



Ottawa, Thursday, October 31, 1996

Appeal No. AP-95-098

IN THE MATTER OF an appeal heard on February 6 and 7, 1996,
under section 67 of the *Customs Act*

UNOFFICIAL SUMMARY

Appeal No. AP-95-098

CANADIAN FRACMASTER LTD.

Appellant

and

THE DEPUTY MINISTER OF NATIONAL REVENUE

Respondent

This is an appeal pursuant to section 67 of the *Customs Act* from decisions of the Deputy Minister of National Revenue made under section 63 of the *Customs Act*. The issue in this appeal is whether coiled steel tubing used in the oil and gas industry in high-pressure down-hole operations is properly classified under tariff item No. 7306.50.00, as determined by the respondent, or should be classified under tariff item No. 8307.10.00, as claimed by the appellant.

HELD: The appeal is dismissed. The *Explanatory Notes to the Harmonized Commodity Description and Coding System* (the Explanatory Notes) to Chapter 73 include “tubes and pipes” that may be bent and then specifically refer to “coiled tubing.” The evidence clearly shows that the goods in issue are “coiled tubing” that may be bent. In the Tribunal’s view, the goods in issue are included in Chapter 73. In other words, the goods in issue are “tubes and pipes.” As they are not named or described in any other heading in Chapter 73, they are properly classified in heading No. 73.06 as “[o]ther tubes, pipes ... of iron or steel.” Furthermore, the Tribunal is of the opinion that the goods in issue are not “flexible tubing,” as defined in the Explanatory Notes to heading No. 83.07. The Tribunal concludes that the goods in issue are properly classified under tariff item No. 7306.50.00.

Place of Hearing:	Vancouver, British Columbia
Dates of Hearing:	February 6 and 7, 1996
Date of Decision:	October 31, 1996
Tribunal Members:	Arthur B. Trudeau, Presiding Member Raynald Guay, Member Desmond Hallissey, Member
Counsel for the Tribunal:	Joël J. Robichaud
Clerk of the Tribunal:	Anne Jamieson
Appearances:	Brenda Swick-Martin and Wyatt Holyk, for the appellant Josephine A.L. Palumbo, for the respondent

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and

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TRIBUNAL: ARTHUR B. TRUDEAU, Presiding Member
RAYNALD GUAY, Member
DESMOND HALLISSEY, Member

REASONS FOR DECISION

This is an appeal pursuant to section 67 of the *Customs Act*¹ (the Act) from decisions of the Deputy Minister of National Revenue made under section 63 of the Act.

The issue in this appeal is whether coiled steel tubing used in the oil and gas industry in high-pressure down-hole operations is properly classified under tariff item No. 7306.50.00 of Schedule I to the *Customs Tariff*,² as determined by the respondent, or should be classified under tariff item No. 8307.10.00, as claimed by the appellant. The goods in issue were imported into Canada between September 27, 1993, and August 3, 1994.

For purposes of this appeal, the relevant tariff nomenclature reads as follows:

73.06	Other tubes, pipes and hollow profiles (for example, open seam or welded, riveted or similarly closed), of iron or steel.
7306.50.00	-Other, welded, of circular cross-section, of other alloy steel
83.07	Flexible tubing of base metal, with or without fittings.
8307.10.00	-Of iron or steel

At the hearing, two witnesses testified on behalf of the appellant: Mr. Charles Douglas Costell, Manager of the maintenance and fabrication facility at Canadian Fracmaster Ltd., in Calgary, Alberta, and Mr. Glenn Stanley Coburn, Sales Engineer with Precision Tube Technology, Inc. (Precision Tube), in Houston, Texas, who testified as an expert in the composition, design and production of coiled tubing.

Mr. Costell explained that the appellant is an oil and gas well service company that does remedial work on wells. It also has a division in Russia which does some production. Mr. Costell described the goods in issue as coiled tubing made of steel that ranges in size from 1 in. to 4 1/2 in. He explained that coiled tubing is used for well cleanouts, acid treatments (bullhead, circulation, selective and diverted stimulations), nitrified cleanouts and hydrate and scale removal (jetting and drilling). He said that the general principle is that coiled tubing can be operated in a live gas well, reducing the expense of "killing" the well and reducing the flip period that is required for a workover rig. With the use of an overhead diagram, Mr. Costell

1. R.S.C. 1985, c. 1 (2nd Supp.).
2. R.S.C. 1985, c. 41 (3rd Supp.).

described for the Tribunal how coiled tubing is used in a cleanout operation. Two videos were also introduced into evidence and shown at the hearing in order to help the Tribunal understand how coiled tubing is used. Mr. Costell explained that, in one cycle, the coiled tubing is bent at least five times. The tubing is delivered from the factory on a wooden or steel storage drum and then stored on a truck. It is pulled off the drum by an injector. At this point, the tubing is straight. It then goes up the gooseneck and through its first bending cycle. As the tubing passes over the gooseneck, it goes through its second bending cycle. The gripper chains which are approximately one metre long straighten the tubing enough so that it can go down the well. The tubing then comes back up and goes through its third bending cycle. Mr. Costell testified that the tubing is bent three times on the way down the well and twice on the way up. He did say, however, that, depending on how one counts the bends, there could be six instead of five.

