

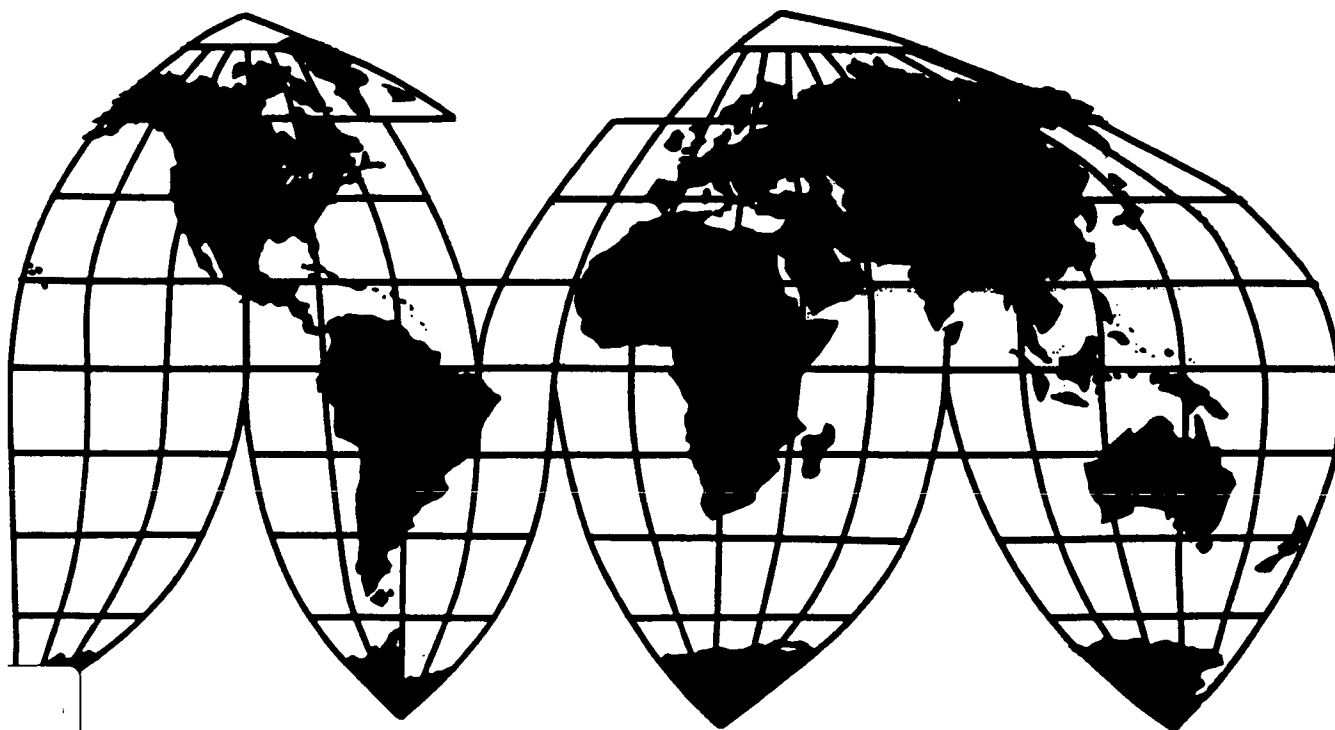
Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide From the Netherlands

Investigation No. 731-TA-652 (Preliminary)

Publication 2672

August 1993

U.S. International Trade Commission



U.S. International Trade Commission

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Note.--Information that would reveal confidential operations of individual concerns may not be published and therefore has been deleted from this report.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

DETERMINATION AND VIEWS OF THE COMMISSION

UNITED STATES INTERNATIONAL TRADE COMMISSION

Investigation No. 731-TA-652 (Preliminary)

ARAMID FIBER FORMED OF POLY PARA-PHENYLENE TEREPHTHALAMIDE
FROM THE NETHERLANDSDetermination

On the basis of the record¹ developed in the subject investigation, the Commission determines, pursuant to section 733(a) of the Tariff Act of 1930 (19 U.S.C. § 1673b(a)), that there is a reasonable indication that an industry in the United States is materially injured by reason of imports from the Netherlands of aramid fiber formed of poly para-phenylene terephthalamide (PPD-T aramid fiber),² provided for in subheadings 5402.10.30, 5402.32.30, 5503.10.00, and 5601.30.00 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value (LTFV).

Background

On July 2, 1993, a petition was filed with the Commission and the Department of Commerce by counsel on behalf of E. I. Du Pont de Nemours & Co., Wilmington, DE, alleging that an industry in the United States is materially injured or threatened with material injury by reason of LTFV imports of PPD-T aramid fiber from the Netherlands. Accordingly, effective July 2, 1993, the Commission instituted antidumping investigation No. 731-TA-652 (Preliminary).

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

² The imported merchandise which is the subject of Commerce's investigation is all forms of PPD-T aramid fiber from the Netherlands. This includes PPD-T aramid fiber in the form of filament yarn, staple, pulp (wet or dry), non-wovens, chopped fiber, and floc.

Notice of the institution of the Commission's investigation and of a public conference to be held in connection therewith was given by posting copies of the notice in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and by publishing the notice in the Federal Register of July 12, 1993 (58 F.R. 37503). The conference was held in Washington, DC, on July 23, 1993, and all persons who requested the opportunity were permitted to appear in person or by counsel.

VIEWS OF THE COMMISSION

Based on the record in this preliminary investigation, we unanimously determine that there is a reasonable indication that the industry in the United States producing aramid fiber formed of poly para-phenylene terephthalamide ("PPD-T aramid fiber") is materially injured by reason of imports of PPD-T aramid fiber from the Netherlands that allegedly are sold in the United States at less than fair value (LTFV).¹

I. THE LEGAL STANDARD FOR PRELIMINARY DETERMINATIONS

The legal standard in preliminary antidumping duty investigations requires us to determine, based upon the best information available at the time of the preliminary determination, whether there is a reasonable indication that a domestic industry is materially injured or threatened with material injury by reason of the allegedly LTFV imports.² In applying this standard, we weigh the evidence to determine whether "(1) the record as a whole contains clear and convincing evidence that there is no material injury or threat of material injury; and (2) no likelihood exists that any contrary evidence will arise in a final investigation."³ The U.S. Court of Appeals for the Federal Circuit has held that this interpretation of the standard "accords with clearly discernible legislative intent and is sufficiently reasonable."⁴

¹ 19 U.S.C. § 1673b(a).

² Id. See also American Lamb Co. v. United States, 785 F.2d 994 (Fed. Cir. 1986); Calabrian Corp. v. United States, 794 F.Supp. 377, 386 (Ct. Int'l Trade 1992).

³ American Lamb, 785 F.2d at 1001; See also Torrington Co. v. United States, 790 F.Supp. 1161, 1165 (Ct. Int'l Trade 1992), aff'd, 991 F.2d 809 (Fed. Cir. 1993).

⁴ American Lamb, 785 F.2d 994 at 1004.

II. LIKE PRODUCT

A. In General

In determining whether there is a reasonable indication that an industry in the United States is materially injured or is threatened with material injury by reason of the allegedly LTFV imports, we must first define the "like product" and the "industry." Section 771(4)(A) of the Tariff Act of 1930 ("the Act") defines the relevant 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...."⁵ In turn, 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...."⁶ Our determination of what is the appropriate like product or products is a factual determination, and we apply the statutory standard of "like" or "most similar in characteristics and uses" on a case-by-case basis.⁷

The Department of Commerce has identified the articles subject to this investigation as:

all forms of poly para-phenylene terephthalamide aramid

⁵ 19 U.S.C. § 1677(4)(A).

⁶ 19 U.S.C. § 1677(10).

⁷ Asociacion Colombiana de Exportadores de Flores et al. v. United States, 693 F. Supp. 1165, 1169 (Ct. Int'l Trade 1988). In analyzing like product issues, the Commission considers a number of factors including: (1) physical characteristics and uses; (2) interchangeability of the products; (3) channels of distribution; (4) customer and producer perceptions of the products; (5) the use of common manufacturing facilities and production employees; and (6) where appropriate, price. Calabrian Corp. v. United States, 794 F. Supp. at 382, n.4. No single factor is dispositive, and the Commission may consider other factors relevant to its like product determination in a particular investigation. The Commission looks for clear dividing lines among possible like products, and disregards minor variations. See S. Rep. No. 249, 96th Cong., 1st Sess. 90-91 (1979); Torrington Co. v. United States, 747 F. Supp. 744, 748-49 (Ct. Int'l Trade 1990), aff'd, 938 F.2d 1278 (Fed. Cir. 1991).

fiber (PPD-T) from the Netherlands. This includes PPD-T fiber in the form of filament yarn, staple, pulp (wet or dry), non-wovens, chopped fiber and floc.⁸

PPD-T aramid fiber is a high-performance synthetic fiber. Special characteristics include high strength/low weight, high modulus (resistance to deformation by stretching), high thermal stability, and fire and chemical resistance. PPD-T aramid fiber is distinguished from other fibers by its chemical composition, specific properties, method of production, and range of end uses.⁹

PPD-T aramid fiber may be produced in a variety of forms, including filament yarn, staple, pulp, and nonwoven fabric ("nonwovens").¹⁰ The production process for all of the forms of fiber begins with the manufacture of an aramid polymer composed of p-phenylenediamine and terephthaloyl chloride, which is then spun into filament yarn.¹¹ Yarn has independent uses in reinforced rubber products, such as tires, and in advanced composites, ropes and cables and optical fiber. Yarn also may be processed into staple and pulp. PPD-T aramid filament yarn and staple may be further processed into nonwoven fabric.¹²

⁸ 58 Fed. Reg. 40623 (July 29, 1993). Report at I-3.

⁹ Report at I-5.

¹⁰ Staple fiber is yarn that is cut to lengths typically between 3/4 inch and 6 inches and sometimes crimped to facilitate weaving into fabric. Chopped fiber and floc are considered to be types of staple. Floc fibers are precision-cut short fibers, which typically range from 1/25 inch to 1/4 inch in length, and are used in PPD-T paper and a wide variety of reinforcement resin systems. Chopped fiber is filament yarn that has been randomly cut in 1/4 inch and 1/2 inch lengths and is used in friction materials, rubber goods, and composites. Pulp is yarn that has been cut and fibrillated and is used in friction products, gaskets, and advanced composites. Report at I-6 to I-7.

¹¹ Report at I-10.

¹² Nonwovens were discussed only briefly by the parties in their appearances before the Commission. Respondents' Post-conference Brief at 5, n.6. In any final investigation additional information will be sought regarding this product.

B. Like Product Finding^{13 14}

The like product issue in this investigation is whether PPD-T aramid fiber (including yarn, staple, pulp, and nonwovens) should be divided into multiple like products or whether the various forms constitute a single like product. Petitioner, E.I. Du Pont de Nemours & Company ("DuPont"), argues that all forms of PPD-T aramid fiber comprise a single like product because they are produced from the same organic polymer, share the same physical and performance characteristics, are sold in the same channels of trade and are predominantly produced using common manufacturing facilities.¹⁵ The respondent, Akzo N.V., a Dutch manufacturer and exporter of PPD-T aramid fiber to the United States, contends that there are four separate like products consisting of filament yarn, staple, pulp, and nonwovens. Respondents assert

¹³ In this investigation, the like product determination involves aspects of both vertical product differentiation (in that staple, pulp, and nonwovens are articles produced from yarn) and horizontal product differentiation (in that yarn, staple, pulp, and nonwovens are all end products sold at the same level of commerce). With respect to vertical product differentiation, in prior investigations the Commission has used a "semifinished product" analysis, in which it has examined the following factors: (1) the necessity for, and the costs of, further processing; (2) the degree of interchangeability of articles at the different stages of production; (3) whether the article at an earlier stage of production is dedicated to use in the finished article; (4) whether there are significant independent uses or markets for the finished and unfinished articles; and (5) whether the article at an earlier stage of production embodies or imparts to the finished article an essential characteristic or function. The parties are invited to address whether the semifinished analysis should be applied to the definition of the like product in any final investigation in this proceeding.

¹⁴ Commissioner Rohr notes that because this investigation involves both vertical and horizontal product differentiation, the parties are urged to address both aspects should this matter return to the Commission for a final investigation. He further notes that, with respect to the vertical product issues, he has recently expressed his dissatisfaction with the Commission's so-called semifinished products analysis, which he feels has been inconsistently applied over the years. He also urges the parties to address the issue of alternatives to the traditional analysis in any final investigation.

¹⁵ DuPont Post-conference Brief at 8.

that a finding of four separate like products is warranted by differences in physical characteristics, the lack of interchangeability in end uses for the different forms of aramid fiber, and the alleged existence of different manufacturing facilities and production employees for those products.¹⁶

In this preliminary investigation, we determine that all PPD-T aramid fiber is a single like product. As explained below, we determine that the generally similar physical characteristics, regardless of end use, of PPD-T aramid fiber, U.S. producer and consumer perceptions, and common U.S. production processes and channels of distribution, all indicate that PPD-T aramid fiber is a single like product without the clear dividing lines between multiple products proposed by Respondents.¹⁷

1. Physical characteristics. As staple, pulp, and nonwovens are processed from yarn (or in the case of nonwovens, from yarn and staple), they share the same chemical composition and physical characteristics as yarn. The various forms of aramid fiber have been developed for specific end uses. The additional physical properties required for certain end uses, not

¹⁶ Respondents' Post-conference Brief at 5-11.

¹⁷ Commissioner Brunsdale and Commissioner Crawford also find one like product for the purpose of this preliminary investigation. Since aramid fiber staple, pulp, and nonwovens are further processed from aramid fiber yarn, however, they do not believe the traditional analysis is appropriate. Rather, they have tried to determine whether subject imports have disparate effects on different segments of the industry. Unfortunately, until very late in this preliminary investigation, there was no evidence of any domestic producer of these products other than DuPont. At this point, it appears that there are some other domestic producers of aramid fiber staple, pulp, and nonwovens. The Commission does not know, however, if they are completely independent from DuPont. In a final investigation Commissioner Brunsdale and Commissioner Crawford will revisit the like product issue. They are interested in finding out more about these other producers and their relationships with DuPont and Akzo. In addition, they would like parties to submit a more complete analysis of the like product determination for semifinished and finished products, including additional information regarding the extent of independent uses and markets for aramid fiber, staple, pulp and nonwovens.

satisfied by aramid yarn, are imparted during the further processing necessary to produce staple, pulp, and nonwovens.¹⁸ All of the particularized types of aramid fiber, however, are engineered to permit various manufacturers to incorporate the essential characteristics common to all aramid fiber into their finished products.¹⁹

2. Interchangeability. The different forms of PPD-T aramid fiber are not interchangeable in specific end uses to any substantial degree.²⁰ This is a result of the specific manufacturing requirements of the end users which require that the fiber be provided in a form that is most suitable to their particular use and/or manufacturing process.

