

Ottawa, Wednesday, September 25, 1991

Appeal No. 2372

IN THE MATTER OF an appeal heard on May 7, 1991, under section 47 of the *Customs Act*, R.S.C., 1970, c. C-40, as amended.;

AND IN THE MATTER OF a decision of the Deputy Minister of National Revenue for Customs and Excise dated July 16, 1985, with respect to a request for a re-determination pursuant to section 46 of the *Customs Act*.

**BETWEEN**

**EEV CANADA LIMITED**

**Appellant**

**AND**

**THE DEPUTY MINISTER OF NATIONAL REVENUE  
FOR CUSTOMS AND EXCISE**

**Respondent**

**DECISION OF THE TRIBUNAL**

The appeal is allowed. The goods at issue are thyristors and should be classified under tariff item 44544-1 as semiconductor devices.

Charles A. Gracey  
Charles A. Gracey  
Presiding Member

Arthur B. Trudeau  
Arthur B. Trudeau  
Member

Sidney A. Fraleigh  
Sidney A. Fraleigh  
Member

Robert J. Martin  
Robert J. Martin  
Secretary

**UNOFFICIAL SUMMARY**

**Appeal No. 2372**

**EEV CANADA LIMITED**

**Appellant**

**and**

**THE DEPUTY MINISTER OF NATIONAL REVENUE  
FOR CUSTOMS AND EXCISE**

**Respondent**

*This is an appeal under subsection 47(1) of the Customs Act from a re-determination made by the Deputy Minister of National Revenue, Customs and Excise, classifying the goods in issue under tariff item 44621-1 as "Electric apparatus designed for welding, n.o.p., and parts thereof, not including motors." The appellant seeks a declaration that the goods be classified under tariff item 44544-1 as "Transistors and other semiconductor devices; parts thereof; materials for use in the manufacture thereof," other than those described in tariff item 44544-2. In the alternative, the appellant seeks a declaration that the goods be classified under tariff item 41417-2 as "... process control apparatus which converts analog signals from or to digital signals...." The respondent requests that his decision be upheld or, in the alternative, that the goods be classified under tariff item 44524-1 as other "Electric apparatus and complete parts thereof, n.o.p." The issue in this appeal is which tariff classification is most appropriate to the goods in issue.*

**HELD:** *The appeal is allowed. The goods at issue are thyristors and should be classified under tariff item 44544-1 as semiconductor devices.*

*Place of Hearing: Ottawa, Ontario  
Dates of Hearing: May 7 to 9, 1991  
Date of Decision: September 25, 1991*

*Tribunal Members: Charles A. Gracey, Presiding Member  
Arthur B. Trudeau, Member  
Sidney A. Fraleigh, Member*

*Counsel for the Tribunal: David M. Attwater*

*Clerk of the Tribunal: Nicole Pelletier*

*Appearances: Dean A. Peroff, for the appellant  
Linda J. Wall, for the respondent*

**Cases Cited:** *Concentrated Foods Inc. v. The Deputy Minister of National Revenue for Customs and Excise, 12 T.B.R. 321; Nortesco Inc. v. The Deputy Minister of National Revenue for Customs and Excise, 9 T.B.R. 164; Microsonic Digital Systems Limited v. The Deputy Minister of National Revenue for Customs and Excise, 10 T.B.R. 210; The Deputy Minister of National Revenue for Customs and Excise v. Kallestad Canada Inc.*

*(1987), 14 C.E.R. 71 (F.C.A.); John Deere Limited. v. The Deputy Minister of National Revenue for Customs and Excise, 3 T.C.T. 5097 (F.C.A.); Danfoss Manufacturing Company Limited v. The Deputy Minister of National Revenue for Customs and Excise et al., 5 T.B.R. 75; Reference by the Deputy Minister of National Revenue for Customs and Excise as to his administration of Tariff item 326e, 1 T.B.R. 192; Robert Bosch (Canada) Ltd. v. The Deputy Minister of National Revenue for Customs and Excise et al., 10 T.B.R. 110; Staub Electronics Ltd. v. The Deputy Minister of National Revenue for Customs and Excise, Canadian International Trade Tribunal, Appeal No. 2764, November 2, 1989; Access Corrosion Services Ltd. v. The Deputy Minister of National Revenue for Customs and Excise, 9 T.B.R. 184; Rolm Canada Inc. v. The Deputy Minister of National Revenue for Customs and Excise, Tariff Board, Appeal Nos. 2600 and 2625, September 14, 1988.*

