CANADIAN INTERNATIONAL TRADE TRIBUNAL
TRIBUNAL CANADIEN DU COMMERCE EXTÉRIEUR

Ottawa, Thursday, January 25, 1996

Appeal No. AP-94-329

IN THE MATTER OF an appeal heard on April 27, 1995, under section 67 of the *Customs Act*, R.S.C. 1985, c. 1 (2nd Supp.);

AND IN THE MATTER OF a decision of the Deputy Minister of National Revenue dated January 16, 1995, with respect to a request for re-determination under section 63 of the *Customs Act*.

BETWEEN

SIMARK CONTROLS LTD. **Appellant**

AND

THE DEPUTY MINISTER OF NATIONAL REVENUE **Respondent**

AND

ASEA BROWN BOVERI INC. AND MEASUREX INC. **Interveners**

DECISION OF THE TRIBUNAL

The appeal is allowed.

Lise Bergeron
Lise Bergeron
Presiding Member

Robert C. Coates, Q.C.
Robert C. Coates, Q.C.
Member

Desmond Hallissey
Desmond Hallissey
Member

Michel P. Granger
Michel P. Granger
Secretary

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TRIBUNAL CANADIEN DU COMMERCE EXTÉRIEUR

UNOFFICIAL SUMMARY

Appeal No. AP-94-329

SIMARK CONTROLS LTD. **Appellant**

and

THE DEPUTY MINISTER OF NATIONAL REVENUE **Respondent**

and

ASEA BROWN BOVERI INC. AND MEASUREX INC. **Interveners**

This is an appeal under section 67 of the Customs Act. The issue in this appeal is whether two models of goods described as turbine flow meters, namely, the raised face carbon steel meter and the EZ-IN meter, are properly classified under tariff item No. 9026.10.99 as other flow meters, as determined by the respondent, or should be classified under tariff item No. 9026.10.10 as electrical flow meters, as claimed by the appellant.

***HELD**: The appeal is allowed. The goods in issue should be classified under tariff item No. 9026.90.91 as parts of electrical flow meters. The Tribunal finds that the goods in issue are parts of turbine flow meters, as they can only perform their intended function when they have, installed on them, a magnetic pickup device and when they are attached to an external readout device. As such, they are essential to the operation and necessary and integral components of the turbine flow meters. In considering the appropriate classification of the turbine flow meters, themselves, the Tribunal relied on Supplementary Note 3 to Chapter 90 of Schedule I to the Customs Tariff which provides that, for the purpose of Chapter 90, an "electrical" instrument or apparatus is one whose operation depends on an electrical phenomenon which varies according to the factor to be determined. The Tribunal finds that the production of an electrical pulse in a turbine flow meter is an electrical phenomenon, that the frequency of production of an electrical pulse varies according to the flow of water through the turbine flow meter and that the operation of the turbine flow meter depends upon the production of the electrical pulse, without which there would be no basis for measuring the flow of liquid.*

Place of Hearing:	*Ottawa, Ontario*
Date of Hearing:	*April 27, 1995*
Date of Decision:	*January 25, 1996*
Tribunal Members:	*Lise Bergeron, Presiding Member* *Robert C. Coates, Q.C., Member* *Desmond Hallissey, Member*
Counsel for the Tribunal:	*Shelley Rowe*
Clerk of the Tribunal:	*Anne Jamieson*
Appearances:	*Douglas J. Bowering, for the appellant* *Ian McCowan, for the respondent* *John R. Peillard, for the interveners*

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CANADIAN INTERNATIONAL TRADE TRIBUNAL
TRIBUNAL CANADIEN DU COMMERCE EXTÉRIEUR

Appeal No. AP-94-329

SIMARK CONTROLS LTD. **Appellant**

and

THE DEPUTY MINISTER OF NATIONAL REVENUE **Respondent**

and

ASEA BROWN BOVERI INC. AND MEASUREX INC. **Interveners**

TRIBUNAL: LISE BERGERON, Presiding Member
ROBERT C. COATES, Q.C., Member
DESMOND HALLISSEY, Member

REASONS FOR DECISION

This is an appeal under section 67 of the *Customs Act*[1] (the Act). The issue in this appeal is whether two models of goods described as turbine flow meters, namely, the raised face carbon steel meter and the EZ-IN meter, are properly classified under tariff item No. 9026.10.99 of Schedule I to the *Customs Tariff*[2] as other flow meters, as determined by the respondent, or should be classified under tariff item No. 9026.10.10 as electrical flow meters, as claimed by the appellant.

