taiwan undersold comparable lockwashers from Shakeproof in \*\*\* out of \*\*\* comparisons, with margins of underselling \*\*\* and with margins of overselling \*\*\*. Id. at I-35 - I-36, Tables 18-23.

The instances of underselling were \*\*\*. We have considered this fact in our decision not to cumulate the imports from China with those from Taiwan in our threat analysis.

Information obtained in the investigation reflects that some of the overselling is accounted for by transaction volumes, which tend to be larger for the domestic industry and therefore affected by volume discounts. The petitioner's average unit value data, however, include the influence of smaller volume transactions; these average unit value data still show \*\*\* of

The petitioner maintains that, in purchasing LTFV imports rather than domestic product, importers pay a substantially lower price, as evidenced by ex-dock prices.<sup>37</sup> The petitioner argues that the Commission should base its underselling analysis on importers' ex-dock purchase prices instead of on importers' sales prices.<sup>38</sup> Comparisons of ex-dock prices with domestic industry sales prices show a preponderance of underselling by the imports.<sup>39</sup> However, in view of the fact that underselling at this level of trade is not passed on by the importer, we do not find that it has a significant impact on domestic prices. Rather, it appears that importers simply mark up the LTFV products to price levels comparable to, if not above, those for domestic products. Thus, the impact of lower ex-dock prices appears to be in providing importers with a profit margin on imported lockwashers -- without significantly affecting domestic producers' prices.<sup>40</sup>

Even if domestic prices are not adversely affected, low ex-dock prices could have an adverse volume effect if purchasers that previously sourced from domestic producers shifted to offshore sources. Such a shift would be

---

overselling by the imports.

In comparing the unit values of the six products for which the Commission gathered pricing information, imported lockwashers from China undersold comparable lockwashers from Shakeproof in \*\*\* out of \*\*\* comparisons, with margins of underselling \*\*\* and with margins of overselling \*\*\*. Imported lockwashers from Taiwan undersold comparable lockwashers from Shakeproof in \*\*\* out of \*\*\* comparisons, with margins of underselling \*\*\* and with margins of overselling \*\*\*. Id. at I-37 - I-38, Tables 24-29.

<sup>37</sup> Transcript at 34, 35. Investigated allegations of lost sales generally support this contention.

<sup>38</sup> E.g., Petitioner's prehearing brief at 10.

<sup>39</sup> Report at I-39 - I-40.

<sup>40</sup> We note that importers' ability to maintain such markups is a reflection of purchasers' relative price insensitivity. The subject lockwashers account for a very small part of any finished product, and substitution of these products likely would occur only at the design stage. Transcript at 104; report at I-8. Very large volume purchasers may be somewhat more price sensitive. See transcript at 104.

reflected by a gain in market share for the subject imports at the expense of U.S. producers. According to the petitioner, this shift towards direct importation by distributors started in the mid-1980s and continued through the period of investigation.<sup>41</sup> As noted above in our discussion of volume effects, the record in this investigation reflects that domestic market share declined, and subject imports' market share increased, from 1990 to 1991.<sup>42</sup> No such shift is reflected in the most recent data, however.<sup>43</sup>

In sum, underselling based on ex-dock prices does not appear to have resulted in significant adverse price effects, and the evidence on volume effect is unclear.<sup>44</sup> The imports appear to be resold in the U.S. market at prices above those of comparable domestic products. For these reasons, we place little weight on evidence of underselling at the ex-dock level and find that the record does not, on balance, support a finding of significant underselling.

#### **Price depression and price suppression**

There is no evidence of price depression in this investigation. Prices of selected domestic lockwashers fluctuated, showing no clear trend during the

---

<sup>41</sup> See id. at 36 and 59.

<sup>42</sup> The record shows \*\*\* overselling by importers of the subject imported products during 1990-91. In contrast, during 1992, when there was \*\*\*, there was no significant loss in the domestic industry's U.S. market share and an actual decline in China's share. This evidence does not support a conclusion that underselling contributed to shifts in market share.

<sup>43</sup> The petitioner has also argued that we should consider import data for 1989. Petitioner's prehearing brief at 2-4. We note that we have placed more weight on 1990-92 data (as opposed to 1989 data) because the more recent data are more relevant than are earlier data for our determination as to present material injury, and threat of material injury, by reason of the subject imports.

<sup>44</sup> In any event, we find that the impact on the domestic industry of any adverse volume effect by the subject imports does not constitute material injury. See infra our discussion of the impact of the subject imports on the condition of the domestic industry.

period of investigation.<sup>45</sup> At the same time, prices of the subject imports from China fluctuated but showed some declining trends,<sup>46</sup> and prices of the imports from Taiwan showed either no clear trends or a slight increase.<sup>47</sup>

The petitioner has argued that the imports had a price-suppressing effect on U.S. prices, noting that production costs have risen.<sup>48</sup> We find that the record does not contain positive evidence of significant price suppression by the subject imports. Specifically, we do not find that import prices prevented domestic price increases, which otherwise would have occurred, to a significant degree.<sup>49</sup> Allegations of increases in costs are not borne out by the confidential record.<sup>50</sup> Rather, the improved financial picture suggests that significant price increases would not have been expected. The petitioner also implies that prices might have been expected to rise as domestic companies exited the industry.<sup>51</sup> However, the domestic industry was already fairly concentrated in 1990, with the smaller firms producing primarily specials;<sup>52</sup> thus, it is not obvious that further concentration would have had a significant effect on prices for standard lockwashers, where the competition with imports occurs. In the absence of any other support for its claim of price suppression, we also note that the

---

<sup>45</sup> Report at I-35 - I-36, Tables 18-23.

<sup>46</sup> Id. at I-35 - I-36, Tables 18-19 and 21-22.

<sup>47</sup> Id. at I-35 - I-36, Tables 18-23.

<sup>48</sup> See Petitioner's prehearing brief at 19. See also Transcript at 35.

<sup>49</sup> See 19 U.S.C. § 1677(7) (C) (ii).

<sup>50</sup>

\* \* \* \* \*

Report at I-20, Tables 8-9.

<sup>51</sup> See Transcript at 35.

<sup>52</sup> Id. at 28.



petitioner did not provide any documentation regarding attempts on its part to institute price increases.<sup>53</sup>

We have also examined the record for other evidence of adverse price effects by the subject imports. Both the anecdotal evidence of lost sales and lost revenues and the data for unit values are consistent with other pricing data discussed above.<sup>54</sup>

Impact of Subject Imports on the Condition of the Domestic Lockwasher Industry

In this investigation, we offer the following analysis specifically regarding the impact of the subject imports on the condition of the industry. The financial performance of the domestic industry has improved markedly over the period 1990-92.<sup>55</sup> Overall sales quantities and values decreased from 1990 to 1992, but there was a noticeable improvement from 1991 to 1992.<sup>56</sup> Gross profits decreased slightly over the whole period, but improved substantially from 1991 to 1992.<sup>57</sup> In addition, operating income, net income before income

---

<sup>53</sup> Report at I-42 n.102.

<sup>54</sup> Specifically, the anecdotal evidence of lost sales and lost revenues indicates importers source LTFV product due to its low price and mark it up above domestic levels, and that the domestic industry generally did not lose existing customers during 1990-92. Report at I-42 - I-44.

The unit values of U.S. shipments of carbon lockwashers (which account for most of total shipments) did not increase overall while import unit values were lower and declined. Id. at C-3, Table C-1.

<sup>55</sup> Our analysis is based on data presented by the petitioner. These data include \*\*\*. We note that the report also presented adjusted cost data for the domestic industry in an attempt to \*\*\*. These adjusted data show \*\*\*. Report at App. D.

<sup>56</sup> Sales quantities increased \*\*\* percent and sales values increased \*\*\* percent from 1991 to 1992. Id. at I-20, Tables 8-9.

We note that the product mix between carbon and stainless steel could have an impact on combined domestic sales values and unit values. However, the evidence on the record seems to indicate that this product mix has not had a significant effect on domestic sales and unit values. Id. at I-21.

<sup>57</sup> Gross profits rose \*\*\* percent from 1991 to 1992. Id. at I-20.

taxes, and cash flows all increased significantly.<sup>58</sup> Information on capital expenditures, research and development (R&D), and the value of assets also are not indicative of an industry experiencing material injury.<sup>59</sup>

We note that we have no specific profitability level threshold in making our determination. An industry exhibiting high profitability levels may nevertheless be suffering material injury by reason of subject imports. Conversely, an industry with low profitability levels may not be suffering material injury by reason of the subject imports. Our determinations are made based on an examination of profitability levels in conjunction with all other relevant factors; no single factor is dispositive.<sup>60</sup>

Domestic capacity to produce lockwashers declined throughout 1990-92.<sup>61</sup> Based on the information on the record, however, we find that the decrease in productive capacity is related to industry restructuring and the existing excess capacity in the domestic industry -- and not due to the subject imports.<sup>62</sup> We note that capacity utilization for the domestic industry showed

---

<sup>58</sup> Operating income increased \*\*\* percent from 1990 to 1992. Id. at I-20, Table 8.

\* \* \* \* \*

See id. at I-20.

\* \* \* \* \*

Id. at I-20 -I-21.

Net income before taxes increased \*\*\* percent from 1990 to 1992. In addition, cash flow was up \*\*\* percent over the same period. Id. at I-20.

<sup>59</sup> \* \* \*. Id. at I-21. R&D expenditures in this industry are \*\*\*. Id. at I-22. The value of assets for Shakeproof's lockwashers operations \*\*\*. Id. at I-22, Table 12. See also id. at E-3.

<sup>60</sup> 19 U.S.C. § 1677(7) (E) (ii).

<sup>61</sup> U.S. producers' average-of-period capacity decreased \*\*\* percent from 1990 to 1992. Id. at I-16, Table 3.

<sup>62</sup> As noted previously, two companies closed their divisions producing lockwashers during the period 1990-92. Shakeproof purchased the lockwasher productive assets of both companies and \*\*\*. Id. at I-17. \*\*\* domestic capacity existed throughout the 1990-92 period. Id. at I-16, Table 3.

an overall favorable trend, especially from 1991 to 1992.<sup>63</sup> Domestic production declined slightly over the period 1990-92.<sup>64</sup> However, all of the decline occurred from 1990 to 1991. From 1991 to 1992, production actually increased.<sup>65</sup>

U.S. producers' domestic shipments decreased from 1990-91, but increased from 1991 to 1992, for a slight decline overall. The trend in value of domestic shipments was similar.<sup>66</sup> Reported end-of-period inventories increased over the investigation period.<sup>67</sup> Inventories as a ratio to production and as a ratio to U.S. shipments also increased.<sup>68</sup>

Productivity of the domestic producers increased from 1990 to 1992.<sup>69</sup> Coinciding with this improvement has been a decrease in the number of production and related workers and hours worked.<sup>70</sup> Three companies reported reductions in their labor force producing lockwashers, for a total reduction of 16 workers.<sup>71</sup> However, we note that a significant percentage of the

---

<sup>63</sup> Capacity utilization increased \*\*\* percentage points from 1990 to 1992, with an \*\*\*-percentage point rise from 1991 to 1992. Id.

<sup>64</sup> Production declined \*\*\* percent from 1990-92. Id.

<sup>65</sup> Production increased \*\*\* percent from 1991 to 1992. Id.

<sup>66</sup> Domestic producers' U.S. shipments decreased \*\*\* percent from 1990 to 1992, but increased \*\*\* percent from 1991 to 1992. Report at I-17, Table 4.

<sup>67</sup> End-of-period inventories of U.S. producers increased from \*\*\*. Id. at I-18.

<sup>68</sup> Inventories as a ratio of production increased from \*\*\* percent in 1990 to \*\*\* percent in 1992. Inventories as a ratio of U.S. shipments also increased, from \*\*\* percent in 1990 to \*\*\* percent in 1992. Id.

<sup>69</sup> Productivity rose \*\*\* percent over 1990-92. Id. at I-18, Table 6.

<sup>70</sup> Total hours worked decreased \*\*\* percent. Id. at I-18, Table 6.

<sup>71</sup> Id. at I-18 - I-19.

reduction in workers producing the like product was due to the restructuring that was taking place within this industry.<sup>72</sup>

A critical issue is whether the subject imports contribute in more than a de minimis manner to whatever injury is being experienced by the domestic industry.<sup>73</sup> In this case, we find no evidence that the volume of the subject imports had a significant adverse impact on the domestic industry. Although market shares of the subject imports increased overall during 1990-92, the condition of the industry as measured by financial performance and certain other performance indicators improved during this period. Declines in capacity were due to restructuring, as were a sizeable portion of lay-offs.<sup>74</sup> To the extent that the increased market share of the imports from 1990 to 1991 took some business from the U.S. industry, we find that the impact of such a loss was small. Moreover, from 1991 to 1992, the market share of the subject imports declined and almost all industry indicators rose strongly.

We also find no evidence of a significant adverse price effect by the subject imports. We do not find, on balance, that there was significant underselling, nor was there significant price depression or suppression by reason of the imports. Consequently, we determine that the industry producing

---

<sup>72</sup> Of the 16 workers permanently laid-off during 1990-92, \*\*\* were related to the industry restructuring. Id. at I-19.

Commissioner Watson notes that the petitioner states that the growth in imports has caused the closure of three U.S. producers between 1990 and 1992. Petitioner's posthearing brief at 2. Respondents counter that the petitioner has systematically purchased and eliminated its domestic competition. Respondents' postconference brief at 7. Regardless of the reasons behind this contraction of the domestic industry, he notes that the petitioner has gained a significant competitive advantage within the domestic industry by virtue of its having less competition from other domestic producers.

<sup>73</sup> See, e.g., Maine Potato Council v. United States, 613 F.Supp. 1237, 1244 (Ct. Int'l Trade 1985).

<sup>74</sup> See supra n.61 and n.70, respectively.

lockwashers in the United States is not materially injured by reason of the subject imports from China and Taiwan.

### Threat of Material Injury

Having arrived at a negative determination with respect to present injury, we now turn to examine whether the subject imports pose a threat of material injury to the domestic industry. Section 771(7)(F) of the Act directs the Commission to determine whether a U.S. industry is threatened with material injury by reason of imports "on the basis of evidence that the threat of material injury is real and that actual injury is imminent." The statute specifically states, "Such a determination may not be made on the basis of mere conjecture or supposition."<sup>75</sup> The Commission considers as many of the ten statutory factors as are relevant to the facts of the particular investigation before it, as well as any other relevant economic factors.<sup>76</sup> Our reviewing court has stated that the ten statutory factors "primarily serve as guidelines for the Commission's analysis of the likely impact of future imports."<sup>77</sup> We discuss each of the factors relevant to the facts of this investigation below.

### Cumulation

As noted above, cumulation of the subject imports is discretionary in analyzing threat of material injury.<sup>78</sup> In this investigation, we decline to

---

<sup>75</sup> 19 U.S.C. § 1677(7)(F)(ii). See Metallwerken B.V. v. United States, 744 F. Supp. 281, 287 (CIT 1990).

<sup>76</sup> 19 U.S.C. § 1677(7)(F)(i). Factor I, regarding the nature of the subsidy, Factor VIII, regarding product shifting, and Factor IX, regarding raw agricultural products, are not relevant to this investigation.

<sup>77</sup> Calabrian Corp. v. United States, Slip Op. 92-69 at 23 (CIT May 13, 1992).

<sup>78</sup> 19 U.S.C. § 1677(7)(F)(iv).

cumulate the imports from the two countries subject to investigation for purposes of our threat analysis. Our decision is based on the numerous differences between the industries in the two countries and their exports to the United States. For example, the level of imports from China far exceeded that from Taiwan.<sup>79</sup> Further, the imports from China consisted entirely of carbon lockwashers, whereas carbon and stainless steel lockwashers accounted for nearly equal shares of the imports from Taiwan during the period of investigation.<sup>80</sup> Both the level and the trend in Taiwan's reported productive capacity differed from comparable data for the Chinese industry.<sup>81</sup> Prices in the U.S. market of products from the two countries also followed different trends, with more overselling by the Taiwan products.<sup>82</sup> Finally, the levels and trends in the ratio of importers' inventories-to-shipments were different for Taiwan and Chinese products.<sup>83</sup> Our discussion here consequently focuses only on the Taiwan industry<sup>84</sup> and on imports from Taiwan.

---

<sup>79</sup> Report at I-30, Table 16.

<sup>80</sup> Id. at I-31.

<sup>81</sup> Compare id. at I-27, Table 14, with id. at I-28, Table 15.

<sup>82</sup> Id. at I-35 - I-36, Tables 18-23; id. at I-37 - I-38, Tables 24-29. With regard to pricing, we also note that the import unit values of carbon lockwashers from Taiwan remained well above those of imports from China. Id. at I-30, Table 16.

<sup>83</sup> Id. at I-24 - I-25, Table 13.

<sup>84</sup> We note the available data for the Taiwan industry are limited to one producer, Likunog Industrial Co., Ltd. (Likunog). Likunog appears to have accounted for not only a substantial amount of Taiwan production, but also the majority of the subject exports from Taiwan to the United States. Most importantly in the context of a threat analysis, Likunog appears to account for the increase in imports of the subject products into the United States. See Report at I-29, Table 16. Any other producers in Taiwan appear to have either ceased operations or developed other export markets during 1990-92. Report at I-27 -I-28 and n.83.

### Foreign capacity and capacity utilization (Factors II and VI)

During the period 1990-92, there were no increases in foreign capacity or underutilized capacity that appear "likely to result in a significant increase in imports of the merchandise to the United States." Specific levels and trends in capacity, production, and capacity utilization do not support a finding of threat of material injury by reason of the subject imports from Taiwan.<sup>85</sup>

### Subject import market penetration (Factor III)

The statute directs us to consider any rapid increase in United States market penetration by the subject imports and the likelihood that the penetration will increase to an injurious level.<sup>86</sup> While the share of subject imports from Taiwan increased from 1990 to 1992, it remained at low levels.<sup>87</sup> Although the overall increase may appear "rapid", we have considered the fact that this increase started from a low base. We do not find any evidence indicating a likelihood that the subject imports from Taiwan will increase their share of the market to injurious levels.<sup>88</sup>

---

<sup>85</sup> Reported capacity \*\*\* during 1990-92. Id. at I-28, Table 15. Production, meanwhile, \*\*\*, resulting in \*\*\* in capacity utilization. Id. \* \* \*.

<sup>86</sup> 19 U.S.C. § 1677(7)(F)(i)(III).

<sup>87</sup> The market share of imports from Taiwan rose from \*\*\* percent (by quantity) in 1990, to \*\*\* percent in 1991, and to \*\*\* percent in 1992. Report at I-31, Table 17.

<sup>88</sup> We also note that the share of Likunog's total production that is exported to the United States \*\*\* during 1990-92. Report at I-28, Table 15. Likunog and other producers had significant other foreign markets for their products. Id. at I-28.

#### Price depression or suppression (Factor IV)

The imports from Taiwan generally oversold domestic products during the period of 1990-92.<sup>89</sup> The absence of significant price depression or price suppression in our present injury analysis is also relevant to our threat analysis. There is no indication on the record that prices will have, in the future, a price effect different from that which they have had in the past. The record does not establish "the probability that imports of the merchandise will enter the United States at prices that will have a depressing or suppressing effect on domestic prices of the merchandise."<sup>90</sup>

#### Inventories (Factor V)

Data on inventories of imports from Taiwan show increases in the absolute level, but declines as a ratio of either imports or shipments of imports.<sup>91</sup> These trends do not provide an indication of real and imminent threat to the domestic industry.

#### Development and production efforts (Factor X)

Since the lockwasher industry is relatively mature, we are not inclined to place much weight on this threat factor. The confidential information on capital expenditures and research and development also support our conclusion that the domestic industry is not threatened with material injury by reason of imports from Taiwan.<sup>92</sup>

---

<sup>89</sup> Of particular relevance to threat, we also note that the unit value of U.S. shipments of Taiwan stainless steel standard lockwashers \*\*\* in 1992. Stainless steel lockwashers accounted for the majority of imports from Taiwan that year. Id. at C-3, Table C-2.

<sup>90</sup> 19 U.S.C. § 1677(7)(F)(i)(IV).