3. Customer and producer perceptions. The limited information on customer perceptions comes primarily from statements provided by purchasers who were contacted regarding allegations of lost sales and lost revenues. These customers offered their views as to the advantages and disadvantages of PPD-T aramid fiber generally vis-a-vis other types of fiber as opposed to the relative substitutability of one form of PPD-T aramid fiber for another.²¹

¹⁸ For example, pulp consists of filament yarn that is cut and then fibrillated to increase surface area and increase its dispersion properties. This processing allows the aramid fiber to be used in products such as brake components where it is necessary to blend the fiber with other materials.

¹⁹ DuPont Post-conference Brief at 10-11.

²⁰ The Commission previously has considered similar interchangeability issues in cases involving other chemical products. For example, in Polyethylene Terephthalate Film, Sheet, and Strip from Japan and the Republic of Korea, Inv. Nos. 731-TA-458 and 459 (Final), USITC Pub. 2383 (May 1991), the Commission considered an industry that produced a multitude of different film types that were similar with respect to the basic production process and inherent physical characteristics, but which because of the distinct demands of specific end uses were manufactured with many different finishes and coatings as well as in different thicknesses. The Commission found that such variations did not create sufficient differences to justify finding more than a single like product. The Commission reached a similar conclusion in Granular Polytetrafluorethylene Resin from Italy and Japan, Inv. Nos. 731-TA-385 and 386 (Final), USITC Pub. 2112 (August 1988).

²¹ Report at I-32 through I-36.

Petitioner, which is the only domestic producer of PPD-T aramid filament yarn and the exclusive source of domestically manufactured pulp and staple fiber, considers its overall operations involving PPD-T aramid fiber to constitute the production of a single like product.²²

4. Production processes, facilities, and employees. Most of the manufacturing facilities and production employees are common to the production of all four types of PPD-T aramid fiber. Nonetheless, additional processing equipment and personnel are required to produce staple, pulp, and nonwovens. The domestic industry indicates that the cost of such further processing is small in comparison to the cost of manufacturing the aramid yarn.²³

5. Channels of distribution. Yarn, staple, and pulp are sold in the same distribution channels, with end users purchasing directly from the manufacturer all of the aramid fiber that is sold by the domestic industry.²⁴ There are no distributors or wholesalers.

6. Price. Prices of PPD-T aramid fiber generally have been based on their value in a particular end use. Therefore, the same form of aramid fiber may be sold to different customers at widely varying prices.²⁵ As a result, the pricing data in this investigation do not provide a meaningful indicator of whether there is a single like product and the Commission has not relied on industry pricing for the purposes of its like product finding.

We determine in this preliminary investigation that all forms of PPD-T aramid fiber constitute a single like product. In any final investigation, however, we will revisit the issue.

²² DuPont's Petition at 14-15.

²³ Conference Transcript at 43-44. DuPont Post-conference brief at 13-14.

²⁴ Report at I-15.

²⁵ Report at I-27 to I-28.

III. DOMESTIC INDUSTRY

The principal question in defining the domestic industry is whether the domestic operations of several companies that process yarn into pulp and staple fiber on a contractual basis for DuPont conduct production activities that are sufficient to make them part of the domestic industry.²⁶ It has been the general practice of the Commission to include all domestic production, whether toll produced, captively consumed, or sold in the open market, in establishing the scope of the domestic industry.²⁷

In deciding whether a particular firm is a domestic producer, the Commission examines the overall nature of a firm's production-related activities, including the source and extent of its capital investment, technical expertise in production activities, value added, employment, quantity and type of domestically sourced parts, and other costs and activities in the United States directly leading to the production of the like product.²⁸ No single factor is dispositive, and the decision whether to include a producer in the domestic industry is made on a case-by-case basis.²⁹

²⁶ DuPont manufactures yarn in its Richmond, Virginia facility. Staple and pulp sold by DuPont are manufactured for it by a number of independently owned companies that process DuPont yarn under contract. The extent of DuPont's dependence on outside contractors for processing of staple and pulp did not become evident until the staff conference. We will seek more information concerning the operations of the contractors in any final investigation.

²⁷ See Shop Towels from Bangladesh, Inv. No. 731-TA-514 (Final), USITC Pub. 2487 (Feb. 1992) (tolling); DRAMs of One Megabit and Above From the Republic of Korea, Inv. No. 731-TA-556 (Final), USITC Pub. 2629 at 13-16 (May 1993).

²⁸ See, e.g., Certain Carbon Steel Butt-Weld Pipe Fittings from China and Thailand, Inv. Nos. 731-TA-520 and 521 (Final), USITC Pub. 2527 at 6, n.16 (June 1992). Commission practice has not established a specific level of U.S. value added, or product finished value, required to qualify as a domestic producer.

²⁹ In considering the foregoing factors, it is important to recognize that the criteria normally have been applied in situations where the Commission is seeking to determine whether a domestic processor of imported materials should be included in the domestic industry.

Applying the above-referenced criteria in the instant investigation is made difficult by the absence of data regarding many of the factors that the Commission considers to be relevant. For example, there is no information on the record concerning employment levels, production costs, or profitability at the companies processing staple and pulp under contract to DuPont.³⁰

Petitioner has supplied data regarding the relative value added by the contractors. In the case of staple and pulp, the value added may be fairly substantial.³¹ Much of the technical expertise required in the manufacturing process appears to be provided by DuPont employees assigned to these contractors.³²

Based on the information now available and for purposes of this preliminary determination, we find that the contractors that process yarn into staple fiber and pulp possess sufficient production-related activities to form part of the domestic industry.^{33 34} Therefore, in light of our like product determination and the foregoing discussion, we find that there is a single domestic industry comprised of domestic producers of all forms of PPD-T aramid fiber, which include yarn, staple, pulp, and nonwovens. We intend to examine this issue further in any final investigation.

³⁰ Although data concerning these producers was sought after the staff conference, once it was revealed that DuPont contracted out its processing of staple and pulp, only incomplete responses containing shipment data were received.

³¹ DuPont Post-conference Brief at 14.

³² DuPont Post-conference Brief at 18.

³³ We note that whether the contractors are included in the industry or not does not alter the industry data in this preliminary investigation given the limited industry information provided by them.

³⁴ Chairman Newquist determines, for purposes of this preliminary investigation, that these contractors are not producers and, accordingly, are not part of the domestic industry.

IV. CONDITION OF THE INDUSTRY

When determining whether there is material injury to a domestic industry by reason of the LTFV imports, the Commission considers all relevant economic factors that have a bearing on the state of the industry in the United States. These factors include output, sales, inventories, capacity utilization, market share, employment, wages, productivity, profits, cash flow, return on investment, ability to raise capital, and research and development. No single factor is determinative, 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."³⁵ Much of our analysis of the foregoing factors is provided in general terms. This is done to protect the confidentiality of the underlying data, given that one producer accounts, directly or indirectly, for virtually all of domestic production and sales of the like product.

One condition of competition relevant to this industry is the decline in purchases of military related goods by the U.S. Department of Defense. Purchases of helmets and other protective apparel fashioned from PPD-T aramid fiber have declined permanently according to the domestic industry.³⁶ In addition, other fibers such as polyester, glass, and acrylic, may be supplanting PPD-T aramid fiber in certain end use markets.³⁷ A final condition of competition is the expiration of DuPont's patents relating to

³⁵ 19 U.S.C. § 1677(7)(C)(iii).

³⁶ DuPont Post-conference Brief at 22.

³⁷ Report at I-8. The lower price of some of the alternative fiber products may be an independent source of pressure on the price of PPD-T aramid fiber. The Commission intends to develop additional information on the effect of such inter-fiber competition in any final investigation.

Neither the petitioner nor the respondents suggested that the like product should be expanded to include non-aramid fiber products that to a certain degree compete with aramid fiber for specific end uses.

PPD-T aramid fiber in March 1992. Patent protection strengthened its market position in the United States and afforded DuPont a significant amount of freedom with respect to pricing strategy. DuPont adopted and has maintained a "value in use" pricing methodology which establishes a different price for the same form of aramid fiber depending on the specific end use in which it is consumed. We have examined the various indicators of the domestic industry's performance in light of these conditions of competition.³⁸

Apparent U.S. consumption of PPD-T aramid fiber decreased during 1990-1991 and again from 1991 to 1992; interim 1993 (January-March) consumption was higher than for the same period in 1992.³⁹

Domestic production increased from 1990 to 1991 and then decreased in 1992 to levels below those prevailing in 1990.⁴⁰ During interim 1993, domestic production increased as compared to interim 1992. Average-of-period capacity to produce PPD-T aramid fiber increased overall from 1990 to 1992 and remained static when comparing interim periods.⁴¹ Capacity utilization increased from 1990-1991, but then decreased in 1992 to the lowest level during the period of investigation. Interim 1993 capacity utilization was somewhat higher than in the comparable 1992 period.

The domestic industry's U.S. shipments declined, when measured on a volume basis, throughout the period of investigation, including the interim periods.⁴² The average unit value of the domestic industry's U.S. shipments

³⁸ Even after the expiration of the patents, no domestic competitor (or foreign competitor other than Akzo) entered the U.S. market for PPD-T aramid fibers. Competing products from the Netherlands began to enter the United States in 1988 under a licensing agreement with DuPont.

³⁹ Report, Table 2, at I-16.

⁴⁰ Report, Table 4, at I-17.

⁴¹ Id.

⁴² Report, Table 5, at I-18.

increased from 1990 to 1991, but then declined in 1992 and continued to fall between the interim periods.⁴³ U.S. producer exports of PPD-T aramid fiber declined overall from 1990 to 1992, but then increased between interim 1992 and interim 1993.⁴⁴

The domestic industry's end-of-period inventories of PPD-T aramid fiber increased from 1990 to 1991 and then declined both between 1991 and 1992 and during the interim periods of 1992 and 1993. End-of-period inventories in relation to production fluctuated during the period of investigation with the highest level occurring in 1991.⁴⁵

The average number of production and related workers producing PPD-T aramid fiber declined in each year of the investigatory period and continued to decline between interim periods in 1992 and 1993.⁴⁶ The hours worked also declined during each year from 1990 to 1992, and continued to decline between interim periods.⁴⁷

Net sales, measured on a value basis, declined from 1990 to 1991 and again from 1991 to 1992. The decline continued between interim periods in 1992 and 1993. The volume of net sales by the domestic industry followed the same pattern of decline throughout the investigatory period.⁴⁸ The shrinking sales volume resulted in a contraction in gross profits, operating income, and

⁴³ Report, Table 5, at I-18.

⁴⁴ Id. Petitioner manufactures PPD-T aramid filament yarn in Northern Ireland and in Japan from U.S.-produced PPD-T polymer. The decline in exports of PPD-T aramid fiber is in part explained by DuPont's decision to source sales outside of the United States to some extent from offshore production sites. DuPont Post-conference Brief at 6-7. The impact of that decision, if any, on the financial performance of the domestic industry will be further examined in any final investigation by the Commission.

⁴⁵ Report, Table 6, at I-18.

⁴⁶ Report, Table 7, at I-19.

⁴⁷ Id.

⁴⁸ Report, Table 8, at I-20.

net income for the domestic industry in 1991-1992, after a small increase in net income from 1990 to 1991.⁴⁹ End of the period net income was well below that obtained by the industry in 1990. The downward trend in profitability continued between the interim periods.⁵⁰

Capital investment by the domestic industry has declined throughout the period of investigation. The only exception to the downward trend in investment was the increase that occurred from interim 1992 to interim 1993.⁵¹ Research and development expenditures by the domestic industry increased irregularly during the period of investigation with the exception of the interim periods, where research and development expenses declined.^{52 53}

V. REASONABLE INDICATION OF MATERIAL INJURY BY REASON OF ALLEGED LTFV IMPORTS

In making a preliminary determination in an antidumping investigation, the Commission is to determine whether there is a reasonable indication that an industry in the United States is materially injured "by reason of" the imports under investigation.⁵⁴ The Commission must consider the volume of imports, their effect on prices for the like product, and their impact on domestic producers of the like product, but only in the context of U.S. production operations.⁵⁵ Although the Commission may consider causes of injury other than the LTFV imports, it is not to weigh causes.^{56 57 58} For the

⁴⁹ Report, Table 8, at I-20.

⁵⁰ Id.

⁵¹ Report at I-21.

⁵² Id.

⁵³ Based upon the foregoing, Chairman Newquist and Commissioner Rohr determine that the domestic aramid fiber industry is currently experiencing material injury.

⁵⁴ 19 U.S.C. § 1673b(a).

⁵⁵ Id. § 1677(7)(B)(i).

⁵⁶ See, e.g., Citrosuco Paulista, S.A. v. United States, 704 F.Supp. at 1101.

Chairman Newquist, Commissioner Rohr and Commissioner Nuzum further note that the Commission need not determine that imports are "the principal, a substantial or a significant cause of material injury." S. Rep. No. 249, at 57, 74. Rather, a finding that imports are a cause of material injury is

(continued...)

reasons discussed below, we find that there is a reasonable indication that the domestic PPD-T aramid fiber industry is materially injured by reason of alleged LTFV imports of PPD-T aramid fiber from the Netherlands.

Shipments of the subject imported merchandise increased in each segment

⁵⁶ (...continued)

sufficient. See, e.g., Metallverken Nederland B.V. v. United States, 728 F. Supp. 730, 741 (Ct. Int'l Trade 1989); Citrusoco Paulista, S.A. v. United States, 704 F. Supp. at 1101.

⁵⁷ 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 United States Engineering & Forging v. United States, 779 F. Supp. 1375, 1391 (Ct. Int'l Trade 1991) ("[I]t 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) with Metallverken Nederland B.V. v. United States, 728 F. Supp. at 741 (affirming a determination by two Commissioners that "the imports were a cause of material injury") and USX Corp. v. United States, 682 F. Supp. 69, 67 (Ct. Int'l Trade 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 determined 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, at 75.

