



[2021] UKFTT 0201 (TC)

TC08151

CUSTOMS DUTIES – tariffs – application of GIR – whether fire alarms contained a recording system – whether smoke detection was a principal function compared to the alarm function – appeal dismissed

**FIRST-TIER TRIBUNAL
TAX CHAMBER**

Appeal number: TC/2019/01256

BETWEEN

**FIREANGEL SAFETY TECHNOLOGY GROUP PLC
(FORMERLY SPRUE AEGIS PLC)**

Appellant

-and-

**THE COMMISSIONERS FOR
HER MAJESTY'S REVENUE AND CUSTOMS**

Respondents

**TRIBUNAL: JUDGE ANNE FAIRPO
CHRISTOPHER JENKINS**

The hearing took place on 7 December 2020. With the consent of the parties, the form of the hearing was held using the Tribunal video platform. A face to face hearing was not held because of the ongoing restrictions arising from the COVID-19 pandemic. The documents to which we were referred were included in an electronic bundle of 472 pages and an authorities bundle, together with the parties' skeleton arguments and a number of emails regarding provisional claims.

Prior notice of the hearing had been published on the gov.uk website, with information about how representatives of the media or members of the public could apply to join the hearing remotely in order to observe the proceedings. As such, the hearing was held in public.

Mr Cock, of the Customs Consultancy, for the Appellant

Mr Barth, Counsel for the Respondents

DECISION

Introduction

1. This is an appeal against HMRC's decision to reject certain customs duty repayment claims. The claims under appeal were made to change the tariff classifications of two types of products imported by the appellant which contained EEPROM devices, being heat detectors and combined smoke and heat detectors. The appeal originally related to a wider range of product but, by the time the matter reached the hearing, the dispute related only these types of products.

2. At the time of import, the appellant had classified the products under heading 8531 of the Combined Nomenclature, and subheadings 8531 10 30 and 8531 10 95. The duty rate for these headings was 2.2%. The repayment claims were made to reclassify the products under heading 9207, subheading 9027 50 00 and 9027 80 17. The duty rate for these headings was 0%.

3. The products involved in the claims can be briefly described as follows:

Smoke detectors

4. These smoke detectors operate on the 'light scatter principle'. The detector is based on a smoke chamber into which environmental gases can enter. The detector contains an infrared (IR) LED, which pulses a beam of light into the sensor chamber every few seconds to check for smoke particles. The chamber also incorporates an IR light receptor. If smoke enters the optical chamber, its particles cause the IR photons to scatter and so IR light is detected by the receptor. If the amount of IR light detected by the receptor rises above a pre-set value, the detector will trigger an in-built alarm.

5. Some of these detectors also contain temperature sensors. If the temperature sensors detect a sudden increase in temperature, the sensitivity of the smoke detector is increased and thereby reduces the threshold at which the alarm will trigger. This enables the alarm to respond to fast-burning fires which produce less smoke but a lot of heat at the outset.

6. Some of the smoke detectors imported by the appellant use a radioactive source in place of the infrared LED which ionises the air in the chamber and creates a small current. If smoke enters the chamber, the current changes and so triggers the alarm.

Heat detectors

7. These detectors contain a thermistor which measures temperature. If the temperature exceeds specific parameters, the detector will trigger an in-built alarm.

8. Both types of detector contain Electrically Erasable Programmable Read-Only Memory ("EEPROM"). It was agreed that this contains data which can be extracted and read via a diagnostic tool. The data contained on the EEPROM includes up to 10 alarm events, the time since the detector was calibrated, the time from calibration to an alarm event, remote alarm events and other diagnostic data.

9. The disagreement between the parties, and so the issues to be decided by this Tribunal, is the classification of the products and, in particular:

- (1) whether the EEPROM amounts to a recording system;
- (2) if the EEPROM amounts to a recording system, whether the smoke detectors fall within heading 9027; and
- (3) if the EEPROM amounts to a recording system, the proper classification of the heat detectors.