Mr. Costell explained that, typically, a pipe can be used in at least 40 applications. This is equivalent to 200 bendings. Depending on the internal pressure, this number can be higher or lower. According to Mr. Costell, coiled tubing is not rigid. Furthermore, the amount of flexibility depends on the needs of the end user. Mr. Costell also described a horizontal drilling or logging operation for the Tribunal. He explained that coiled tubing is also needed in this type of operation because of its flexibility. Mr. Costell testified that, originally, in the early 1960s, jointed pipes made up of 30-ft. sections which were butt welded together were used instead of coiled tubing. Their failure rate was high because all the butt welds broke. Coiled tubing was therefore developed. At the beginning, it was also butt welded. In the mid-1980s, new steel was developed and, as a result, coiled tubing is now milled on a continuous strip. The failure rate is now almost nil. Mr. Costell testified that coiled tubing normally comes in coils, which are 10,000 to 14,000 ft. long, while a normal tube is usually 30 to 32 ft. long. He also testified that there are presently no substitutes for coiled tubing. A product called "Coflexip," which has been classified by the Department of National Revenue as "flexible tubing," was introduced into evidence. Mr. Costell testified that, just like the goods in issue, this product cannot be bent without some type of mechanical assistance. In his view, there is no difference between something that is "bendable" and something that is "flexible." Finally, he testified that, until June 1994, the appellant imported the goods in issue duty-free. In cross-examination, Mr. Costell acknowledged that the appellant's product is referred to in the industry as "coiled tubing" and not "flexible tubing."

The appellant's second witness, Mr. Coburn, testified that Precision Tube is a producer of coiled tubing that it sells to a number of different companies, including the appellant. Mr. Coburn described his knowledge and experience relating to the goods in issue. He explained that he has been involved in their design and engineering and that he is familiar with all different types of manufacturing coiled tubing. A video showing the production process of coiled tubing was introduced into evidence. Mr. Coburn explained that Precision Tube turns raw strip material into coiled tubing. The raw strip must have good weldability because it will be welded in a number of places. It also has to have good mechanical properties because, once the coiled tubing is in the well, it is going to have to survive internal pressure and go through repeated cycles. The steel is ordered in sizes which are uncommon to conventional pipes. Coiled tubing is much smaller in diameter. The required number of coils are gathered to get the desired lengths, which can be anywhere from 12,000 to 20,000 ft. The strips of coils are then welded together. Mr. Coburn explained that Precision Tube developed a special 45°-angle welding machine which gives the product a cylindrical shape that allows the stress points to be distributed over a wide angle instead of a 90° butt weld. This new technology improved the quality and reliability of the coiled tubing. It has increased fatigue resistance. Mr. Coburn explained that this is state-of-the-art technology that is not used in the manufacture of conventional tubing.

To obtain a cylindrical shape, the flat strips of steel must be fed through forming stations. They are then fed through a high-frequency induction station. The edges of the coils are heated to approximately 2,700°F, literally causing them to fuse together. Mr. Coburn testified that this process is similar to that used for conventional tubing, but the fact that Precision Tube uses it for 10,000- to 20,000-ft. coils makes coiled tubing different. The coils then go through a number of metallurgical processes. The excess metal is removed from the edges. The coils are put through a cooling process and an electromagnetic inspection to make sure that there are no cracks or defects in the material. The tubing is then introduced into a full body stress relief. From there, it is air cooled and placed on a wooden spool. Once the tubing is complete, Precision Tube does a pressure test to see if there are any leaks. Mr. Coburn testified that, when the appellant purchases this product, it is a veritable pressure vessel. He also explained how coiled tubing is shipped. Mr. Coburn also discussed certain American Petroleum Institute standards for coiled tubing that were put together by the industry to differentiate between coiled tubing and regular jointed tubing, one of the differences being the bendability of coiled tubing. Mr. Coburn testified that the goods in issue have the characteristics and properties of flexible tubing. He explained that the degree of bendability depends on the requirement of the end user. He said that he was not aware of any tubing that could be bent or flexed manually. He was also not aware of any prescribed standard or range of flexibility that makes tubing become flexible. He testified that flexible tubing can have a smooth surface.