⁵⁸ Commissioner Crawford and Brunsdale note that the statute requires that the Commission determine whether a domestic industry is "materially injured by reason of" the allegedly LTFV imports. They find that the clear meaning of the statute is to require a determination on whether the domestic industry is materially injured by reason of LTFV imports, not by reason of LTFV imports among other things. Many, if not most domestic industries, are subject to injury from more than one economic factor. Of these factors, there may be more than one that independently is causing material injury to the domestic industry. It is assumed in the legislative history that the "ITC will consider information which indicates that harm is caused by factors other than less-than-fair-value imports." Id. However, the legislative history makes it clear that the Commission is not to weigh or prioritize the factors that are independently causing material injury. Id. at 74; H.R. Rep. No. 317, 96th Cong., 1st Sess. 46-47 (1979). The Commission is not to determine if the allegedly LTFV imports are "the principal, a substantial or a significant cause of material injury." S. Rep. No. 249 at 74. Rather, it is to determine whether any injury "by reason of" the alleged LTFV imports is material. That is, the Commission must determine if the subject imports are causing material injury to the domestic industry. "When determining the effect of imports on the domestic industry, the Commission must consider all relevant factors that can demonstrate if unfairly traded imports are materially injuring the domestic industry." S. Rep. No. 71, 100th Cong., 1st Sess. 116 (1987) (emphasis added).

of the investigatory period, including an increase between the 1992 and 1993 interim periods.⁵⁹ Import volume from the Netherlands increased significantly during 1990-1991 and 1991-1992, but declined in interim 1993 as compared to interim 1992.⁶⁰ The market share obtained by the subject merchandise, moreover, is substantial on an absolute basis. Subject imports as a share of apparent U.S. consumption also increased significantly in 1991 and again in 1992, increasing as well between interim periods in 1992 and 1993 as shipments by the domestic industry contracted and total apparent U.S. consumption declined.⁶¹ We find the volume of the subject imports to be significant, particularly in view of the fact that the subject imports' share of apparent U.S. consumption increased substantially throughout the period of investigation, while the market share of the U.S. industry declined commensurately.⁶²

The subject imports also are having an effect on prices for the domestic like product. According to purchaser comments, domestic industry prices had been rising steadily prior to the introduction of subject imports into the U.S. market.⁶³ Many of these purchasers stated that they bought the subject imports because of their lower price.⁶⁴ In other instances, purchasers simply stated that they desired to foster competition or secure a second source of supply.

Substitutability between the domestic like product and subject imports

⁵⁹ Report, Table 2, at I-16.

⁶⁰ Report, Table 14, at I-26. The volume of shipments and the import quantity reported by Respondents for specific time periods sometimes were different. Respondents suggested that these differences were attributable to different internal reporting schedules and inventories.

⁶¹ Report, Table 15, at I-27.

⁶² Minimal quantities of non-subject imports from the petitioner's production facility in Ireland were included separately in total apparent domestic consumption during the period of investigation.

⁶³ Report at I-32 to I-36.

⁶⁴ Id.

is a factor we considered in assessing the price effects in this preliminary investigation. The more substitutable the alleged LTFV imports are with the domestic like product, the more likely consumers will base their purchasing decisions on price differences between the products. Customers purchasing PPD-T aramid fiber perceived the domestic and imported products to be highly substitutable, although qualifying tests lasting between six months and two years and involving substantial expense are normally required to introduce a product into a new customer's manufacturing operations.^{65 66}

The Commission also collected price data for products comprising a majority of the domestic shipments by both the domestic industry and the Dutch manufacturer, respectively.⁶⁷ Although these price comparisons revealed that in most instances the imported product undersold the comparable domestic product, we did not base our determination on these data due to their limited probative value.⁶⁸ Instead, we relied principally on purchasers' statements indicating that the lower price of the imports was an important factor in their buying decisions. We note, however, that the trends reflected in the pricing data received in the producer and importer questionnaire responses confirm the purchasers' statements.^{69 70}

⁶⁵ Report at I-32 to I-36.

⁶⁶ Commissioner Rohr does not believe that substitutability is an independent criterion for determining causation. He does not join in this discussion.

⁶⁷ Report at I-30.

⁶⁸ Report, Table 17, at I-30 and I-29-I-30. In this preliminary investigation, the Commission found that the pricing trends reflected in data contained in industry and importer questionnaire responses were not meaningful because individual forms of aramid fiber are priced based on end use value. Therefore, price increases or declines in particular periods may reflect not only pressure from imports of the subject merchandise, but also the particular end uses for which the particular article was sold in a given instance or specific time period.

⁶⁹ Report, Table 17, at I-30 and I-29 to I-32.

⁷⁰ Commissioner Rohr notes that the statistical pricing data gathered by the Commission is of limited value in his evaluation of this industry and he does not rely on it. He notes that because of value-in-use pricing employed by Du Pont, price comparisons, which are based on sales to different customers and

(continued...)

Based on the foregoing, we find that underselling by the subject imports is significant.⁷¹ We determine in this preliminary investigation that there is a reasonable indication that the subject imports suppressed prices for the like product.^{72 73}

Additionally, the Commission confirmed a number of lost sales to the subject imports.⁷⁴ Many purchasers indicated that they purchased the subject imports because of their lower price and, in some instances, a desire for an alternative source of supply, particularly when that source could be locked into a lower price for a fixed time commitment.⁷⁵

⁷⁰ (...continued)

therefore not necessarily the same use, are inherently suspect. Similarly even with regard to trends, a valid trend line cannot be established because the sales reported in each quarter may be to different customers with different "values-in-use."

⁷¹ Commissioner Brunsdale and Commissioner Crawford do not rely on the underselling data in this case. Since, as noted above, the same product is sold to different end users at different prices, it may be particularly misleading to compare the largest sale of each manufacturer for each period.

⁷² In examining price effects in this investigation, Commissioner Rohr relies on the investigation of individual purchases conducted in the context of our review of lost sales and lost revenue allegations. He notes that price and price terms were major factors in most cases. When Akzo's lower price was not directly at issue, its willingness to offer longer term commitments than Du Pont, or the desire of purchasers to foster "competition" in the aramid fiber market were frequently cited as reasons for purchases of the allegedly dumped product. Such reasons support an affirmative finding as much as do direct evidence of underselling. Commission Rohr bases his affirmative causation finding on the volume effects of the allegedly dumped imports and the price effects noted in the lost sales and lost revenue allegations.

⁷³ Commission Brunsdale and Commissioner Crawford note that the alleged dumping margin in this case is 43 percent. Thus, if imports were fairly traded, they would be priced significantly higher. Since subject imports and the domestic like product appear to be good substitutes, and fairly traded imports are insignificant, it is likely that sales of the domestic like product would increase. In addition, since the domestic producer is the only other producer of aramid fiber, it is likely that it could raise the price of the like product, absent competition from Akzo. In the final investigation, they would like more information on substitutes for aramid fiber that could have a price disciplining effect on the market.

⁷⁴ Report at I-36. The lost sales and lost revenue allegations received in the preliminary investigation represented more than 20 percent of domestic sales.

⁷⁵ Report at I-36.

CONCLUSION

The information of record in this preliminary investigation -- particularly the significant volume of imports, the significant and increasing share of apparent domestic consumption held by the subject imports, and the price suppressing effect of those imports, in light of the decline in the domestic industry's performance during the period examined -- establishes a reasonable indication that the domestic industry producing PPD-T aramid fiber is materially injured by reason of the subject imports from the Netherlands.

INFORMATION OBTAINED IN THE INVESTIGATION

INTRODUCTION

On July 2, 1993, a petition was filed with the U.S. International Trade Commission (Commission) and the U.S. Department of Commerce (Commerce) by counsel on behalf of E. I. Du Pont de Nemours & Co. (DuPont), Wilmington, DE, alleging that an industry in the United States is being materially injured and is threatened with further material injury by reason of imports from the Netherlands of aramid fiber formed of poly para-phenylene terephthalamide (PPD-T aramid fiber)¹ that is allegedly sold in the United States at less than fair value (LTFV). Accordingly, effective July 2, 1993, the Commission instituted antidumping investigation No. 731-TA-652 (Preliminary) under section 733(a) 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.

Notice of the institution of this investigation was posted in the Office of the Secretary, U.S. International Trade Commission, Washington, DC, and published in the Federal Register of July 12, 1993 (58 F.R. 37503). Commerce published its notice of initiation in the Federal Register of July 29, 1993 (58 F.R. 40623). Copies of the Commission's and Commerce's Federal Register notices are presented in appendix A.

The Commission held a public conference in Washington, DC, on July 23, 1993, at which time all interested parties were allowed to present information and data for consideration by the Commission. A list of the participants in the conference is presented in appendix B. The Commission voted on this investigation on August 11, 1993. The statute directs the Commission to make its preliminary determination within 45 days after receipt of the petition, or in this investigation by August 16, 1993.

PRODUCT HISTORY

In the mid-1960s, research scientists employed by DuPont began work on aromatic polyamides that would later lead to the current formulation of PPD-T aramid fiber. In the early 1970s, DuPont pioneered the development and production of this product under the registered trademark Kevlar® at its Spruance facility near Richmond, VA. DuPont's commercial production of Kevlar® began in 1973 and, to date, DuPont is the only producer of this fiber in the United States.

¹ The imported merchandise which is the subject of Commerce's investigation is all forms of PPD-T aramid fiber from the Netherlands. This includes PPD-T aramid fiber imported in the form of filament yarn, staple, pulp (wet or dry), nonwovens, chopped fiber, and floc. The subject product is provided for in subheadings 5402.10.30, 5402.32.30, 5503.10.00, and 5601.30.00 of the Harmonized Tariff Schedule of the United States (HTS). Although the HTS numbers are provided for convenience and customs purposes, the written description of the scope of the investigation is dispositive.

Following DuPont's initial discovery, Akzo N.V. (Akzo), a Netherlands corporation, began aromatic polyamide development, establishing a pilot plant to produce a PPD-T aramid fiber. In 1983, Enka B.V. (Enka), a wholly-owned subsidiary of Akzo, and N.V. Noordelijke Ontwikkelingsmaatschappij (NOM), a development company of the Dutch government, entered into an agreement to establish a joint venture for the commercial production of PPD-T aramid fiber. The joint venture, Aramide Maatschappij V.O.F. (Aramide), began commercial production of PPD-T aramid fiber under the registered trademark Twaron® in 1987 and began selling the product commercially in the United States in 1988.

The 1980s were marked by a legal war over PPD-T aramid fiber process patents held by DuPont and Akzo. Although DuPont held the basic patent for PPD-T aramid fiber, the company's original production process used a solvent that was found to be carcinogenic in laboratory tests. DuPont then switched to a solvent used in the PPD-T production process under which Akzo held a patent, contending that Akzo's patent was invalid because it was based on "prior art" patented by DuPont. DuPont also argued that Akzo had infringed on DuPont's basic patent for the spinning process.

Numerous legal battles concerning patents held by DuPont and Akzo ensued not only in the United States and the Netherlands, but also in several other industrialized countries, including the United Kingdom, France, Japan, and West Germany. In many of these countries, the outcome was a ban against one or the other company's product. In addition, initial rulings in a few cases were later reversed in favor of the other company's product.

A resolution to the worldwide patent struggle was reached by DuPont and Akzo through a cross-licensing agreement, finalized on May 10, 1988. This agreement allowed limited amounts of Akzo's Twaron® to be exported to the United States from May 1988 to March 1992² in exchange for royalty payments and access to Akzo's patents elsewhere.³ The amounts of Twaron® allowed to enter the United States for sale under the cross-licensing agreement⁴ are presented in the following tabulation (in metric tons):

<u>Period</u>	<u>Quantity</u>
May 10, 1988 to Dec. 31, 1988.....	***
Jan. 1, 1989 to Dec. 31, 1989.....	***
Jan. 1, 1990 to Dec. 31, 1990.....	***
Jan. 1, 1991 to Dec. 31, 1991.....	***
Jan. 1, 1992 to Mar. 4, 1992.....	***

² The last of DuPont's patents concerning PPD-T aramid fiber expired on Mar. 4, 1992.

³ Transcript of the conference, p. 92, and respondents' postconference brief, app. A, exh. 1.

⁴ ***.

RELATED COMMISSION INVESTIGATION

On May 14, 1984, the Commission instituted investigation No. 337-TA-194 to determine whether there was a violation of subsection (a) of section 337 of the Tariff Act of 1930 (19 U.S.C. 1337 and 19 U.S.C. 1337(a)), regarding the unlawful importation of certain aramid fiber into the United States or its sale, by reason of alleged production of such fiber overseas by means of a process allegedly covered by the claims of a U.S. patent,⁵ the effect or tendency of which is to destroy or substantially injure an industry efficiently and economically operated in the United States.⁶ The complaint, filed by DuPont, named the following respondents: Akzo, Enka, and Aramide, all of the Netherlands, and Akzona, Inc., of Asheville, NC. The Commission found a violation of section 337 and a limited exclusion order was issued on November 25, 1985,⁷ prohibiting the unlicensed importation of certain aramid fiber in the form of fiber, yarn, pulp, staple, chopped fiber, paper, felt, or fabric, manufactured abroad by the named respondents or any of their affiliated companies, parents, subsidiaries, licensees, or other related business entities, or their successors or assignees.⁸

THE PRODUCT

Description

Aramid fiber formed of PPD-T is a high-performance synthetic fiber. Special characteristics include high strength, high modulus (resists deformation by stretching), high thermal stability, fire resistance, and chemical resistance. PPD-T aramid fiber is distinguished from other fibers by its chemical composition, specific properties, method of production, and range of end uses.

PPD-T aramid fiber may be produced in a variety of forms including filament yarn, staple, pulp, floc, and chopped fiber. PPD-T aramid filament yarn and staple may be further processed into nonwoven fabric, and floc and pulp may be processed into PPD-T paper.

PPD-T aramid filament yarn, which may consist of one continuous filament or multiple filaments grouped together, is used in radial tires, advanced composites, ropes and cables, and fiber optics. It is offered in standard,

⁵ The process, entitled "Dry-Jet Wet Spinning Process," is used in the production of PPD-T aramid fiber. The U.S. patent on the process (U.S. Letters Patent 3,767,756), issued on Oct. 23, 1973, to inventor Herbert Blades and assigned to DuPont, expired on Oct. 23, 1990.

⁶ 49 F.R. 21806, May 23, 1984.