10. The appellant had imported the products which are the subject of this appeal and paid duty on the basis that the appropriate tariff was 85.31.10.30.00 (2.2% duty). The appellant subsequently made applications for repayment of import duties on the products, the basis that the correct tariff classification should be 90.27.80.17.90 (0% duty). HMRC rejected the claims on the basis that the tariff applied at import was correct and so no repayment was appropriate.

11. The Tribunal was not required to consider the repayment claims themselves: the only question before the Tribunal was the tariff classification of the products.

Approach to be taken in determining classification

12. The relevant principles of the General Rules of Interpretation (GIR) (Part 1, Section 1 of the Combined Nomenclature) are as follows:

1. Classification shall be determined according to the terms of headings and section/chapter notes;

3a. Where goods are prima facie classifiable under two or more headings, the heading which provides the most specific description shall be preferred to headings providing a more general description;

3b. Mixtures or composite goods which cannot be classified by Rule 3a shall be classified as if they consisted of the material or component which gives them their essential character;

3c. Where goods cannot be classified by reference to Rule 3a or 3b, they shall be classified under the heading which occurs last in numerical order amongst those which equally merit consideration

6. Only subheadings at the same level are comparable.

13. The parties were agreed as to the approach to be taken by the Tribunal in deciding whether the products fall within a particular heading and subheading, which was summarised in Case C-486/06 *BVBA Van Landeghem* [2007] ECR I-10661, at §§23-25 as follows:

(1) the decisive criterion for the classification of goods is in general their objective characteristics and properties;

(2) the intended use of a product may constitute an objective criterion for classification if it is inherent to the product;

(3) the Explanatory Notes are an important aid to the interpretation of the scope of the various headings but do not have legally binding force.

14. The content of the Explanatory Notes must therefore be interpreted to be compatible with the provisions of the CN, but they cannot alter the meaning of those provisions.

Combined Nomenclature

15. The Combined Nomenclature describes the various headings and subheadings involved in this case as follows:

8531 Electric sound or visual signalling apparatus (for example, bells, sirens, indicator panels, burglar or fire alarms), other than those of heading 8512 or 8530:

8531 10 Burglar or fire alarms and similar apparatus:

8531 10 30 Of a kind used for buildings.

853195 Other.

8531 HSEN (as relevant):

(F) Fire Alarms: Automatic alarms also consist of two parts: a detecting part, and a signalling part (bell, buzzer, visual indicator, etc). They include:

(3) Apparatus based on the variation in the electrical resistance of an element subject to a change in temperature.

(4) Apparatus based on photoelectric cells. A ray of light is focussed on the cell and, if obscured to a predetermined extent by smoke, operates the alarm. Similar apparatus fitted with a graduated indicator or a recording system fall in Chapter 90.

9027 Instruments and apparatus for physical or chemical analysis (for example, polarimeters, refractometers, spectrometers, gas or smoke analysis apparatus); instruments and apparatus for measuring or checking viscosity, porosity, expansion, surface tension or the like; instruments and apparatus for measuring or checking quantities of heat, sound or light (including exposure meters); microtomes:

9027 50

9027 50 00 Other instruments and apparatus using optical radiation (UV, visible, IR).

9027 80 Other instruments and apparatus:

9027 80 17 Other.

9027 HSEN (as relevant):

(9) Electronic smoke detectors, used in furnaces, ovens, etc., for example, in which a beam of light (or infra-red) rays is directed onto a photoelectric cell. According to the density of the smoke, the passage of this beam through the smoke causes variations in the current in the photoelectric cell circuit, thus operating a graduated indicator or a recording system and, in certain cases, a regulating valve. These apparatus may be fitted with an alarm device.

Electronic smoke detector equipped solely with an alarm fall in heading 85.31.

Whether the EEPROM amounts to a recording system

16. The parties were generally agreed as to the characteristics of the products with a single exception: both types of product are stated to contain Electrically Erasable Programmable Read-Only Memory ("EEPROM"). It was agreed that this contains data which can be read via a diagnostic tool. The data contained on the EEPROM included up to 10 alarm events, the time since the detector was calibrated, the time from calibration to an alarm event, remote alarm events and other diagnostic data.

17. HMRC submitted, as set out below, that the EEPROM could not be regarded as a recording system such that the products could not fall within CN 90.27, as contended by the appellant. The appellant agreed that the question of whether or not there was a recording system was key to classification of the products.