Appeal No. 2372

EEV CANADA LIMITED

Appellant

and

THE DEPUTY MINISTER OF NATIONAL REVENUE  
FOR CUSTOMS AND EXCISE

Respondent

TRIBUNAL: CHARLES A. GRACEY, Presiding Member  
ARTHUR B. TRUDEAU, Member  
SIDNEY A. FRALEIGH, Member

REASONS FOR DECISION

ISSUE AND APPLICABLE LEGISLATION

This is an appeal under subsection 47(1) of the *Customs Act*<sup>1</sup> (the Act) from a re-determination made by the Deputy Minister of National Revenue, Customs and Excise (the Deputy Minister), classifying the goods in issue under tariff item 44621-1 as "Electric apparatus designed for welding, n.o.p., and parts thereof, not including motors." The appellant seeks a declaration that the goods be classified under tariff item 44544-1 as "Transistors and other semiconductor devices; parts thereof; materials for use in the manufacture thereof," other than those described in tariff item 44544-2. In the alternative, the appellant seeks a declaration that the goods be classified under tariff item 41417-2 as "... process control apparatus which converts analog signals from or to digital signals...." The respondent requests that his decision be upheld or, in the alternative, that the goods be classified under tariff item 44524-1 as other "Electric apparatus and complete parts thereof, n.o.p." The issue in this appeal is to determine what the goods are and which of the following tariff items is the most appropriate for their classification.

For the purposes of this appeal the relevant provisions of the *Customs Tariff*<sup>2</sup> are:

*Electronic data processing machines and apparatus; peripheral equipment for use therewith including data entry, data preparation and data handling machines and apparatus; accessories and attachments for use therewith; parts of all the foregoing; none of the foregoing to include telephone and telegraph apparatus and parts thereof:*

41417-1      *Other than the following*

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1. R.S.C., 1970, c. C-40, as amended.  
2. R.S.C., 1970, c. C-41, as amended.

41417-2 *Drum storage memories; disc packs; disc drives; disc files; disc cartridge cleaners; card readers; card punches; card reader/punches; paper tape readers and punches; badge readers and punches; document transport mechanisms; tape to card punches; reproducing punches; line printers and page writers; card printers; matrix printers including buffered printers; card or paper tape verifiers; collators; card sorters; process control apparatus which converts analog signals from or to digital signals, the foregoing not to include sensors; card conditioning equipment; parts of the foregoing*

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*Electric apparatus and complete parts thereof, n.o.p.:*

44524-1 *Other than the following*

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*Transistors and other semiconductor devices; parts thereof; materials for use in the manufacture thereof:*

44544-1 *Other than the following*

44544-2 *Hybrids; linear audio amplifiers with a power rating of twenty milliwatts or less; diodes and silicon-controlled rectifiers with a current rating greater than 510 amperes average; diodes and voltage multipliers with a current rating of one ampere or less together with a voltage rating greater than one kilovolt*

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44621-1 *Electric apparatus designed for welding, n.o.p., and parts thereof, not including motors*

## FACTS AND EVIDENCE

On or about December 28, 1983, the appellant, EEV Canada Limited (EEV) imported, under tariff item 44544-1, certain items designated as semiconductor parts and identified by EEV model numbers CHE800-22, HE2500-22, AHE195-22, AHE3300-18, HE3300-22 and HE1200-22. A B-3 Canada Customs Import Entry Coding Form, No. E538704, was declared on December 28, 1983, and date stamped January 4, 1984, at Toronto.

A Dominion customs appraiser determined that the imported goods were properly classified under tariff item 44621-1, as "Electric apparatus designed for welding, n.o.p., and parts thereof, not including motors." The notice of final determination was dated February 15, 1984. On May 11, 1984, EEV appealed the decision of the customs appraiser to the Deputy Minister who, in a letter dated July 16, 1985, confirmed the tariff classification. By letter dated September 6, 1985, EEV appealed that

determination to the Tariff Board that was taken up and continued by the Tribunal in accordance with section 60 of the *Canadian International Trade Tribunal Act*.<sup>3</sup>

Evidence adduced at the hearing held from May 7 to 9, 1991, indicated that the products in issue perform as switches for alternating current. Each product contains two thyristors placed inversely so as to utilize both phases of alternating current. A thyristor is a type of semiconductor. It consists of a silicon wafer that has been designed and manufactured to enable it to conduct electrons in a desired manner. Copper contact plates are compressed against each side of the silicon wafer and together they are contained in a cylinder of porcelain sometimes referred to as a thyristor puck. The copper contact plates are inter-connected to each other by busbars to facilitate connection to the power circuit. The pucks are affixed to a base. Insulated wire leads run into the pucks to contact points.

