



HARMONIZED SYSTEM
COMMITTEE

NC0041E1

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O. Eng.

H3-1

Brussels, 19 April 1999.

CLASSIFICATION OF A COMPRESSION TYPE REFRIGERATOR

(Item IX.33 on the Agenda)

Reference documents :

40.602 (RSC/14)	41.100, Annex H/16 (HSC/19 - Report)
40.470, Annex C/22 (RSC/14 - Report)	41.156 (RSC/16)
40.413, paragraph 70 (HSC/18)	41.580, Annexes A/10 and D/5 (RSC/16 - Report)
40.647 (HSC/18)	41.308 (HSC/20)
40.697 (HSC/18)	41.600, Annex D, paragraphs 36 to 39, and Annexes F/15 and L/4 (HSC/20 - Report)
40.600, Annex E/1, paragraph 54 and Annex E/9 (HSC/18 - Report)	42.046 (HSC/21)
41.178 (HSC/19)	42.112 (HSC/21)

I. BACKGROUND

1. At its 18th Session (November 1996), the Committee began its examination of the classification of "split-system" type air conditioning machines. At its 19th Session, the Committee received a Note from the Argentine Administration on this question, dated 21 March 1997 (Doc. 41.178). Subsequent to this, the Argentine Administration, in a Note to the Secretariat published for the Committee's 21st Session (Doc.42.112), withdrew its question concerning the "classification of "split-system" type air conditioning machines without their connecting devices, by application of Note 4 to Section XVI".
2. On 10 February 1999, the Secretariat received a Note from the Argentine Administration requesting that the classification of a "compression type refrigerator designed to work as an outdoor condensing unit of a split-system air conditioning system" be placed on the Agenda of the Harmonized System Committee.

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II. NOTE FROM THE ARGENTINE ADMINISTRATION

3. "As you know, the Argentine Administration has requested classification advice to the Directorate you are in charge of, related to the classification of a compression type refrigerator designed to work as an outdoor condensing unit of a split-system air conditioning system.
4. That request was made by a fax dated on September 19, 1997, and after reiteration in which my Administration expressed the need of having your advice as soon as possible, sent by a fax dated on October 17, 1997, was answered by your fax of November 5, 1997, saying that taking into account the HS Committee Agenda for the 20th Session included the classification of split-system air conditioner without connecting pipes and cables, it was premature to give any advice on the matter.
5. Now the Argentine Administration which was the responsible one of the 20th Agenda item said before, has withdrawn it and have the need to ask again to your Directorate the same request about the mentioned compression type refrigerator.
6. However, in this opportunity we ask you that this matter be discussed by the Committee because, in our opinion, there is a legal text which shows a mistake.
7. Although I append the said faxes we sent you referred to the question at issue in which we explained the reasons we have to conclude so, I briefly say the text of the subheading 8418.61 "Compression type units whose condensers are heat exchangers", doesn't match reality due to the fact that all condensers are heat exchangers. The last statement is also confirmed by the Explanatory Notes of Heading 84.18, (II) Heat Pumps, (3).
8. So I think the compression type refrigerator at issue should be classified in subheading 8418.61 and its text should be amended under the Article 16 procedure."

Argentine fax of 19 September 1997

9. "The aim of this request is to determine the scope of subheading 8418.61, which reads as follows; "Compression type units whose condensers are heat exchangers".
10. The last phrase of this text raises some problems of interpretation due to the fact, in our opinion, all condensers are heat exchangers. This view is based on technical literature as well as the Explanatory Note to heading 84.18 (II) Heat Pumps. Some copies of the mentioned literature are enclosed herewith.
11. The said Explanatory Note indicates that one of the essential elements of compression heat pumps is "a condenser, which is a heat exchanger in which the vapour liquefies, giving up heat to the medium to be treated".
12. The Explanatory Note to heading 84.19 also makes some comments about the heat exchange units that can not be taken as a definition because they are just examples of the products which fall under the category of Heating or Cooling Plant and Machinery referred by Part I of that Explanatory Note. In our view all heat exchangers, except those mentioned in the exclusion (e) of the first paragraph of the said Explanatory Note to heading 84.19, are clearly classified in this heading, subheading 8419.50, even though they are not of the types described in item (B) of the referred EN.