Appellant's evidence and submissions

18. The appellant submitted that the goods should be regarded as a composite machine, consisting of an alarm, which they submitted fell within CN 85.31, and a detector, which they submitted fell within CN 90.27 as the detectors in the products check quantities of heat or light and the EEPROM is a recording system.

19. As the appellant considered that two possible tariff headings applied, they submitted that GIR 1 required consideration of the tariff notes to consider whether one of the headings should be applied over the other. If no tariff note provided a tiebreak, then GIR 3 needed to be considered to determine which of the headings applied.

20. On the basis that the notes for section XVI provide (inter alia) that:

“3. Unless the context otherwise requires, composite machines consisting of two or more machines fitted together to form a whole and other machines designed for the purpose of performing two or more complementary or alternative functions are to be classified as if consisting only of that component or as being that machine which performs the principal function.

4. 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 85, then the whole falls to be classified in the heading appropriate to that function.”

21. These two notes apply to Chapter 85, as that is within Section XVI; they also apply to Chapter 90, by virtue of note 3 to Chapter 90.

22. The appellant submitted that, based on note 3, the products could be classified under one heading according to their principal function if that function could be determined between the detecting and the alarm elements. Based on note 4, the products might be classified to one heading if the elements contribute together to a clearly defined function.

23. In addition, note 1(m) provides that section XVI does not cover articles of Chapter 90.

24. The appellant submitted that, therefore, if the products are regarded as articles of Chapter 90 due to the presence of the detector, they can only be within 90.27 as note 1(m) would preclude the products from being within Section XVI, and therefore they would be precluded from being within Chapter 85. It was submitted that this was confirmed by the VAT and Duties Tribunal decision in *Flir Systems AB v The Commissioners for HMRC* (TC00253).

25. Chris Bolger, witness for the appellant, stated in evidence that the EEPROM was used to record alarm events for the smoke detectors and the heat detectors. The data was extracted via a diagnostic tool either by direct connection or wireless communication.

26. The EEPROM is non-volatile memory which is used where, as in this case, small amounts of data are stored and data is written to the memory frequently. The data could be retrieved on multiple occasions and could, potentially, be stored for up to 40 years. The EEPROM was intended to be able to be read even if the alarm was destroyed.

27. Mr Bolger confirmed that the data recorded in the EEPROM was:

- (1) Number of alarm events (up to ten).
- (2) Alarm type: recorded as either type A or B, depending on whether the product had detected heat as well as smoke, in the case of the combined detector.

- (3) Time since calibration in hours.
 - (4) Time of alarm event. This is stored as time since calibration, so the actual date and time can be calculated within the diagnostic tool.
 - (5) In the case of inter-connected smoke alarms, a remote alarm event is tagged with the ID of the device that initiated the alarm.
 - (6) Diagnostic data showing fault codes and time of faults.
28. No other data was recorded in the EEPROM.
29. He confirmed also that the primary reason for the recording of events was to allow for forensic analysis of alarms returned for analysis. This was a service offered to the Fire and Rescue Services for use in forensic analysis of fires and similar incidents. Some of the alarms could also be monitored remotely, to view alarm events. This was a function offered for landlords as well as the rescue services.
30. Mr Bolger stated that the brochures and similar material for the detectors did not always mention the EEPROM function as these were typically provided to installers, rather than to those who may be interested in the forensic output. Different brochures which did contain the information were provided for the fire and rescue services. The information as to the EEPROM was contained in the manuals for the products.
31. The appellant submitted that the expert witness report produced by HMRC regarding recording systems was internally inconsistent, stating that a playback facility is “most often” present in a recording system but then determining that the playback facility “must” be present for a recording system to exist. It was submitted that the report was artificially limited to sound recording systems and that he failed to consider recording systems more widely, such as digital flight records (‘black boxes’) which are classified within the CN as a data recorder (tariff 8543 70 04) but do not have any playback facility.
32. Accordingly, the appellant considered that the products should be regarded as a composite machine, with an alarm and a detector and incorporating a recording system. The detector and recording system were submitted to be the principal function of the product. As such, and as set out above, they submitted that the application of GIR 1 meant that the products were to be classified within 90.27.
33. In the alternative, if GIR 1 did not provide the necessary tiebreak, the appellant submitted that GIR 3(a) would not apply, as the headings should be regarded as equally specific. GIR3(b) would also not apply, as neither the alarm nor the detector could be regarded as alone giving the essential character of the product. Under GIR 3(c), which would remain, the heading last in numerical order should be applied and this would also mean that the products should be classified within 90.27.