⁷ The procedures used by the Commission formed the basis for a General Agreement on Tariffs and Trade (GATT) challenge. The GATT council, on Nov. 7, 1989, found certain aspects of the statute to be inconsistent with the GATT, and the United States agreed to bring the statute into compliance. Respondents' postconference brief, app. A, p. 2.

⁸ 50 F.R. 49776, Dec. 4, 1985. U.S. International Trade Commission, In the Matter of Certain Aramid Fiber (inv. No. 337-TA-194), USITC Pub. 1824, March 1986.

intermediate, and high-modulus ranges. Staple fibers are precision-cut short fibers, which typically range from approximately 3/4 inch to 6 inches in length. Staple fibers may be processed into spun yarns used in apparel and textile products or into nonwoven fabrics used for insulation in protective clothing. Floc fibers are precision-cut short fibers, which typically range from approximately 1/25 inch to 1/4 inch in length. Floc is used in PPD-T paper and a wide variety of reinforcement resin systems. Chopped fiber is filament yarn that has been randomly cut in 1/4-inch to 1/2-inch lengths and is used in friction materials, rubber goods, and composites. Pulp is a highly fibrillated form of the fiber and is used in brakes and gaskets as a replacement for asbestos and in specialty composites.

PPD-T aramid fibers are produced in commercial quantities under the trademark Kevlar® by DuPont in the United States, Ireland, and Japan and under the trademark Twaron® by Akzo in the Netherlands. Kevlar® and Twaron® are produced using similar technology, possess similar properties and characteristics, and are interchangeable in most end uses for which they are qualified.⁹ Both producers offer PPD-T aramid fiber in filament yarn, staple, floc, and pulp forms;¹⁰ offer standard, intermediate, and high-modulus filament yarns; and provide similar fiber finishes.

Uses

Compared to other synthetic fibers such as polyester and nylon, the market for PPD-T aramid fiber is small and limited to a small number of specialty end-use products. Because PPD-T aramid fiber is a highly-specialized product, large investments in time and money are necessary to develop new applications. Also, the high cost of PPD-T aramid fiber, relative to other fibers and materials, tends to limit the use of this fiber.

Major end-use markets for PPD-T aramid fiber in the United States include gaskets and friction materials, ropes and cables, rubber reinforcement (tires, belts, and hoses), advanced composites, and ballistic-protection apparel (military and civilian) (figure 1).

Figure 1

PPD-T aramid fiber: U.S. consumption, by end uses, 1992

* * * * *

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

⁹ In response to a question in the Commission's questionnaire, namely "Are the U.S.-produced and imported product from the Netherlands used interchangeably?", DuPont checked *** and Akzo checked ***.

¹⁰ Akzo does not produce nonwoven PPD-T aramid fabric or PPD-T paper. Transcript of the conference, p. 106.

The gasket and friction materials market has over the years been a major growth area for PPD-T aramid fiber with the development of pulp as a replacement for asbestos. Pulp is also used in place of fumed silica and asbestos for viscosity control and reinforcement of adhesives and sealants.

In the tire market, PPD-T aramid filament yarn is used mainly in radial tires. Properties include good wear and strength, light weight, good thermal stability, and reduced rolling resistance. However, PPD-T aramid fiber is a minor contributor in the tire market. In 1992, PPD-T aramid fiber made up less than 2 percent of tire cord fabric shipments. Steel accounted for 51 percent of U.S. tire cord fabric shipments while polyester, nylon, and rayon accounted for 27, 20, and less than 1 percent, respectively.¹¹

In the rope and cable market, the use of PPD-T aramid filament yarn has been limited to niche applications, largely because of its high cost relative to that of other materials, such as steel cable. In the offshore oil industry, PPD-T aramid filament yarn is used in mooring lines, pennant lines, and riser tensioner cables because of its resistance to chemicals and corrosion. Because of their electrical neutrality, ropes and cables made of PPD-T aramid filament yarn are used in radio antenna tower guys and on stays on the electronic equipment masts on naval vessels. Light weight, resistance to stretch, and excellent dielectric properties make PPD-T aramid filament yarn a good reinforcement material for above-ground fiber optic cables.

Advanced composites are typically made up of a matrix resin containing 60-70 percent by weight of a high-performance fiber such as carbon, high-strength fiberglass, or PPD-T aramid fiber.¹² Composites incorporating PPD-T aramid filament yarn and staple are used in the aircraft/aerospace, marine, recreational, and automotive industries. PPD-T aramid fibers may also be used in combination with carbon or fiberglass fibers in hybrid composites, in order to achieve a broad range of performance and cost options.

In the ballistics-protection market, PPD-T aramid filament yarn, staple, and nonwoven fabrics are used to make bullet-resistant garments and helmets. Other protective apparel applications include cut-resistant and temperature-resistant gloves, leg chaps for protection from chain saw accidents, and steel replacements in steel-toed shoes. Nonprotective fabric applications include parachutes and sails.

Both DuPont and Akzo produce similar products for the end uses listed. However, in a few cases, one producer may offer a more specialized product for a certain end use. For example, DuPont offers specialized forms of pulp that allow for better dispersion of the fiber in composite materials.¹³ Akzo

¹¹ U.S. Bureau of the Census, *Current Industrial Reports--Broadwoven Fabrics (Gray)* (Washington: GPO, 1993), p. 13.

¹² In 1989, aramid fibers accounted for about 25 percent of the total fiber usage for advanced composites. Carbon fibers accounted for almost 60 percent of this market. James Weatherall and Carl Eckert, "Advanced Polymer Composites Overview and Outlook," U.S. Bureau of Mines Information Circular 1990: Advanced Materials Outlook and Information Requirements (Washington, DC: 1990), p. 30.

¹³ Petition, att. 1, and transcript of the conference, pp. 23 and 61.

offers a filament yarn with a special adhesive activation finish for use in rubber goods¹⁴ and a few other types of Twaron® which Akzo claims have special characteristics compared with DuPont's product.

Although the physical properties of Kevlar® and Twaron® products are basically the same, substitution of these products for each other is limited in certain end-use applications because of qualification requirements. The qualification process is expensive and can take 6 months to 2 years for a new entrant in a previously-developed market.¹⁵ Once qualified, a product is considered interchangeable with other certified products of the same type of fiber.

Substitute Products

Several products are used in the same end-use applications as PPD-T aramid fiber (table 1). However, in many cases these products are not directly competitive with PPD-T aramid fiber.

Use of certain products depends on the design of and the qualities desired in the end product. For example, although the use of PPD-T aramid fiber may make a superior product, a tire manufacturer may choose to use steel because it provides adequate properties at a lower cost and because of the strong image that steel projects among most tire customers.

There is considerable competition, however, among the high-performance fibers such as carbon fiber; the ultra-high-molecular-weight polyethylene fibers--Spectra® produced by Allied-Signal and Dyneema® produced by DSM and Toyobo; S-glass, a high-strength fiberglass fiber made by Owens-Corning Fiberglass; and Technora®, a para-aramid co-polymer fiber made by Teijin. With the exception of carbon fibers, the use of PPD-T aramid fiber dominates the market for high-performance fibers.

Each of these fibers has specific properties that make them suitable for use in particular end-use applications. Spectra® and Dyneema® filament yarn compete with PPD-T aramid filament yarn mainly in the ballistics-protection apparel market. Technora® competes in the rubber reinforcement, ropes and cables, and ballistic-protection apparel markets. Carbon fiber and S-glass are competitive in the advanced composite materials markets.

Most of the applications that incorporate PPD-T aramid fiber involve highly-specialized products that have been engineered around the characteristics of this fiber. To substitute another product would likely involve redesigning the end product. The time and expense involved in redesigning a product tends to impede the substitution of materials.

¹⁴ Transcript of the conference, p. 117.

¹⁵ Transcript of the conference, p. 113.

Table 1

PPD-T aramid fiber: Major end-use applications and substitute products

End use	Form	Substitute products
Gaskets and friction materials: asbestos replacement in gaskets, packings, and brake and clutch linings	Pulp (wet and dry)	Asbestos, acrylic pulp, carbon fibers, fiberglass, and semi-metallics
Rubber reinforcement: radial tires, radiator hoses, fan belts, and conveyor belts	Standard-modulus filament yarn	Steel, high-tenacity rayon, polyester, nylon, glass, fiberglass, Nomex®, and Technora®
Ropes and cables: mooring lines, anchor and pennant lines, deep- sea cables, and load-bearing cables on cranes and derricks	Standard-modulus filament yarn	Steel, high-tenacity rayon, polyester, nylon, fiberglass, and Technora®
Advanced composite materials: aircraft/aerospace, marine, recreational, and automotive industries	Staple and high-modulus filament yarn	High-strength fiberglass and carbon fibers
Ballistic protection: bullet- resistant vests and helmets	Standard-modulus filament yarn	Spectra®, Spectra shield®, Dyneema®, Technora®, fiberglass, and high-density polyethylene

Source: Compiled by the staff of the U.S. International Trade Commission.

Production Process¹⁶

Synthetic fiber, including PPD-T aramid fiber, is formed by a spinning¹⁷ process in which a polymer solution is extruded through the tiny holes of a spinneret to form continuous filament yarn. The polymer may be produced "in-line" with the spinning process or may be produced in a separate process at a different location.¹⁸

Production of PPD-T polymer involves the low temperature polycondensation of p-phenylenediamine (PPD) and terephthaloyl chloride (TCL) in an amide-type solvent such as dimethyl acetamide, N-methylpyrrolidinone, hexamethylphosphoric triamide, or tetramethylurea.¹⁹ The polymer resulting from this reaction is washed and filtered several times to remove the acid and then dried.

In preparation for spinning, the PPD-T polymer is redissolved in a strong acid, such as sulfuric acid or chloro- or fluoro-sulfuric acid. A dry-jet wet or air gap spinning method is used, in which the polymer solution is extruded from a spinneret located a fraction of an inch above a coagulating bath of dilute sulfuric acid. The filament yarn rapidly coagulates and crystallizes, developing its full orientation and structure. After coagulation, the filament yarn is pulled through a series of washing stages of either water or dilute caustic to completely remove the acid and achieve a pH-neutral filament yarn. The filament yarn is then dried on steam-heated rolls. At this time the physical tensile properties are substantially developed. Any further changes in modulus or other physical tensile properties require the application of substantial heat and tension, which may be done in an off-line process. Depending on the fiber's end use, various finishes may be applied to the dried filament yarn before it is wound onto a bobbin.²⁰

PPD-T aramid filament yarn is produced in three modulus ranges: standard modulus (approximately 550 grams per denier), intermediate modulus (approximately 780 grams per denier), and high modulus (approximately 890 grams per denier).²¹ The process described above produces a standard-modulus

¹⁶ For further description of the production process for PPD-T aramid fiber, see U.S. Letters Patent No. 3,767,756 entitled "Dry-Jet Wet Spinning Process" issued Oct. 23, 1973.

¹⁷ The term "spinning" used here is not to be confused with the textile mill process in which spun yarn is processed from staple fiber such as cotton.

¹⁸ In the United States, DuPont produces PPD-T polymer and spins the fiber at its plant in Richmond. In the Netherlands, Akzo produces PPD-T polymer at its plant in Delfzijl and spins the fiber at its plant in Emmen.

¹⁹ "Aramid Fibers," Encyclopedia of Textiles, Fibers, and Nonwoven Fabrics, ed., Martin Grayson (New York: John Wiley & Sons, 1984).

²⁰ Finishes are applied to the yarn to facilitate further processing of the fiber in its end-use applications (e.g., adhesive finishes for rubber reinforcement applications) and to increase properties of the fiber (e.g., increased abrasion resistance for cables and ropes).

²¹ Denier is a measure of the thickness of yarn expressed as the weight in grams of 9,000 meters of yarn. The thickness is also expressed as decitex (dtex), which is defined as the weight in grams of 10,000 meters of yarn. 1 dtex = 0.9 denier.

filament yarn. In order to achieve a higher modulus, the filament yarn must undergo additional heat treatment under tension.²²

Staple, floc, pulp, chopped fiber, and nonwoven fabric and paper are derived from the filament yarn.²³ Staple is produced by gathering together multiple yarn ends to form a bundle called tow, which is then precision-cut into uniform lengths (typically 3/4 inch to 6 inches). Crimp may or may not be added to the tow by applying steam and pressure to the filament yarn before cutting. Feed stock for pulp is cut in much the same way as staple and floc, although the fibers are typically 1/4 inch to 1/2 inch in length and must undergo further processing, causing them to fibrillate or break up. Depending on customer specifications, the pulp may be shipped wet or dry. Chopped fiber is produced by cutting bulk filament yarn into random lengths (roughly 1/4 inch to 1/2 inch) using a guillotine-like method.

Precision-length floc is also cut from a tow bundle, but the process involves specially-designed, precision equipment which cuts the filament yarn in lengths ranging from 1/25 inch to 1/4 inch. Regular textile processing equipment, with some modification, may be used to cut staple and pulp. Nonwoven PPD-T aramid fabric, made from filament yarn or staple, is produced by nonwoven textile processes, including needle punch, stitch bonding, and dry-laid methods. PPD-T paper is produced from pulp and/or floc with the application of heat, pressure, and sometimes chemical binders.

Packaging depends on the fiber form and on the end use.²⁴ Filament yarn is wound onto bobbins or tubes. Filament yarn for tire cord may be rewound onto warp beams that hold 160 to 250 yarn ends.²⁵ Staple fiber is formed into bales, and floc and dry pulp are packaged in bags. Wet pulp is formed into rolls that resemble rolls of paper. Nonwoven fabric and paper are packaged in rolls or on bolts.

U.S. Tariff Treatment

PPD-T aramid fiber is classified under subheadings covering "nylon or other polyamides" in the HTS. According to the petitioner, the bulk of the imports of PPD-T aramid fiber from the Netherlands is believed to enter under HTS subheadings 5402.10.30 and 5402.32.30 (filament yarn), 5503.10.00 (staple fibers), and 5601.30.00 (floc and pulp).²⁶ The column 1-general or most-

²² ***. Field trip to DuPont on July 15, 1993.

²³ ***. Currently, DuPont contracts out the processing of these products to unrelated firms and Akzo further processes its own yarn into these products at separate Akzo facilities.

²⁴ DuPont offers different size packages or specific lengths of yarn depending on customer specifications.

²⁵ ***. Field trip to DuPont on July 15, 1993. Imported yarn from the Netherlands may be rewound onto beams in Akzo's facilities in the United States. Transcript of the conference, p. 116.