Either air-cooled or water-cooled copper heat sinks are affixed to the pucks to draw away heat. In the case of a water-cooled system, cooling jackets are affixed to the thyristor pucks and water coming from a cooling system circulates within the cooling jackets drawing the heat away from the pucks. An important part of the cooling mechanism is the thermistor, which is attached to the heat sink. The thermistor measures the temperature of the thyristor and sends a signal back to the control apparatus.

The two busbars are affixed to the heat sinks by means of spring-loaded plates, which compress all of the parts together. The heat sinks, the thermistor and spring-loaded plates must be factory mounted and calibrated for proper functioning of the device.

Certain of the goods, specifically those imported bearing model numbers HE1200-22 and HE3300-22, come complete with an attenuator. The attenuator is an optional addition. It is used when the goods are incorporated into welding-control apparatus of older design that operates on high voltage. A semiconductor device operates on low voltage and the attenuator modifies the voltage from high to low so that the device will function.

Uncontroverted expert evidence was adduced respecting the similarities that exist between smaller thyristors that may be incorporated onto an integrated circuit board and the goods at issue. The smaller components are considered semiconductor devices as they contain semiconductor materials.

## ARGUMENTS

Counsel for the appellant initiated his argument with two points. Between alternative tariff items, those claimed by the appellant should take priority to those claimed by the respondent as the latter are qualified as n.o.p. (not otherwise provided for) provisions and both are less specific than those claimed by the appellant. Also, there is a distinction between the terms "device" and "apparatus," as used in the *Customs Tariff*, and the goods are more properly characterized as devices.

Counsel reviewed the evidence stating that there was considerable agreement between the expert witnesses. He claimed that the experts agree that the goods are parts of process-control apparatus; that the goods cannot be considered electric apparatus, but are more appropriately characterized as parts of electric apparatus; and that, save for the electronics expert presented by the respondent, the goods were referred to as thyristors in the trade.

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3. R.S.C., 1985, c. 47 (4th Supp.).

Counsel proceeded to identify what he called implied or actual admissions by the respondent's witness: the goods could be called devices, which are distinct from apparatus; the device contains a semiconductor; some people would call the goods a thyristor or semi-conductor device; a small thyristor that would be incorporated into an integrated circuit board is practically the same as, or there is a perfect analogy between those and, the much larger goods at issue; the primary component of the goods is electronic and the other parts associated with it do not change the fundamental nature of the electronic component, but serve as ancillary parts; for the ancillary parts, the electronic components would not function; and, finally, the respondent's witness recognized the IEEE Standard Dictionary of Electric and Electronics Terms<sup>4</sup> as an authoritative reference.

Counsel submitted that this last point is significant because reference can be made to technical publications accepted by both parties to resolve ambiguities in the definition of technical terms such as "thyristor."<sup>5</sup> In this regard, he argued that the goods in issue are properly described in the above-mentioned dictionary as:

...

*semiconductor rectifier diode (thyristor). A semiconductor diode having an asymmetrical voltage-current characteristic, used for the purpose of rectification, and including its associated housing, mounting, and cooling attachment if integral with it.*

...

Counsel stated that presently accepted international standards of classification in customs law recognize the definitions of semiconductor and thyristor advocated by the appellant. In this regard, he referred the Tribunal to the Explanatory Notes to the Harmonized System and to European Nomenclature. He also referred the Tribunal to U.S. jurisprudence. He argued that the goods should be classified in accordance with their dominant component, namely, the electronic component.<sup>6</sup> In the alternative, he argued that it would be proper to classify the goods according to the component of greatest economic value<sup>7</sup> (again the electronic component) or based on the inherent nature of the goods which function as an electronic switching device.<sup>8</sup>

Counsel for the respondent initiated her argument by submitting that any reference to European or U.S. classification and jurisprudence is irrelevant before the Tribunal. She argued that it is inappropriate for the Tribunal to refer to the Harmonized System or the Explanatory Notes thereto to

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4. Fourth Edition, p. 873.