<sup>91</sup> Report at I-13 - I-14, Table 13.

<sup>92</sup> See supra n.59.



**Other adverse trends (Factor VIII)**

We have identified no other adverse trends that would suggest a threat of material injury by the subject imports. Taiwan lockwashers are reportedly not subject to antidumping findings in any other country.<sup>93</sup>

In view of recent strong performance by the industry producing lockwashers in the United States, and the very small scale of the Taiwan industry producing the subject products, we conclude that the domestic industry is not threatened with material injury by reason of LTFV imports from Taiwan.

---

<sup>93</sup> Report at I-28. See 19 U.S.C § 1677(7) (F) (iii).



**INFORMATION OBTAINED IN THE INVESTIGATIONS**



## INTRODUCTION

### Institution

Following preliminary determinations by the U.S. Department of Commerce (Commerce) that imports of certain helical spring lockwashers<sup>1</sup> from the People's Republic of China (China) and Taiwan are being, or are likely to be, sold in the United States at less than fair value (LTFV) (58 F.R. 26112, April 30, 1993, and 58 F.R. 11027, February 23, 1993, respectively), the U.S. International Trade Commission (Commission) instituted investigations Nos. 731-TA-624 (Final) and 731-TA-625 (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. § 1673d(b)) to determine whether an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports of such merchandise. Notices of the institution of the Commission's investigations and of a public hearing to be held in connection therewith were posted in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and published in the Federal Register on May 3, 1993 (58 F.R. 26347), and on March 10, 1993 (58 F.R. 13280).<sup>2</sup> The hearing for both investigations was held in Washington, DC, on May 13, 1993.<sup>3</sup>

Commerce's final LTFV determination with respect to China is due to be made on July 12, 1993; its final affirmative LTFV determination with respect to Taiwan was made on May 3, 1993 (58 F.R. 27709, May 11, 1993). The applicable statute directs that the Commission make its final injury determination(s) within 45 days after the final determinations by Commerce. Summary data on these investigations are presented in appendix C.

### Background

On September 8, 1992, a petition was filed with the Commission and Commerce by counsel for the Shakeproof Industrial Products Division, Illinois Tool Works (Shakeproof), Milwaukee, WI. The petition alleged that imports of certain helical spring lockwashers from China and Taiwan are being sold in the United States at LTFV and that an industry in the United States is being materially injured and is threatened with further material injury by reason of such imports.

---

<sup>1</sup> For purposes of these investigations, "certain helical spring lockwashers" are circular washers of carbon steel, of carbon alloy steel, or of stainless steel, heat-treated or non-heat-treated, plated or non-plated, with ends that are off-line. Such helical spring lockwashers are designed to: (1) function as a spring to compensate for developed looseness between the component parts of a fastened assembly; (2) distribute the load over a larger area for screw or bolts; and (3) provide a hardened bearing surface. The scope does not include internal or external tooth washers, nor does it include spring lockwashers made of other metals, such as copper. Certain helical spring lockwashers are provided for in subheading 7318.21.00 of the Harmonized Tariff Schedule of the United States (HTS).

<sup>2</sup> Copies of cited Federal Register notices are presented in app. A.

<sup>3</sup> A list of the participants in the hearing is presented in app. B.

Accordingly, effective September 8, 1992, the Commission instituted preliminary antidumping investigations under section 733 of the Tariff Act of 1930 to determine whether there is a reasonable indication that an industry in the United States is materially injured or threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports of such merchandise into the United States. On October 23, 1992, the Commission determined that there was a reasonable indication of material injury.

The Commission has not conducted previous investigations specifically concerning helical spring lockwashers; however, the Commission has examined the industry producing nuts, bolts, and screws on several occasions. Details from these investigations are provided in table 1.

Table 1  
Helical spring lockwashers: Previous and related investigations, 1975-92

Product	Investigation number	Date of issue	Publication number	Result
Bolts, nuts, & screws of iron or steel....	TA-201-2.....	1975.....	USITC 747...	Negative Commission determination.
Bolts, nuts, & screws of iron or steel....	TA-201-27.....	1977.....	USITC 847...	( <sup>1</sup> )
Bolts, nuts, & screws of iron or steel....	TA-201-37.....	1978.....	USITC 924...	( <sup>2</sup> )
Bolts, nuts, & large screws of iron or steel.....	TA-203-11.....	1982.....	USITC 1193..	( <sup>3</sup> )
Bolts, nuts, & screws of iron or steel....	332-103.....	1979-80..	USITC 963, 979, 1000, 1020, 1042, 1052.	Report(s) to Congress.
Nuts, bolts, and screws: Japan.....	701-TA-151 (P)	1982	( <sup>4</sup> )	Terminated 3/18/82; petition withdrawn.

<sup>1</sup> The Commission made an affirmative injury determination and recommended imposition of an additional 30-percent ad valorem duty, declining to 20 percent by the end of the 5-year relief period. The President declined to accept the Commission's recommendation.

<sup>2</sup> The Commission made an affirmative injury determination and recommended imposition of an additional 20-percent ad valorem duty, declining to 10 percent by the end of the 5-year relief period. Duties were imposed pursuant to a Presidential Proclamation of January 4, 1979.

<sup>3</sup> The Commission recommended against extension of import relief.

<sup>4</sup> No report issued.

Source: Various publications of the U.S. International Trade Commission.

## THE PRODUCTS

### Description and Uses

Helical spring lockwashers are flattened, ring-shaped metal devices whose ends are cut in an off-line manner. This design provides spring or tension to assembled parts when such lockwashers are used as a seat for bolts, nuts, screws, and similar fasteners. In addition to preventing movement or loss of tension between assembled parts, helical spring lockwashers are used to distribute loads over an area greater than that provided by the fastener and to provide a hardened bearing surface that facilitates assembly and disassembly of fastened parts. The vast majority of helical spring lockwashers (\*\*\*) percent of 1992 U.S. production and U.S. imports) are manufactured from carbon (or carbon alloy) steel or stainless steel, which are the lockwashers subject to these investigations. Other varieties include those made from copper, aluminum alloy, phosphor bronze, and monel-nickel.<sup>4</sup>

Helical spring lockwashers are generally recognized in the washer industry as being light, regular, heavy, extra-duty, or high-collar types, largely depending on the thickness or diameter of the wire used during manufacture and the intended application of the washer.<sup>5</sup> For example, heavy, extra-duty, and high-collar type helical spring lockwashers are manufactured from relatively heavy-gauge wire and used primarily with bolts and nuts to secure more rigid fastening assemblies.

More generally, helical spring lockwashers are often referred to in the lockwasher industry as being either "standard" or "special" products. "Standard" types generally encompass regular helical spring lockwashers having inside diameters of 0.112 to 1.5 inches<sup>6</sup> and constitute a large portion of the helical spring lockwashers produced in the United States and of those imported from China and Taiwan.<sup>7</sup> These lockwashers are manufactured from carbon steel

---

<sup>4</sup> For ease of presentation, this report will use the terms "helical spring lockwashers" to include all helical spring lockwashers regardless of metal content and "certain" or "subject" helical spring lockwashers to include only carbon (or carbon alloy) steel or stainless steel helical spring lockwashers.

<sup>5</sup> The American Society of Mechanical Engineers (ASME) provides production and performance standards for regular, heavy, extra-duty, and high-collar helical spring lockwashers in ASME Standard B18.21.1-1990. Light helical spring lockwashers are not provided for in this standard, but remain in use in the fastener industry.

<sup>6</sup> Shakeproof uses the term "standard" to include its most popular items, which generally correspond to its stock items. Shakeproof restricts "standards" to "40 types of carbon steel (helical spring lockwashers) and 20 types of stainless steel (helical spring lockwashers)." Prehearing brief of the petitioner, p. 7. However, there is some dispute regarding the definition of the term "standard." Some large importers, such as \*\*\*, do not employ the term "standard" at all; others, such as \*\*\*, use the term "standard" to mean all lockwashers listed in published standards, without exception for weight, diameter, or metal type. Furthermore, \*\*\*. Telephone interviews with \*\*\*.

<sup>7</sup> "Standard" helical spring lockwashers made up \*\*\* percent of Shakeproof's U.S. shipments of carbon steel helical spring lockwashers in 1992 and \*\*\*

and stainless steel. "Special" helical spring lockwashers, on the other hand, include light, heavy, extra-duty, and high-collar varieties. In addition, helical spring lockwashers in metric sizes or those made to unique customer specifications, or manufactured from such materials as bronze, brass, copper, and aluminum, are considered to be "special" products.<sup>8</sup> Finally, helical spring lockwashers for preassembled bolt/lockwasher or screw/lockwasher combinations ("sems")<sup>9</sup> are considered "specials."

Helical spring lockwashers are used in all types of fastening applications, such as appliances, toys, and lawnmowers. The largest consumers of these products are original equipment manufacturers (particularly in the automotive industry) that use helical spring lockwashers for assembling finished products.

### Manufacturing Processes

The manufacture of virtually all helical spring lockwashers, regardless of metal content, begins with either "green" (raw, unfinished, or unprocessed) rod or processed wire, which is then shaped into a trapezoidal form by a series of rollers. The wire proceeds to a machine that coils it around a long metal shaft, or "arbor," then cuts it. The wire can be cut in either of two ways. The slower is the "up-and-down" or "reciprocal" method, in which a blade cuts through the coil. The faster method uses spinning rotary blades.<sup>10</sup> After the cutting operation, unfinished carbon steel lockwashers are placed in a furnace, heated to 1,600 degrees Fahrenheit, then quenched, washed, and further tempered. These processes harden and strengthen the lockwashers, imparting spring properties that enable them to maintain tension when under load in a fastened assembly. Next, the lockwashers may be treated with a rust inhibitor, plated with zinc, or both, and are then packed for shipment.<sup>11</sup> The products are tested and inspected at various stages during the manufacturing process, largely to ensure the exactness of inside and outside diameters.

---

<sup>7</sup> (...continued)

percent of its stainless steel lockwasher shipments. Such helical spring lockwashers made up \*\*\* percent of Hangzhou's lockwasher exports to the United States in 1992. Posthearing briefs of the petitioner (app. 4) and counsel for Hangzhou (exhibit 2). Telephone interviews with the largest importers of carbon steel and stainless steel helical spring lockwashers from Taiwan indicate that the vast majority of such imports are "standard" lockwashers.

<sup>8</sup> Products manufactured from metals other than carbon steel or stainless steel are not within the scope of Commerce's investigations; however, the Commission determined in the preliminary investigations that such products should be included in its definition of like product.

<sup>9</sup> These lockwashers are produced with slightly smaller inside diameters than "regular" or "standard" helical spring lockwashers in order to insure a tighter, more secure fit. They are placed over bolts or screws prior to threading, then "captured" when the bolts or screws are threaded.

<sup>10</sup> The output using rotary blades can average \*\*\* pieces per minute; the output using reciprocal cutting rarely exceeds \*\*\* pieces per minute.

<sup>11</sup> Stainless steel helical spring lockwashers are not heat-treated, plated, or treated with rust inhibitors. Hearing transcript, p. 167.



A tiny portion (less than \*\*\* percent) of the helical spring lockwashers produced in the United States are manufactured from sheet, plate, or round bars. One method of manufacture involves punching the washer from metal sheet or plate using made-to-order dies. The other method requires cutting off the ends of round bars to the customer's specified thickness, then drilling a hole through each piece. The resulting washer is then split and formed, again according to customer specifications.<sup>12</sup>

The manufacturing technology used to produce helical spring lockwashers from wire in China and Taiwan is widely available and essentially the same as that used in the United States. In China, however, wire coiling and wire cutting are performed by different pieces of machinery at separate stages in the production process.<sup>13</sup>

### Interchangeability

Parties to these investigations agree that helical spring lockwashers produced in the United States are similar in terms of quality and function with those imported from China and Taiwan.<sup>14</sup> However, while counsel for Shakeproof claimed that all of the helical spring lockwashers produced in the United States and those imported from China and Taiwan are "fully fungible," counsel for Hangzhou and the AAFI asserted that there are differences in metal content, prices, and uses of (carbon steel) helical spring lockwashers from China and (stainless steel) helical spring lockwashers from Taiwan and counsel for Likunog argued that "carbon steel lockwashers (from China) are not technically interchangeable with stainless steel lockwashers (from Taiwan)."<sup>15</sup> Regarding carbon steel helical spring lockwashers specifically, some buyers differentiate by national origin between lockwashers sourced from China or Taiwan, while others do not.<sup>16</sup> There are no known imports of stainless steel helical spring lockwashers from China, nor any known imports of other metallic helical spring lockwashers from either China or Taiwan.

Non-helical spring lockwashers include such products as conical lockwashers, belleville washers, and disc and wave washers. They are used primarily in automotive applications. Their production differs from helical

---

<sup>12</sup> These methods of production are employed by \*\*\*.

<sup>13</sup> Conference transcript, p. 119.

<sup>14</sup> Prehearing briefs of the petitioner (p. 16), counsel for Hangzhou and the American Association of Fastener Importers (AAFI) (p. 5), and counsel for Taiwan (pp. 3 and 10); conference transcript, pp. 74, 75, 125, 126, and 132. Similarly, 50 out of 53 responding importers noted that helical spring lockwashers produced in the United States, China, and Taiwan are used interchangeably. Importer questionnaire responses, p. 29.

<sup>15</sup> Prehearing brief of the petitioner (p. 16), counsel for Hangzhou and the AAFI (p. 5), and counsel for Likunog (p. 10). Forty-four out of 49 responding importers noted that carbon steel, stainless steel, and other metallic helical spring lockwashers are not generally substitutable for each other, citing as reasons differing resistance to corrosion, metal compatibility with the fastener assembly, and price. Importer questionnaire responses, p. 28.

<sup>16</sup> Conference transcript, p. 127; purchaser questionnaire responses.

spring lockwashers primarily in that they are stamped from sheet steel, rather than cut from lengths of wire.

Other washers that are commonly used with fasteners are external and internal tooth lockwashers. Unlike helical spring lockwashers, tooth lockwashers have bent teeth on the external or internal surface of the washer. The teeth bite into the adjacent bearing work surface to prevent the bolt, nut, or screw from loosening or turning. Because tooth lockwashers generally provide more friction than helical spring lockwashers, they are widely used in electronic equipment and appliances. They are also used in hidden applications or when their jagged appearance is not a concern to the user.

Although they serve a similar purpose to that of helical spring lockwashers, the production process for manufacturing non-helical spring lockwashers and tooth lockwashers differs from that generally employed in the manufacture of helical spring lockwashers.<sup>17</sup> Large consumers, such as original equipment manufacturers, design products to use a specific kind of lockwasher and do not consider helical spring lockwashers and other types of lockwashers to be interchangeable. According to the petitioner, substitution of these products would occur only at the design stage, where manufacturers must decide which type of lockwasher to use.<sup>18</sup> Once designed into a "downstream" product, manufacturers would not substitute tooth lockwashers, for example, for helical spring lockwashers.<sup>19</sup>

Finally, plain or flat washers have no locking capabilities. These hardened circular steel washers are used largely to impart space, to protect a part from damage, to distribute a load more widely, to improve appearance, and to bridge oversize clearance holes. In some applications, plain or flat washers are used in combination with locking-type washers to prevent the fastener from loosening under vibration.

#### U.S. Tariff Treatment

Imports of the carbon steel and stainless steel helical spring lockwashers subject to these investigations are provided for in subheading 7318.21.00 of the HTS (covering non-threaded spring washers and other lockwashers). The column 1-general (most-favored-nation) rate of duty for the imported products of China and Taiwan is 5.8 percent ad valorem, while the column 2 duty rate is 35.0 percent ad valorem.

---

<sup>17</sup> In particular, they are formed from sheet material on stamping machines, rather than cut from wire as are virtually all helical spring lockwashers.

<sup>18</sup> Conference transcript, p. 71.

<sup>19</sup> Petition, p. 8; interview with Mr. Joseph (Joe) Musuraca, General Manager, Shakeproof, Sept. 15, 1992.

## THE NATURE AND EXTENT OF SALES AT LTFV

## China

In its preliminary determinations, Commerce stated that it had received a questionnaire response from Hangzhou Spring Washer Plant (Hangzhou) but did not receive a consolidated response from the Government of China for all other producers and exporters of certain helical spring lockwashers. Because Hangzhou was unable to demonstrate that it qualified for a separate rate, Commerce based its affirmative preliminary determinations regarding alleged LTFV sales and critical circumstances on "best information available" as provided by the petitioner. Petitioner's market research provided U.S. price estimates, based on purchase prices, for carbon steel helical spring lockwashers imported from China. Petitioner obtained estimates for plain and plated varieties of six lockwasher sizes and adjusted for U.S. duty and freight charges.

Because Commerce determined that the Chinese lockwasher industry does not have market-oriented industry status, it based foreign market value on the valuation of the factors of production in a surrogate market economy country (India). Foreign market value was calculated as the sum of material costs; labor and overhead costs; selling, general, and administrative expenses; packing costs; and profit.

For carbon steel helical spring lockwashers, the petitioner alleged margins ranging between 92.30 and 128.63 percent. As "best information available," Commerce selected the highest margin, 128.63 percent.

## Taiwan

In its final determinations, Commerce stated that it had received no response from any producer or exporter of helical spring lockwashers in Taiwan. Consequently, Commerce based its affirmative final determinations regarding LTFV sales and critical circumstances on "best information available" as provided by the petitioner. Petitioner's market research provided U.S. price estimates, based on observed price quotes, for carbon steel and stainless steel helical spring lockwashers imported from Taiwan. Petitioner obtained estimates for plain and plated varieties of six lockwasher sizes and adjusted as necessary for U.S. duty, freight, and commissions.

Because the petitioner was unable to obtain price quotations for domestic sales of such products in Taiwan, it based foreign market value on constructed value, both for carbon and stainless steel helical spring lockwashers. Constructed value was calculated as the sum of material costs; labor and overhead costs; selling, general, and administrative expenses; packing costs; and profit.

For carbon steel helical spring lockwashers, the petitioner alleged margins ranging between 6.88 and 29.25 percent. The petitioner's calculation of margins for stainless steel helical spring lockwashers varied from 11.43 to 31.93 percent. As "best information available," Commerce selected the highest margin, 31.93 percent, for all subject lockwashers.

## THE DOMESTIC MARKET

## Apparent U.S. Consumption

This report presents data concerning apparent U.S. consumption of helical spring lockwashers as compiled from responses to Commission questionnaires. The petitioner, Shakeproof, provided its own and, for the period prior to its purchase in April 1991, Mellowes' shipment data; the three other companies known to have produced helical spring lockwashers during 1990-92 also provided shipment data. Shakeproof's sales of helical spring lockwashers accounted for \*\*\* percent of reported U.S. sales of domestically-produced helical spring lockwashers in 1990, \*\*\* percent in 1991, and \*\*\* percent in 1992.

The Commission received usable import data from 90 firms, which it used to measure apparent consumption and U.S. market penetration by imports of carbon steel, stainless steel, and other metallic<sup>20</sup> helical spring lockwashers.<sup>21</sup> The data are aggregated in table 2 and presented separately in appendix C.

Table 2

Helical spring lockwashers: U.S. shipments of domestic product and U.S. shipments of imports,<sup>1</sup> 1990-92

Item	1990	1991	1992
	Quantity (1,000 pounds)		
Producers' U.S. shipments..	***	***	***
Importers' U.S. shipments:			
China.....	5,404	6,701	7,091
Taiwan.....	388	629	735
Subtotal.....	5,792	7,330	7,826
Other sources.....	677	849	1,094
Total.....	6,469	8,179	8,920
Apparent consumption.	***	***	***

Continued on the following page.

<sup>20</sup> Reported imports of helical spring lockwashers of metals other than carbon steel and stainless steel are extremely small; there were no reported imports of other metallic helical spring lockwashers from China or Taiwan.

<sup>21</sup> Official import statistics do not separate imports of carbon steel and stainless steel helical spring lockwashers. Also, official statistics include such non-subject merchandise as tooth lockwashers and non-helical spring washers.