HMRC evidence and submissions

34. A chartered electrical engineer, Dr Robert Brown, gave evidence as an expert witness on behalf of HMRC. He described himself as a “leading world expert in the field of electrical circuit protection systems, the phenomena of electrical fuse operation and the attributes of clearing ‘fault’ electrical current circumstances”.
35. His evidence was that an internet search for a definition of a record system returned the result “an audio system for recording sound”, which refers to a system which stores for a period of time, data which represents sound waves. He considered that the same definition could be apply to the recording of any data, as ‘data’ can represent many forms of physical parameter.

36. He considered that an important attribute of a recording system was the ability to ‘play back’ the data in form recognisable to a user of the system. For example, a temperature recording system will have some form of character display to present temperature.

37. He concluded that fundamentally a recording system technically constitutes a system which accepts, senses some physical parameter and produces a record of the parameter over a period of time. The system also has the ability to play back the data such that the user of the system can interpret the data aligned to its physical form, i.e. sound or temperature or whatever.

38. He compared this to a data logging system, which he considered to be similar to a data recording system but without the facility to represent the data to a user in an interpretable format. The data would instead be retrieved and then turned into interpretable data.

39. His evidence was, therefore, that he considered the EEPROM in the appellant’s products to be a data logging system rather than a data recording system. Extracting data from an EEPROM requires an interface in the form of software and hardware, and he considered that the data would be most often extracted by engineers.

40. HMRC submitted that the view of the expert witness should be regarded as meaning that the EEPROM in the detectors was not a ‘recording system’. In particular, they submitted that the EEPROM was not complex enough to be a recording ‘system’, and that such a system would involve a playback function which the EEPROM lacked.

41. HMRC’s view was that the wording of CN heading 90.27 and the HSEN together indicating that the ‘recording system’ referred to in the HSEN note was for the measurement or checking of smoke, and not for the sounding of the alarm. As the HSEN did not require that a relevant product must have an alarm, it was submitted that the ‘recording system’ referred to could not be an EEPROM which logged the triggering of the alarm.

42. HMRC submitted that the objective use of the products was as a smoke alarm: the EEPROM could only be used in retrospect via a diagnostic tool. It had no impact on the function of the product as a smoke alarm. HMRC submitted that the appellant’s distinction between the alarm function and the detector function of the product was misguided, as a fire alarm by definition must contain a detector and an alarm, as set out in the HSEN for 85.31. If it were missing one of the two, the product could not function as a fire alarm. HMRC concluded that it was therefore not necessary to apply GIR Rule 3 or Notes 3 and 4 to Section XVI.

43. HMRC submitted that, even if the EEPROM amounted to a recording system, there was also no example of a heat detector alarm within HSEN 90.27. In contrast, HSEN 85.31 contained a description of a thermistor which matched the appellant’s heat detectors. The CN description itself makes no reference to recording systems and, as such, HMRC submitted that there was no basis on which a heat detector with an EEPROM should fall within 90.27.

Discussion

44. We noted HMRC’s submissions and evidence that the EEPROM in the detectors was a ‘data logger’ and not a ‘recording system’.

45. We note that the definition of a ‘recording system’ quoted by Dr Brown is one of a “system which stores for a period of time, data” and makes no reference to the playback or user retrieval of that data. Although he subsequently stated that he considered that playback was an important attribute of a recording system, no support for this opinion was provided. We consider the comparison of a data logging system and a recording system to be a distinction without a difference: if data is logged and stored by a system then, as set out in Dr Brown’s

initial analysis, it is recorded by the system. It was not disputed that the EEPROM logged and stored data.