5. See, e.g., *Concentrated Foods Inc. v. The Deputy Minister of National Revenue for Customs and Excise*, 12 T.B.R. 321.

6. See, e.g. *Nortesco Inc. v. The Deputy Minister of National Revenue for Customs and Excise*, 9 T.B.R. 164.

7. *Microsonic Digital Systems Limited v. The Deputy Minister of National Revenue for Customs and Excise*, 10 T.B.R. 210.

8. See, e.g., *The Deputy Minister of National Revenue for Customs and Excise v. Kallestad Canada Inc.* (1987), 14 C.E.R. 71 (F.C.A.); *John Deere Limited. v. The Deputy Minister of National Revenue for Customs and Excise*, 3 T.C.T. 5097 (F.C.A.).

determine classification of goods under the pre-harmonized system. In response to the appellant's reference to a Revenue Canada policy ruling, she argued that the respondent is not bound by such ruling and it is irrelevant before the Tribunal.

Counsel argued that the Tribunal must determine the essential nature of the goods. She agreed that the goods serve as switches and that her witness acknowledged that the goods are devices with semiconductor components. She argued that in determining the essential nature or function of the goods the Tribunal must have regard to the components, the configuration of those components and the design, machining and engineering of the entire unit. Counsel noted that her witness testified that the goods were part of process-control apparatus. She argued, however, that this should not imply that their essential nature is characterized as process-control apparatus. She submitted that the goods do not control any process nor do they receive and process data.

Counsel argued that the semiconductor devices contemplated in tariff item 44544-1 are not of the same class as transistors based on the wording contained in the heading to that tariff item. She submitted that the opposing counsel has not established that the goods could be grouped in the same category as transistors. As such, it would be inappropriate to classify the goods under that tariff item. She noted that the goods have been referred to as silicon-controlled rectifiers by at least one of the witnesses at the hearing, but there was not enough evidence presented at the hearing to properly determine whether the goods could be classified under tariff item 44544-2.

Counsel referred to a letter dated July 16, 1984, addressed to Mr. C. Pilsmaker of the Customs and Excise office from Mr. D. Clissord, representing the appellant, wherein it was stated that the goods are used in standard and micro-processor based welding-controls. She argued that it is clear that the goods were intended to be distributed for use in welding machines or welding systems. She noted that Mr. Clissord, when cross-examined, admitted that in 1984 between 85 to 90 percent of the goods were sold for use in welding.

Counsel argued that the Tribunal should distinguish this case from *Danfoss Manufacturing Company Limited v. The Deputy Minister of National Revenue for Customs and Excise*<sup>9</sup> which stands for the proposition that where an item can be used in a number of different applications it cannot be considered a part of any particular article for tariff purposes. She argued that in the *Danfoss* case the Tariff Board noted that there was nothing unique about the goods at the time of importation to identify them as parts of any particular thing. In contrast, she noted that the particular goods in issue were designed and intended for use in resistance welding. Reference was made to the configuration of the busbars and the positioning of the holes on the busbars. She argued that the actual design of the goods should take precedence over how the goods are used when considering the applicability of tariff item 44621-1.<sup>10</sup> Counsel then addressed certain tests to determine whether an article can properly be considered a part of goods.<sup>11</sup>

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9. 5 T.B.R. 75; affirmed by [1972] F.C. 798.

10. See, e.g., *Reference by the Deputy Minister of National Revenue for Customs and Excise as to his administration of Tariff item 326e*, 1 T.B.R. 192.

11. See, e.g., *Robert Bosch (Canada) Ltd. v. The Deputy Minister of National Revenue for Customs and Excise et al.* 10 T.B.R. 110; *Staub Electronics Ltd. v. The Deputy Minister of National Revenue for Customs and Excise*, Canadian International Trade Tribunal, Appeal No. 2764, November 2, 1989.



Counsel concluded her argument with several additional points. She noted that the term "apparatus" has been given a very broad interpretation for tariff classification purposes<sup>12</sup> and, as such, the goods could be viewed as apparatus; she considered it inappropriate to classify the goods by reference to the component of greatest economic value and distinguished the opposing counsel's jurisprudence from the present circumstances; and she argued that the goods qualify as both electronic and electric.<sup>13</sup>

## REASONS

This appeal is to determine what the goods in issue are and which of the four tariff classifications identified earlier is the most appropriate for their classification.