Table 2--Continued

Helical spring lockwashers: U.S. shipments of domestic product and U.S. shipments of imports,<sup>1</sup> 1990-92

Item	1990	1991	1992
	Value (1,000 dollars)		
Producers' U.S. shipments..	***	***	***
Importers' U.S. shipments:			
China.....	3,779	4,118	4,272
Taiwan.....	482	1,056	1,465
Subtotal.....	4,261	5,174	5,737
Other sources.....	1,160	1,351	1,444
Total.....	5,421	6,525	7,181
Apparent consumption.	***	***	***

<sup>1</sup> U.S. shipments of helical spring lockwashers imported from China and Taiwan include only shipments of subject lockwashers; those of U.S. producers and importers of helical spring lockwashers from other countries include shipments of all helical spring lockwashers.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

In terms of quantity, apparent U.S. consumption of all varieties of helical spring lockwashers declined by \*\*\* percent between 1990 and 1991 but rebounded sharply between 1991 and 1992, rising by \*\*\* percent. In terms of value, U.S. apparent consumption declined by \*\*\* percent between 1990 and 1991 but increased by \*\*\* percent between 1991 and 1992. By both measures, apparent consumption exhibited net growth during 1990-92.

Parties characterized the demand for helical spring lockwashers as a derived demand.<sup>22</sup> Thus, lockwasher consumption is driven by the consumption of products that incorporate lockwashers. Demand for lockwashers generally follows the level of overall economic activity, but swings in demand are tempered somewhat by the existence of a maintenance and replacement market; thus, in slow economic times, there is still a consistent core demand for helical spring lockwashers.<sup>23</sup> Parties agreed that the lockwasher industry is not a dynamic one and that no significant changes in demand are anticipated, but disagreed somewhat as to the trend in consumption since 1990. Petitioner characterized demand for lockwashers as fairly flat.<sup>24</sup> Importers' views on this subject were split; some detected a decline in demand since 1990, while

<sup>22</sup> See, e.g., conference transcript, p. 50.

<sup>23</sup> Joe Musuraca, Shakeproof, interview, Sept. 15, 1992; conference transcript, p. 115; respondents' postconference brief, p. 6.

<sup>24</sup> Questionnaire response of Shakeproof, p. 40; conference transcript, p. 51.

others reported a surge in demand, at least for their products.<sup>25</sup> Shakeproof predicts an upturn in non-U.S. lockwasher demand, however, as more lockwasher-using industries move offshore. Respondents reported that, as China industrializes, lockwasher consumption in the Chinese domestic market is expected to increase as well.<sup>26</sup>

Shakeproof perceives a stratification of the helical spring lockwasher market, alleging that China and Taiwan tend to concentrate on supplying standard lockwasher sizes and types, leaving domestic companies to supply the special, low-volume varieties.<sup>27</sup> Shakeproof views this stratification as problematic because of the static nature of technology in lockwashers; applications are quite standardized, and the industry has been characterized by few technological shifts in recent years.<sup>28</sup>

### U.S. Producers

According to the petition, in 1980 there were seven U.S. producers of helical spring lockwashers.<sup>29</sup> By 1990, the domestic industry had shrunk to four firms: Mellows; Beall Manufacturing (Beall), East Alton, IL; Crest Products (Crest), Lexington, KY; and MW Industries, (MW), Houston, TX.<sup>30</sup> During 1990-92, the domestic industry continued to become increasingly concentrated, as the petitioner purchased the assets of Mellows in April 1991, Beall in November 1991, and Crest in July 1992. By the end of the period for which data were collected, only Shakeproof and MW were producing helical spring lockwashers.

The Commission sent questionnaires to the four producers identified above and also sent questionnaires to companies believed to have produced other types of lockwashers, such as tooth lockwashers and non-helical spring lockwashers. On the basis of a review of questionnaire responses from the preliminary investigations, various business digests, such as the Thomas Register and the U.S. Industrial Directory, and from industry publications, such as *Hardware Age* and *The Distributor's Link*, the Commission sent a total of 17 questionnaires to firms believed to have produced some type of spring washer or lockwasher. Of the 16 companies that responded, 1 (Shakeproof)

---

<sup>25</sup> In their questionnaire responses, large importers of helical spring lockwashers from China such as \*\*\*, \*\*\*, and \*\*\* reported declining demand for their products, while \*\*\* reported no change in demand and \*\*\*, \*\*\*, and \*\*\* indicated increasing demand. Among large importers of helical spring lockwashers from Taiwan, \*\*\* reported a decrease in demand, \*\*\* could discern no change, and \*\*\* reported varied demand. Importers' questionnaires, p. 28.

<sup>26</sup> Conference transcript, p. 115.

<sup>27</sup> Conference transcript, pp. 36 and 67. According to testimony by Stephen Soule of Soule, Blake, and Wechsler, Hangzhou, the major producer of helical spring lockwashers in China, manufactures lockwashers to U.S., Chinese, British, Japanese, and metric standards. Conference transcript, p. 97.

<sup>28</sup> Shakeproof indicated that \*\*\*. Field visit to Shakeproof, Sept. 16, 1992; conference transcript, p. 124.

<sup>29</sup> Petition, p. 2.

<sup>30</sup> All four companies which produced helical spring lockwashers during the period 1990-92 \*\*\*.

provided complete usable data on helical spring lockwashers and 3 (Beall, Crest, and MW Industries) provided partial usable data. Twelve firms reported that they did not produce helical spring lockwashers, though many indicated that they distributed lockwashers. The one firm that did not respond to the Commission's producer questionnaire is no longer in operation.

Shakeproof is one of over 100 divisions of Illinois Tool Works (ITW), a \$2.6 billion, highly diversified company that manufactures a wide variety of industrial products ranging from fasteners to plastic packaging. ITW began operations in 1912 in Chicago manufacturing metal-cutting equipment and gear assemblies. The tooth lockwasher, developed in 1923, was ITW's first major product innovation; the Shakeproof division, established first in Chicago and later in Elgin, IL, dates from that time. Helical spring lockwashers did not become part of Shakeproof's product line until April 1991, when Shakeproof bought the Mellowes Co., Milwaukee, WI, which previously was owned by Charter Manufacturing Co. Currently, Shakeproof produces helical spring lockwashers exclusively in the old Mellowes facility and produces tooth lockwashers and small quantities of non-helical spring lockwashers in Elgin. Lockwashers \*\*\*.

Beall, a private company with approximately \$12 million in annual sales and 110 employees, is primarily a spring manufacturer whose product line includes leaf springs, railroad elliptical springs, and other open-die spring steel forgings. Until November 1991, Beall also manufactured carbon steel helical spring lockwasher "specials" \*\*\*.<sup>31</sup>

Crest, a private company with approximately \$8.5 million in annual sales and 80 employees, is a manufacturer of stamped fasteners, including washers and nuts, using spring steel and sheet metal. Until July 1992, Crest also manufactured carbon steel helical spring lockwasher "specials" for sems.<sup>32</sup>

MW is a specialty manufacturer of custom-order washers, fastenings, and stampings. MW has been in operation since 1976 and produced helical spring lockwashers \*\*\*.<sup>33</sup>

In addition to the four above-mentioned companies which produced helical spring lockwashers between 1990 and 1992, Standard Lock Washer & Mfg. Co., Inc. (Stanlok), Worchester, MA, maintained in storage equipment for the production of helical spring lockwashers until \*\*\*, at which time it sold the equipment to Shakeproof. Stanlok, a private company with approximately \$3.5 million in annual sales and 40 employees, ceased actual production of regular

---

<sup>31</sup> Public information appears in Standard & Poor's Register of Corporations, Volume 1 (New York: Standard & Poor Corp., 1992), p. 313. Confidential information was provided by \*\*\*. In assessing why Beall ceased production of helical spring lockwashers, \*\*\*.

<sup>32</sup> Public information appears in Standard & Poor's Register of Corporations, Volume 1 (New York: Standard & Poor Corp., 1992), p. 708. In assessing why Crest ceased production of helical spring lockwashers, \*\*\*.

<sup>33</sup> Public information appears in The Distributor's Link, Vol. 16, No. 1, pp. 124-125. Confidential information was provided by \*\*\*.

section carbon steel helical spring lockwashers in 1988.<sup>34 35</sup> One additional firm, Marvec, Inc. (Marvec), Upland, PA, began production of regular section stainless steel helical spring lockwashers in May 1993. Marvec, a manufacturer of hex key wrenches and helical spring lockwashers, had planned \*\*\* but experienced \*\*\*.<sup>36</sup>

#### U.S. Importers

Imports of the subject carbon steel and stainless steel helical spring lockwashers enter the United States under HTS subheading 7318.21.00, covering non-threaded spring washers and other lockwashers. However, this tariff provision also covers other types of lockwashers, such as non-helical spring lockwashers and tooth lockwashers. The Commission sent 225 importers' questionnaires to companies believed to be importing helical spring lockwashers,<sup>37</sup> including all 17 companies receiving producer questionnaires. The Commission received responses from 188 firms, 90 of which provided usable data on imports of helical spring lockwashers. Three companies provided unusable responses and 95 reported no imports of merchandise corresponding to the product definitions in the Commission's questionnaire.<sup>38</sup> Seventy-eight firms reported imports of carbon steel helical spring lockwashers; 23 reported imports of stainless steel helical spring lockwashers; and 2 reported imports of other metallic helical spring lockwashers. The majority of responding firms reported imports exclusively from China and Taiwan; other major import sources included Germany, Japan, Korea, and Switzerland.

#### Channels of Distribution

The channel structure of the helical spring lockwasher industry is broad and long. According to the petitioner, its sales of helical spring lockwashers are generally either to its large master distributors<sup>39</sup> or to

---

<sup>34</sup> Stanlok continues to manufacture taper pins, cotter pins, and machine screw nuts. Stanlok sold the helical spring lockwashers that it produced in both bulk and packaged form, sometimes in conjunction with its other fasteners and sometimes separately. Telephone interview with \*\*\*.

<sup>35</sup> Public information appears in Standard & Poor's Register of Corporations, Volume 1 (New York: Standard & Poor Corp., 1992), p. 2467. In assessing why Stanlok ceased production of helical spring lockwashers, \*\*\*.

<sup>36</sup> \*\*\*.

<sup>37</sup> The Commission sent questionnaires to all companies believed to have imported carbon steel or stainless steel helical spring lockwashers from China, Taiwan, or Hong Kong; to companies believed to have imported 75 percent of such imports from countries other than China, Taiwan, or Hong Kong; and to companies believed to have imported 60 percent of imports of product which would include other metallic helical spring lockwashers.

<sup>38</sup> An additional 11 companies are no longer in operation. Twenty-six firms did not respond to the Commission's questionnaire. Staff estimates that coverage of imports is approximately 97 percent for China, 93 percent for Taiwan, and 67 percent for other sources.

<sup>39</sup> Petitioner did not actually define the term "master distributor," but generally used the term in reference to large stocking distributors that sell wholly or primarily to other, smaller distributors. However, in the final investigations, \*\*\*.



other distributors, large or small; to a lesser extent, Shakeproof also sells directly to end users. The distributors in turn sell to other, smaller distributors (5,000 or more in number), to retail or hardware outlets, or to original equipment manufacturers.<sup>40</sup>

Importers of helical spring lockwashers are generally firms that stock and distribute the product to other, smaller, distributors or to end users (including both retailers and original equipment manufacturers). Several responding firms, however, are manufacturers that import lockwashers directly for use in their production processes. Of the 90 firms providing usable data in response to the questionnaire, 75 (including \*\*\* members of the American Association of Fastener Importers) identified themselves as distributors, 4 as retailers, and 11 as original equipment manufacturers.<sup>41</sup> Importers of carbon steel helical spring lockwashers from China and stainless steel helical spring lockwashers from Taiwan tend to sell their helical spring lockwashers to distributors. A large proportion of carbon steel helical spring lockwashers from Taiwan, however, are imported by, or sold directly to end users.<sup>42</sup> Original equipment manufacturers also frequently imported directly from European or Japanese parent companies.<sup>43</sup>

The following tabulation presents a summary of the channels of distribution used by U.S. producers and importers of helical spring lockwashers, by metal type, according to questionnaire responses:

	<u>Distributors</u>	<u>End users</u>
Share of U.S. producers' shipments made to..	***	***
• Carbon steel.....	***	***
• Stainless steel.....	***	***
• Other metal.....	***	***
Importers:		
Share of Chinese product shipped to.....	93	7
Share of Taiwanese product shipped to.....	63	37
• Carbon steel.....	***	***
• Stainless steel.....	***	***
Average of imported product.....	91	9

<sup>40</sup> Petitioner's postconference brief, pp. 7-8; conference transcript, pp. 122-123.

<sup>41</sup> All four companies which identified themselves as retailers imported helical spring lockwashers from \*\*\*. Four original equipment manufacturers imported helical spring lockwashers from \*\*\* and seven from \*\*\*.

<sup>42</sup> In 1992, internal consumption of carbon steel helical spring lockwashers imported from Taiwan by original equipment manufacturers accounted for \*\*\* percent of all U.S. shipments of such product.

<sup>43</sup> In 1992, internal consumption of helical spring lockwashers imported from countries other than China or Taiwan accounted for \*\*\* percent of U.S. shipments of carbon steel helical spring lockwashers from non-subject countries and \*\*\* percent of U.S. shipments of stainless steel helical spring lockwashers from non-subject countries.

**CONSIDERATION OF ALLEGED MATERIAL INJURY  
TO AN INDUSTRY IN THE UNITED STATES**

As indicated in the section of the report entitled "U.S. Producers," Shakeproof/Mellowes provided complete and usable data to the Commission regarding operations producing helical spring lockwashers and the three other firms producing helical spring lockwashers during 1990-92 (Crest, Beall, and MW) provided partial data. Because of the relative size of Shakeproof, however, coverage for all domestic industry data presented \*\*\*.

**U.S. Production, Capacity, and Capacity Utilization**

Domestic production of all helical spring lockwashers, as reported in table 3, declined between 1990 and 1991, but recovered partially in 1992. The trend is \*\*\* when carbon steel helical spring lockwasher production is examined separately; \*\*\* production of stainless steel helical spring lockwashers \*\*\* during \*\*\*.

Table 3

Helical spring lockwashers: U.S. capacity, production, and capacity utilization, 1990-92

\*       \*       \*       \*       \*       \*       \*

Domestic capacity to produce helical spring lockwashers declined throughout 1990-92. As noted previously, two companies closed their divisions producing helical spring lockwashers during this period. Shakeproof purchased the productive assets of both lockwasher divisions and \*\*\*. The trend in production noted above caused capacity utilization to fall from \*\*\* percent in 1990 to \*\*\* percent in 1991. This indicator \*\*\* in 1992, \*\*\*. The domestic industry experienced similar trends in capacity utilization for carbon steel helical spring lockwashers, \*\*\* utilization levels for stainless steel helical spring lockwashers \*\*\*.

Shakeproof generally operates its Milwaukee plant \*\*\*.<sup>44</sup> The equipment used to manufacture helical spring lockwashers is completely dedicated to that product; nothing else can be produced on the equipment.<sup>45</sup> Shakeproof \*\*\*. Average production rates \*\*\*.<sup>46</sup> For the most common one-quarter-inch helical spring lockwasher, Shakeproof's average production run is 20 million pieces.<sup>47</sup>

---

<sup>44</sup> Joe Musuraca, Shakeproof, interview, Sept. 16, 1992. As noted in the section of the report entitled "U.S. Producers," the Milwaukee plant is the only major facility still producing helical spring lockwashers.

<sup>45</sup> Questionnaire response of Shakeproof, p. 11; conference transcript, p. 48.

<sup>46</sup> Production rates tend to be lower for the smaller sizes; this is because \*\*\*. Joe Musuraca, Shakeproof, interview, Sept. 16, 1992.

<sup>47</sup> Joe Musuraca, Shakeproof, interview, Sept. 16, 1992; conference transcript, p. 56; petitioner's postconference brief, p. 3. Minimum production runs range as low as \*\*\* pieces. Shakeproof noted that \*\*\*.

Shakeproof noted that it experienced no constraints during 1990-92 regarding supply of materials, labor, capital equipment, or any unusual increases in fixed costs.<sup>48</sup> Reported capacity data for Shakeproof's operations \*\*\*.<sup>49</sup>

Shakeproof manufactures helical spring lockwashers not only from carbon and stainless steel, but also from copper, aluminum alloy, phosphor bronze, and other materials. Shakeproof reported that all helical spring lockwashers, regardless of metal content, are manufactured on the same machinery, and that only minor retooling is necessary when switching from one metal to another.<sup>50</sup> At most, \*\*\* of downtime is required. \*\*\*.<sup>51</sup>

#### U.S. Producers' Shipments

The shipments reported by all four companies known to have produced helical spring lockwashers during 1990-92 are presented in table 4. Company transfers and exports were both a small portion of total shipments by U.S. producers. All such shipments were \*\*\*. Such shipments exhibited \*\*\* during 1990-92.

Table 4

Helical spring lockwashers: Shipments by U.S. producers, by types, 1990-92

\*            \*            \*            \*            \*            \*            \*

Domestic shipments of helical spring lockwashers declined sharply between 1990 and 1991, both in terms of quantity and value. By both measures, domestic shipments increased between 1991 and 1992, but did not return to their 1990 levels. The unit value of such shipments increased between 1990 and 1991, but fell in 1992 to a level below that in 1990.

#### U.S. Producers' Inventories

End-of-period inventories reported by all four U.S. producers of helical spring lockwashers are presented in table 5. Inventories held by the firms increased throughout 1990-92, both absolutely and in relation to production and U.S. shipments. Although \*\*\* producers reported maintaining inventories of greater than 500 pounds, a sizeable majority of inventories reported were \*\*\* stocked by Shakeproof. Shakeproof reported no unusual occurrences during

---

<sup>48</sup> Joe Musuraca, Shakeproof, interview, Sept. 16, 1992; conference transcript, p. 59.

<sup>49</sup> \*\*\*.

<sup>50</sup> Questionnaire response of Shakeproof, p. 11; conference transcript, pp. 70 and 72. In addition, few adjustments are needed in order to produce the various types of helical spring lockwashers, such as heavy, light, high-collar, extra-duty, etc. Conference transcript, p. 48.

<sup>51</sup> Preliminary questionnaire response of Shakeproof, p. 12.

1990-92 that would unduly affect inventory levels.<sup>52</sup> Shakeproof asserted that it could respond to customers' orders for "standard" helical spring lockwashers in a matter of days, but claimed no advantage over importers in supplying such items. However, when new designs, new applications, or special sizes are requested for which stock is unavailable, it can fill the order within 8 weeks, as opposed to 4 to 5 months for product sourced from overseas.<sup>53</sup>

Table 5

Helical spring lockwashers: End-of-period inventories of U.S. producers, 1990-92

\* \* \* \* \*

#### U.S. Employment, Wages, Compensation, and Productivity

In their questionnaire responses, Shakeproof, Beall, and Crest provided information on the number of production and related workers, total hours worked by those employees, and the wages and total compensation paid to those employees during 1990-92. MW \*\*\*. The data are presented in table 6.<sup>54</sup>

Table 6

Average number of U.S. production and related workers producing helical spring lockwashers, hours worked, wages and total compensation paid to such employees, and hourly wages, productivity, and unit production costs, 1990-92

\* \* \* \* \*

The average number of production and related workers producing all varieties of helical spring lockwashers declined by \*\*\* percent between 1990 and 1992, falling from \*\*\* to \*\*\*. Hours worked by those workers declined irregularly throughout 1990-92, with a net decline of \*\*\* percent. Wages and total compensation dipped between 1990 and 1991 before partially recovering in 1992. Hourly wages and hourly total compensation remained stable between 1990 and 1991, then increased in 1992 following \*\*\*. Productivity rose irregularly throughout the three years for which data were collected, increasing by a cumulative \*\*\* percent. Unit labor costs fell during 1990-92, declining by a cumulative \*\*\* percent.

Shakeproof's work force is small, since lockwasher manufacture is capital intensive.<sup>55</sup> Production employees \*\*\*. \*\*\*.

In its questionnaire, the Commission requested domestic producers to provide detailed information concerning actual reductions in the number of production and related workers producing helical spring lockwashers during 1990-92, if such reductions involved at least 5 percent of the work force or

<sup>52</sup> Conference transcript, p. 58.