The following are the relevant provisions from Schedule I to the *Customs Tariff:*

90.26	*Instruments and apparatus for measuring or checking the flow, level, pressure or other variables of liquids or gases (for example, flow meters, level gauges, manometers, heat meters), excluding instruments and apparatus of heading No. 90.14, 90.15, 90.28 or 90.32.*
9026.10	*-For measuring or checking the flow or level of liquids*
9026.10.10	*---Electrical flow meters*
	---Other:
9026.10.91	*----Electrical instruments and apparatus*
9026.10.99	*----Other*
9026.90	*-Parts and accessories*
	---Other:
9026.90.91	*----Of the goods of tariff item No. 9026.10.91, 9026.20.10 or 9026.80.10*

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

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Both the appellant and the respondent agreed that the goods in issue are properly classified in subheading No. 9026.10. However, they disagreed about the classification at the tariff item level as either "electrical" flow meters or "other" flow meters.

Dr. Peter R. Frise, Associate Professor, Department of Mechanical and Aerospace Engineering at Carleton University, appeared as an expert witness in the area of hydraulics utilizing flow measurements. He stated that he is familiar and knowledgeable about the use and operation of the Halliburton turbine flow meters. Referring to a cutaway sample of one of the goods in issue, Dr. Frise explained that it has a small, propeller-like, turbine inside which spins as a result of the liquid passing through the instrument and that the frequency of the blade spinning is directly related to the rate at which the liquid passes through the instrument. The blades of the turbine pass through a magnetic field which is induced by a magnetic pickup, which action produces a pulse of electrical current in a coil that is wrapped around the magnetic pickup. The pulse is then fed to an electronic counting circuit which counts the pulses, and the count is transformed into a reading that the electrical readout equipment can display to a person. Dr. Frise agreed with the definition of a flow meter as "an instrument for measuring the velocity of flow of a liquid in a pipe.[3]"

The appellant's representative confirmed that the goods in issue were not equipped with magnetic pickups at the time of their importation and were comprised only of a stainless steel body with a propeller. Dr. Frise explained that, without the magnetic pickups and the support electronics, such as a digital meter or a clock mechanism, the goods in issue are not flow meters and do not measure or indicate anything. In his opinion, the goods in issue, with the magnetic pickups and support electronics, are electrical devices.

Dr. Frise agreed with the definition of a "phenomenon" as "a fact or event of scientific interest susceptible of scientific description and explanation[4]" introduced by the appellant's representative. In addition, he stated that, in his view, in a scientific or engineering context, a "phenomenon" is any occurrence and that the pulse rate generated from liquid passing through a flow meter is a phenomenon.

In response to questions from counsel for the respondent, Dr. Frise agreed that there are different types of flow meters and that some operate on mechanical principles, some on electrical principles and some on a mixture of both mechanical and electrical principles. In terms of the goods in issue specifically, Dr. Frise opined that the rotation of the propeller is a mechanical phenomenon and that the number of pulses is determined by the mechanical action of the propeller spinning, which is, in turn, determined by the rate of flow of the liquid. He further opined that the production of the pulse from the motion of the propeller is an electrical phenomenon.

Counsel for the respondent referred Dr. Frise to another type of flow meter, a magnetic flow meter, commonly used in the pulp and paper industry. The liquid passing through these types of flow meters is, itself, a conductor. The flow meter does not have any parts inside it impeding the flow of the liquid. Rather, the pipe is a non-conductor, such as a plastic pipe, that is surrounded by magnetic coils. Dr. Frise stated that the phenomenon that produces the reading in a magnetic flow meter is the same phenomenon which produces the reading in the goods in issue. He stated that a magnetic flow meter is a type of electrical flow meter that does not incorporate a mechanical device.