46. We consider that the initial definition put forward by Dr Brown, which does not involve a playback function, is more appropriate in this context. The relevant HSEN refers to a 'recording system' and the text of CN 90.27 refers to apparatus for measuring certain characteristics. There is no indication in the CN or the HSEN that the measurements must be readily readable by a user from the system directly, and that such measurements cannot be extracted from the system for review or to be passed to another system for analysis or interpretation (eg: by wireless communication or cable to a computer which is not integrated to the measuring device).

47. We consider therefore, that the lack of an integrated playback function for stored data does not mean that the EEPROM cannot be regarded as a recording system.

48. However, we consider that it is clear from the wording of the relevant HSEN (set out above) that the recording system must be operated by the measurements taken by the apparatus as it states that "the passage of [the] beam through the smoke causes variations in the current in the photoelectric cell circuit, thus operating a graduated indicator or a recording system" (emphasis added).

49. The evidence provided by the appellant was that a variation in the current above a certain level triggered the alarm in the product, and the EEPROM recorded that the alarm had been triggered, the time of the alarm, the ID of the device (if inter-connected). The EEPROM also recorded faults, recording the fault code and the time of the fault. We find therefore that the recording system is operated by the alarm and not by measurements taken.

50. We have considered whether the fact that the alarm is triggered by a measurement of a variation could mean that the HSEN does describe the product but have concluded that the wording of the HSEN is clear that the recording system must be operated by the variations in current, and not operated by another event which may have been in turn been triggered by a variation in current. That is, to be within 90.27, we consider that the recording system must record variations in the current. It is not sufficient that the system records another event which may have been triggered by a particular type of variation in the current.

51. Given that the alarm in a combined heat and smoke alarm may be triggered by different measurements, depending on whether or not the heat detector has operated to increase the sensitivity of the smoke detector, and may also be triggered by faults, the recording of an alarm event cannot even be considered to be a recording that a particular quantity has been measured or checked. From the evidence of the appellant, the EEPROM does not record the actual quantity measured, nor the threshold operating at the time of the alarm event. All that is recorded is that the alarm has sounded and, in the case of combined detectors, that the product detected either smoke alone, or heat and smoke together.

52. We find therefore that although there is a recording system in the devices, the recording system records the triggering of the alarm and/or the occurrence of faults in the device, and not does not record any measurement of the density of smoke in the chamber. The recording system is not operated by the variations in current but, instead, by the alarm. As such, we find that the products are not described within the HSEN for Chapter 90.27.

53. We also do not agree with the appellant's contention that the alarms must be regarded as a composite machine made up of an alarm and a detector with the detector and recording system as the principal element: a fire alarm must necessarily contain both a detector and an alarm element such that we find that neither is principal to the other. The EEPROM provides a diagnostic function which may be of some assistance to the rescue services after a fire, but it

is not in our view a principal function of the fire alarm products. We consider that a user of the alarm does not purchase it in order to know what the level of smoke is within an area but, instead, to receive a clear warning that smoke in an area has exceeded a threshold, which may vary in the presence of rising temperatures. As such, we do not consider that the principal function of the product is to be found within 90.27.

54. We note the point made by the appellants that certain other products with a radioactive sensor were accepted to be within 90.22, but also note that the HSEN to 90.22 specifically includes “fire alarms incorporating smoke detectors containing a radioactive substance” and so clearly describes the relevant products. The HSEN for 90.27 does not so clearly describe the smoke detectors which underlie this appeal.

55. We find, therefore, that all of the products fall within 85.31 as being fire alarms.

Decision

56. The appeal is dismissed.

Right to apply for permission to appeal

57. This document contains full findings of fact and reasons for the decision. Any party dissatisfied with this decision has a right to apply for permission to appeal against it pursuant to Rule 39 of the Tribunal Procedure (First-tier Tribunal) (Tax Chamber) Rules 2009. The application must be received by this Tribunal not later than 56 days after this decision is sent to that party. The parties are referred to “Guidance to accompany a Decision from the First-tier Tribunal (Tax Chamber)” which accompanies and forms part of this decision notice.

**ANNE FAIRPO
TRIBUNAL JUDGE**

RELEASE DATE: 01/06/2021