<sup>53</sup> Conference transcript, pp. 56-58, 88, and 118.

<sup>54</sup> Shakeproof's and Crest's work forces are non-unionized; Beall's work force is unionized.

<sup>55</sup> Petition, p. 3; conference transcript, p. 15.

more than 50 workers. Three companies, \*\*\*, reported reductions in their labor force producing helical spring lockwashers totaling 16 workers.<sup>56</sup> The reductions reported by the three companies, which occurred between December 1990 and September 1992, are shown in the following tabulation:

<u>Company</u>	<u>Year</u>	<u>Number of workers</u>	<u>Duration</u>	<u>Reason</u>
***	1990	***	***	***
***	1991	***	***	***
***	1991	***	***	***
***	1992	***	***	***
***	1992	***	***	***

#### Financial Experience of U.S. Producers

Shakeproof,<sup>57</sup> representing \*\*\* percent of U.S. helical spring lockwasher production in 1992, submitted financial data on the establishment<sup>58</sup> in which helical spring lockwashers are produced and, separately, on its carbon steel, stainless steel, other metallic, and total helical spring lockwasher operations.<sup>59</sup> Acquisition costs are discussed in appendix D. \*\*\*<sup>60</sup> provided financial data on the establishment<sup>61</sup> in which helical spring lockwashers are produced and on its helical spring lockwasher operations.

Shakeproof's data were verified by the Commission's staff. As a result of the verification, Shakeproof changed the data for overall establishment operations, operations on helical spring lockwashers, operations on carbon steel helical spring lockwashers, operations on stainless steel helical spring lockwashers, asset valuation, research and development expenses, capital expenditures, sales prices to U.S. wholesalers/distributors, shipment values of all helical spring lockwashers, shipment values of carbon steel helical spring lockwashers, and capacity for carbon steel helical spring lockwashers.

<sup>56</sup> Shakeproof has alleged that, since 1980, more than 250 jobs have been lost in the U.S. lockwasher industry because of the various plant closings and company consolidations. Petition, p. 2.

<sup>57</sup> ITW purchased Mellowes (a division of Charter Manufacturing) in April 1991 for \*\*\* and made it a division of Shakeproof. \*\*\*. Shakeproof purchased the helical spring lockwasher business of Beall in November 1991 for \*\*\*. Shakeproof also purchased the helical spring lockwasher business of Crest in July 1992 for \*\*\*.

<sup>58</sup> Shakeproof produces helical spring lockwashers in its Milwaukee, WI, plant (formerly Mellowes). Helical spring lockwashers accounted for approximately \*\*\* percent of the total sales of the overall establishment in 1992. Cotter pins are the only other product produced at the facility.

<sup>59</sup> Financial data for carbon steel, stainless steel, and other metallic helical spring lockwashers are presented in app. C.

<sup>60</sup> \*\*\*.

<sup>61</sup> \*\*\*.

### Overall Establishment Operations

Income-and-loss data of Shakeproof<sup>62</sup> on its overall establishment operations in which helical spring lockwashers are produced are shown in table 7.<sup>63</sup> Net sales on overall establishment operations decreased by \*\*\* percent from \*\*\* in 1990 to \*\*\* in 1991, and increased by \*\*\* percent to \*\*\* in 1992. The operating income was \*\*\* in 1990, \*\*\* in 1991, and \*\*\* in 1992. The operating income as a share of sales was \*\*\* percent in 1990, \*\*\* percent in 1991, and \*\*\* percent in 1992.

Table 7

Income-and-loss experience of Shakeproof on its overall establishment operations in which helical spring lockwashers are produced, 1990-92

\* \* \* \* \*

Shakeproof reported significant expenditures related to \*\*\*, as shown in the following tabulation (in 1,000 dollars):

\* \* \* \* \*

### Operations on Helical Spring Lockwashers

Income-and-loss data for Shakeproof and \*\*\* on their operations for helical spring lockwashers are shown in table 8. Net sales of helical spring lockwashers decreased by \*\*\* percent from \*\*\* in 1990 to \*\*\* in 1991, and increased by \*\*\* percent to \*\*\* in 1992. Operating income was \*\*\* in 1990, \*\*\* in 1991, and \*\*\* in 1992. Operating income as a share of sales was \*\*\* percent in 1990, \*\*\* percent in 1991, and \*\*\* percent in 1992. Net sales quantities, as shown in table 9, followed the same trend as sales values. The average sales value per pound fluctuated from \*\*\* in 1990 to \*\*\* in 1991 and \*\*\* in 1992. Cash flow was \*\*\* in 1990, \*\*\* in 1991, and \*\*\* in 1992.

Table 8

Income-and-loss experience of U.S. producers on their operations producing helical spring lockwashers, 1990-92

\* \* \* \* \*

Table 9

Income-and-loss experience (on a per-pound basis) of U.S. producers on their operations producing helical spring lockwashers, 1990-92

\* \* \* \* \*

<sup>62</sup> The overall establishment operations of \*\*\*.

<sup>63</sup> In addition to helical spring lockwashers, data relate to production of cotter pins.

The mix of prices and quantities sold for carbon steel, stainless steel, and other metallic helical spring lockwashers has an impact on the combined sales values and related costs. A summary of the sales quantities, sales values, and the average unit sales values (on a per-pound basis) for carbon steel, stainless steel, and other metallic helical spring lockwashers, is presented in the following tabulation:

\*       \*       \*       \*       \*       \*       \*

Selected income and loss data for helical spring lockwashers, by firms, are presented in table 10.

Table 10

Income-and-loss experience of U.S. producers, by firms, on their operations producing helical spring lockwashers, 1990-92

\*       \*       \*       \*       \*       \*       \*

Details of Shakeproof's cost of goods sold are presented in table 11.

Table 11

Details of Shakeproof's cost of goods sold for its operations producing helical spring lockwashers, 1990-92

\*       \*       \*       \*       \*       \*       \*

All helical spring lockwashers are produced by Shakeproof on the same equipment; therefore, \*\*\*.<sup>64</sup>

#### Capital Expenditures

Capital expenditures of Shakeproof<sup>65</sup> for its establishment in which lockwashers are produced are shown in the following tabulation (in 1,000 dollars):

\*       \*       \*       \*       \*       \*       \*

#### Investment in Productive Facilities

Shakeproof's investment in productive facilities for operations on its overall establishment and helical spring lockwashers are presented in table 12. Shakeproof reported that all lockwashers are produced on the same equipment. The Mellowes plant operated \*\*\*.

---

<sup>64</sup> \*\*\*.

<sup>65</sup> \*\*\*.

Table 12

Value of assets of Shakeproof for its overall establishment and helical spring lockwasher operations, 1990-92

\*       \*       \*       \*       \*       \*       \*

#### Research and Development Expenses

Shakeproof's research and development expenses,<sup>66</sup> which consist primarily of \*\*\*,<sup>67</sup> are shown in the following tabulation (in 1,000 dollars).

\*       \*       \*       \*       \*       \*       \*

#### Capital and Investment

The Commission requested the producers to describe any actual or potential negative effects of imports of certain helical spring lockwashers from China and/or Taiwan on their growth, development and production efforts, investment, and ability to raise capital (including efforts to develop a derivative or improved version of their product). Comments are presented in appendix E.

#### CONSIDERATION OF THE QUESTION OF THREAT OF MATERIAL INJURY TO AN INDUSTRY IN THE UNITED STATES

Section 771(7)(F)(i) of the Tariff Act of 1930 (19 U.S.C. § 1677(7)(F)(i)) provides that--

In determining whether an industry in the United States is threatened with material injury by reason of imports (or sales for importation) of the merchandise, the Commission shall consider, among other relevant economic factors<sup>68</sup>--

(I) If a subsidy is involved, such information as may be presented to it by the administering authority as to the nature of the subsidy (particularly as to whether the subsidy is an export subsidy inconsistent with the Agreement),

---

<sup>66</sup> \*\*\*.

<sup>67</sup> \*\*\*.

<sup>68</sup> Section 771(7)(F)(ii) of the Act (19 U.S.C. § 1677(7)(F)(ii)) provides that "Any determination by the Commission under this title that an industry in the United States is threatened with material injury shall be made on the basis of evidence that the threat of material injury is real and that actual injury is imminent. Such a determination may not be made on the basis of mere conjecture or supposition."



(II) any increase in production capacity or existing unused capacity in the exporting country likely to result in a significant increase in imports of the merchandise to the United States,

(III) any rapid increase in United States market penetration and the likelihood that the penetration will increase to an injurious level,

(IV) the probability that imports of the merchandise will enter the United States at prices that will have a depressing or suppressing effect on domestic prices of the merchandise,

(V) any substantial increase in inventories of the merchandise in the United States,

(VI) the presence of underutilized capacity for producing the merchandise in the exporting country,

(VII) any other demonstrable adverse trends that indicate the probability that the importation (or sale for importation) of the merchandise (whether or not it is actually being imported at the time) will be the cause of actual injury,

(VIII) the potential for product-shifting if production facilities owned or controlled by the foreign manufacturers, which can be used to produce products subject to investigation(s) under section 701 or 731 or to final orders under section 706 or 736, are also used to produce the merchandise under investigation,

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

(X) the actual and potential negative effects on the existing development and production efforts of the domestic industry, including efforts to develop a derivative or more advanced version of the like product.<sup>69</sup>

Information on the volume, U.S. market penetration, and pricing of imports of the subject merchandise (items (III) and (IV) above) is presented in the section entitled "Consideration of the Causal Relationship Between Imports of the Subject Merchandise and the Alleged Material Injury;" and information on the effects of imports of the subject merchandise on U.S. producers' existing development and production efforts (item (X)) is presented in the section entitled "Consideration of Alleged Material Injury to an Industry in the United States." Available information on U.S. inventories of the subject products (item (V)); foreign producers' operations, including the potential for "product-shifting" (items (II), (VI), and (VIII) above); any other threat indicators, if applicable (item (VII) above); and any dumping in third-country markets, follows. Items (I) and (IX) above have not been alleged or are otherwise not applicable.

#### U.S. Importers' Inventories

Of the 90 firms reporting imports of helical spring lockwashers, 50 also reported end-of-period inventories of those imports. These data are presented in table 13.

Table 13  
Helical spring lockwashers: End-of-period inventories of U.S. importers,<sup>1</sup> by sources, 1990-92

Item	1990	1991	1992
	Quantity (1,000 pounds)		
China.....	2,789	2,864	3,552
Taiwan.....	104	182	222
Subtotal.....	2,893	3,046	3,774
Other sources.....	124	141	135
Total.....	3,017	3,187	3,909

Continued on the following page.

<sup>69</sup> Section 771(7)(F)(iii) of the Act (19 U.S.C. § 1677(7)(F)(iii)) further provides that, in antidumping investigations, ". . . the Commission shall consider whether dumping in the markets of foreign countries (as evidenced by dumping findings or antidumping remedies in other GATT member markets against the same class or kind of merchandise manufactured or exported by the same party as under investigation) suggests a threat of material injury to the domestic industry."

Table 13--Continued

Helical spring lockwashers: End-of-period inventories of U.S. importers,<sup>1</sup> by sources, 1990-92

Item	1990	1991	1992
<u>Ratio to imports (percent)</u>			
China.....	45.6	42.6	44.9
Taiwan.....	38.9	31.3	30.6
Average.....	45.3	41.7	43.8
Other sources.....	17.8	18.7	13.8
Average.....	42.6	39.5	40.7
<u>Ratio to U.S. shipments of imports (percent)</u>			
China.....	52.8	43.0	50.8
Taiwan.....	40.6	35.6	33.7
Average.....	52.2	42.5	49.3
Other sources.....	19.3	19.2	13.8
Average.....	48.8	40.3	45.3

<sup>1</sup> Reported inventory, import, and shipment data regarding helical spring lockwashers imported from China and Taiwan include only subject lockwashers; such data regarding helical spring lockwashers imported from other countries include all helical spring lockwashers.

Note.--Ratios are calculated using data of firms supplying both numerator and denominator information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

End-of-period inventories of the subject helical spring lockwashers from China rose slightly between 1990 and 1991 and sharply between 1991 and 1992. Inventories of imports from Taiwan, while relatively small, more than doubled between 1990 and 1992 due primarily to growing stocks of stainless steel helical spring lockwashers. Inventories of helical spring lockwashers imported from countries other than China or Taiwan increased moderately between 1990 and 1991, then declined slightly in 1992. In comparison to imports and U.S. shipments, inventories of helical spring lockwashers imported from China declined between 1990 and 1991, but rebounded to near-1990 levels in 1992. In comparison to imports and U.S. shipments of helical spring lockwashers from Taiwan, inventory levels declined throughout 1990-92. Many of the large importers of helical spring lockwashers from countries other than China or Taiwan are themselves original equipment manufacturers, and maintain markedly lower inventories as a ratio to imports and U.S. shipments than do importers of helical spring lockwashers from either China or Taiwan.

Importers responding to the Commission's questionnaire generally reported shorter leadtimes on stock items than the 1-week estimate provided by Shakeproof. Several importers indicated that they could provide immediate

delivery of high-volume stock items, and the remaining firms generally promise delivery within 1 to 10 days. On special made-to-order items, however, Shakeproof claimed a turnaround time of 6 to 8 weeks, as opposed to 4 months at best for importers from China or Taiwan.<sup>70</sup> Importers, though, indicated that they sell almost exclusively from stock.<sup>71</sup> Inventory is generally kept by part and not segregated by customer or by country of origin,<sup>72</sup> although country of origin information is available and could be provided if requested.<sup>73</sup> Importers as a group are considerably more likely than Shakeproof to keep inventories, as seen by comparing table 5 with table 13.

In its questionnaire, the Commission requested importers to indicate whether they expected deliveries of carbon and/or stainless steel helical spring lockwashers from China and/or Taiwan after December 31, 1992. Of the 77 importers of helical spring lockwashers who responded to this question, 30 indicated that they had arranged for imports of helical spring lockwashers in 1993, and 47 indicated that they had not. Several importers noted that they had cancelled or were attempting to cancel orders placed with companies in China or Taiwan.<sup>74</sup>

#### Ability of Foreign Producers to Generate Exports and Availability of Export Markets Other than the United States

##### The Industry in China

The petition identified 11 producers of subject helical spring lockwashers in China and 5 firms with Hong Kong addresses believed to manufacture such lockwashers in China. Only one of these producers, Hangzhou Spring Washer Factory (Hangzhou), Zhejiang, China, is represented by counsel; Hangzhou, however, reportedly accounts for \*\*\* of production and more than 80 percent of Chinese exports of the subject merchandise to the United States.<sup>75</sup>

---

<sup>70</sup> Conference transcript, pp. 56-58 and 88. The quickest delivery in China is offered by Hangzhou, according to Porteous. Other Chinese factories, according to Porteous, offer leadtimes on new items that extend to 5 to 5½ months.

<sup>71</sup> Conference transcript, p. 123.

<sup>72</sup> According to parties, customers do not tend to specify the origin of imported lockwashers when ordering. Except for military and certain government sales, customers also do not generally stipulate domestic origin for lockwashers. Conference transcript, pp. 62 and 127.

<sup>73</sup> Hearing transcript, pp. 161-162.

<sup>74</sup> Most of the 30 companies which expected imports of helical spring lockwashers from China or Taiwan in 1993 were able to provide data only in numbers of pieces. According to their responses, import shipments under contract were expected to fluctuate during the first half of 1993, peaking in January, at 47.5 million pieces, then declining to 18.7 million pieces in February, rebounding to 35.3 million pieces in March, falling to 7.0 million in April, rising to 33.9 million pieces in May, then declining to 14.9 million pieces in June.

<sup>75</sup> Posthearing brief, counsel for Hangzhou, pp. 10-11.

Counsel for Hangzhou provided the data presented in table 14 on behalf of its client, which noted that its exports are not affected by nontariff barriers, such as antidumping findings, in countries other than in the United States.

Table 14

Certain helical spring lockwashers: Hangzhou's capacity, production, inventories, capacity utilization, and shipments, 1990-92 and 1993-94 (projected)

\* \* \* \* \*

Hangzhou produces helical spring lockwashers and small amounts of such products as hex bolts.<sup>76</sup> Hangzhou's lockwasher production process, which utilizes equipment developed by Hangzhou itself, is similar to that employed by Shakeproof, except that the coiling process and cutting process are performed in separate steps.<sup>77</sup> Most of the subject lockwashers produced by Hangzhou are \*\*\*.<sup>78</sup>

Importers purchasing from China reported experiencing sporadic supply problems, primarily because of plant slowdowns and shutdowns occasioned by lack of availability of raw materials, such as steel. Respondents testified at the conference that there is no distributor network as such in China; Hangzhou sells directly to end users.<sup>79</sup>

Regarding Hong Kong firms alleged to be producing the subject merchandise in Hong Kong or in China, the petitioner and counsel for Hangzhou believe that the Hong Kong firms named in the petition are trading companies representing manufacturers located in China.<sup>80</sup> The U.S. Consul in Hong Kong reported, on the basis of information from four of the five companies named in the petition, that those firms' activities are limited to re-exporting helical spring lockwashers manufactured in China by unrelated companies.<sup>81</sup>

#### The Industry in Taiwan

The petition named three firms as producing certain helical spring lockwashers in Taiwan during the period of investigation. In response to the Commission's request for information on the industry in Taiwan, the American

---

<sup>76</sup> These items are not produced on the same equipment as that used for helical spring lockwashers. Conference transcript, pp. 97 and 117.

<sup>77</sup> Conference transcript, p. 119; Joe Musuraca, Shakeproof, interview, Sept. 16, 1992.

<sup>78</sup> Counsel for Hangzhou, June 8, 1993, submission.

<sup>79</sup> Conference transcript, p. 120.

<sup>80</sup> Conference transcript, p. 63; Prehearing brief, counsel for Hangzhou, pp. 18-19.

<sup>81</sup> According to the official statistics compiled by Commerce, U.S. imports from Hong Kong of all spring washers and lockwashers classified in HTS category 7318.21.00.00 declined from 371,000 pounds in 1990 (\$199,000) to 354,000 pounds in 1991 (\$166,000) and to 185,000 pounds in 1992 (\$103,000).

Institute in Taiwan (AIT) and counsel for the Taiwan respondents provided limited information on the operations of these firms and on those of the major producer of stainless steel helical spring lockwashers in Taiwan. According to counsel and to the AIT, the three firms named in the petition are exporters but not producers of the subject merchandise. During 1990-92, these firms dealt with four manufacturers, three of which allegedly stopped producing helical spring lockwashers in the second half of 1992.<sup>82</sup> Data of the fourth company, Likunog, are presented in table 15 and appendix C. In 1992, Likunog reportedly accounted for \*\*\* percent of the production of stainless steel helical spring lockwashers and \*\*\* percent of the production of carbon steel helical spring lockwashers in Taiwan.<sup>83</sup>

Table 15

Certain helical spring lockwashers: Likunog's capacity, production, inventories, capacity utilization, and shipments, 1990-92 and 1993-94 (projected)

\* \* \* \* \*

The AIT reported that the lockwasher industry in Taiwan peaked during 1985-86, with seven firms producing over 500 metric tons per month. Since then, foreign buyers increasingly have shifted import orders to China, which can undersell the Taiwanese product by 20 to 30 percent. The AIT noted that this factor and a sharp appreciation of the new Taiwan dollar against the U.S. dollar allegedly led to the closing of almost all plants producing lockwashers in Taiwan.

The AIT noted that the United States was the primary destination of exports of helical spring lockwashers from Taiwan in 1990 and 1991, followed distantly by Hong Kong and Australia and, more distantly, by Japan and Canada. In 1992, however, Nigeria was the primary destination of total exports of helical spring lockwashers from Taiwan, followed in descending order by the United States, Hong Kong, Malaysia, Australia, Japan, and Singapore. The AIT noted further that exports from Taiwan are not affected by nontariff barriers, such as antidumping findings, in countries other than in the United States.

---

<sup>82</sup> AIT did not identify these firms.