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3. Webster's Third New International Dictionary of the English Language (Springfield: Merriam-Webster, 1986) at 876.
4. *Ibid*. at 1696.

Mr. Gilles Bouchard, a mechanical engineer and Process Control Specialist with Sandwell Inc., appeared on behalf of the respondent and was qualified by the Tribunal as an expert witness in the area of instrumentation and process controls, including flow meters. In his expert witness report, as well as in his testimony at the hearing, Mr. Bouchard opined that the "turbine flowmeter's operation does not depend upon an electrical phenomenon but rather upon a mechanical action proportional to the mass flow rate which is then converted to electrical pulses" and that "[n]o electrical supply is needed in the operation of a turbine flowmeter."

In describing the function of the goods in issue, Mr. Bouchard stated that there is a momentum of flow inside the tube and that the blades of the turbine are caused to move by a magnet which has an induced current. The pickup coil in the magnet converts the turbine blade rotation into pulses. Mr. Bouchard stated that there is no difference from one pulse to the next and that the measurement of the flow is actually based on the space between the pulses, that is, the number of pulses, divided by the time, rather than on the pulses themselves. In Mr. Bouchard's view, the method of measurement of the goods in issue is not an electrical phenomenon, since the pulses are invariant and there is no electrical input to the flow meter. During cross-examination, Mr. Bouchard agreed that the production of a pulse is an electrical phenomenon, but stated that, in his view, to be considered electrical flow meters, the goods in issue must be externally excited.

By way of comparison, Mr. Bouchard referred to a number of types of flow meters that, in his view, do depend upon an electrical phenomenon, unlike the goods in issue. First, Mr. Bouchard described magnetic flow meters which, he stated, are used extensively in the pulp and paper industry. He described them as apparatus comprised of a tube through which liquid flows. The liquid flowing through the tube is a conductor and has an imprinted excitation current running through it. The motion of the liquid through the current produces a continuous voltage signal on the pickup coils proportional to the flow rate. The pickup coil then creates a magnetic field. He stated that, with this type of flow meter, the voltage is the phenomenon that varies.

Mr. Bouchard also described head flow meters. He stated that these flow meters create a head, which is basically a difference in pressure. The difference in pressure is then interpreted by a gauge or by a transmitter or transducer. The cell in the transducer has an electrical current going through it. In Mr. Bouchard's view, the current going through the cell is an electrical phenomenon, as it varies according to the pressure exerted on it.

In argument, the appellant's representative looked to the wording of heading No. 90.26 and to the relevant Explanatory Notes to the Harmonized Commodity Description and Coding System[5] (the Explanatory Notes). The Explanatory Notes to heading No. 90.26 provide that "[t]he instruments and apparatus of [heading No. 90.26] may be fitted with recording, signalling or optical scale-reading devices or transmitters with an electrical, pneumatic or hydraulic output." The representative highlighted the fact that the Explanatory Notes provide that the instruments and apparatus of heading No. 90.26 "may" contain those elements, but that they are not required to contain those elements in order to be classified in heading No. 90.26. The representative further pointed out that flow meters are specifically addressed in paragraph (I)(A) of the Explanatory Notes to heading No. 90.26 which provide that flow meters "indicate the rate of flow (in volume or weight per unit of time) and are used for measurement of flow." Referring specifically to the word "indicate," the representative submitted that an electrical flow meter under tariff item No. 9026.10.10 should be interpreted to be the complete assemblage of goods required to measure the flow.

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

The appellant's representative also referred to the Explanatory Notes to Chapter 90, which, under Part (III) entitled "Parts and Accessories," provide that "parts or accessories identifiable as suitable for use solely or principally with the machines, appliances, instruments or apparatus of this Chapter are classified with those machines, appliances, etc." He submitted that the goods in issue are components of turbine flow meters, which include both measurement and indication devices. The representative also referred to the Tariff Board's decision in *Simark Controls Ltd. v. The Deputy Minister of National Revenue for Customs and Excise*[6] and directed the Tribunal's attention to the following excerpt from that decision:

> *In the present appeal, although the imported goods are referred to as meters, they are not capable of measuring and recording quantities unless used in conjunction with an electro-magnetic pick-up and recorder. When so used, the combination functions as a meter. The subject goods have no use other than as components of meters which would not function without them. They are therefore to be regarded as parts of meters.*[7]

Finally, the appellant's representative referred to the Supplementary Notes to Chapter 90 of Schedule I to the *Customs Tariff*. Supplementary Note 3 provides as follows:

> *For the purpose of the tariff items of this Chapter, the term "electrical" when used in reference to instruments, appliances, apparatus and machines, refers to those articles the operation of which depends on an electrical phenomenon which varies according to the factor to be determined.*

The representative submitted that it is the electrical pulses that are actually being measured and that they are directly proportional to the rate of flow, which is the factor to be determined.

Supporting the appellant's position, the representative for the interveners, that use flow meters as inputs for equipment that they market in Canada to the pulp and paper industry, submitted that Note 3 of the Supplementary Notes to Chapter 90 does not contain any limiting provisions which provide that no portion of the operation of the device may be mechanically oriented. He referred to a definition of "electrical" as "[r]elating to electricity.[8]"

The representative for the interveners also highlighted the word "indicate" in the Explanatory Notes and added that Rule 2 (a) of the General Rules for the Interpretation of the Harmonized System[9] (the General Rules) specifically covers incomplete articles such as the goods in issue. He submitted that the goods in issue are not only parts of turbine flow meters but also incomplete flow meters. He submitted that the goods in issue are committed by design to have magnetic pickups in their towers.

Finally, the representative for the interveners referred to the Explanatory Notes to Chapter 90, under Part IV entitled "Functional Units." In particular, he referred to Note 3 to Chapter 90 which provides that the provisions of Note 4 to Section XVI apply to Chapter 90. Note 4 to Section XVI provides as follows:

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6. (1985), 10 T.B.R. 221.
7. *Ibid.* at 227.
8. The Concise Oxford Dictionary of Current English, 5th ed. (Oxford: Clarendon Press, 1964) at 392.
9. *Supra*, note 2, Schedule I.

> *Where a machine (including a combination of machines) consists of individual components (whether separate or interconnected by piping, by transmission devices, by electric cables or by other devices) intended to contribute together to a clearly defined function covered by one of the headings in Chapter 84 or Chapter 85, then the whole falls to be classified in the heading appropriate to that function.*

He submitted that subheading No. 9026.10, which provides for flow meters, refers to the combination of devices which are separate, but which are interconnected and clearly to be used together for a particular function. In support of this position, he referred to the Tariff Board's decision in *Landis and Gyr Inc. v. The Deputy Minister of National Revenue for Customs and Excise*,[10] in which it was found that the combination of a transmitter and amplifier or readout device, placed at opposite ends of a power transmission line, located miles apart, could be considered to be an electrical measuring instrument.

Counsel for the respondent argued that flow meters are comprised of the goods in issue and magnetic pickups and do not include the readout equipment, whether it is a meter, computer, etc. In support of this position, counsel referred to the product literature contained in the appellant's and the respondent's briefs which, in his view, shows that goods marketed, promoted and advertised as flow meters include a magnetic pickup. Furthermore, counsel pointed out that, in their briefs, the appellant and the interveners agreed with his submission as to what constitutes a flow meter. In particular, he referred to the statement in the interveners' brief that "[t]he Haliburton [sic] flowmeters are designed for use with the Haliburton [sic] electronic readout." Counsel also contended that the Explanatory Notes to heading No. 90.26 support this view, as they contemplate that the instruments and apparatus of that heading "may be fitted with recording, signalling or optical scale-reading devices."

Counsel for the respondent submitted that the Tariff Board's decision in *Simark* is of limited value in this appeal, as it preceded the introduction of Supplementary Note 3 to Chapter 90, and that the passage from that decision, on which the appellant's representative relied, is from a dissenting judgement.