²⁶ There are about a dozen more HTS subheadings that cover PPD-T aramid fiber in various forms. Although these subheadings were not specifically identified in the petition or in Commerce's initiation notice, the written description of the scope of the investigation is dispositive.

favorable rates of duty for the above-mentioned HTS subheadings are 10 percent ad valorem for filament yarn and 4.9 percent ad valorem for staple, floc, and pulp. Imports of certain forms of PPD-T aramid fiber produced in Israel and Canada (if there were any such production) are eligible for preferential duty rates or for duty-free treatment under the United States-Israel Free Trade Area Implementation Act of 1985 and under the United States-Canada Free-Trade Agreement, if importers claim such tariff treatment.

In general, U.S. imports of PPD-T aramid filament yarn under HTS subheadings 5402.10.30 and 5402.32.30 are subject to quantitative restraints under the Multifiber Arrangement (MFA),²⁷ which provides the international legal framework within which importing countries can negotiate agreements with exporting countries to limit their shipments of textiles and apparel. However, U.S. imports of textile and apparel products from the Netherlands are not subject to quantitative restraints under the MFA.

THE NATURE AND EXTENT OF ALLEGED SALES AT LTFV

In its petition, DuPont originally submitted U.S. and foreign price quotes based on six separate forms of PPD-T aramid fiber.²⁸ The foreign prices supplied were from the following countries: France, Italy, Spain, Sweden, the United Kingdom, and the Netherlands. The petitioner supplied prices from third-country markets because it claims that the Netherlands market is not viable and because not all of the six forms of PPD-T aramid fiber are sold in the Netherlands or any other single European country. Petitioner also alleged that sales of PPD-T aramid fiber by Akzo in the Netherlands and third-country markets are at prices below its cost of production (COP) and are inappropriate bases for calculating the foreign market value (FMV). Therefore, petitioner calculated FMV on the basis of constructed value (CV). Commerce, however, rejected petitioner's allegation of sales below COP²⁹ and requested that petitioner provide a price-to-price comparison for the form of PPD-T aramid fiber (2160 denier yarn) for which it originally provided a Netherlands price.

Petitioner based U.S. price (USP) for 2160 denier yarn on a call report of prices offered to U.S. consumers. Deductions were made from USP for U.S.

²⁷ The MFA, formally known as the Arrangement Regarding International Trade in Textiles, is an international agreement negotiated under the auspices of the GATT. The MFA was implemented in January 1974 and was recently extended to run through Dec. 31, 1993.

²⁸ The six forms of PPD-T aramid fiber are as follows: (1) 1500 denier yarn, beamed for use in the production of tire cord for radial tires; (2) 2160 denier yarn for use as a rigid strength member in fiber optic cable; (3) 2840 denier yarn for use as a rigid strength member in fiber optic cable; (4) 2250 epoxy coated denier yarn for use in the manufacture of fabric for conveyor belts; (5) pulp for use in the reinforcement of brake pads; and (6) staple for use in the production of fabric for protective gloves.

²⁹ Commerce has requested additional clarification, recalculation, and documentation necessary to initiate a cost investigation. Petitioner will have until 45 days prior to the scheduled date of any preliminary determination by Commerce to perfect and renew the allegation.

selling expenses, U.S. duty charges, ocean freight, foreign inland freight, and credit expenses.³⁰

Petitioner based FMV for 2160 denier yarn on a call report of prices offered to consumers in the Netherlands. Deductions were made for indirect selling expenses, foreign inland freight, and credit expenses.³¹

The price-to-price dumping margin as adjusted by Commerce is 43.43 percent.³²

THE U.S. MARKET

The period for which data were collected in this investigation is from January 1990 through March 1993.³³ The information presented in the body of this report is for all PPD-T aramid fiber and summary data concerning all PPD-T aramid fiber are presented in appendix C. Separate data concerning PPD-T yarn, staple, pulp, and other forms of PPD-T aramid fiber are presented in appendix D.

U.S. Producer³⁴

DuPont, founded in 1802 and incorporated in 1915, is a major global corporation headquartered in Wilmington, DE. It is the only U.S. producer of PPD-T aramid fiber and is one of the leading chemical producers worldwide, with operations in approximately 70 countries. The company has five principal business segments: chemicals, fibers, polymers, petroleum, and diversified businesses (agricultural products, electronics, imaging systems, and medical products). The firm has more than 225 manufacturing facilities and approximately 90 businesses that manufacture and sell a wide range of products to numerous markets. DuPont's major worldwide markets include aerospace, chemicals, energy, transportation, textile, construction, automotive, electronics, printing, health care, packaging, and agriculture. The corporate total net sales in fiscal year 1992 were \$38 billion, compared with its U.S. PPD-T aramid fiber net sales in 1992 of ***.

³⁰ Commerce rejected the number of credit days used in petitioner's calculation of credit expenses, using instead the terms reported in the call report. Petitioner's deduction for U.S. inland freight was also rejected by Commerce because there was insufficient evidence demonstrating that the foreign producer incurs this cost.

³¹ Commerce rejected the petitioner's method of conversion to U.S. dollars and instead used the exchange rate in effect during the first quarter for which the U.S. offer for sale of 2160 denier yarn was effective.

³² Petitioner's original dumping margin allegations, based on a comparison of USP to CV, ranged from 124 percent to 301 percent for five of the six forms of PPD-T aramid fiber and was "infinite" for the sixth form because of "zero price U.S. sale."

³³ Pricing data were collected through June 1993.

³⁴ DuPont provided the information presented in the body of this report.

***.

DuPont owns and operates PPD-T aramid fiber production facilities in the United States and Northern Ireland and is part owner of a joint venture in Japan. In the United States, the primary ingredients needed for the production of PPD-T aramid fiber, i.e., PPD and TCL, are produced at its Pontchartrain facility in La Place, LA, and its Chambers Works facility in Deepwater, NJ, respectively. At DuPont's U.S. PPD-T aramid fiber production facility, located near Richmond, VA, the PPD-T polymer is produced and the yarn is spun. Other products, such as Nomex®, Teflon®, Mylar®, and Tyvek®,³⁵ are also produced at the Richmond facility, ***.

As previously stated, DuPont produces the PPD-T polymer and spins the yarn at its Richmond facility. This yarn can be sold as a finished product for use in markets such as tires, fiber optic cables, and mechanical rubber goods, or can be further processed into staple, pulp, or other products. DuPont indicated that the bulk of the unique properties and investment in PPD-T aramid fiber lies in the production of the polymer and the spinning of the yarn.³⁶ Akzo argues, however, "that many of the essential properties required by specific end-use applications are imparted only by means of further manufacturing yarn into staple fiber or pulp."³⁷

The further processing needed to produce staple and pulp from the spun yarn is performed for DuPont for a fee by unrelated subcontractors. DuPont employs *** firms (***) in the processing of Kevlar® pulp, and *** in the processing of Kevlar® staple (***). DuPont indicates that it "owns some of the equipment used to process yarn into pulp and staple, exercises close supervision over the subcontractors' operations, utilizes its regular manufacturing, planning and inventory systems, maintains ownership of the product, and uses its own marketing and sales force to sell pulp and staple to its customers."³⁸ The firm also indicates that ***.³⁹ Data collected from subcontracting firms on their PPD-T aramid fiber pulp and staple operations are presented in appendix E. DuPont's future plans include the in-house manufacturing of pulp. The firm expects ***. ***.⁴⁰

In *** 1988, DuPont began production of PPD-T aramid fiber yarn at its wholly-owned spinning facility in Maydown, Northern Ireland. This plant, ***, has an annual capacity of *** pounds. In ***, production began at a PPD-T

³⁵ Nylon® was also produced by DuPont at its Richmond facility ***. ***.
Conversation with *** on July 15, 1993.

³⁶ Transcript of the conference, p. 11. According to DuPont, *** percent or more of the production cost of Kevlar® pulp and staple lies in the production of the polymer alone and 80 percent or more lies in the production of the polymer and yarn combined. Transcript of the conference, p. 44 and petitioner's postconference brief, annex B. Respondents' share of total production cost differs from that of DuPont. According to Akzo, approximately *** percent of its Twaron® pulp and staple production cost lies in the production of the polymer and approximately *** percent lies in the production of the polymer and yarn combined. Respondents' postconference brief, app. A, p. 7.

³⁷ Respondents' postconference brief, p. 8.

³⁸ Petitioner's postconference brief, p. 9.

³⁹ Petitioner's postconference brief, annex C.

⁴⁰ Conversation with *** on July 26, 1993.

aramid fiber spinning facility in Tokai, Japan, ***. This facility, a joint venture with Toray Industries of Japan, has an annual capacity of *** pounds. Both the Northern Ireland and Japanese plants spin PPD-T aramid fiber yarn exclusively from polymer produced at DuPont's Richmond facility.⁴¹ The firm has indicated that minor amounts of yarn spun at its Northern Ireland plant from U.S.-produced polymer have reentered the United States.⁴² In addition, during the period of investigation, DuPont reported export sales of PPD-T aramid fiber to ***.

U.S. Importers

The Commission sent questionnaires requesting information concerning U.S. imports of PPD-T aramid fiber to the petitioner, DuPont, and to the respondent, Akzo.⁴³ Akzo Fibers, Inc., Conyers, GA, a subsidiary of the corporate headquarters located in the Netherlands, is responsible for the importation into the United States of Twaron®.

Both DuPont and Akzo provided complete responses to the Commission's request for import data.⁴⁴ These data, as presented throughout this report, are believed to account for all U.S. imports of the subject product from all countries. Commerce's official import statistics are not presented because the tariff classification numbers under which the subject product falls contain additional products and the list of tariff classification numbers may not be complete.⁴⁵

Channels of Distribution

All PPD-T aramid fiber produced in the United States and in the Netherlands is sold in the United States through the same channels of distribution, directly to unrelated end users for use in a variety of markets.

⁴¹ Respondents argue that DuPont's additional capacity and production in Northern Ireland and Japan have had a "substantial negative impact on the firm's U.S. operations," since the markets in those regions were previously supplied by Kevlar® produced in the United States. Transcript of the conference, pp. 90-92, and respondents' postconference brief, pp. 24-25.

⁴² ***. For additional information on DuPont's imports of PPD-T aramid fiber see the section of this report entitled "U.S. Imports."

⁴³ Questionnaires were also sent to four additional firms identified by the U.S. Customs Service as U.S. importers of items falling within the same tariff classification as the subject product. One firm indicated that it did not import the subject product and the others did not respond to the Commission's inquiry. Counsel for the respondents has, however, indicated that Akzo is its own U.S. importer of all PPD-T aramid fiber produced in the Netherlands. Telephone conversation with counsel for respondents on July 7, 1993.

⁴⁴ Data provided by Akzo and DuPont concerning imports, shipments, and inventories ***, ***.

⁴⁵ DuPont indicated that it believes the majority of Akzo's Twaron® enters the United States under the numbers previously provided; however, some imports may enter the United States under other numbers. Conversation with *** on July 15, 1993.

For additional information concerning end uses, see the sections of this report entitled "Uses," "Apparent U.S. Consumption," and "U.S. Market Penetration by the Subject Imports." For additional information concerning channels of distribution and other factors affecting demand, see the section of this report entitled "Marketing Characteristics."

Apparent U.S. Consumption

Data concerning apparent U.S. consumption of PPD-T aramid fiber are calculated based on U.S. shipments of PPD-T aramid fiber as reported by DuPont and Akzo. The data concerning all PPD-T aramid fiber are presented in table 2 and figure 2. Consumption data by end use are presented in table 3.⁴⁶

Table 2

PPD-T aramid fiber: U.S. shipments of U.S. product, U.S. shipments of imported product, and apparent U.S. consumption, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

Figure 2

PPD-T aramid fiber: U.S. shipments of U.S. product, U.S. shipments of product from the Netherlands, and apparent U.S. consumption, 1990-92

* * * * *

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

Table 3

PPD-T aramid fiber: U.S. shipments of U.S. product, U.S. shipments of imported product, and apparent U.S. consumption, by end uses, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

The quantity of apparent U.S. consumption of PPD-T aramid fiber fell by *** percent from 1990 to 1992, while an erratic decline in value was reported for the same period. This decline in consumption was reported primarily in

⁴⁶ Petitioner provided U.S. shipment data by submarket categories. These data appear in app. F.

the U.S. military⁴⁷ and tire markets, although smaller declines were also reported in *** markets.

In the first quarter of 1993, apparent U.S. consumption increased by *** percent, by quantity, and by *** percent, by value, over that of the first quarter of 1992. This increase was seen primarily in the following markets:
***.⁴⁸

CONSIDERATION OF ALLEGED MATERIAL INJURY

Data presented in this section of the report are for PPD-T aramid fiber containing U.S.-produced polymer, yarn, staple, and pulp. The data also include a small amount of pulp that is produced in the United States from yarn spun in Northern Ireland. The data do not include a small amount of yarn spun in Northern Ireland and sold as a finished yarn product in the United States. These data were reported in DuPont's importer's questionnaire response and are presented in the section of this report entitled "U.S. Imports." All of DuPont's PPD-T aramid fiber products contain U.S.-produced polymer.

U.S. Capacity and Production

Data concerning DuPont's U.S. capacity, production, and capacity utilization for PPD-T aramid fiber are presented in table 4. DuPont calculated capacity based on *** and on the representative product mix of ***.⁴⁹ DuPont's full production capability for PPD-T aramid fiber is also based on operating *** hours per week, *** weeks per year. As reported, DuPont's average capacity to produce PPD-T aramid fiber increased *** from 1990 to 1992, but remained constant from the first quarter of 1992 to the comparable period in 1993. According to DuPont, the changes in reported capacity are due to ***.

Table 4

PPD-T aramid fiber: U.S. capacity, production, and capacity utilization, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

Production of PPD-T aramid fiber reported by DuPont increased by *** percent from 1990 to 1991, but fell by *** percent from 1991 to 1992. An

⁴⁷ Because of "Buy America" provisions, DuPont was the exclusive supplier of the product in this market.

⁴⁸ An increase in consumption was also reported in ***. The data reported in this category were ***.

⁴⁹ ***. Conversation with *** on July 26, 1993.

increase of *** percent was reported from the first quarter of 1992 to the first quarter of 1993.

The calculated capacity utilization for U.S. production of PPD-T aramid fiber (***) fell from *** percent in 1990 to *** percent in 1992, but increased during the partial-year periods from *** to *** percent.