<sup>83</sup> Posthearing brief, counsel for Likunog, p. 13. Based on a comparison of data provided by Likunog and by the importers of helical spring lockwashers from Taiwan, Likunog accounted for \*\*\* exports of stainless steel helical spring lockwashers from Taiwan to the United States during 1990-92. Using the same comparison, Likunog accounted for \*\*\* percent of exports of carbon steel helical spring lockwashers from Taiwan to the United States in 1990, \*\*\* percent in 1991, and \*\*\* percent in 1992.

**CONSIDERATION OF THE CAUSAL RELATIONSHIP BETWEEN IMPORTS OF THE SUBJECT  
MERCHANDISE AND THE ALLEGED MATERIAL INJURY**

**U.S. Imports**

According to the data collected by the Commission through its questionnaires, subject imports of helical spring lockwashers from China and Taiwan increased overall in terms of quantity and value during 1990-92 (table 16).<sup>84</sup> Because of a pronounced change in the composition of imports, U.S. imports of both carbon steel and stainless steel helical spring lockwashers from China and from Taiwan are presented and discussed below. \*\*\* U.S. producers reported imports of carbon steel, stainless steel, or other metallic helical spring lockwashers.

Table 16  
Helical spring lockwashers: U.S. imports, by products and by sources, 1990-92

Item	1990	1991	1992
<u>Quantity (1,000 pounds)</u>			
* * *	*	*	*
China.....	6,237	6,859	8,002
Taiwan.....	407	710	780
Subtotal.....	6,644	7,569	8,782
Other sources.....	732	869	1,092
Total.....	7,376	8,438	9,874
<u>Value (1,000 dollars)</u>			
* * *	*	*	*
China.....	2,613	2,815	3,370
Taiwan.....	386	971	1,195
Subtotal.....	2,999	3,786	4,565
Other sources.....	1,062	1,192	1,264
Total.....	4,061	4,978	5,829
<u>Unit value (per pound)</u>			
* * *	*	*	*
China.....	\$0.42	\$0.41	\$0.42
Taiwan.....	.95	1.37	1.53
Average.....	.45	.50	.52
Other sources.....	1.44	1.37	1.15
Average.....	.55	.59	.59

Note.--Unit values are calculated using data of firms supplying both quantity and value information.

Source: Compiled from data submitted in response to questionnaires of the U.S. International Trade Commission.

<sup>84</sup> Import data based on Commerce's official statistics for HTS subheading 7318.21.00 are presented in app. F.

## China

Imports from China consisted entirely of carbon steel helical spring lockwashers. In terms of volume and value, such imports grew between 1990 and 1991 (by 10.0 and 7.7 percent, respectively) and between 1991 and 1992 (by 16.7 and 19.7 percent). The value per pound of such imports declined from \$0.42 in 1990 to \$0.41 in 1991, then returned to \$0.42 in 1992.

## Taiwan

The majority of subject imports from Taiwan in 1990 by weight and value were carbon steel helical spring lockwashers. By 1991 and continuing into 1992, stainless steel helical spring lockwashers constituted the majority of such imports from Taiwan, but carbon steel helical spring lockwashers accounted for nearly one-half of the total volume of subject imports from Taiwan during 1990-92. Imports of carbon steel helical spring lockwashers from Taiwan remained very stable in terms of quantity but increased by \*\*\* percent in terms of value during 1990-92. The unit value of such imports rose steadily from \*\*\* per pound in 1990 to \*\*\* in 1991 and to \*\*\* in 1992. The volume and the value of imports of stainless steel helical spring lockwashers from Taiwan grew substantially between 1990 and 1991 (from a low base) and more moderately between 1991 and 1992. The unit value of such imports rose \*\*\*.

## Total Imports

The total level of U.S. imports of helical spring lockwashers from all sources grew rapidly in terms of volume and value between 1990 and 1992. The unit value of each individual metal type declined between 1990 and 1991, then regained or surpassed its 1990-level unit value in 1992, although the changing metal composition of helical spring lockwasher imports caused an increase in overall unit values between 1990 and 1991.

Imports of helical spring lockwashers from non-subject countries, primarily Germany, Japan, Korea, and Switzerland, accounted for an increasing share of total imports (by weight) during 1990-92.<sup>85</sup> However, while imports of carbon steel helical spring lockwashers from countries other than China and Taiwan showed moderate growth between 1990 and 1991 and substantial growth between 1991 and 1992, imports of stainless steel helical spring lockwashers from other sources dropped slightly between 1990 and 1991, then declined substantially in 1992.

---

<sup>85</sup> However, respondents stated at the conference that China and Taiwan are currently the primary import sources of carbon steel and stainless steel helical spring lockwashers, a pattern that is not expected to change in the near future. Conference transcript, p. 121.



### Market Shares

Market shares (based on U.S. shipments) of U.S. producers, importers of subject helical spring lockwashers from China and Taiwan, and importers of helical spring lockwashers from countries other than China and Taiwan are presented in table 17. In terms of quantity, the U.S. producers' share of the total U.S. market fell by \*\*\* percent between 1990 and 1991 (the decline was \*\*\* for \*\*\*) and by \*\*\* percent between 1991 and 1992. The shares held by importers of helical spring lockwashers from China, Taiwan, and from all other countries increased between 1990 and 1991. However, between 1991 and 1992, the share held by importers of helical spring lockwashers from China decreased. The shares held by importers of helical spring lockwashers from Taiwan and from countries other than China and Taiwan continued to increase.

Table 17

Helical spring lockwashers: U.S. market shares, 1990-92

\*       \*       \*       \*       \*       \*       \*

In terms of value, the share of the U.S. market held by U.S. producers declined throughout the period 1990-92, whereas the share held by importers of helical spring lockwashers from Taiwan increased throughout the period. The share of the U.S. market held by importers of helical spring lockwashers from China grew between 1990 and 1991, but declined between 1991 and 1992, whereas that of the importers of helical spring lockwashers from other countries grew between 1990 and 1991 and remained stable between 1991 and 1992.

### Prices

#### Market Characteristics

As noted earlier, Shakeproof and the major importers of helical spring lockwashers from China and Taiwan sell lockwashers to wholesaler/distributors and, to a lesser extent, directly to manufacturing industries for use in a broad range of consumer products and industrial applications. The larger importers of lockwashers from China, such as \*\*\*, and from Taiwan, such as \*\*\*, consider themselves to be master distributors. In addition to importing from China and Taiwan, some of these large distributors also purchase helical spring lockwashers from Shakeproof and then compete with Shakeproof on sales to smaller distributors.<sup>86</sup> A small share of imports of helical spring lockwashers from China and a larger share of such imports from Taiwan are sold

---

<sup>86</sup> See, e.g., hearing transcript at p. 39, testimony of Shakeproof general sales manager Kenneth Vahl; p. 121, testimony of Soule, Blake, and Wechsler principal Stephen Soule; and p. 125, testimony of Porteous president Barry Porteous.

directly to retail outlets by importers.<sup>87</sup> These lockwashers are sold in small volumes, often in packaged rather than bulk form, and are priced higher than comparable items marketed in a bulk form to distributors. According to the petitioner, Shakeproof has virtually no direct sales of helical spring lockwashers to the retail segment of the lockwasher market.<sup>88</sup>

Carbon steel and stainless steel helical spring lockwashers are commonly marketed through the same channels of distribution. Shakeproof and some importers, including \*\*\*, sell both carbon steel and stainless steel helical spring lockwashers. Other importers, such as \*\*\*, specialize in carbon steel lockwashers, and still others, such as \*\*\*, import and sell only stainless steel lockwashers.<sup>89</sup>

Most sales by Shakeproof and the major importers are on a spot rather than on a contract basis. Shakeproof indicated that spot sales account for \*\*\* percent of its total sales, with contract sales accounting for the remainder. Shakeproof's contracts are on a \*\*\* basis with prices and quantities \*\*\* during that period. Only a very small share of imported helical spring lockwashers are sold on a contract basis, and the terms of these contracts vary widely.

Shakeproof and the importers generally agreed that helical spring lockwashers from China and Taiwan are comparable in quality with the domestic product and interchangeable in their end uses.<sup>90</sup> In fact, distributors who responded to the purchaser's questionnaires often had difficulty in determining whether the helical spring lockwashers that they purchased were of domestic origin or imported from China, Taiwan, or from other foreign sources. The domestic producer and importers do not differ significantly in the leadtimes required for delivery of standard items. Shakeproof reported that deliveries are commonly made within one week of receipt of order for items commonly in stock and within eight weeks for items not commonly stocked. Importers reported leadtimes ranging from 1 to 10 days for items in stock.<sup>91</sup>

Shakeproof markets a wider range of helical spring lockwashers (approximately 2,000 variations) than do the importers of these products from China and Taiwan. Shakeproof sells an extensive array of standard and specialty lockwashers, whereas a large portion of helical spring lockwashers from China and Taiwan consists of 60 standard varieties of products.<sup>92</sup>

---

<sup>87</sup> \*\*\* imports carbon steel helical spring lockwashers from China and resells these products to small wholesalers and retailers. \*\*\* imports carbon steel lockwashers from China and Taiwan and stainless steel lockwashers from Taiwan that it resells to retailers. Also, a few retailers import \*\*\* directly, sometimes in package form and sometimes in bulk.

<sup>88</sup> Hearing transcript, p. 216.

<sup>89</sup> Concerning the distribution of helical spring lockwashers, regardless of metal type, \*\*\* stated that \*\*\*.

<sup>90</sup> Questionnaire responses. While a few purchasers indicated in their questionnaire responses that they consider imports from China and Taiwan to be inferior in quality to the domestic product, the great majority either considered the products to be comparable in quality or expressed no opinion.

<sup>91</sup> Conference transcript, pp. 56-58; questionnaire responses.

<sup>92</sup> Hearing transcript, p. 26.

Prices of helical spring lockwashers are commonly quoted on either an f.o.b. or a delivered basis. Shakeproof generally quotes prices on an f.o.b. plant basis, but quotes \*\*\*. Among the large importers of helical spring lockwashers from China, \*\*\* generally quote delivered prices, but \*\*\* generally quote prices on an f.o.b. basis. Among the larger importers of helical spring lockwashers from Taiwan, \*\*\* quotes on both an f.o.b. and delivered basis, and \*\*\* quotes on a delivered basis.

The use of list prices varies widely in this industry. Shakeproof publishes price lists and \*\*\*.<sup>93</sup> Shakeproof indicated that \*\*\*. \*\*\* also publishes price lists and regularly follows these lists in most of its transactions. However, it provides discounts of \*\*\* percent for large volume sales. \*\*\* do not use published price lists, but regularly negotiate prices with their customers for each sale.

Questionnaire responses from purchasers indicate that quality, price, and availability are important considerations in the purchase of helical spring lockwashers. When asked to rank the factors they consider to be most important in selecting a supplier, 9 of 28 purchasers ranked quality first. Price was ranked first by 7 purchasers and second by 8 other purchasers, while availability was ranked first by 4 purchasers.

Helical spring lockwashers are marketed throughout the entire United States, though some companies concentrate on specific regions. For example, \*\*\* sell nationwide, while \*\*\* sells primarily in the East, Southwest, Midwest, and West, maintaining \*\*\* stocking warehouses to serve these regions. \*\*\* sells throughout the region east of the Rockies. \*\*\* sells throughout the continental United States but concentrates on the Southeast, Midwest, and Southwest.

Most shipments of helical spring lockwashers to customers are made by truck to the wholesaler/distributor, with small amounts shipped by rail or other means. The majority of these shipments are within a radius of 500 miles from the supplier's shipping point within the United States. Shakeproof and the major importers generally consider transportation costs important. Shakeproof's costs range from \*\*\* percent of delivered price for distances of less than 100 miles to \*\*\* percent for distances over 500 miles. Shipping costs reported by major importers of products from China and Taiwan generally amounted to 5 percent or less of the delivered price for distances of 100 miles or less, but ranged as high as 10 percent for distances of 100 to 500 miles, and 20 percent, in some cases, for distances over 500 miles.

---

<sup>93</sup> Shakeproof issues \*\*\* to distributors interested in purchasing its "standard" carbon steel helical spring lockwashers. Based on the price list for customers \*\*\*, Shakeproof \*\*\*. Prices offered to customers purchasing in \*\*\* increments \*\*\*. Posthearing brief of the petitioner, app. 6.

Shakeproof's pricing policy for its "standard" stainless steel helical spring lockwashers is \*\*\*. Shakeproof \*\*\*.

### Questionnaire Price Data

Price data were requested for four standard carbon steel helical spring lockwashers and two standard stainless steel items that are commonly sold by both Shakeproof and importers to wholesaler/distributors. For each of these products (listed below), Shakeproof and the importers were requested to provide prices on their largest sales in each quarter as well as total quantities and total values shipped in all quarters during January 1990-December 1992. Purchasers were requested to provide price data on their largest purchases from the domestic producer and from importers for each of these product categories as well as on the total quantities and total values purchased.

#### Product Categories

- Product 1: Carbon steel helical spring lockwasher, plain finish, regular section, 1/4 inch.
- Product 2: Carbon steel helical spring lockwasher, zinc-plated, regular section, 1/4 inch.
- Product 3: 304 stainless steel helical spring lockwasher, regular section, 1/4 inch.
- Product 4: Carbon steel helical spring lockwasher, plain finish, regular section, 3/8 inch.
- Product 5: Carbon steel helical spring lockwasher, zinc-plated, regular section, 3/8 inch.
- Product 6: 304 stainless steel helical spring lockwasher, regular section, 3/8 inch.

Shakeproof provided data for all six product categories. Twenty-seven importers provided usable price data, though none reported sales in all 6 product categories, or, in most cases, sales in all quarters during 1990-92.<sup>94</sup> These 27 importers accounted for 92 percent of stainless steel imports from Taiwan, 12 percent of carbon steel imports from Taiwan, and 85 percent of carbon steel imports from China in 1992. Some important importers could not provide data in the form requested by the Commission because of the nature of their operations. For example, \*\*\*, a large importer of helical spring lockwashers from China, sells directly to the retail and hardware segments of the lockwasher market. As a result, its prices were \*\*\* than those reported by importers that sell to distributors. In addition, a large share of the carbon steel lockwasher imports from Taiwan were either imported directly by, or sold directly to, retailers or original equipment manufacturers for their own use. Therefore, very little price data were available on sales of carbon steel lockwashers from Taiwan to distributors. Eighteen purchasers provided varying amounts of usable information on prices paid for domestic helical

---

<sup>94</sup> \*\*\*.

spring lockwashers and imports purchased from distributors. However, in many instances these purchasers could not determine the national origin of the imports.

### *Price Trends*

Quarterly prices based on the largest sales reported by Shakeproof and on the weighted-average prices of the largest sales of imports from China and Taiwan for 1990-92 are presented in tables 18-23. No domestic price series for carbon steel helical spring lockwashers or for stainless steel helical spring lockwashers exhibited a clear trend during this period. Shakeproof's price for carbon steel product 1 ranged from a low of \*\*\* per 1,000 units to a high of \*\*\* per 1,000 units, but in 9 of the 12 quarters was between \*\*\* and \*\*\* per 1,000 units. The price of carbon steel product 2 ranged from \*\*\* to \*\*\*, but was between \*\*\* and \*\*\* in 10 of the 12 quarters. Shakeproof's price for carbon steel product 4 ranged \*\*\* from \*\*\* to \*\*\* during the 12 quarters for which data were collected. Its price for carbon steel product 5 \*\*\* during 1990-92. The price of \*\*\* per 1,000 units in the fourth quarter of 1992 was \*\*\* than in previous quarters. Shakeproof's price for stainless steel product 3 \*\*\*. Shakeproof's price for stainless steel product 6 ranged from \*\*\* to \*\*\*.

Table 18

F.o.b. prices of product 1 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\* \* \* \* \*

Table 19

F.o.b. prices of product 2 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\* \* \* \* \*

Table 20

F.o.b. prices of product 3 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\* \* \* \* \*

Table 21

F.o.b. prices of product 4 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\* \* \* \* \*

Table 22

F.o.b. prices of product 5 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\*       \*       \*       \*       \*       \*       \*

Table 23

F.o.b. prices of product 6 reported by Shakeproof and weighted-average prices of importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\*       \*       \*       \*       \*       \*       \*

Prices of three carbon steel products imported from China edged downward during 1990-92 despite frequent and significant quarterly fluctuations. The price of product 1 ranged from a low of \*\*\* per 1,000 units to a high of \*\*\* during the period. The price was \*\*\* in all quarters in 1992 than in comparable quarters in 1990. The price of product 2 \*\*\* in the first quarter of 1990 to a \*\*\* of \*\*\* in the second quarter of 1992. Prices in 1992 were \*\*\* in all quarters than in comparable quarters in 1990 and 1991. The price of product 4 from China fluctuated widely throughout the period, ranging from a low of \*\*\* to a high of \*\*\*. The price of product 5 declined irregularly from a high of \*\*\* to a low of \*\*\*, and was lower in all quarters in 1991 and 1992 than in comparable quarters in 1990.

The price of imports from Taiwan of carbon steel product 1 increased slightly during the periods for which data were available, while prices of the other carbon steel products and the stainless steel products showed no clear trend. The price of product 1 \*\*\*. The \*\*\* price of \*\*\* in the third quarter of 1992 was for a sale of \*\*\* units. The price of carbon steel product 2 \*\*\*. The \*\*\* in the fourth quarter of 1991 and \*\*\* in the second quarter of 1992 reflect large sales by \*\*\*. The price of product 4 was \*\*\* per 1,000 units in \*\*\* quarters from July-September 1991 through October-December 1992. In the fourth quarter of 1991, the price \*\*\*. The price of carbon steel product 5 ranged from \*\*\* to \*\*\* during the 8 quarters for which data were available. The price of stainless steel product 3 fluctuated with no clear trend during the 11 quarters for which data were available, though it was generally \*\*\* during 1992 than in earlier years. It ranged from a low of \*\*\* per 1,000 units to a high of \*\*\* per 1,000 units. The price of product 6 also fluctuated widely during the period for which data were available, ranging from \*\*\* to \*\*\*.<sup>95</sup>

#### *Producer/importer Price Comparisons*

Direct price comparisons for the six products shown in tables 18 through 23 indicate that Shakeproof's prices on its largest sales were generally \*\*\*

---

<sup>95</sup> The limited price data provided by \*\*\* do not indicate a clear trend in the price of either product 3 or product 6.

than prices of the largest sales of comparable imports from China during 1990-92 and were consistently \*\*\* than prices of imports from Taiwan. Prices of products 2 and 5, zinc-plated carbon steel helical spring lockwashers, from China were \*\*\* than domestic prices in 7 of 12 quarters, but for products 1 and 4, plain carbon steel helical spring lockwashers, Chinese prices were \*\*\* in most quarters. In the case of Taiwan, import prices were \*\*\* than domestic prices in all quarters where comparisons could be made for carbon steel products 1, 4, and 5 and stainless steel products 3 and 6.<sup>96</sup> The Taiwan price was \*\*\* than the domestic price in 2 out of 8 quarters for product 2.

Analysis based on these price comparisons is complicated by two factors. First, although the majority of the price comparisons for carbon steel products (shown in tables 18, 19, 21, and 22) are based on domestic and importer sales to distributors, most of Shakeproof's prices for stainless steel products (shown in tables 20 and 23) are based on sales to large master distributors that \*\*\*.<sup>97</sup>

Second, Shakeproof's prices were usually based on much larger transactions than were the prices of imported helical spring lockwashers from both China and Taiwan. This is illustrated by figures G-1 through G-3, which show that the average size of the largest quarterly transaction reported by Shakeproof was consistently \*\*\* than those reported for imports from China and \*\*\* than those reported for imports from Taiwan. Since volume discounts are common in this industry, Shakeproof's largest quarterly sale prices are \*\*\* than they would have been for \*\*\*.

#### *Producer/importer Unit Value Comparisons*

As an alternative approach, unit values of shipments to distributors by Shakeproof and importers were computed and compared for the six product categories. While Shakeproof's unit values, shown in tables 24-29, are still based on larger transactions than subject import unit values, they include the influence of smaller transactions.

Table 24

Average unit values of shipments of product 1 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\* \* \* \* \*

---

<sup>96</sup> Price data provided by \*\*\*.