13. Therefore we think the outdoor condensing unit at issue should be classified in subheading 8418.61.”

III. SECRETARIAT COMMENTS

14. The Secretariat is trying to acquire more technical information in English about the specific product put forward by the Argentine Administration. Consequently, it is not in a position to provide its opinion on the classification of this product. However, the Secretariat believes that the questions regarding the scope of subheading 8418.61 and the definition of the terms “heat exchanger” and “condenser” are valid points that could be dealt by the Committee at this time.
15. The Secretariat conducted a review of the technical literature at its disposal to determine the meaning of the terms “heat exchanger” and “condenser”. The New Encyclopaedia Britannica defines a “heat exchanger” as “any of several devices that transfer heat from a hot to a cold fluid.... The devices are given different names when they serve a special purpose. Thus boilers, evaporators, superheaters, condensers, and coolers may all be considered heat exchangers.” The McGraw-Hill Encyclopedia of Science and Technology defines a “heat exchanger” as “A device used too transfer heat from a fluid flowing on one side of a barrier to another fluid (or fluids) flowing on the other side of the barrier.” The McGraw-Hill goes on to say that “the simplest example of a heat exchanger would now be a tube within which a hot fluid flows and outside of which air is made to flow for the purpose of cooling. By similar reasoning, it might be argued that any container of a fluid immersed in any fluid could serve as a heat exchanger if the flow paths were properly connected, or that any container of a fluid exposed to air becomes a heat exchanger when a temperature differential exists. However, engineers will insist that the true heat exchanger serve some useful purpose, that the heat recovery be meaningful or profitable.”
16. The term “condenser” is described in Refrigeration & Air Conditioning Technology, as “a heat exchange device similar to the evaporator that rejects heat from the system absorbed by the evaporator.” The New Encyclopaedia Britannica defines a “condenser” as a “device for reducing a gas or vapour to a liquid.... All condensers operate by removing heat from the gas or vapour; once sufficient heat is eliminated, liquefaction occurs. For some applications, all that is necessary is to pass the gas through a long tube (usually arranged in a coil or other compact shape) to permit heat to escape into the surrounding air.”
17. The Explanatory Note to heading 84.19 (I)(B) provides examples of heat exchange units for the purpose of the Harmonized System. These systems are in line with the engineers’ idea that the “true heat exchanger serve some useful purpose, that the heat recovery be meaningful or profitable.”
18. The Secretariat has not had the time to conduct a study of the various types of condensers on the market to determine if there are those that do not operate according to the principle of heat exchange as described in the Explanatory Note to heading 84.19 (I)(B). However, if there are and it is the Committee’s decision that heat exchangers serve some useful purpose, then there is no conflict with the text of subheading 8418.61. Those units whose condensers do not operate as heat exchangers would be classified in subheading 8418.69 as “other”. However, if it is the Committee’s view that a heat exchanger is a device that transfers heat and that it is not necessary to capture that transfer for a useful purpose, then the Explanatory Note to heading 84.19 (I)(B) would have to be amended to reflect this broader definition. In addition, subheadings 8418.61 would have to be amended to include all compression type units with condensers.

19. Copies of the documentation provided by the Argentine Administration in support of its position will be available in the Meeting Room (English version only).

III. CONCLUSION

20. The Committee is invited to give its opinion on the scope of subheading 8418.61 and the definition of the terms “heat exchanger” and “condenser” and, in addition, whether there is a need to amend or study the legal texts and Explanatory Notes regarding heat exchangers and condensers as suggested by the Argentine Administration.
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