U.S. Producer's Shipments

Shipments of U.S.-produced PPD-T aramid fiber are presented in table 5. DuPont's total shipments of U.S.-produced PPD-T aramid fiber fell by *** percent, by quantity, from 1990 to 1992. Total shipments, by value, increased by *** percent from 1990 to 1991, but fell by *** percent in 1992. For DuPont, these declines were most evident in the U.S. military, tires, and *** markets, although smaller declines were also evident in the *** markets. DuPont's total shipments increased in the first quarter of 1993 by *** percent, by quantity, and by *** percent, by value, over the first quarter of 1992.

Table 5

PPD-T aramid fiber: Shipments of U.S.-produced product, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

U.S. Producer's Inventories

DuPont's inventories of PPD-T aramid fiber are presented in table 6. DuPont's inventories of PPD-T aramid fiber increased by *** percent from 1990 to 1991, but fell by *** percent from 1991 to 1992 and by *** percent during the partial-year periods. The ratios of inventories to total shipments and of inventories to production increased from *** percent in 1990 to approximately *** percent in 1991, but fell in 1992 to ***. A decline in the ratios was reported from the first quarter of 1992 to the comparable period in 1993.

Table 6

PPD-T aramid fiber: U.S. producer's end-of-period inventories, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

U.S. Employment, Wages, and Productivity

DuPont indicated that its production and related workers who produce PPD-T aramid fiber are represented by the following unions: Ampthill Rayon Workers, Inc. and the International Brotherhood of Electrical Workers. Although other products are produced at DuPont's Richmond facility, these workers are employed ***.

DuPont reported ***. ***.

Data on employment and productivity are shown in table 7. The data presented indicate a reduction in PPD-T aramid fiber employment of *** percent from 1990 to 1992 and a reduction of *** percent from the first quarter of 1992 to the comparable period in 1993. Overall declines were also reported for hours worked, wages paid, and total compensation paid to employees producing PPD-T aramid fiber. Hourly wages paid to such employees remained relatively stable throughout all periods, while hourly total compensation fell by *** percent from 1990 to 1992. Productivity fell by *** percent from 1990 to 1992, although a *** increase was reported in 1991. In comparing the periods January-March 1992 and January-March 1993, productivity increased by *** percent. Unit labor costs fell *** in 1991 from *** per pound in 1990, but increased to *** per pound in 1992. A decline was reported from *** per pound during January-March 1992 to *** per pound during January-March 1993.

Table 7

Average number of U.S. production and related workers producing PPD-T aramid fiber, hours worked, wages and total compensation paid to such employees, and hourly wages, productivity, and unit labor costs, 1990-92, January-March 1992, and January-March 1993.

* * * * *

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

Financial Experience of DuPont

DuPont provided income-and-loss data on its U.S. operations on PPD-T aramid fiber. The company could not supply separate financial data as requested in the questionnaire on its operations on yarn, staple, and pulp; however, it supplied such data in a different format when requested in the conference. DuPont also provided data on its overall establishment operations, which consisted of data on its U.S. Kevlar® manufacturing operations that include polymer sales as well as fiber sales. Polymer sales were *** in 1990 and accounted for *** percent of total net sales for the remaining periods for which data were collected in the investigation. Data on operations of all products manufactured on the plant site where Kevlar® is produced were not provided. Costs are essentially assigned directly to each product and data reported on PPD-T aramid fiber are according to DuPont's internal reports.⁵⁰

⁵⁰ Telephone conversation with ***, July 26, 1993.

PPD-T Aramid Fiber Operations

The income-and-loss data of Dupont on its U.S. PPD-T aramid fiber operations are presented in table 8. Major components of cost of goods sold of its U.S. PPD-T aramid fiber operations are presented in table 9, and major components of selling, general, and administrative expenses on its U.S. PPD-T aramid fiber operations are presented in table 10. The total net sales value of PPD-T aramid fiber declined by *** percent from 1990 to 1992 and further fell by *** percent from January-March 1992 to January-March 1993. During the same periods, total net sales in pounds declined by *** percent and *** percent, respectively. DuPont reported income in each year. The operating income of ***, or *** percent of total net sales in 1990, rose to ***, or *** percent of total net sales in 1991, and then dropped to ***, or *** percent of total net sales in 1992. Such income further declined to ***, or *** percent of total net sales in January-March 1993, from ***, or *** percent of total net sales in January-March 1992. Pre-tax net income followed a similar trend.

Table 8

Income-and-loss experience of DuPont on its U.S. PPD-T aramid fiber operations, calendar years 1990-92, January-March 1992, and January-March 1993

* * * * * * *

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

Table 9

Major components of cost of goods sold of DuPont on its U.S. PPD-T aramid fiber operations, calendar years 1990-92, January-March 1992, and January-March 1993

* * * * * * *

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

Table 10

Major components of selling, general, and administrative expenses of DuPont on its U.S. PPD-T aramid fiber operations, calendar years 1990-92, January-March 1992, and January-March 1993

* * * * * * *

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

DuPont's average net sales value per pound rose by *** percent from 1990 to 1991 and then declined by *** percent in 1992, and further fell by *** percent from January-March 1992 to January-March 1993. The average cost of goods sold per pound remained the same in 1990 and 1991, but rose by ***

percent in 1992 and increased by *** percent from January-March 1992 to January-March 1993. The average general, selling, and administrative expenses per pound rose by *** percent in 1992 from 1991 and increased by *** percent from January-March 1992 to January-March 1993. DuPont attributes these increases in the average costs and expenses per pound to ***.

The fixed and variable costs as a share of cost of goods sold are shown in the following tabulation (in percent):

* * * * *

Investment in Productive Facilities

The investment in property, plant, and equipment and return on investment for DuPont on its U.S. PPD-T aramid fiber operations are shown in table 11. The return on book value of fixed assets followed generally the same trend as did the ratios of operating and net income to total net sales during the reporting periods.

Table 11

Value of assets and return on assets of DuPont on its U.S. PPD-T aramid fiber operations as of December 31, 1990-92, March 31, 1992, and March 31, 1993

* * * * *

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

Capital Expenditures

Capital expenditures by DuPont on its U.S. PPD-T aramid fiber operations are shown in the following tabulation:

* * * * *

The capital expenditures declined by *** percent from 1990 to 1992. They averaged about *** percent of net sales during 1990-92. The Commission requested DuPont to describe the effects of major capital expenditures incurred in the last five years on both capacity and capacity utilization rates in the production of PPD-T aramid fiber by giving amounts and dates of capital expenditures and related depreciation expenses. However, DuPont's response ***. Accordingly, such data are not presented.

Research and Development

Research and development expenses by DuPont on its U.S. PPD-T aramid fiber operations are shown in the following tabulation:

* * * * *

Capital and Investment

The Commission requested DuPont to describe any actual or potential negative effects of imports of PPD-T aramid fiber from the Netherlands on its growth, investment, ability to raise capital, or existing development and production efforts (including efforts to develop a derivative or improved version of PPD-T aramid fiber). DuPont's response is presented below.

* * * * *

CONSIDERATION OF THE QUESTION OF THREAT OF MATERIAL INJURY

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 factors⁵¹--

(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),

(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,

⁵¹ 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."

(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.⁵²

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." 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. Other threat indicators have not been alleged or are otherwise not applicable.

⁵² 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."

U.S. Importers' Inventories

Data concerning U.S. inventories of PPD-T aramid fiber produced in the Netherlands are presented in table 12. The quantity of these inventories *** in 1990 to *** in 1992. *** was reported in the first quarter of 1993 over the comparable period in 1992. The ratio of inventories to total shipments *** in 1990 to *** in 1991, but *** in 1992. *** was reported for the first quarters of 1992 and 1993.

Table 12

PPD-T aramid fiber: End-of-period inventories of product produced in the Netherlands, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

DuPont imports for sale minor amounts of Kevlar® yarn spun at the firm's Northern Ireland facility from U.S.-produced polymer. Inventory data concerning these imports are presented in the following tabulation (in 1,000 pounds):

* * * * *

Ability of Producers in the Netherlands to Generate Exports and the Availability of Export Markets Other Than the United States

Aramide, a joint venture established in the Netherlands by NOM and a subsidiary of Akzo, is the only foreign producer of the subject product. Aramide produces PPD-T aramid fiber in the form of yarn, staple fiber, and chopped fiber at its facility in Emmen and pulp at its facility in Arnhem.⁵³ Although Aramide manufactures only PPD-T aramid fiber in the Netherlands, its parent corporation, Akzo, is a multinational firm with 5 divisions operating in 50 countries. Its principal products include salt and chemicals, fibers and polymers, coatings, and health care.

Aramide supplied data concerning its PPD-T aramid fiber production, inventories, and shipments.⁵⁴ These data are shown in table 13. Aramide reported capacity data on the basis of ***-hour work weeks, operating *** weeks per year. As shown, the firm's capacity to produce PPD-T aramid fiber *** during *** periods for which information was requested.

⁵³ The firm is ***. ***. Respondents' postconference brief, app. A, p. 7.

⁵⁴ The data provided ***. ***.

Table 13

PPD-T aramid fiber: The Netherlands' capacity, production, capacity utilization, end-of-period inventories, and shipments, 1990-92, January-March 1992, January-March 1993, and projected 1993-94

* * * * *

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

In answer to a question on whether or not the firm plans to add, expand, curtail, or shut down production capacity and/or production of PPD-T aramid fiber in the Netherlands, Aramide responded as follows:

* * * * *

Production of PPD-T aramid fiber in the Netherlands *** from 1990 to 1992 and *** during the partial-year periods. Projections reveal that *** is expected from 1992 to 1994.

Inventories held in the Netherlands *** throughout the period of investigation, ***.

Akzo warehouses a certain amount of Twaron® in Canada for sale to customers in Canada and the United States. These exports were reported by Aramide and are presented in table 13 as "Exports to all other markets." The following tabulation presents the amount of Twaron® that entered the United States from Akzo's Canadian warehouse (in 1,000 pounds):

* * * * *

As reported by Aramide, exports of PPD-T aramid fiber to the United States, which represented *** of Aramide's total shipments, ***. In comparing the first quarters of 1992 to 1993, exports to the United States ***. Aramide projects that exports to the United States will *** from 1992 to 1994, although the share of total shipments is projected to *** in 1994.

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

U.S. Imports

DuPont and Akzo provided complete import data in response to the Commission's request. These data are presented in table 14. The quantity of U.S. imports of PPD-T aramid fiber from the Netherlands increased from *** in 1990 to *** in 1992, but fell from *** in the first quarter of 1992 to *** in the first quarter of 1993.⁵⁵ Unit values, which may be affected by product mix, *** from 1990 to 1992, but *** during the first quarter of 1993.

⁵⁵ The data include transshipments through Canada. In addition, the quantity of Akzo's imports into the United States were limited by terms of a cross-licensing agreement with DuPont from May 1988 to March 1992. For more information concerning the agreement, see the section of this report entitled "Product History."

Table 14

PPD-T aramid fiber: U.S. imports, by sources, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

Akzo indicated that in the second quarter of 1993 it imported *** pounds of PPD-T aramid fiber into the United States, *** percent of which was pulp and *** percent of which was yarn. In July 1993, Akzo reported imports of *** pounds of PPD-T aramid fiber, *** percent of which was yarn and *** percent of which was pulp.

U.S. imports of DuPont's Kevlar® yarn spun in the North Ireland from polymer produced in the United States represented *** percent of total U.S. production of PPD-T aramid fiber in every period for which data were collected.⁵⁶ These imports fell from *** in 1990 to *** in 1992, but increased from *** during the first quarter of 1992 to *** during the first quarter of 1993.

U.S. Market Penetration by the Subject Imports

Market penetration data are calculated from U.S. shipment data of U.S.-produced and imported PPD-T aramid fiber as submitted in response to Commission questionnaires. These data are presented in table 15 and figure 3. Market penetration data based on quantity, by end use, are presented in table 16.

The share of apparent U.S. consumption of PPD-T aramid fiber held by imports from the Netherlands, by quantity, increased from *** percent in 1990 to *** percent in 1992. An increase from *** percent to *** percent was reported from the first quarter of 1992 to that of 1993. These increases were primarily evident in the following markets: ***. By value, the subject imports' share of U.S. consumption increased from *** percent in 1990 to *** percent in 1992 and increased from *** percent in the first quarter of 1992 to *** percent in the comparable period of 1993.

⁵⁶ These data include only Kevlar® yarn that is spun in Northern Ireland and imported and sold in the United States as a finished yarn product. The data do not include small amounts of Kevlar® yarn imports consumed in the U.S. production of pulp. These data were reported in DuPont's producer's questionnaire response and are included in the section of this report entitled "Consideration of Alleged Material Injury."

Table 15

PPD-T aramid fiber: U.S. shipments of domestic and imported product as a share of apparent U.S. consumption, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

Figure 3

PPD-T aramid fiber: Shares of the quantity and value of apparent U.S. consumption held by the United States and the Netherlands, 1990-92 and January-March 1993

* * * * *

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

Table 16

PPD-T aramid fiber: U.S. shipments of U.S. product and imported product as a share of the quantity of apparent U.S. consumption, by end uses, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

Prices

Marketing Characteristics

Demand for PPD-T aramid fiber is derived from the demand for the products using PPD-T aramid fiber. PPD-T aramid fiber is used in a variety of end uses, including tires, high-pressure automobile and industrial hoses, power transmission and conveyor belts, ship mooring lines and working ropes, fiber optics cable, electromechanical and crane cables, automotive brakes, industrial and automotive gaskets, composites, industrial fabric, cut-resistant gloves, bullet-resistant vests, and other protective apparel. The largest market for PPD-T aramid fiber is the *** market.

PPD-T aramid fiber is priced on a per-pound basis and generally sold on a ***. Although it is typically sold in three different forms (pulp, staple, and yarn),⁵⁷ PPD-T aramid fiber is primarily priced according to the end-use market to which it is sold. Pricing to these markets generally depends on the

⁵⁷ PPD-T aramid fiber is also available in other forms, including floc, chopped fiber, and nonwoven fabric.

importance of PPD-T aramid fiber to the specific end-use product and whether there are other competing products for the end-use application. PPD-T aramid fiber is priced the lowest for the *** market, approximately *** per pound, and is priced the highest for the *** market, approximately *** per pound. PPD-T aramid fiber is also priced differently according to the denier (or fineness) of the specific yarn or staple products.⁵⁸ The lower the denier of these products, the higher the price.