<sup>97</sup> During the preliminary investigations, Shakeproof argued that its largest customers are master distributors, while subject imports are sold mainly to distributors. So, price comparisons based on these transactions would not be appropriate since they represent different levels of distribution. But Shakeproof's questionnaire indicates that \*\*\*.

Table 25

Average unit values of shipments of product 2 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\* \* \* \* \*

Table 26

Average unit values of shipments of product 3 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\* \* \* \* \*

Table 27

Average unit values of shipments of product 4 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\* \* \* \* \*

Table 28

Average unit values of shipments of product 5 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\* \* \* \* \*

Table 29

Average unit values of shipments of product 6 by Shakeproof and by importers, margins of under/(over)selling, and total shipments, by quarters, January 1990-December 1992

\* \* \* \* \*

While unit value data still indicate that Shakeproof's prices are \*\*\* than prices of imports from China for the majority of comparisons during the 3-year period, the differentials between domestic and import prices tend to be \*\*\* than those shown in tables 18-23. For product 1, the unit value of imports from China was \*\*\* than the unit value of domestic shipments in 6 out of 12 quarters by margins ranging from 2.0 percent to 11.7 percent. In the other 6 quarters, imports were priced \*\*\* by margins ranging from 6.1 percent to 14.1 percent. For product 2, the import unit value was \*\*\* than the domestic unit value in 3 out of 12 quarters by margins ranging from 0.1 percent to 3.5 percent. All \*\*\* occurred in \*\*\*. In the other 9 comparisons, margins of \*\*\* ranged from 0.5 percent to 14.0 percent. For product 4, imports \*\*\* domestic unit values in 4 out of 12 quarters by margins ranging from 1.8 percent to 8.3 percent. In the other 8 quarters, import unit values were \*\*\* by margins ranging from 1.9 percent to 9.5 percent. Product 5 import unit values were \*\*\* than domestic unit values in 5 out of 12 quarters, including all 4 quarters in \*\*\*, by margins ranging from 1.1 percent to 3.9



percent. In the other 7 quarters, margins of \*\*\* ranged from 2.4 to 12.3 percent.

Unit values of importers' shipments of helical spring lockwashers from Taiwan were \*\*\* than the unit values of Shakeproof's shipments in the majority of comparisons. In the case of products 1, 5, and 6, the unit values for Taiwan were \*\*\* than domestic unit values in all quarters where comparisons were possible. Taiwanese unit values were \*\*\* than domestic unit values in 2 out of 8 quarters for product 2, in 1 out of 11 quarters for product 3, and in 2 out of 6 quarters for product 4. However, in many cases, the quarterly shipment volumes of imports from Taiwan were \*\*\*.

#### *Purchaser Price Comparisons*

Purchaser price data \*\*\* indicated that average prices paid by distributors for imports from China and Taiwan were higher than prices paid for Shakeproof's products during 1990-92, although the transaction volumes for purchases from Shakeproof tend to be larger than those of purchases from importers. Efforts were made to construct quarterly comparisons between Shakeproof's prices and import prices for individual purchasers. However, in many cases, distributors purchased only from Shakeproof, only from importers, or did not know the original source of the helical spring lockwashers.

Direct quarterly price comparisons were possible for \*\*\* distributors that bought helical spring lockwashers from both Shakeproof and importers of the subject lockwashers from China in 1991 and 1992. F.o.b. prices reported by \*\*\* for carbon steel 1/4-inch and 3/8-inch regular section zinc-plated helical spring lockwashers (products 2 and 5, respectively) in 9 quarterly comparisons indicate that the prices of the imported lockwashers were lower than Shakeproof's prices in \*\*\* comparisons. In most cases, the purchase volumes were in the small to medium range:<sup>98</sup>

Although questionnaire responses indicate that prices of carbon steel and stainless steel helical spring lockwashers imported from China and Taiwan tend to be higher than domestic prices on sales at the distributor level, available data also indicate that prices of these imports are significantly lower than domestic prices when they enter the United States. The low ex-dock prices are discussed in the "Lost Sales and Lost Revenue" section of this report and are reflected in data provided by the few purchasers who reported prices paid for lockwashers imported directly from China and Taiwan.<sup>99</sup>

---

<sup>98</sup> Margins of underselling by imported product 2 reported by \*\*\* ranged from \*\*\* to \*\*\* for the last 3 quarters in 1992. Margins of underselling reported by \*\*\* for imported product 5 was \*\*\* in January-March 1991 and ranged from \*\*\* to \*\*\* for the last 3 quarters in 1992. In 6 of the 7 comparisons, the volume of purchases of imported product was \*\*\* than that of the domestic product. The margin of underselling by imported product 2 reported by \*\*\* was \*\*\* for January-March 1991. The margin of underselling reported by \*\*\* for imported product 5 was \*\*\* for July-September 1991. In both comparisons, the volume of domestic purchases was \*\*\* than that of the imported product.

<sup>99</sup> Purchase price data for these direct imports were not included with the price data used in computing weighted-average purchase prices. The weighted-average purchase prices reflected only sales by importers to distributors.

Data provided by \*\*\* distributors, \*\*\*, indicated that ex-dock prices of carbon steel products from China have been \*\*\* lower than Shakeproof's f.o.b. prices. \*\*\*'s prices for direct imports of carbon steel helical spring lockwashers from China and purchases of carbon steel helical spring lockwashers from Shakeproof are presented in the following tabulation (prices per 1,000 units and volume in 1,000 units):

\*       \*       \*       \*       \*       \*       \*

\*\*\* reported prices for direct imports of carbon steel helical spring lockwashers from China and purchases of carbon steel helical spring lockwashers from Shakeproof, as presented in the following tabulation (prices per 1,000 units and volume in 1,000 units):

\*       \*       \*       \*       \*       \*       \*

Data provided by \*\*\* indicate that ex-dock prices of these imports also tend to be lower than Shakeproof's prices. \*\*\* reported both prices for direct imports of \*\*\* helical spring lockwashers from Taiwan and purchases of \*\*\* helical spring lockwashers from Shakeproof, as presented in the following tabulation (prices per 1,000 units and volume in 1,000 units):

\*       \*       \*       \*       \*       \*       \*

Additional data on ex-dock prices of stainless steel helical spring lockwashers from Taiwan were provided by \*\*\*. Invoice data from that company show that the ex-dock prices that it paid for imported helical spring lockwashers from Taiwan ranged from \*\*\* to \*\*\* per 1,000 units for product 3 and from \*\*\* to \*\*\* for product 6 during 1990-92. These prices are \*\*\* below Shakeproof's f.o.b. prices on its largest sales for the same period (see tables 20 and 23).

#### Exchange Rates

Quarterly data reported by the International Monetary Fund<sup>100</sup> indicate that, between January-March 1990 and October-December 1992, the nominal value of the Taiwan dollar fluctuated, appreciating overall by 3.3 percent relative to the U.S. dollar (table 30).<sup>101</sup> Adjusted for movements in producer price indexes in the United States and Taiwan, the real value of the Taiwan currency depreciated by 0.6 percent overall during this period.

<sup>100</sup> *International Financial Statistics*, March 1993.

<sup>101</sup> The value of the currency of China is determined by the Government of China rather than by the free market. Therefore, an accurate description of movements in the Chinese exchange rate cannot be presented.

Table 30

Exchange rates:<sup>1</sup> Indexes of nominal and real exchange rates of the Taiwan dollar and indexes of producer prices in the United States and Taiwan,<sup>2</sup> by quarters, January 1990-December 1992

Period	U.S. producer price index	Taiwan producer price index	Nominal exchange rate index	Real exchange rate index <sup>3</sup>
1990:				
January-March.....	100.0	100.0	100.0	100.0
April-June.....	99.8	100.8	97.3	98.2
July-September.....	101.6	102.8	96.1	97.2
October-December.....	104.7	103.8	96.2	95.4
1991:				
January-March.....	102.5	103.2	96.3	97.0
April-June.....	101.5	102.7	96.0	97.1
July-September.....	101.4	101.9	97.9	98.4
October-December.....	101.5	100.3	100.5	99.3
1992:				
January-March.....	101.3	98.5	103.9	101.1
April-June.....	102.3	99.1	104.6	101.3
July-September.....	102.8	99.1	104.6	100.8
October-December.....	102.9	99.0	103.3	99.4

<sup>1</sup> Exchange rates expressed in U.S. dollars per Taiwan dollar.

<sup>2</sup> Producer price indexes--intended to measure final product prices--are based on period-average quarterly indexes presented in line 63 of the *International Financial Statistics*.

<sup>3</sup> The real exchange rate is derived from the nominal rate adjusted for relative movements in producer prices in the United States and Taiwan.

Note.--January-March 1990 = 100.

Source: International Monetary Fund, *International Financial Statistics*, March 1993.

## Lost Sales and Lost Revenue

Shakeproof provided 11 allegations of lost sales in its questionnaires in the preliminary and final investigations.<sup>102</sup> Six of the allegations were related to carbon steel helical spring lockwashers from China and five were related to stainless steel helical spring lockwashers from Taiwan. Only 5 of the 11 allegations included specific quantities and values. Most of the allegations were related to distributors that import from China and Taiwan. The staff investigated all of these allegations.

Shakeproof alleged that it lost an unspecified quantity of sales of carbon steel helical spring lockwashers to \*\*\* because of competition from imports from China. \*\*\* did not recall the particular allegation. He said that \*\*\* purchases carbon steel lockwashers in bulk form from Shakeproof, China, and from other import sources \*\*\*. \*\*\* has reduced its purchases from Shakeproof in recent years because Shakeproof's prices are not competitive with prices of imports from China.

Shakeproof also alleged that it lost a sale of carbon steel helical spring lockwashers to \*\*\* valued at \*\*\* to competition from Chinese imports in \*\*\*.<sup>103</sup> The accepted quote for the products from China was alleged to be \*\*\*. \*\*\* could not address the specific allegations. He said that \*\*\* does occasionally make inquiries to Shakeproof, although Shakeproof's prices for standard carbon steel lockwashers are not competitive with imports from China. He added that, during the past 18 months, \*\*\* has limited purchases from Shakeproof to \*\*\*.

Shakeproof further alleged that it lost an unspecified quantity of sales of carbon steel helical spring lockwashers to \*\*\* because of import competition from China. \*\*\* buys carbon steel lockwashers from Shakeproof and also imports these products from China. However, he was unable to provide any information on the specific allegation and unwilling to provide other information on \*\*\*'s relationship with its suppliers.

Shakeproof also alleged that it lost an unspecified quantity of sales of carbon steel helical spring lockwashers to \*\*\* because of import competition from China. \*\*\* did not recall the specific allegation. However, he said that \*\*\* obtains its carbon steel lockwashers exclusively from China and from other import sources. He said that his company does not even compare Shakeproof's prices with prices of imports from China, because the Chinese prices are consistently at least 25 percent lower.

Shakeproof also alleged that it lost a sale of \*\*\* units of carbon steel helical spring lockwashers, valued at \*\*\*, to \*\*\*. Shakeproof alleged that \*\*\*. \*\*\* remembered Shakeproof's quotation and the actual transaction. However, he believed \*\*\*. \*\*\* relies exclusively on imports from China and other sources for its supply of carbon steel lockwashers. \*\*\*.

---

<sup>102</sup> Shakeproof included no lost revenue allegations in its questionnaire response, noting that prices of imported helical spring lockwashers from Taiwan and China were too low for Shakeproof to roll back its prices.

<sup>103</sup> \*\*\*.

\*\*\* said that, while Shakeproof sells to master distributors and manufacturers, it also competes with \*\*\* on sales to smaller wholesaler/distributors. \*\*\* said that, after markups, \*\*\*'s prices of carbon steel lockwashers on sales to these wholesaler/distributors are often higher than Shakeproof's prices.

Shakeproof also alleged that it lost a sale of \*\*\* units of carbon steel helical spring lockwashers valued at \*\*\* to \*\*\* in \*\*\* as a result of competition from imports from China. Shakeproof alleged that \*\*\*.<sup>104</sup> \*\*\* denied the allegation. He said that his company did send an inquiry to Shakeproof requesting quotations on prices of selected lockwashers in \*\*\*, but that negotiations for a sale did not occur.

Shakeproof alleged that it lost a sale of \*\*\* stainless steel helical spring lockwashers valued at \*\*\* to \*\*\* because of import competition from Taiwan. \*\*\*, who is responsible for purchases of stainless steel lockwashers at \*\*\*, could not recall the particular transaction. However, he said that the company does purchase stainless steel fasteners from Shakeproof, as well as from Asian and European sources. \*\*\*.

\*\*\* said that Shakeproof's prices for stainless steel lockwashers have increased significantly in recent years and are not presently competitive with prices of comparable lockwashers from Taiwan. According to \*\*\*, Shakeproof's f.o.b. prices at its Milwaukee plant for stainless steel lockwashers in such common sizes as 1/4 inch and 3/8 inch are about \*\*\* percent higher than the price at the dock in \*\*\* of identical imported items from Taiwan. When overland transportation costs to \*\*\* are taken into account the differential is even greater.

Shakeproof also alleged that it lost an unspecified quantity of sales of stainless steel helical spring lockwashers to \*\*\* as a result of competition from imports from Taiwan. \*\*\* could not recall the specific transaction. He said that \*\*\*. \*\*\* imports stainless steel lockwashers from Taiwan and other foreign sources and also buys these products from Shakeproof. \*\*\* had reduced overall purchases of stainless steel lockwashers significantly during the past two years as a result of the recession, but had recently increased their purchases from Shakeproof. He added that Shakeproof's prices for stainless steel lockwashers are often competitive with imports from Taiwan. However, he said that, when \*\*\* contacts Shakeproof at its plant in Milwaukee to make price inquiries, Shakeproof is generally unwilling to negotiate levels below its list price.

Shakeproof cited \*\*\* in an unspecified lost sales allegation relating to imports of stainless steel helical spring lockwashers from Taiwan in \*\*\*. \*\*\* relies exclusively on imports from Taiwan and from other foreign sources for its stainless steel lockwashers because the Shakeproof product is not price competitive with these imports.

Shakeproof alleged that it lost a sale of stainless steel helical spring lockwashers, valued at \*\*\*, to \*\*\* as a result of competition from imports from Taiwan. Shakeproof stated that the accepted quote was \*\*\*. \*\*\* could

---

<sup>104</sup> \*\*\*.

not address the specific allegation. However, he said that \*\*\* does import large quantities of stainless steel lockwashers from Taiwan and that they are often priced lower than comparable domestically-produced lockwashers. Despite importing from Taiwan, \*\*\* said that \*\*\*. He said that Shakeproof accounts for \*\*\* of its purchases of lockwashers made of \*\*\* stainless steel, and \*\*\* of its purchases of \*\*\* lockwashers.

Shakeproof alleged that it lost a sale of stainless steel lockwashers valued at \*\*\* to \*\*\* because of competition from imports from Taiwan in \*\*\*. Shakeproof alleged that the accepted price was \*\*\*. \*\*\* purchases lockwashers from Shakeproof and from importers. \*\*\* could not specifically address the allegation. However, he said that the amount of the purchase cited in the allegation seemed much too large. The purchaser questionnaire received from \*\*\* indicates that the company bought \*\*\* worth of helical spring lockwashers imported from Taiwan in \*\*\*, \*\*\* percent of the amount cited in the allegation.

APPENDIX A

FEDERAL REGISTER NOTICES OF  
THE COMMISSION AND COMMERCE





---

[Investigation No. 731-TA-625 (Final)]

**Certain Helical Spring Lockwashers  
From Taiwan**

**AGENCY:** United States International  
Trade Commission.

**ACTION:** Institution and scheduling of a  
final antidumping investigation.

---

**SUMMARY:** The Commission hereby gives notice of the institution of final antidumping investigation No. 731-TA-625 (Final) under section 735(b) of the Tariff Act of 1930 (19 U.S.C. 1673d(b)) (the Act) to determine whether an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports from Taiwan of certain helical spring lockwashers,<sup>1</sup> provided for in subheading 7318.21.00 of the Harmonized Tariff Schedule of the United States.

For further information concerning the conduct of this investigation, hearing procedures, and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and C (19 CFR part 207).

**EFFECTIVE DATE:** February 22, 1992.

**FOR FURTHER INFORMATION CONTACT:** Douglas Corkran (202-205-3177), Office of Investigation, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000.

---

<sup>1</sup> For purposes of this investigation, certain helical spring lockwashers are circular washers of carbon steel, of carbon alloy steel, or of stainless steel, heat-treated or non heat-treated, plated or non plated, with ends that are off-line. Such helical spring lockwashers are designed to: (1) Function as a spring to compensate for developed looseness between the component parts of a fastened assembly; (2) distribute the load over a larger area for screw or bolts; and (3) provide a hardened bearing surface. The scope does not include internal or external tooth washers, nor does it include spring lock washers made of other metals, such as copper.

**SUPPLEMENTARY INFORMATION:****Background**

This investigation is being instituted as a result of an affirmative preliminary determination by the Department of Commerce that imports of certain helical spring lockwashers from Taiwan are being sold in the United States at less than fair value within the meaning of section 733 of the Act (19 U.S.C. 1673b). The investigation was requested in a petition filed on September 8, 1992, by the Shakeproof Industrial Products Division, Illinois Tool Works, Milwaukee, WI.

**Participation in the Investigation and Public Service List**

Persons wishing to participate in the investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in section 201.11 of the Commission's rules, not later than twenty-one (21) days after publication of this notice in the *Federal Register*. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to this investigation upon the expiration of the period for filing entries of appearance.

**Limited Disclosure of Business Proprietary Information (BPI) Under an Administrative Protective Order (APO) and BPI Service List**

Pursuant to section 207.7(a) of the Commission's rules, the Secretary will make BPI gathered in this final investigation available to authorized applicants under the APO issued in the investigation, provided that the application is made not later than twenty-one (21) days after the publication of this notice in the *Federal Register*. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

**Staff Report**

The prehearing staff report in this investigation will be placed in the nonpublic record on April 30, 1993, and a public version will be issued thereafter, pursuant to section 207.21 of the Commission's rules.

**Hearing**

The Commission will hold a hearing in connection with this investigation beginning at 9:30 a.m. on May 13, 1993, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before May 5, 1993.

A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 9:30 a.m. on May 10, 1993, at the U.S. International Trade Commission Building. Oral testimony and written materials to be submitted at the public hearing are governed by §§ 201.6(b)(2), 201.13(f), and 207.23(b) of the Commission's rules. Parties are strongly encouraged to submit as early in the investigation as possible any requests to present a portion of their hearing testimony *in camera*.

**Written Submissions**

Each party is encouraged to submit a prehearing brief to the Commission. Prehearing briefs must conform with the provisions of § 207.22 of the Commission's rules; the deadline for filing is May 7, 1993. Parties may also file written testimony in connection with their presentation at the hearing, as provided in § 207.23(b) of the Commission's rules, and posthearing briefs, which must conform with the provisions of § 207.24 of the Commission's rules. The deadline for filing posthearing briefs is May 21, 1993; witness testimony must be filed no later than three (3) days before the hearing. In addition, any person who has not entered an appearance as a party to the investigation may submit a written statement of information pertinent to the subject of the investigation on or before May 21, 1993. All written submissions must conform with the provisions of § 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of §§ 201.6, 207.3, and 207.7 of the Commission's rules.

In accordance with §§ 201.16(c) and 207.3 of the rules, each document filed by a party to the investigation must be served on all other parties to the investigation (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

**Authority:** This investigation is being conducted under the authority of the Tariff Act of 1930, title VII. This notice is published pursuant to § 207.20 of the Commission's rules.

Issued: March 3, 1993.

By order of the Commission.

Paul R. Barden,

Acting Secretary.

[FR Doc. 93-5462 Filed 3-9-93; 8:45 am]

SELLING CODE 7030-00-01

Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone: (202) 482-0116.

**PRELIMINARY DETERMINATION:** We preliminarily determine that certain helical spring lock washers are being, or are likely to be, sold in the United States at less than fair value, as provided in section 733 of the Tariff Act of 1930, as amended (the Act). The estimated margin is shown in the "Suspension of Liquidation" section of this notice.