One witness testified on behalf of the respondent, Dr. David R. Budney, Professor of mechanical engineering at the University of Alberta, who was qualified as an expert in mechanical engineering with a particular emphasis on tubing. Dr. Budney explained that he has performed numerous studies in the field of tubing. He testified that the “Coflexip” pipe can be bent manually. Dr. Budney explained that there are differences between “coiled tubing” and “flexible tubing,” which he attempted to identify for the Tribunal. He testified that, in engineering terms, something that has large stiffness has low flexibility and something that has large flexibility has low stiffness. Dr. Budney explained that “stiffness” and “flexibility” are measurable properties using different scientific formulas and definitions. He said that the definition of “flexible pipe” is something that can withstand large curvature without adverse effects. He explained that the goods in issue experience an adverse effect every time they are gathered to small coils because some fatigue damage is occurring. After 40 or 50 cycles, the coiled tubing has to be discarded.

Most of Dr. Budney’s testimony was based on industry literature on flexible pipe introduced into evidence at the hearing. He noted that the word “flexible” in the literature is usually associated with a type of construction called “helical wrapping.” He testified that, in his view, there is no difference between manufacturing ordinary pipe and manufacturing coiled tubing. “Coflexip,” on the other hand, involves a more complex manufacturing process which he described for the Tribunal. Using scientific calculations, Dr. Budney identified the minimum bend rate that can occur before a pipe suffers damage. He testified that there are clear differences between coiled tubing, “Coflexip” and other types of tubing, such as the type used as a protective cover for electric wires or hydraulic leads, which, in his view, is “flexible tubing.” He testified that the effort required to bend coiled tubing would be considerably greater than the effort required to bend “flexible tubing.” There is less stress involved and, as a result, less damage caused. Dr. Budney explained that there is “wave action” in the “flexible tubing” which is not present in the coiled tubing. In his opinion, the goods in issue are not “flexible tubing.”

Counsel for the appellant argued that the goods in issue are “flexible tubing” and, as such, that they should be classified in heading No. 83.07. They noted that the word “flexible” is not defined in the tariff nomenclature or in the *Explanatory Notes to the Harmonized Commodity Description and Coding System*³ (the Explanatory Notes). Counsel, therefore, referred the Tribunal to the two following dictionary definitions of the term which, they argued, clearly describe the characteristics and properties of the goods in issue: (1) “capable of being flexed; ... characterized by a ready capability to adapt to new, different, or changing requirements⁴”; and (2) “that will bend without breaking, pliable, pliant.⁵” Relying on information taken from industry articles, counsel submitted that the goods in issue are flexible because they can be wound off a reel and put through a 90° guide before wearing out. Counsel argued that the goods in issue are “flexible tubing” because of their end use. They submitted that the goods in issue are significantly different from other pipe which, although bendable, is not capable of being flexed repeatedly. According to counsel, the evidence showed that there are fundamental differences between the goods in issue, which are flexible tubing, and rigid pipe. In light of these differences, counsel submitted that the goods in issue are excluded from heading No. 73.06.

Counsel for the appellant argued that the respondent made an arbitrary decision when he decided that tubing must have the following characteristics to be classified in heading No. 83.07: (1) tubing must have a spiral or corrugated construction; (2) tubing must have a certain range of flexibility; (3) tubing must not be designed to withstand high-pressure requirements; and (4) tubing must not have a smooth construction. Counsel argued that the *Harmonized Commodity Description and Coding System*⁶ does not provide that tubing must meet these conditions to be classified in heading No. 83.07 and, as such, that the respondent should not have relied on them in making his decision. According to counsel, the fact that the Explanatory Notes to heading No. 83.07 provide that there are “two main types” of flexible tubing does not exclude other types of flexible tubing from that heading. Counsel argued that the goods in issue are included in Code 1557 of Schedule II to the *Customs Tariff*, as they are used in the exploration, development, maintenance, testing, depletion or production of oil or natural gas wells.