DuPont and Akzo agree that there are a variety of substitute fibers for PPD-T aramid fiber for nearly all of its applications. However, when alternative materials are used, the performance and the cost are lowered.⁵⁹ DuPont commented ***. Akzo, however, argues ***.⁶⁰ Akzo commented ***. For this reason, Akzo reported ***.

* * * * *

Purchasers contacted during the investigation confirmed that other fibers have been intruding into some of the PPD-T aramid fiber applications. These applications include tires, brakes, and fiber optic cables. However, these purchasers reported that although Akzo's prices are lower than those offered by DuPont, the prices are still significantly higher than the prices of the substitute fibers.

Both DuPont and Akzo market their PPD-T aramid fiber with a brand name. The brand name for DuPont is Kevlar® and the brand name for Akzo is Twaron®. DuPont reported that its average lead time was ***, whereas Akzo reported lead times of *** from its warehouse and *** for product from the Netherlands. Sales terms are typically *** for both the U.S. producer and importer; however, ***.⁶¹ *** reported that transportation costs are *** in the sale of PPD-T aramid fiber and are *** of the price of the product. ***.

* * * * *

The Commission requested U.S. producers and importers to report whether they were ever unable to supply PPD-T aramid fiber to a customer in a timely manner at prevailing prices and in the quantities desired during January 1990-June 1993. ***. Akzo reported that its capability to supply product prior to March 1992 was restricted initially due to DuPont's patent and then due to the cross-license agreement with DuPont that ended in March 1992, when DuPont's patent expired.

Both DuPont and Akzo reported that they must qualify their PPD-T aramid fiber with the end users before making commercial sales. Product qualification is a major barrier for sales in the U.S. market. The qualification process includes laboratory testing, processing trial runs, and

⁵⁸ There is no denier measurement of PPD-T aramid fiber pulp products.

⁵⁹ See app. G for DuPont's list of substitutable products for PPD-T aramid fiber and the advantages of Kevlar® compared with the advantages of the alternative fibers.

⁶⁰ *** reported that in general, ***. Telephone conversation, Aug. 2, 1993.

⁶¹ Akzo reported ***. ***.

field testing. The time it takes to qualify a product generally ranges from 6 months to 2 years, depending on the end use, although Akzo reported that some end users may take up to 4 years to qualify a product. The qualification of a product is also costly, ranging up to \$250,000 for some end-use applications. Some purchasers contacted during the investigation reported that both DuPont and Akzo have helped defray some of the costs in the qualification/product development process. They reported that supplier assistance was not unusual behavior in their respective businesses.

*** agreed that after qualification of both firms' PPD-T aramid fiber, the U.S.- and the Netherlands-produced PPD-T aramid fiber are interchangeable. *** no significant difference in the quality of the Kevlar® and Twaron® product. However, ***. ***.

Questionnaire Price Data

The Commission requested quarterly price and quantity information from U.S. producers and importers for their sales of PPD-T aramid fiber during the period January 1990-June 1993. U.S. producers and importers were requested to provide price data for eight PPD-T aramid fiber products sold to seven end-use markets. Three products are in pulp form (one wet), one is in staple form, and four are in yarn form. The eight products are described below:

Product 1: PPD-T aramid fiber in pulp form, wet, sold to the gasket market (e.g., Kevlar® type 979 or Twaron® type 1079)

Product 2: PPD-T aramid fiber in pulp form, dry, sold to the gasket market (e.g., Kevlar® type 979 or Twaron® type 1095)

Product 3: PPD-T aramid fiber in pulp form, dry, sold to the dry friction (brakes) market (e.g., Kevlar® type 979 or Twaron® type 1095)

Product 4: PPD-T aramid fiber in staple form, sold to the protective apparel (cut-resistant gloves) market (e.g., Kevlar® type 970 or Twaron® 1070)

Product 5: PPD-T aramid fiber in yarn form, regular/standard modulus (1680 dtex or 1500 denier), sold to the tire market (e.g., Kevlar® type 950 or Twaron® type 1000)

Product 6: PPD-T aramid fiber in yarn form, regular/standard modulus (1680 dtex or 1500 denier), sold to the hoses/belts market (e.g., Kevlar® type 956 or Twaron® type 1000)

Product 7: PPD-T aramid fiber in yarn form, high modulus (1260 dtex or 1140 denier), sold to the aircraft composite market (e.g., Kevlar® type 965 or Twaron® type 1056)

Product 8: PPD-T aramid fiber in yarn form, intermediate modulus (3220 dtex or 2890 denier), sold to the fiber optics cable market (e.g., Kevlar® 68 yarn type 989b or Twaron® type 1111)

Usable price data were received from both DuPont and Akzo. Reported pricing for these eight products accounted for approximately *** percent of DuPont's domestic shipments of PPD-T aramid fiber and *** percent of Akzo's domestic shipments of PPD-T aramid fiber during 1992.⁶²

Price Trends

Average delivered prices for U.S.-produced PPD-T aramid fiber *** for which the Commission requested pricing information (table 17, figures 4-11).

* * * * *

Average delivered prices for PPD-T aramid fiber imported from the Netherlands ***.

* * * * *

Table 17

Average delivered selling prices and quantities of U.S.-produced and imported PPD-T aramid fiber, by products and by quarters, January 1990-June 1993

* * * * *

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

Figure 4

Average delivered selling prices of U.S.-produced PPD-T aramid fiber product 1, by quarters, January 1990-June 1993

* * * * *

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

Figure 5

Average delivered selling prices of PPD-T aramid fiber product 2 produced in the United States and imported from the Netherlands, by quarters, January 1990-June 1993

* * * * *

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

⁶² DuPont also provided pricing information on a high-modulus PPD-T aramid fiber yarn for product 8 that ***. ***.

Figure 6

Average delivered selling prices of PPD-T aramid fiber product 3 produced in the United States and imported from the Netherlands, by quarters, January 1990-June 1993

* * * * *

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

Figure 7

Average delivered selling prices of PPD-T aramid fiber product 4 produced in the United States and imported from the Netherlands, by quarters, January 1990-June 1993

* * * * *

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

Figure 8

Average delivered selling prices of PPD-T aramid fiber product 5 produced in the United States and imported from the Netherlands, by quarters, January 1990-June 1993

* * * * *

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

Figure 9

Average delivered selling prices of PPD-T aramid fiber product 6 produced in the United States and imported from the Netherlands, by quarters, January 1990-June 1993

* * * * *

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

Figure 10

Average delivered selling prices of PPD-T aramid fiber product 7 produced in the United States and imported from the Netherlands, by quarters, January 1990-June 1993

* * * * *

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

Figure 11

Average delivered selling prices of intermediate-modulus PPD-T aramid fiber product 8 produced in the United States and imported from the Netherlands and high-modulus PPD-T aramid fiber product 8 produced in the United States, by quarters, January 1990-June 1993

* * * * *

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

Price Comparisons

There were *** instances in which comparisons between the U.S.-produced PPD-T aramid fiber and the imported product from the Netherlands were possible (table 18).

Table 18

PPD-T aramid fiber: Margins of under(over)selling by imports from the Netherlands, by products and by quarters, January 1990-June 1993

* * * * *

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

* * * * *

Exchange Rates

Quarterly data reported by the International Monetary Fund indicate that during January-March 1990 through October-December 1992, the nominal value of the Netherlands' guilder fluctuated, appreciating overall by 9.3 percent relative to the U.S. dollar (table 19). Adjusted for movements in producer price indexes in the United States and the Netherlands, the real value of the Netherlands' currency showed an overall appreciation of 12.4 percent relative to that of the dollar for the period.

Lost Sales and Lost Revenues

The Commission received *** allegations of lost sales and *** allegations of lost revenues by the U.S. producer, DuPont, which involved *** purchasers. The lost sales allegations totalled *** and involved *** pounds of PPD-T aramid fiber. The lost revenues allegations totalled *** and involved *** pounds. Staff contacted *** firms representing *** of the lost sale allegations involving *** pounds and totalling *** and *** of the lost revenues allegations involving *** pounds and totalling ***.

Table 19

Exchange rates:¹ Indexes of nominal and real exchange rates of the Netherlands guilder and indexes of producer prices in the United States and the Netherlands,² by quarters, January 1990-December 1992

Period	U.S. producer price index	Netherlands producer price index	Nominal exchange rate index	Real exchange rate index ³
1990:				
Jan.-Mar.....	100.0	100.0	100.0	100.0
Apr.-June.....	99.8	100.4	100.9	101.5
July-Sept.....	101.6	101.3	106.2	105.8
Oct.-Dec.....	104.7	101.5	112.5	109.1
1991:				
Jan.-Mar.....	102.5	101.7	110.4	109.5
Apr.-June.....	101.5	102.1	97.5	98.1
July-Sept.....	101.4	104.1	97.0	99.6
Oct.-Dec.....	101.5	104.6	104.0	107.1
1992:				
Jan.-Mar.....	101.3	105.4	104.6	108.8
Apr.-June.....	102.3	105.9	104.8	108.5
July-Sept.....	102.8	106.1	115.6	119.3
Oct.-Dec.....	102.9	105.8	109.3	112.4

¹ Exchange rates expressed in U.S. dollars per Netherlands guilder.

² 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.

³ The real exchange rate is derived from the nominal rate adjusted for relative movements in producer prices in the United States and the Netherlands.

Note.--January-March 1990 = 100.

Source: International Monetary Fund, International Financial Statistics, June 1993.

*** was cited in ***. ***. *** confirmed ***.

*** reported that *** was phasing out its *** product that uses PPD-T aramid fiber and that *** PPD-T aramid fiber purchases had declined from *** pounds during 1991 to between *** pounds during 1993.

* * * * *

*** switched over to Akzo from DuPont for its 1992 purchases due to the reduced price offered by Akzo. *** commented that Akzo believed by offering a *** that it might slow down or stop the ***. ***. Although Akzo's price was *** than the price offered by DuPont, Akzo's price was still approximately *** times *** than the competing steel product.

To receive the aramid fiber business, Akzo had to be qualified by ***. This process took approximately *** and involved ***. Once qualified, the Akzo PPD-T aramid fiber product is considered interchangeable with the DuPont product. *** estimated that the qualification costs ranged between ***, of which Akzo assumed a portion. *** reported that the sharing of qualification costs between supplier and purchaser is not unusual in this business and that DuPont had done the same during an earlier period.

*** was cited in ***. ***, purchaser of aramid fibers for ***, reported that *** did switch to Akzo because of its superior technical expertise in servicing *** and its willingness to ***.

*** reported that the agreed price with Akzo was *** than the DuPont price and that the ***. *** commented that sharing of qualification costs between supplier and purchaser is not unusual in this business and that DuPont had also done so in the past. Qualification of Akzo's product took *** and involved ***.

*** also commented that Akzo, unlike DuPont, was willing to provide ***. *** also reported that DuPont increased its price ***.

*** reported that demand for *** using aramid fibers has been growing. *** currently purchases approximately *** pounds of aramid fiber per year. Aramid fibers are considered to be a better ***.

*** was cited in ***.

* * * * *

***, purchaser of this product for ***, acknowledged purchasing the Akzo product but stated that the price was ***. *** purchases from Akzo to maintain a viable second supply source and to keep the market price honest from DuPont. *** reported that for years, DuPont ***.

*** purchases approximately *** pounds of PPD-T aramid fiber per year. It started purchasing the aramid fiber product ***. *** commented that to develop and qualify a new product takes at minimum *** and costs approximately ***. Once a product is qualified, it is considered interchangeable with other qualified products of the same fiber type. *** reported that because of the high costs of the aramid fiber products, a competing type of ***.

*** was cited in ***. ***.

***, purchaser of this product for ***, denied ***, stating that the *** was not due to any imported product, rather DuPont was ***. *** commented that the previous DuPont *** that do not use PPD-T aramid fiber. ***.

* * * * *

*** reported that the demand for this product has *** during the past few years because of the ***. Three years ago, *** purchased approximately *** pounds of aramid fiber, whereas it currently purchases approximately *** pounds of product, and it *** to *** pounds in the near future. *** reported

that it is substituting other fibers such as ***, which is approximately *** the price of aramid fiber.

*** requires products to be qualified before commercial use. The time it takes to qualify a product depends on the specific application; for ***. *** estimated that the cost for qualification was ***. *** the Akzo product to be completely interchangeable with the DuPont product.

*** was cited in ***. *** confirmed ***. He also added that *** never sole-sources a product and it ***.

*** purchases approximately *** pounds of aramid fiber per year. Demand for aramid fiber for this application has increased as demand for *** has increased. However, ***.

The qualification process for aramid fiber takes ***. *** reported that *** considered both DuPont's and Akzo's product virtually the same, with no significant difference in the physical characteristics.

*** was cited in ***. ***.

***, purchaser of this product for ***, could not recall the specific price quotes. *** purchases aramid fiber in a ***. ***.

* * * * *

*** was cited in ***.

* * * * *

***, purchaser of this product for ***, confirmed *** but denied ***.

* * * * *

*** reported that DuPont had approached ***.

* * * * *

*** reported that *** is planning to ***.

* * * * *

*** stated that there was a very slight difference between the DuPont fiber and the Akzo fiber and that it was not a major problem for most applications. ***.

*** was cited in ***. *** confirmed ***.

* * * * *

*** reported five additional reasons besides price for purchasing the imported product. First, *** did not feel secure with only a single source of supply for this product. Second, it believed that Akzo's R&D capabilities

were more flexible than DuPont. Third, ***. Fourth, Akzo provided outstanding customer service. Fifth, Akzo ***.

*** reported that *** purchases approximately *** pounds of aramid fiber per year from ***.

* * * * *

*** was cited in ***.

* * * * *

*** confirmed most of the quantities and values involved in the allegations, but reported that it purchased Akzo's product for two additional reasons besides price. First, it wanted to keep the price for PPD-T aramid fiber competitive. Prior to Akzo entering the market, DuPont kept raising its prices. During 1986-90, DuPont raised its prices of PPD-T aramid fiber yarn sold for the ***. Second, *** always wants an alternative source of supply. *** commented that it is a better purchasing practice to have two sources of supply than single sourcing any product.

*** purchases approximately *** on an annual basis.

* * * * *

*** reported that although there are substitute products for PPD-T aramid fiber in ***, there has been no real intrusion into the PPD-T aramid fiber market due to the differences in the performance and the costs of these substitute fibers. *** stated that PPD-T aramid fiber retains a niche in these applications due to ***. ***.