#### Case History

Since the initiation of this investigation on September 28, 1992, (57 FR 45765, October 5, 1992), the following events have occurred:

On October 14, 1992, and November 3, 1992, the Department sent facsimiles to the American Embassy in Beijing, China, requesting information on the value and quantity of sales to the United States by Chinese companies for the period April 1, 1992 to September 30, 1992.

On November 10, 1992, we received a response from the American Embassy in China, listing the names and addresses of several potential respondents. On October 6, 1992, Hangzhou Spring Washer Plant (Hangzhou) and the American Association of Fastener Importers (AAFI) sent a joint letter of appearance as interested parties in this proceeding.

On October 16, 1992, the Department sent petitioner and Hangzhou letters which solicited publicly available published information (PI) to be used to value the factors of production in the investigation. On October 23, 1992, the International Trade Commission (ITC) notified us of its preliminary determination that there is a reasonable indication that an industry in the United States is materially injured by reason of imports of helical spring lock washers that are allegedly sold at less than fair value in the United States. Petitioner submitted information it considered PI on December 14, 1992. Hangzhou submitted data it considered PI on December 15, 1992.

On December 30, 1992, the Department sent Hangzhou the antidumping questionnaire. We also served questionnaires on the Embassy of the People's Republic of China (PRC), and on the Ministry of Foreign Economic Relations & Trade (MOFERT). On January 7, 1993, the Department sent Hangzhou and the PRC embassy supplementary questionnaires to determine whether critical circumstances exist.

[A-570-822]

**Notice of Preliminary Determination of Sales at Less Than Fair Value: Certain Helical Spring Lock Washers From the People's Republic of China**

**AGENCY:** Import Administration, International Trade Administration, Department of Commerce.

**EFFECTIVE DATE:** April 30, 1993.

**FOR FURTHER INFORMATION CONTACT:** Bill Crow, Office of Antidumping

On January 13, 1993, Hangzhou submitted its response to section A of the questionnaire. No PRC government body replied to our questionnaire. On January 14, 1993, Hangzhou submitted the full translation of the Regulations Regarding State Enterprises, promulgated by the State Council of the People's Republic of China. Petitioner submitted additional information for consideration as PI on January 19, 1993, for data covering Indian labor. On January 22, 1993, the Department sent Hangzhou a section A deficiency questionnaire.

On January 26, 1993, the Department postponed the preliminary determination because the issues involved in this investigation were found to be extraordinarily complicated. On January 27, 1993, Hangzhou requested a one week extension for responding to sections C and D of the Department's questionnaire. This request was granted. On January 28, 1993, the Department extended the deadline for submission of PI until February 5, 1993. On February 5, 1993, Hangzhou submitted its response to the section A deficiency questionnaire. On February 5, 1993, Hangzhou submitted its response to sections C and D. On February 22, 1993, petitioner commented on Hangzhou's February 5, 1993, submissions.

On March 2, 1993, the Department sent Hangzhou the first section C and D deficiency questionnaire. On March 16, 1993, Hangzhou submitted its response to the first section C and D deficiency questionnaire. On March 30, 1993, the Department sent Hangzhou a second section C and D deficiency questionnaire. On March 30, petitioner submitted comments on Hangzhou's March 16, 1993, submission. On April 6, 1993, Hangzhou submitted its response to the second section C and D deficiency questionnaire.

On April 19, 1993, Hangzhou submitted more legible copies of previously submitted sales documentation and noted revisions it had submitted in its April 6, 1993, computer disks, but had failed to fully discuss in the narrative accompanying the disks. Hangzhou also raised an objection to what it perceived as double-counting in petitioner's cost estimate for steel wire rods in calculating margins in the petition. On April 8, 1993, petitioner responded that Hangzhou incorrectly interpreted the petition estimate for converting green wire rod into processed wire, and that no double-counting was involved.

### Scope of Investigation

For purposes of this investigation, certain helical spring lock washers (HSLWs) are circular washers of carbon steel, of carbon alloy steel, or of stainless steel, heat-treated or non heat-treated, plated or non-plated, with ends that are off-line. HSLWs are designed to: (1) Function as a spring to compensate for developed looseness between the component parts of a fastened assembly; (2) distribute the load over a larger area for screw or bolts; and (3) provide a hardened bearing surface. The scope does not include internal or external tooth washers, nor does it include spring lock washers made of other metals, such as copper. The lock washers subject to this investigation are currently classifiable under subheading 7318.21.0000 of the Harmonized Tariff Schedule of the United States (HTSUS). Although the HTSUS subheadings are provided for convenience and customs purposes, our written description of the scope of this investigation is dispositive.

### Period of Investigation

The period of investigation (POI) is from April 1, 1992, through September 30, 1992.

### Market-Oriented Industry Status

In its December 7, 1992, submission and in subsequent filings with the Department, Hangzhou has argued that the Department should consider the Chinese lock washer industry as a market-oriented industry (MOI). Petitioner has objected to classifying the lock washer industry of the PRC as market-oriented. As outlined in the Amendment to Final Determination of Sales at Less Than Fair Value and Amendment to Antidumping Order: Chrome-Plated Lug Nuts from the People's Republic of China 57 FR 15052 (April 24, 1992), the Department considers three criteria in establishing whether an industry in a non-market economy should be classified as market-oriented: (1) For merchandise under investigation, there must be virtually no government involvement in setting prices or amounts to be produced (e.g., state-required production or allocation of production of the merchandise, whether for export or domestic consumption in the non-market economy, would be an almost insuperable barrier to finding a market-oriented industry); (2) the industry producing the merchandise under investigation should be characterized by private or collective ownership (there may be state-owned enterprises in the industry but substantial state ownership would weigh heavily against finding a

market-oriented industry); and (3) market-determined prices must be paid for all significant inputs, whether material or non-material (e.g., labor and overhead), and for an all but insignificant proportion of all the inputs accounting for the total value of the merchandise under investigation. For example, an input price will not be considered market-determined if the producers of the merchandise under investigation pay a state-set price for the input or if the input is supplied to the producers at government direction. Moreover, if there is any state-required production in the industry producing the input, the share of state-required production must be insignificant.

As recorded in a January 19, 1993, memorandum from David Binder to Richard Moreland, the Department has determined that the Chinese lock washer industry does not have MOI status. As regards the first criterion, the record is not sufficient to determine the degree and nature of control exercised in the lock washer industry by the central and regional government bodies of the PRC. As regards criterion two, the December 7, 1992, PRC embassy submission indicated that a significant portion of total PRC production comes from state-owned factories, a factor indicating "substantial state ownership." As regards criterion three, the PRC submissions neither stated nor documented that market-determined prices are paid for all significant inputs.

### Separate Rates

In its December 7, 1992, submission and in subsequent filings with the Department, Hangzhou has argued that a separate, company-specific rate should be calculated in this investigation. In order to determine whether a company-specific dumping margin should be calculated in this investigation, we asked respondent to provide information on company ownership and relationships, sources of inputs, manufacturing processes, distribution channels, involvement of trading companies, controls on external trade, profit retention, and other facets of its production and sale of the subject merchandise. As stated in the Final Determination of Sales at Less than Fair Value: Sparklers from the People's Republic of China (56 FR 20588, May 6, 1991) (Sparklers), we will issue separate rates if a respondent can demonstrate both a *de jure* and *de facto* absence of central control. Evidence supporting, though not requiring, a finding of *de jure* absence of central control would include: (1) An absence of restrictive stipulations associated with an individual exporter's business and

export licenses; and (2) any legislative enactments devolving central control of export trading companies. Evidence supporting a finding of *de facto* absence of central control with respect to exports would include: (1) Whether each exporter sets its own export prices independently of the government and other exporters; and (2) whether each exporter can keep the proceeds from its sales.

Petitioner has argued that Hangzhou does not qualify for a separate rate because Hangzhou has not adequately explained its relationship to the People's Congress and to the state-owned trading companies through which it makes a significant number of sales to the United States.

Based on a review of Hangzhou's submissions regarding its relationships with PRC government and trade entities, we believe that there is sufficient evidence of *de facto* and *de jure* control by the People's Congress to cause us to question Hangzhou's assertions regarding the complete independence of its business operations. Moreover, as petitioner has pointed out, the PRC government apparently has some degree of control over state trading companies. This further calls into question the independence of Hangzhou. In evaluating Hangzhou's claim to have satisfied the separate rates test from Sparklers, these above concerns cause us to reject Hangzhou's claim for purposes of the preliminary determination, as recorded in our April 19, 1993, memorandum from Richard Moreland to Joseph Spetrini.

#### Best Information Available

The PRC government did not supply the consolidated questionnaire response requested for all producers/exporters other than Hangzhou. Further, Hangzhou has not demonstrated that it qualifies for a separate rate. Therefore, we are using best information available (BIA) to calculate the margin for all exporters from the PRC. As BIA, we are using the highest single margin calculated in the petition, a margin of 128.63 percent.

#### Fair Value Comparisons

To determine whether sales of HSLWs from the PRC to the United States were made at less than fair value, we compared the United States price (USP) to the foreign market value (FMV), as specified in the "United States Price" and "Foreign Market Value" sections of this notice.

#### United States Price

We based USP on the information contained in the petition. Petitioner

based U.S. price (USP) on observed price quotes of helical spring lock washers by producers of the subject merchandise from the PRC. Petitioner made deductions from USP for U.S. duty and freight charges.

#### Foreign Market Value

We based FMV on the methodology contained in the petition. Petitioner contends that the FMV of PRC-produced imports subject to this investigation must be determined in accordance with section 773(c) of the Act, which concerns non-market economy (NME) countries. The PRC is presumed to be an NME within the meaning of section 771(18)(C) of the Act, and the Department has treated it as such in previous investigations (see, Final Determination of Sales at Less Than Fair Value: Sulfanilic Acid from the PRC, 57 FR 29705 (July 6, 1992)).

In accordance with section 773(c) of the Act, FMV in NME cases is based on NME producers' factors of production (valued in a market economy country). Petitioner calculated FMV on the basis of the valuation of the factors of production. In valuing the factors of production, petitioner used India as a surrogate country. In our initiation, we accepted India as having a comparable economy and being a significant producer of comparable merchandise, pursuant to section 773(c)(4) of the Act.

In accordance with the hierarchy for preferred input values as set forth in the notice of Final Determination of Sales at Less Than Fair Value: Certain Carbon Steel Butt-Weld Pipe Fittings From the People's Republic of China (PRC), 57 FR 21058 (May 18, 1992) (Comment 4), petitioner first used Indian published, publicly available information to value the factors of production before resorting to unclassified information contained in U.S. government cables or to its own costs of production.

Petitioner obtained and valued the factors of production in the PRC as follows: For carbon steel, petitioner used pricing in U.S. dollars contained in a published report. Petitioner used the cost in the United States for processing rod into finished wire. For labor, petitioner estimated the costs based on cable information from a U.S. consulate in India. For depreciation, petitioner estimated costs of its own equipment using the value of such equipment available in the United States, Taiwan, and Japan. For energy, petitioner valued the factor using its own costs. Petitioner used comparable equipment and valued electricity costs using cable information from a U.S. consulate in India and natural gas prices from published information. For tooling, petitioner used

its own actual costs. For selling, general, and administrative expenses (SG&A), petitioner used the statutory minimum of ten percent of the cost of manufacture. For profit, petitioner used the statutory minimum of eight percent of the cost of manufacture plus SG&A expenses. For packing, petitioner estimated the cost as a percentage of the cost of production based on its own experience.

Petitioner calculated margins for both plain and plated carbon steel lock washers. Petitioner obtained and valued the plating factors of production using its own chemical costs, adjusted for one percent waste. For plating labor, petitioner estimated the costs based on cable information from a U.S. consulate in India. For plating equipment depreciation, petitioner estimated costs of its own equipment using the value of such equipment available in the United States. For plating energy, petitioner used its own cost per pound. For plating SG&A, petitioner used the statutory minimum of ten percent of the cost of manufacture. For plating profit, petitioner used the statutory minimum of eight percent of the cost of manufacture plus SG&A expenses.

The range of dumping margins of HSLWs from the PRC based on a comparison of USP to CV alleged by petitioner is 92.30 percent to 128.63 percent. For purposes of this preliminary determination, we are applying the highest margin of 128.63 percent as BIA.

#### Verification

As provided in section 776(b) of the Act, we will verify the information used in reaching our final determination.

#### Critical Circumstances

Petitioner alleges that "critical circumstances" exist with respect to imports of the subject merchandise from the PRC. Section 733(e)(1) of the Act provides that the Department will preliminarily determine that critical circumstances exist if we determine that there is a reasonable basis to believe or suspect that:

(A)(i) there is a history of dumping in the United States or elsewhere of the class or kind of merchandise which is the subject of the investigation, or

(ii) the person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the merchandise which is the subject of the investigation at less than its fair value, and

(B) there have been massive imports of the class or kind of merchandise which is the subject of the investigation over a relatively short period.

Under 19 CFR 353.16(f), we normally consider the following factors in determining whether imports have been massive over a short period of time: (1) the volume and value of the imports; (2) seasonal trends (if applicable); and (3) the share of domestic consumption accounted for by imports.

In determining knowledge of dumping, we normally consider margins of 15 percent or more sufficient to impute knowledge of dumping under section 733(e)(1)(A)(ii) for exporters sales price sales, and margins of 25 percent or more for purchase price sales. (See, e.g., Final Determination of Sales at Less Than Fair Value; Tapered Roller Bearings and Parts Thereof, Finished or Unfinished, from Italy, 52 FR 24198, June 29, 1987). Since the preliminary margin for HSLWs from the PRC is above 25 percent, we determine in accordance with section 733(e)(1)(A)(ii) of the Act that there is a reasonable basis to believe or suspect that knowledge of dumping existed for HSLWs from the PRC.

Because the Department did not receive responses to its questionnaire from the PRC government on behalf of all producers other than Hangzhou, and since we are not calculating separate rates for purposes of the preliminary determination, we have relied upon BIA for determining whether there have been massive imports of HSLWs from the PRC. As BIA we are making the adverse assumption that imports were massive over a relatively short period of time in accordance with section 733(e)(1)(B) of the Act. Therefore, we find that there is a reasonable basis to believe or suspect that imports of HSLWs from the PRC have been massive over a relatively short period of time. Based on our analysis, we determine that there is a reasonable basis to believe or suspect that critical circumstances exist for imports of HSLWs from the PRC.

#### Suspension of Liquidation

In accordance with sections 733(d)(1) and 733(c)(2) of the Act, we are directing the Customs Service to suspend liquidation of all entries of certain helical spring lock washers from the PRC that are entered, or withdrawn from warehouse, for consumption on or after the date 90 days prior to the publication of this notice in the Federal Register. The Customs Service shall require a cash deposit or posting of a bond equal to 128.63 percent on all entries of certain HSLWs from the PRC. This suspension of liquidation will remain in effect until further notice. The estimated dumping margins are as follows:

Manufacturer/producer/exporter	Margin percentage
All PRC Manufacturers, Producers and Exporters .....	128.63

#### ITC Notification

In accordance with section 733(f) of the Act, we have notified the ITC of our determination. If our final determination is affirmative, the ITC will determine before the later of 120 days after the date of this preliminary determination or 45 days after our final determination whether these imports are materially injuring, or threaten material injury to, the U.S. industry.

#### Public Comment

In accordance with 19 CFR 353.38, case briefs or other written comments in at least ten copies must be submitted to the Assistant Secretary for Import Administration no later than June 16, 1993, and rebuttal briefs, no later than June 23, 1993. In accordance with 19 CFR 353.38(b), we will hold a public hearing, if requested, to afford interested parties an opportunity to comment on arguments raised in case or rebuttal briefs. Tentatively, the hearing will be held on June 29, 1993, at 9:30 a.m. at the U.S. Department of Commerce, room 3708, 14th Street and Constitution Avenue, NW., Washington, DC 20230. Parties should confirm by telephone the time, date, and place of the hearing 48 hours before the scheduled time.

Interested parties who wish to request a hearing, or to participate if one is requested, must submit a written request to the Assistant Secretary for Import Administration, U.S. Department of Commerce, room B-099, within ten days of the publication of this notice. Requests should contain: (1) The party's name, address, and telephone number; (2) the number of participants; and (3) a list of the issues to be discussed. In accordance with 19 CFR 353.38(b), oral presentations will be limited to issues raised in the briefs.

This determination is published pursuant to section 733(f) of the Act and 19 CFR 353.15(a)(4).

Dated: April 26, 1993.

Richard W. Moreland,  
Acting Assistant Secretary for Import  
Administration.

[FR Doc. 93-10221 Filed 4-29-93; 8:45 am]

BILLING CODE 3510-08-P

Tariff Act of 1930 (19 U.S.C. 1673d(b)) (the Act) to determine whether an industry in the United States is materially injured, or is threatened with material injury, or the establishment of an industry in the United States is materially retarded, by reason of imports from the People's Republic of China (China) of certain helical spring lockwashers,<sup>1</sup> provided for in subheading 7318.21.00 of the Harmonized Tariff Schedule of the United States.

For further information concerning the conduct of this investigation, hearing procedures, and rules of general application, consult the Commission's Rules of Practice and Procedure, part 201, subparts A through E (19 CFR part 201), and part 207, subparts A and C (19 CFR part 207).

**EFFECTIVE DATE:** April 27, 1993.

**FOR FURTHER INFORMATION CONTACT:** Douglas Corkran (202-205-3177), Office of Investigations, U.S. International Trade Commission, 500 E Street SW., Washington, DC 20436. Hearing-impaired persons can obtain information on this matter by contacting the Commission's TDD terminal on 202-205-1810. Persons with mobility impairments who will need special assistance in gaining access to the Commission should contact the Office of the Secretary at 202-205-2000.

**SUPPLEMENTARY INFORMATION:**

**Background**

This investigation is being instituted as a result of an affirmative preliminary determination by the Department of Commerce that imports of certain helical spring lockwashers from China are being sold in the United States at less than fair value within the meaning of section 733 of the Act (19 U.S.C. § 1673b). The investigation was requested in a petition filed on September 8, 1992, by the Shakeproof Industrial Products Division, Illinois Tool Works, Milwaukee, WI.

**Participation in the Investigation and Public Service List**

Persons wishing to participate in the investigation as parties must file an entry of appearance with the Secretary

<sup>1</sup> For purposes of this investigation, certain helical spring lockwashers are circular washers of carbon steel, of carbon alloy steel, or of stainless steel, heat-treated or non heat-treated, plated or non-plated, with ends that are off-line. Such helical spring lockwashers are designed to: (1) Function as a spring to compensate for developed looseness between the component parts of a fastened assembly; (2) distribute the load over a larger area for screws or bolts; and (3) provide a hardened bearing surface. The scope does not include internal or external tooth washers, nor does it include spring lockwashers made of other metals, such as copper.

to the Commission, as provided in section 201.11 of the Commission's rules, not later than seven (7) days after publication of this notice in the Federal Register. Section 201.11 (b) of the Commission's rules is hereby waived. The Secretary will prepare a public service list containing the names and addresses of all persons, or their representatives, who are parties to this investigation upon the expiration of the period for filing entries of appearance.

**Limited Disclosure of Business Proprietary Information (BPI) Under an Administrative Protective Order (APO) and BPI Service List**

The Secretary will make BPI gathered in this final investigation available to authorized applicants under the APO issued in the investigation, provided that the application is made not later than seven (7) days after the publication of this notice in the Federal Register. Section 207.7 (a)(2) of the Commission's rules is hereby waived. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

**Staff Report**

The prehearing staff report in this investigation will be placed in the nonpublic record on April 30, 1993, and a public version will be issued thereafter, pursuant to § 207.21 of the Commission's rules.

**Hearing**

The Commission will hold a hearing in connection with this investigation beginning at 9:30 a.m. on May 13, 1993, at the U.S. International Trade Commission Building. Requests to appear at the hearing should be filed in writing with the Secretary to the Commission on or before May 5, 1993. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the hearing. All parties and nonparties desiring to appear at the hearing and make oral presentations should attend a prehearing conference to be held at 9:30 a.m. on May 10, 1993, at the U.S. International Trade Commission Building. Oral testimony and written materials to be submitted at the public hearing are governed by §§ 201.6(b)(2), 201.13(f), and 207.23(b) of the Commission's rules. Parties are strongly encouraged to submit as early in the investigation as possible any requests to present a portion of their hearing testimony *in camera*.