Finally, counsel for the respondent submitted that the fact that the tariff nomenclature distinguishes between electrical and non-electrical flow meters indicates that there is a distinction to be drawn. In counsel's view, the wording of the definition of "electrical" in Supplementary Note 3 to Chapter 90 is critical for the purposes of classifying the goods in issue. Counsel submitted that, according to the definition, to be considered an electrical instrument or apparatus under Chapter 90, the operation of the instrument or apparatus must depend on an electrical phenomenon which varies according to the factor to be determined. Counsel contended that the factor to be determined by the goods in issue, that is, the distance between the pulses, is not a varying electrical phenomenon.

Based on the evidence of both the appellant's and the respondent's expert witnesses, the Tribunal is persuaded that the goods in issue are parts of Halliburton EZ-IN Series BF turbine flow meters. While there is no universal test for determining whether a product is a part of another product, and each case must be determined on its merits,[11] the Tribunal has considered the following factors to be relevant to the determination of whether a product is a part: (1) whether the product is essential to the operation of another product; (2) whether the product is a necessary and integral component of another product; (3) whether the

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10. Appeal No. 708, December 23, 1963.
11. *York Barbell Company Limited v. The Deputy Minister of National Revenue for Customs and Excise*, Canadian International Trade Tribunal, Appeal No. AP-90-161, August 19, 1991.

product is installed in the other product; and (4) common trade usage and practice.[12] As indicated by both expert witnesses, the goods in issue can only perform their intended function of measuring the flow of a liquid when a magnetic pickup has been installed on them and when they are attached to an external readout device. Moreover, the product literature included in both the appellant's and the respondent's briefs indicates that, for a given application, the Halliburton EZ-IN Series BF turbine flow meter is comprised of a turbine flow meter, a pickup unit and an electronic readout device. The product literature provides as follows:

> *The Halliburton EZ-IN Series BF turbine flow meter provides outstanding accuracy for a wide range of industrial metering applications. An in-line liquid metering device, the turbine flow meter incorporates a precision turbine with tungsten carbide shaft and bearings, that is activated by liquid moving through the meter body. Turbine blades, spinning at a rate directly proportional to the flow rate, cut magnetic lines of force set up by a pickup unit (a permanent magnet surrounded by an electrical coil). The electrical impulses are transmitted to the meter instrumentation used in the system. Halliburton turbine flow meters are designed for use with Halliburton electronic readout equipment.*

As such, the goods in issue are, in the Tribunal's view, essential to the operation and necessary and integral components of the turbine flow meters and are, therefore, parts thereof.

Having found that the goods in issue are parts of the turbine flow meters, the Tribunal must further determine whether the turbine flow meters constitute "electrical" flow meters, as provided under tariff item No. 9026.10.10, or "other" flow meters, as provided under tariff item No. 9026.10.99. The Tribunal finds Supplementary Note 3 to Chapter 90 instructive for the purposes of interpreting the term "electrical" in tariff item No. 9026.10.10. Supplementary Note 3 provides that, for the purposes of Chapter 90, an "electrical" instrument or apparatus is one whose operation depends on an electrical phenomenon which varies according to the factor to be determined. In the Tribunal's view, the turbine flow meters meet this definition. The definition of a "phenomenon" introduced by the appellant's representative states that it is "a fact or event of scientific interest susceptible of scientific description and explanation.[13]" The Tribunal finds that the production of an electrical pulse in the turbine flow meter is an electrical phenomenon. Moreover, the Tribunal agrees with both expert witnesses that the frequency of production of an electrical pulse varies according to the flow of water through the turbine flow meter. Finally, the Tribunal finds that the operation of the turbine flow meter depends upon the production of the electrical pulse, without which there would be no basis for measuring the flow of liquid through the turbine flow meter.

Accordingly, the appeal is allowed. The goods in issue should be classified under tariff item No. 9026.90.91 as parts of electrical flow meters.

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12. These factors were previously applied by the Tribunal in *York Barbell, ibid.*; *Hoover Canada, A Division of MH Canadian Holdings Limited v. The Deputy Minister of National Revenue*, Canadian International Trade Tribunal, Appeal No. AP-93-128, July 14, 1994; and *Snydergeneral Canada Inc. v. The Deputy Minister of National Revenue*, Canadian International Trade Tribunal, Appeal No. AP-92-091, September 19, 1994.
13. *Supra*, note 4.

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