The qualification process for *** takes approximately *** and costs between *** and ***. *** reported that Akzo is currently approved for certain types of ***. *** considers the quality and performance of DuPont's and Akzo's product to be similar. However, they are not totally substitutable in all applications.

* * * * *

*** was cited in ***. ***, ***, purchaser of this product for ***, confirmed purchasing the Akzo product. ***. *** stated that Akzo offered better servicing, product availability, and pricing.

*** purchases approximately *** pounds of PPD-T aramid fiber per year.

* * * * *

APPENDIX A
FEDERAL REGISTER NOTICES

**INTERNATIONAL TRADE
COMMISSION**

[Investigation No. 731-TA-652
(Preliminary)]

**Aramid Fiber Formed of Poly Para-
Phenylene Terephthalamide From the
Netherlands**

AGENCY: United States International
Trade Commission.

ACTION: Institution and scheduling of a
preliminary antidumping investigation.

SUMMARY: The Commission hereby gives notice of the institution of preliminary antidumping investigation No. 731-TA-652 (Preliminary) under section 733(a) of the Tariff Act of 1930 (19 U.S.C. 1673b(a)) to determine whether there is a reasonable indication that 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 Netherlands of aramid fiber formed of poly para-phenylene terephthalamide (PPD-T aramid fiber),¹ provided for in subheadings 5402.10.30, 5402.32.30, 5503.10.00, and 5601.30.00 of the Harmonized Tariff Schedule of the United States, that are alleged to be sold in the United States at less than fair value. The Commission must complete preliminary antidumping investigations in 45 days, or in this case by August 16, 1993.

For further information concerning the conduct of this investigation 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 B (19 CFR part 207).

EFFECTIVE DATE: July 2, 1993.

FOR FURTHER INFORMATION CONTACT:
Mary Messer (202-205-3193), Office of
Investigations, U.S. International Trade

¹ The imported merchandise which is the subject of this petition is all PPD-T aramid fiber produced in the Netherlands and imported either directly or indirectly into the United States, whether in fiber, yarn, pulp, staple, or other form.

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 in response to a petition filed on July 2, 1993, by counsel on behalf of E. I. Du Pont de Nemours & Co., Wilmington, DE.

Participation in the Investigation and Public Service List

Persons (other than petitioners) wishing to participate in the investigation as parties must file an entry of appearance with the Secretary to the Commission, as provided in sections 201.11 and 207.10 of the Commission's rules, not later than seven (7) 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 preliminary 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*. A separate service list will be maintained by the Secretary for those parties authorized to receive BPI under the APO.

Conference

The Commission's Director of Operations has scheduled a conference in connection with this investigation for 9:30 a.m. on July 23, 1993, at the U.S. International Trade Commission Building, 500 E Street SW., Washington, DC. Parties wishing to participate in the conference should contact Mary Messer (202-205-3193) not later than July 21, 1993, to arrange for their appearance. Parties in support of the imposition of antidumping duties in this investigation and parties in opposition to the

imposition of such duties will each be collectively allocated one hour within which to make an oral presentation at the conference. A nonparty who has testimony that may aid the Commission's deliberations may request permission to present a short statement at the conference.

Written Submissions

As provided in §§ 201.8 and 207.15 of the Commission's rules, any person may submit to the Commission on or before July 28, 1993, a written brief containing information and arguments pertinent to the subject matter of the investigation. Parties may file written testimony in connection with their presentation at the conference no later than three (3) days before the conference. If briefs or written testimony contain BPI, they must 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 § 207.12 of the Commission's rules.

By order of the Commission.

Issued: July 8, 1993.

Donna R. Koehnke,
Secretary.

[FR Doc. 93-16597 Filed 7-9-93; 8:45 am]

GILLING CODE 7029-02-9

International Trade Administration

[A-421-805]

Initiation of Antidumping Duty Investigation: Aramid Fiber Formed of Poly Para-Phenylene Terephthalamide From the Netherlands

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

EFFECTIVE DATE: July 29, 1993.

FOR FURTHER INFORMATION CONTACT: Lori Way or Jeffery B. Denning, Office of Antidumping Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephones (202) 482-0656 and 482-4194, respectively.

INITIATION OF INVESTIGATION:**The Petition**

On July 2, 1993, we received a petition filed in proper form by E.I. Du Pont de Nemours & Company (petitioner). Petitioner filed supplements to the petition on July 19, 20, and 21, 1993, pursuant to 19 CFR 353.12(e). In accordance with 19 CFR 353.12, petitioner alleges that aramid fiber formed of poly para-phenylene terephthalamide (PPD-T aramid) from the Netherlands is being, or is likely to be, sold in the United States at less than fair value within the meaning of section 731 of the Tariff Act of 1930, as amended (the Act), and that these imports are materially injuring, or threaten material injury to, a U.S. industry.

Petitioner states that it has standing to file the petition because it is an interested party as defined under section 771(9)(C) of the Act, and because the petition is being filed on behalf of the U.S. industry producing the product subject to this investigation. If any interested party, as described under paragraphs (C), (D), (E), or (F) of section 771(9) of the Act, wishes to register support for, or opposition to, this petition, such party should file a written notification with the Assistant Secretary for Import Administration.

Under the Department's regulations, any producer or reseller seeking exclusion from a potential antidumping duty order must submit its request for exclusion within 30 days of the date of the publication of this notice. The procedures and requirements regarding the filing of such requests are contained in 19 CFR 353.14.

Scope of Investigation

The merchandise covered by this investigation is all forms of poly para-phenylene terephthalamide aramid fiber (PPD-T aramid) from the Netherlands. This includes PPD-T aramid fiber in the form of filament yarn, staple, pulp (wet or dry), non-wovens, chopped fiber and floc. PPD-T aramid is classifiable under subheadings 5402.10.3020, 5402.10.3040, 5402.32.3000, 5503.10.0000 and 5601.30.0000 of the Harmonized Tariff Schedule of the United States (HTSUS). Although the HTSUS numbers are provided for convenience and customs purposes, our written description of the scope of this investigation is dispositive.

United States Price and Foreign Market Value

Petitioner originally supplied U.S. and foreign price quotes on six different PPD-T aramid products. The foreign prices were obtained from six European countries, including the Netherlands. Petitioner provided non-Netherlands prices because, petitioner claims, the home market is not viable and because not all of these six products are sold in the Netherlands or any other single European country. Further, based upon its claim that all home market prices are below the cost of production (COP), petitioner relied only upon constructed value for its estimate of foreign market value (FMV) for the six PPD-T aramid products. Pursuant to a request from the Department, petitioner provided a price-to-price comparison for the one product for which it has provided a Dutch price, 2160 denier PPD-T aramid yarn. Because we have rejected petitioner's allegation of sales below the COP (see *Sales Below the Cost of Production*, below), the margin upon which we are initiating this investigation is based on a price-to-price comparison of 2160 denier PPD-T aramid yarn.

Petitioner based United States Price (USP) on exporter's sales price (ESP), in accordance with section 772(c) of the Act. Petitioner based USP for sales of 2160 denier PPD-T aramid yarn on a call report of U.S. prices offered to U.S. consumers of this product. Petitioner made deductions for U.S. selling expenses, foreign inland freight, ocean freight, U.S. duty charges, and credit expenses. We rejected the number of credit days petitioner used in calculating credit expenses, using instead the terms reported in the call report. We also rejected petitioner's deduction for U.S. inland freight because petitioner provided insufficient evidence demonstrating that foreign producers incur this cost.

For FMV, we have utilized petitioner's reported price for sale in the Netherlands of 2160 denier PPD-T aramid yarn. Petitioner based this price on a call report of prices offered to Dutch consumers of this product. Petitioner made deductions for indirect selling expenses, foreign inland freight, and credit expenses. Petitioner converted this price to U.S. dollars using the average of the exchange rates in effect during the period of investigation. We rejected that conversion, and instead used the exchange rate in effect during the first quarter for which the U.S. offer for sale of 2160 denier yarn was effective.

The price-to-price dumping margin alleged by petitioner and adjusted by the Department for 2160 denier PPD-T aramid yarn is 43.43 percent.

Home Market/Third Country Sales Below the Cost of Production

Petitioner alleges that respondent is selling the subject merchandise in the home market/third country below its COP. We have requested additional clarification, recalculation, and documentation necessary to initiate a cost investigation. Consequently, for purposes of this initiation, the Department has rejected petitioner's allegation that home market/third country sales are below COP. In accordance with 19 CFR 353.31(c)(i), petitioner will have until 45 days prior to the scheduled date of the Department's preliminary determination in this investigation to perfect and renew this allegation.

Initiation of Investigation

Pursuant to section 732(c) of the Act, the Department must determine, within 20 days after a petition is filed, whether a petition sets forth allegations necessary for the initiation of an antidumping duty investigation, and whether the petition contains information reasonably available to petitioners supporting the allegation.

We have examined the petition on PPD-T aramid from the Netherlands, and have found that it meets the requirements of section 732(b) of the Act. Therefore, we are initiating an antidumping duty investigation to determine whether imports of PPD-T aramid from the Netherlands are being, or are likely to be, sold in the United States at less than fair value.

ITC Notification

Section 732(d) of the Act requires us to notify the International Trade Commission (ITC) of this action and we have done so.

Preliminary Determination by the International Trade Commission

The ITC will determine by August 16, 1993, whether there is a reasonable indication that imports of PPD-T aramid from the Netherlands are materially injuring, or threaten material injury to, a U.S. industry. Pursuant to section 733(a) of the Act, a negative ITC determination will result in the investigation being terminated; otherwise, the investigation will proceed according to statutory and regulatory time limits.

This notice is published pursuant to section 732(c)(2) of the Act and 19 CFR 353.13(b).

Dated: July 22, 1993.

Joseph A. Spetrini,

Acting Assistant Secretary for Import Administration.

[FR Doc. 93-18137 Filed 7-28-93; 8:45 am]

BILLING CODE 2510-08-P

APPENDIX B
LIST OF PARTICIPANTS IN THE CONFERENCE

CALENDAR OF THE PUBLIC CONFERENCE

Investigation No. 731-TA-652 (Preliminary)

ARAMID FIBER FORMED OF POLY PARA-PHENYLENE TEREPHTHALAMIDE
FROM THE NETHERLANDS

Those listed below appeared at the United States International Trade Commission's conference held in connection with the subject investigation on July 23, 1993, in Hearing Room 101 of the USITC Building, 500 E Street, SW., Washington, DC.

In support of the imposition of antidumping duties

Wilmer, Cutler & Pickering--Counsel
Washington, DC
on behalf of--

E. I. Du Pont de Nemours & Co.

Roszann M. Graham, Business Director, Americas, Advanced Fibers
Systems, E. I. Du Pont de Nemours & Co.

Richard L. Boyce, President, Econometrica International, Inc.

John D. Greenwald--OF COUNSEL

In opposition to the imposition of antidumping duties

Adduci, Mastriani, Schaumberg & Schill--Counsel
Washington, DC
on behalf of--

Aramide Maatschappij V.O.F. and Akzo Fibers Inc.

Ton Runneboom, Commercial Director, Aramide Maatschappij V.O.F.

Lowell D. Bivens, General Manager, Aramid Fibers Business Unit, North
America, Akzo Fibers Inc.

Brendan Naughton, Sales Manager, Akzo Fibers, North America, Akzo
Fibers Inc.

Seth Kaplan, Trade Resources Company

Barbara A. Murphy--OF COUNSEL

APPENDIX C
SUMMARY DATA

Table C-1

PPD-T aramid fiber: Summary data concerning the U.S. market, 1990-92,
January-March 1992, and January-March 1993

* * * * *

Source: Compiled from data presented in the body of this report.

Figure C-1

Salient data for PPD-T aramid fiber

* * * * *

Source: Commission questionnaires.

APPENDIX D
SUMMARY DATA CONCERNING
YARN, STAPLE, PULP, AND OTHER FORMS OF PPD-T ARAMID FIBER

Table D-1

PPD-T aramid fiber in yarn form: Summary data concerning the U.S. market, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

Table D-2

PPD-T aramid fiber in yarn form: The Netherlands' capacity, production, capacity utilization, end-of-period inventories, and shipments, 1990-92, January-March 1992, January-March 1993, and projected 1993-94

* * * * *

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

Table D-3

PPD-T aramid fiber in staple form: Summary data concerning the U.S. market, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

Table D-4

PPD-T aramid fiber in staple form: The Netherlands' capacity, production, capacity utilization, end-of-period inventories, and shipments, 1990-92, January-March 1992, January-March 1993, and projected 1993-94

* * * * *

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

Table D-5

PPD-T aramid fiber in pulp form: Summary data concerning the U.S. market, 1990-92, January-March 1992, and January-March 1993

* * * * *

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

Table D-6

PPD-T aramid fiber in pulp form: The Netherlands' capacity, production, capacity utilization, end-of-period inventories, and shipments, 1990-92, January-March 1992, January-March 1993, and projected 1993-94

* * * * *

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

APPENDIX E

**DATA CONCERNING U.S. PPD-T ARAMID FIBER
PULP AND STAPLE SUBCONTRACTOR OPERATIONS**

There are *** subcontractors that DuPont employs in processing Kevlar® yarn into staple and pulp. These firms, their locations, and the forms of Kevlar® they process are presented in the following tabulation:

* * * * *

The Commission requested information concerning these firms' U.S. operations. Limited responses were received from ***. ***.

In response to the Commission's question concerning the firms' position on the petition, the responses were as follows:

* * * * *

The Commission requested that these subcontractors describe any actual or anticipated negative effects of imports of PPD-T aramid fiber from the Netherlands on their growth, investment, ability to raise capital, or existing development and production efforts, including efforts to develop a derivative or more advanced version of the product. The Commission also asked U.S. producers to report the influence of such imports on their scale of capital investments undertaken. The responses are as follows:

* * * * *

*** provided only the quantity and value of their net sales to DuPont and related capital expenditures, which are presented in the following tabulation:

* * * * *

APPENDIX F
DUPONT'S U.S. SHIPMENT DATA,
BY SUBMARKET CATEGORIES

* * * * *

APPENDIX G

**DUPONT'S DISCUSSION OF THE ADVANTAGES OF KEVLAR®
VIS-A-VIS THE
ADVANTAGES OF THE ALTERNATIVE FIBERS**

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