**Written Submissions**

Each party is encouraged to submit a prehearing brief to the Commission.

**INTERNATIONAL TRADE COMMISSION**

[Investigation No. 731-TA-624 (Final)]

**Certain Helical Spring Lockwashers From China**

**AGENCY:** United States International Trade Commission.

**ACTION:** Institution and scheduling of a final antidumping investigation.

**SUMMARY:** The Commission hereby gives notice of the institution of final antidumping investigation No. 731-TA-624 (Final) under section 735(b) of the

Prehearing briefs must conform with the provisions of § 207.22 of the Commission's rules; the deadline for filing is May 7, 1993. Parties may also file written testimony in connection with their presentation at the hearing, as provided in section 207.23(b) of the Commission's rules, and posthearing briefs, which must conform with the provisions of § 207.24 of the Commission's rules. The deadline for filing posthearing briefs is May 21, 1993; witness testimony must be filed no later than three (3) days before the hearing. In addition, any person who has not entered an appearance as a party to the investigation may submit a written statement of information pertinent to the subject of the investigation on or before May 21, 1993. A supplemental brief addressing only the final antidumping determination of the Department of Commerce is due on July 16, 1993. The brief may not exceed five (5) pages in length. All written submissions must conform with the provisions of § 201.8 of the Commission's rules; any submissions that contain BPI must also conform with the requirements of § 201.6, 207.3, and 207.7 of the Commission's rules.

In accordance with §§ 201.16(c) and 207.3 of the rules, each document filed by a party to the investigation must be served on all other parties to the investigation (as identified by either the public or BPI service list), and a certificate of service must be timely filed. The Secretary will not accept a document for filing without a certificate of service.

**Authority:** This investigation is being conducted under authority of the Tariff Act of 1930, title VII. This notice is published pursuant to section 207.20 of the Commission's rules.

Issued: April 29, 1993.

By order of the Commission.

Paul R. Bardos,

*Acting Secretary.*

[FR Doc. 93-10466 Filed 4-30-93; 8:45 am]

BILLING CODE 7020-02-P

---



[A-583-820]

**Final Determination of Sales at Less Than Fair Value: Certain Helical Spring Lock Washers From Taiwan**

AGENCY: Import Administration, International Trade Administration, Department of Commerce.

EFFECTIVE DATE: May 11, 1993.

FOR FURTHER INFORMATION CONTACT: William H. Crow II, Office of Antidumping Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; telephone: (202) 482-0116.

**FINAL DETERMINATION:** We determine that certain helical spring lock washers from Taiwan are being, or are likely to be, sold in the United States at less than fair value, as provided in section 735 of the Tariff Act of 1930, as amended (the Act). The estimated margin is shown in the "Suspension of Liquidation" section of this notice.

**Case History**

Since our affirmative preliminary determination of sales at less than fair value on February 16, 1993, (58 FR 11027, February 23, 1993), the following events have occurred:

On March 15, 1993, the American Association of Fastener Importers (AAFI) submitted a letter objecting to the preliminary determination that critical circumstances exist. On March 31, 1993, petitioner submitted a letter in support of a final determination that critical circumstances exist.

**Scope of Investigation**

For purposes of this investigation, certain helical spring lock washers (HSLWs) are circular washers of carbon steel, of carbon alloy steel, or of stainless steel, heat-treated or non heat-treated, plated or non-plated, with ends that are off-line. HSLWs are designed to:

- (1) Function as a spring to compensate for developed looseness between the component parts of a fastened assembly;
- (2) distribute the load over a larger area for screw or bolts; and
- (3) provide a hardened bearing surface. The scope does not include internal or external

tooth washers, nor does it include spring lock washers made of other metals, such as copper. The lock washers subject to this investigation are currently classifiable under subheading 7318.21.0000 of the Harmonized Tariff Schedule of the United States (HTSUS). Although the HTSUS subheadings are provided for convenience and customs purposes, our written description of the scope of this investigation is dispositive.

**Period of Investigation**

The period of investigation (POI) is April 1, 1992 through September 30, 1992.

**Best Information Available**

We have determined, in accordance with section 776(c) of the Act, that the use of best information available (BIA) is appropriate for sales of HSLWs in this investigation. In deciding whether to use BIA, section 776(c) provides that the Department may take into account whether the respondent was able to produce information requested in a timely manner and in the form required. In this case, the producers/exporters of HSLWs from Taiwan did not do so. The only response came from Siguar which stated that it did not sell to the United States or produce the subject merchandise during the period of investigation.

During the course of this investigation, the Department has encountered serious problems in obtaining responses from Taiwanese manufacturers and exporters for its investigation. As outlined in the "Case History" section of the preliminary determination notice, the Department made repeated attempts to solicit this information stating that if we did not receive a response to our requests we might have to make our determination on the basis of BIA. In spite of the Department's attempts, we did not receive a response from any manufacturer or exporter who exported or produced during the POI. Consequently, we have based our final determination in this investigation on BIA for all Taiwan companies. As BIA, we have selected the highest margin listed in the notice of initiation for this investigation, which was based on the petition. A description of how petitioner calculated the margins contained in its petition is included in our notice of initiation (57 FR 45765, October 5, 1992).

**Critical Circumstances**

Petitioner alleges that "critical circumstances" exist with respect to imports of the subject merchandise from Taiwan. Section 735(a)(3) of the Act

provides that critical circumstances exist if:

(A) (i) There is a history of dumping in the United States or elsewhere of the class or kind of merchandise which is the subject of the investigation, or

(ii) The person by whom, or for whose account, the merchandise was imported knew or should have known that the exporter was selling the merchandise which is the subject of the investigation at less than its fair value, and

(B) There have been massive imports of the class or kind of merchandise which is the subject of the investigation over a relatively short period.

Under 19 CFR 353.16(f), we normally consider the following factors in determining whether imports have been massive over a short period of time: (i) The volume and value of the imports; (ii) seasonal trends (if applicable); and (iii) the share of domestic consumption accounted for by imports.

In determining knowledge of dumping, we normally consider margins of 15 percent or more sufficient to impute knowledge of dumping under section 735(a)(3)(A)(ii) for exporters sales price sales, and margins of 25 percent or more for purchase price sales. (See, e.g., Final Determination of Sales at Less Than Fair Value: Tapered Roller Bearings and Parts Thereof, Finished or Unfinished, from Italy, 52 FR 24198, June 29, 1987). Since the highest margin contained in the petition for HSLWs is above 25 percent, we determine in accordance with section 735(a)(3)(A)(ii) of the Act that knowledge of dumping existed for HSLWs from Taiwan.

Because the Department did not receive responses to its questionnaire from any Taiwan companies who produced or exported during the period of investigation, we have relied upon BIA for determining whether there have been massive imports of HSLWs from Taiwan. Because we have not received responses from any producers/exporters in this investigation, we are making the adverse assumption that imports were massive over a relatively short period of time. Therefore, we find that imports of HSLWs from Taiwan have been massive over a relatively short period of time. Based on our analysis, we determine that critical circumstances exist for imports of HSLWs from Taiwan.

**Interested Party Comments**

No interested party requested a hearing in this investigation, and, no formal hearing briefs were submitted to the Department. However on March 15, 1993, the AAFI submitted comments regarding the affirmative preliminary determination of critical circumstances. The AAFI maintains that there is no

reasonable basis for the Department's determination that massive imports exist. Specifically, the AAFI claims that the Department's import statistics do not support massive imports.

On March 31, 1993, petitioner responded to the claims made by the AAFI. Petitioner maintains that there is a reasonable basis to determine that critical circumstances exist. Petitioner argues that because no exporter/producer cooperated in this investigation the Department is unable to determine the amount of exports of the subject merchandise from Taiwan. Petitioner points to the fact that the import statistics are for a basket category, i.e., the HTSUS number covers merchandise other than the HSLWs under investigation. For these reasons petitioner notes that the Department must use the most adverse assumption when determining critical circumstances.

#### DOC Position

We disagree with AAFI. Because of a lack of cooperation from Taiwan producers/exporters, the most adverse assumption concerning critical circumstances must be made. Moreover, since imports of HSLWs are covered by a basket category, it is not feasible to use the imports statistics to determine whether the imports are massive. Therefore, we find that imports of the subject merchandise have been massive over a relatively short period of time. Also, we determine that critical circumstances exist for imports of HSLWs from Taiwan.

#### Continuation of Suspension of Liquidation

In accordance with section 735(c)(4)(A) of the Act, we are directing the Customs Service to continue to suspend liquidation of all entries of HSLWs from Taiwan that are entered, or withdrawn from warehouse, for consumption on or after November 25, 1992, which is the date 90 days prior to the publication of our preliminary determination. The Customs Service shall require a cash deposit or posting of a bond equal to 31.93 percent on all entries of HSLWs from Taiwan, as shown below. This suspension of liquidation will remain in effect until further notice.

#### ITC Notification

In accordance with section 735(d) of the Act, we have notified the ITC of our determination. As our final determination is affirmative, the ITC will determine whether these imports are materially injuring, or threaten material injury to, the U.S. industry within 45 days.

This determination is published pursuant to section 735(d) of the Act (19 U.S.C. 1673d(d)) and 19 CFR 353.20(a)(4).

Dated: May 3, 1993.

Joseph A. Spetrini,

Acting Assistant Secretary for Import Administration.

[FR Doc. 93-11145 Filed 5-10-93; 8:45 am]

BILLING CODE 3510-DS-P

Manufacturers/producers/exporters	Margin percentage
Spring Lake Enterprise Co., Ltd .....	31.93
Ceimiko Industrial Co., Ltd .....	31.93
Par Excellence Industrial Co., Ltd ..	31.93
All others .....	31.93

**APPENDIX B**  
**WITNESSES APPEARING AT THE HEARING**



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

Subject : CERTAIN HELICAL SPRING LOCKWASHERS  
FROM CHINA AND TAIWAN

Invs. Nos. : 731-TA-624 and 731-TA-625 (Final)

Date and Time : May 13, 1993 - 9:30 a.m.

Sessions were held in connection with the investigations in the Main Hearing Room 101 of the United States International Trade Commission, 500 E St., S.W., Washington, D.C.

Congressional Appearance:

The Honorable Thomas M. Barrett, U. S. Congressman, Fifth District,  
State of Wisconsin

In Support of the Imposition of  
Antidumping Duties:

Hume & Associates  
Monterey Park, CA  
On behalf of

Shakeproof Industrial Products Division,  
Illinois Tool Works

Joseph Musuraca, General Manager,  
ITW Shakeproof Industrial Products,  
Milwaukee, WI

Kenneth Vahl, Sales and Marketing Manager,  
ITW Shakeproof Industrial Products,  
Milwaukee, WI

Gary Thompson, Accounting Manager,  
ITW Shakeproof Industrial Products,  
Milwaukee, WI

Lee Harper, President  
West Coast Lockwasher Company, Inc.

Robert T. Hume )--OF COUNSEL

In Opposition to the Imposition of  
Antidumping Duties:

Miller, Canfield, Paddock and Stone  
Washington, D.C.  
On behalf of

Cemiko Industrial Company, Ltd.  
Spring Lake Enterprise Company, Ltd.  
Siquar Hardware Industry Co., Ltd.  
Likunog Industrial Co., Ltd.  
Taiwan Industrial Fastener Institute

William E. Perry                    )  
Terry X. Gao                        )--OF COUNSEL  
John Chiu                            )

Barnes, Richardson & Colburn  
Washington, D.C.  
On behalf of

American Association of Fastener Importers (AAFI)

Hangzhou Spring Washer Plant, Zhejiang Province,  
People's Republic of China

Steven Soule, Principal,  
Soule, Blake & Wechsler, Inc.  
Riverside, CT

Barry Porteous, President  
Porteous Fastener Company  
Carson, CA

Matthew T. McGrath                )  
                                     )--OF COUNSEL  
Ronald A. Oleynik                 )

**APPENDIX C**  
**SUMMARY DATA**





Table C-1

Carbon steel helical spring lockwashers: Summary data concerning the U.S. market, 1990-92

\* \* \* \* \*

Table C-2

Stainless steel helical spring lockwashers: Summary data concerning the U.S. market, 1990-92

\* \* \* \* \*

Table C-3

Subject helical spring lockwashers: Summary data concerning the U.S. market, 1990-92

\* \* \* \* \*

Table C-4

Other metallic helical spring lockwashers: Summary data concerning the U.S. market, 1990-92

\* \* \* \* \*

Table C-5

All helical spring lockwashers: Summary data concerning the U.S. market, 1990-92

(Quantity=1,000 pounds, value=1,000 dollars, unit values, unit labor costs, and unit COGS are per pound, period changes=percent, except where noted)

Item	Reported data			Period changes		
	1990	1991	1992	1990-92	1990-91	1991-92
	*	*	*	*	*	*
U.S. importers' imports from--						
China:						
U.S. shipments quantity..	5,404	6,701	7,091	+31.2	+24.0	+5.8
U.S. shipments value.....	3,779	4,118	4,272	+13.0	+9.0	+3.7
Unit value.....	\$0.70	\$0.61	\$0.60	-13.9	-12.1	-2.0
Ending inventory qty.....	2,789	2,864	3,552	+27.4	+2.7	+24.0
Taiwan:						
U.S. shipments quantity..	388	629	735	+89.4	+62.1	+16.9
U.S. shipments value.....	482	1,056	1,465	+203.9	+119.1	+38.7
Unit value.....	\$1.25	\$1.68	\$1.99	+60.0	+34.9	+18.6
Ending inventory qty.....	104	182	222	+113.5	+75.0	+22.0
Subject sources:						
U.S. shipments quantity..	5,792	7,330	7,826	+35.1	+26.6	+6.8
U.S. shipments value.....	4,261	5,174	5,737	+34.6	+21.4	+10.9
Unit value.....	\$0.74	\$0.71	\$0.73	-0.4	-4.1	+3.8
Ending inventory qty.....	2,893	3,046	3,774	+30.5	+5.3	+23.9
Other sources:						
U.S. shipments quantity..	677	849	1,094	+61.6	+25.4	+28.9
U.S. shipments value.....	1,160	1,351	1,444	+24.5	+16.5	+6.9
Unit value.....	\$1.70	\$1.59	\$1.31	-22.8	-6.5	-17.5
Ending inventory qty.....	124	141	135	+8.9	+13.7	-4.3
All sources:						
U.S. shipments quantity..	6,469	8,179	8,920	+37.9	+26.4	+9.1
U.S. shipments value.....	5,421	6,525	7,181	+32.5	+20.4	+10.1
Unit value.....	\$0.84	\$0.80	\$0.80	-3.9	-4.7	+0.8
	*	*	*	*	*	*

Table C-6

Carbon steel helical spring lockwashers: Likunog's capacity, production, inventories, capacity utilization, and shipments, 1990-92 and 1993-94 (projected)

\* \* \* \* \*

Table C-7

Stainless steel helical spring lockwashers: Likunog's capacity, production, inventories, capacity utilization, and shipments, 1990-92 and 1993-94 (projected)

\* \* \* \* \*

APPENDIX D  
ANALYSIS OF ACQUISITION COSTS



During the verification, the Commission staff reviewed the details of the acquisition costs incurred by ITW or Shakeproof as shown in the following tabulation (in 1,000 dollars):

\* \* \* \* \*



**APPENDIX E**

**COMMENTS BY THE U.S. PRODUCERS ON THE IMPACT  
OF IMPORTS OF CERTAIN HELICAL SPRING LOCKWASHERS  
FROM CHINA AND/OR TAIWAN ON THEIR GROWTH, INVESTMENT,  
ABILITY TO RAISE CAPITAL, AND DEVELOPMENT AND PRODUCTION EFFORTS**





The Commission requested U.S. producers to describe and explain the actual and potential negative effects, if any, of imports of certain helical spring lockwashers from China and/or Taiwan on their growth, investment, ability to raise capital, and development and production efforts (including efforts to develop a derivative or improved version of their product). MW responded \*\*\* and Crest responded \*\*\*. Beall responded \*\*\*.

Shakeproof provided the following comments.

Actual Negative Effects

\* \* \* \* \*

Anticipated Negative Effects

\* \* \* \* \*

Influence of Imports on Capital Investment

\* \* \* \* \*



APPENDIX F  
IMPORT DATA FROM OFFICIAL STATISTICS



Table F-1

Imports from China: Imports of product classified under HTS item  
7318.21.0000, by months, January 1990-March 1993  
(In thousands of pounds)

Month	1990	1991	1992	1993
January.....	493	417	856	807
February.....	241	400	585	463
March.....	702	127	628	3
April.....	909	533	259	-
May.....	827	586	497	-
June.....	513	532	567	-
July.....	600	698	790	-
August.....	821	509	493	-
September.....	404	558	506	-
October.....	442	603	772	-
November.....	313	920	724	-
December.....	494	1,083	1,283	-
Total.....	6,759	6,966	7,959	1,272

Source: Compiled from official statistics of the U.S. Department of Commerce.

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

Table F-2

Imports from Taiwan: Imports of product classified under HTS item  
7318.21.0000, by months, January 1990-March 1993  
(In thousands of pounds)

Month	1990	1991	1992	1993
January.....	120	150	92	166
February.....	37	133	140	92
March.....	96	123	85	135
April.....	108	81	128	-
May.....	56	136	83	-
June.....	66	56	168	-
July.....	105	94	148	-
August.....	102	109	133	-
September.....	165	119	142	-
October.....	124	164	163	-
November.....	102	143	135	-
December.....	164	106	168	-
Total.....	1,246	1,415	1,585	393

Source: Compiled from official statistics of the U.S. Department of Commerce.

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

According to the official import statistics compiled by Commerce, imports of product under HTS classification 7318.21.0000 from China rose from 6.8 million pounds in 1990 to 7.0 million pounds in 1991 and 8.0 million pounds in 1992, an increase of 3.1 percent between 1990 and 1991, 14.3 percent between 1991 and 1992, and 17.8 percent over the period 1990-92. Imports from China declined steadily and markedly between January and March 1993. Also according to official import statistics, imports of product under HTS classification 7318.21.0000 from Taiwan rose from 1.2 million pounds in 1990 to 1.4 million pounds in 1991 and 1.6 million pounds in 1992, an increase of 13.6 percent between 1990 and 1991, 12.0 percent between 1991 and 1992, and 27.2 percent over the period 1990-92. Imports from Taiwan fluctuated between January and March 1993.

Imports of product under HTS classification 7318.21.0000 from China entered the United States through 25 different customs districts, while such product imported from Taiwan entered through 26. The top 7 customs districts, accounting for 90.3 percent of imports by weight of such product from China during 1990-92 were, in descending order by weight, Los Angeles, CA; Chicago, IL; Baltimore, MD; Savannah, GA; Philadelphia, PA; New York, NY; and Houston-Galveston, TX. The top 7 customs districts, accounting for 83.2 percent of imports of such product from Taiwan during 1990-92 were, in descending order, Providence, RI; Los Angeles, CA; New York, NY; Chicago, IL; Philadelphia, PA; New Orleans, LA; and Baltimore, MD.

The value of imports of product under HTS classification 7318.21.0000 from China, as recorded by official statistics, declined from \$2.8 million in 1990 to \$2.7 million in 1991, then rose to \$3.3 million in 1992. The value of such imports declined steadily between January and March 1993, totaling \$0.6 million for the first quarter. The value imports of product under HTS classification 7318.21.0000 from Taiwan rose from \$2.2 million in 1990 to \$2.5 million in 1991 and \$2.9 million in 1992. Between January and March 1993, the value of such imports totaled \$0.8 million.

**APPENDIX G**  
**VOLUME OF SALES TRANSACTIONS**





Figure G-1

Helical spring lockwashers: Weighted-average largest quantity sales of products 1 and 2, by quarters, January 1990-December 1992

\* \* \* \* \*

Figure G-2

Helical spring lockwashers: Weighted-average largest quantity sales of products 3 and 4, by quarters, January 1990-December 1992

\* \* \* \* \*

Figure G-3

Helical spring lockwashers: Weighted-average largest quantity sales of products 5 and 6, by quarters, January 1990-December 1992

\* \* \* \* \*