There is no dispute between parties and it is supported by the evidence that a thyristor is a semiconductor and as such falls within the category of semiconductor devices. The central point in issue before this Tribunal is whether the thyristor assemblies in issue, which show certain adaptations enabling them to operate in welding-process control, still qualify as semiconductor devices or whether these adaptations render them more properly classified as electric apparatus designed for welding.

The overwhelming proportion of time spent by counsel for the appellant, both in evidence and argument, was in attempting to establish that the goods, as imported, could be described as thyristors and that the basic unit, referred to as a "thyristor puck," could not be called a thyristor. Counsel for the respondent, for her part, brought evidence and argument to establish that the thyristor puck was itself a thyristor, but that the complete assemblages, which are the subject goods, are more than a thyristor and can therefore not be so classified. After considering all of the evidence and argument, the Tribunal agrees in part with both counsel.

The Tribunal agrees with counsel for the appellant that the goods imported may properly be described as thyristors, but disagrees with the argument that the basic unit, referred to as a "thyristor puck," may not also be referred to as a thyristor. It agrees with counsel for the respondent that a thyristor puck is indeed a thyristor, but disagrees with the respondent that the functional assemblage may not also be so described.

Despite all the evidence and argument brought, the case is relatively straightforward. To begin, it must be conceded that the simple thyristor puck can be considered a thyristor as it displays the essential character of a thyristor. At the core of the puck is a thyristor, which is a type of semiconductor, and the other components are present to render the assemblage functional. The additional parts are ancillary and peripheral to the main component, not altering its main character. The Tribunal, therefore, had no difficulty in determining that the thyristor pucks can be considered thyristors.

However, the Tribunal had more difficulty with the argument advanced by counsel for the respondent that the addition to the thyristor puck of attachments essential to its functioning as a thyristor should somehow disqualify the greater assemblage from being described as a thyristor. This argument suggests that a non-functional item that has the character of a thyristor may be so called, but

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12. *Access Corrosion Services Ltd. v. The Deputy Minister of National Revenue for Customs and Excise*, 9 T.B.R. 184.

13. *Rolm Canada Inc. v. The Deputy Minister of National Revenue for Customs and Excise*, Tariff Board, Appeal Nos. 2600 and 2625, September 14, 1988.

after the addition of basic components essential to its functioning it can no longer be so described. The Tribunal rejects this argument.

Counsel for the respondent argued that the goods were designed and engineered to be incorporated into an apparatus used in welding-control and that 85 to 90 percent of the goods were sold for use in welding applications. This argument raises the "for use" issue, but it is noted that the tariff item preferred by the respondent contains the "n.o.p." reference. Since there is a provision for "Transistors and other semiconductor devices," it is the Tribunal's view that if the goods at issue can be seen to belong in that classification, this would take precedence over the classification proposed by the respondent. Furthermore, the bending and drilling of the busbar in such a manner as to fit the intended application does not alter the basic characteristic of the unit.

Counsel for the respondent argued that opposing counsel has failed to establish that the subject goods are of the same class as the transistors referred to under tariff item 44544-1. However, the head note to that tariff item reads in part, "Transistors and other semiconductor devices." Since the drafters deemed it advisable to use this wording, the Tribunal must conclude that the intent was to make the classification broad enough to include "transistors" as well as other types of "semiconductor devices." As noted above, there is no dispute between parties that thyristors are semiconductor devices, and the Tribunal considers this characterization correct.

The Tribunal does not reject the evidence that the majority of the goods at issue are sold to the welding trade and that some of the attachments were designed to accommodate that purpose. The Tribunal, however, bases its decision on the fact that the goods at issue do qualify fully for inclusion in tariff item 44544-1 and that the classification preferred by the respondent in an n.o.p. item, which obviously is to apply to goods not otherwise provided for.

The Tribunal, therefore, concludes that the thyristor assembly can be considered a semiconductor device. As counsel did not argue for inclusion under tariff item 44544-2, and there being insufficient evidence to conclude that the goods are more properly classified thereunder, the Tribunal concludes that the goods should be classified under tariff item 44544-1.

In view of this decision, neither of the alternative classifications proposed by counsel need be considered.

## CONCLUSION

The appeal is allowed. The goods at issue are thyristors and should be classified under tariff item 44544-1 as semiconductor devices.

Charles A. Gracey  
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