Counsel for the respondent argued that the goods in issue are properly classified in heading No. 73.06 as “[o]ther tubes, pipes and hollow profiles ... of iron or steel.” She argued that the goods in issue are “tubes and pipes,” as these words are defined in the Explanatory Notes to Chapter 73. More particularly, she argued that the goods in issue are welded steel tubing of a diameter which does not exceed 406.4 mm and that they are “coiled tubing.” According to counsel, the goods in issue do not fall within the definition of the goods described in the Explanatory Notes to heading No. 83.07, i.e. they are not “tightly spiralled wire,” and they are not “flexible” to a degree that would allow them to be classified in heading No. 83.07. Counsel argued that steel pipes, generally, have some range of flexibility. However, counsel submitted that the Explanatory Notes to heading No. 83.07 describe tubing which is designed to have a range and ease of flexibility which far exceed any bendability of the goods in issue. According to counsel, the evidence showed that, although the goods in issue go through some sort of bending when being forced down a drilling hole, this process cannot occur without mechanical assistance, such as with the force of a hydraulically powered tubing reel. In counsel’s view, the Explanatory Notes to heading No. 83.07 cover goods of a spiral or

3. Customs Co-operation Council, 1st ed., Brussels, 1986.

4. *Webster’s Ninth New Collegiate Dictionary* (Springfield: Merriam-Webster, 1990) at 472.

5. *The Concise Oxford Dictionary of Current English*, 7th ed. (Oxford: Clarendon Press, 1982) at 373.

6. Customs Co-operation Council, 1st ed., Brussels, 1987.

corrugated construction or similar types of flexible tubing, such as tightly spiralled wire, i.e. tubing that is designed to be flexed without sustaining considerable fatigue. Counsel argued that the goods in issue are not so constructed.

When classifying goods in Schedule I to the *Customs Tariff*, the application of Rule 1 of the *General Rules for the Interpretation of the Harmonized System*⁷ (the General Rules) is of the utmost importance. Rule 1 states that classification is first determined according to the terms of the headings and any relative Chapter Notes. Therefore, the Tribunal must determine whether the goods in issue are named or generically described in a particular heading. If they are, then they must be classified therein, subject to any relative Chapter Note. Section 11 of the *Customs Tariff* provides that, in interpreting the headings or subheadings, the Tribunal shall have regard to the Explanatory Notes.

In determining whether the goods in issue can be classified in heading No. 73.06 as “[o]ther tubes, pipes ... of iron or steel,” the Tribunal referred to the Explanatory Notes to Chapter 73 which provide, in part, as follows:

For the purposes of this Chapter, the expression “tubes and pipes” ... [has] the following meanings hereby assigned to [it]:

(1) Tubes and pipes

Concentric hollow products, of uniform cross-section with only one enclosed void along their whole length, having their inner and outer surfaces of the same form. Steel tubes are mainly of circular, oval, rectangular (including square) cross-sections but in addition may include equilateral triangular and other regular convex polygonal cross-sections. Products of cross-section other than circular, with rounded corners along their whole length, and tubes with upset ends, are also to be considered as tubes. They may be polished, coated, bent (including coiled tubing), threaded and coupled or not, drilled, waisted, expanded, cone shaped or fitted with flanges, collars or rings.

This note clearly provides that Chapter 73 includes “tubes and pipes” that may be bent and then specifically refers to “coiled tubing.” The evidence clearly shows that the goods in issue are “coiled tubing” that may be bent. In the Tribunal’s view, the above note therefore describes the goods in issue. In other words, the goods in issue should be considered as “tubes and pipes.” As they are not named or described in any other heading in Chapter 73, they are properly classified in heading No. 73.06 as “[o]ther tubes, pipes ... of iron or steel.”

Because the General Rules provide that goods may be classified in two or more headings, the Tribunal considered whether the goods in issue can be classified in heading No. 83.07 as “[f]lexible tubing” before dismissing the appeal. In doing so, the Tribunal referred to the Explanatory Notes to that heading, which provide that “[t]here are two main types of flexible metal tubing, differing according to the process of manufacture.” The Tribunal considered the two types of flexible tubing described in the Explanatory Notes and concludes that they do not include the goods in issue. More particularly, the Explanatory Notes refer to tubing which is “strip rolled spirally” and “[c]orrugated flexible tubing.” The evidence clearly shows that the goods in issue are not so constructed. The Tribunal, therefore, is of the opinion that the goods in issue are not

7. *Supra* note 2, Schedule I.

“flexible tubing” as that term is defined in the Explanatory Notes to heading No. 83.07. As such, the Tribunal finds that the goods in issue are not covered in heading No. 83.07.

The Tribunal concludes that the goods in issue are properly classified under tariff item No. 7306.50.00.

Accordingly, the appeal is dismissed.

Arthur B. Trudeau

Arthur B. Trudeau
Presiding Member

Raynald Guay

Raynald Guay
Member

Desmond Hallissey

Desmond Hallissey
Member