

Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Perishable Foodstuffs****18 July 2013****Sixty-ninth session**

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Item 5 (b) of the provisional agenda

Proposal of amendments to the ATP: New proposals**Amendments to Annex 1 to ATP, Appendices 1, 2, 3 and 4 to Annex 1 to ATP regarding introduction of additional provisions to ATP on the classification, control and certification, as well as marking of special equipment that is both mechanically refrigerating equipment and heating equipment****Transmitted by the Government of the Russian Federation****SUMMARY****Key points:**

In accordance with Annex 1 of ATP, there are four categories of special equipment for carriage of perishable foodstuffs:

insulation equipment, which has only an insulated body, including doors, floor and roof;

refrigeration equipment, which, along with an insulated body, also has a source of cold other than a mechanical or “absorption” unit;

mechanical refrigeration equipment, which is the same as the above except that the source of cold is a mechanical or absorption unit;

heating equipment, which, apart from having an insulated body, is also capable of raising and maintaining the inside temperature of the empty body when the outside temperatures are lower.

In reality, however, in certain regions with different climatic zones and sharp fluctuations of outside temperatures within each period of the year, it may be inappropriate to keep two separate fleets of special equipment: mechanical refrigeration equipment and heating equipment. Technically, it is easy to equip mechanical refrigeration equipment additionally with an electrical heating appliance or to use a refrigeration plant in the regime of so-called reverse heat pump. This is what most equipment manufacturers choose, producing, in fact, special equipment of a fifth category not mentioned in ATP – mechanical refrigeration and heating equipment.

At the same time, ATP lacks standards and requirements not only for classifying such special equipment but also for checking and certifying them

<p>Proposed solution:</p>	<p>and making relevant markings thereon.</p> <p>In order to bring ATP into compliance with the actual state of affairs in the area of manufacturing and operation of special equipment, it is proposed to introduce a new category – mechanical refrigeration and heating equipment.</p> <p>Propose to the Working Party a version of amendments to annex 1 to ATP, appendices 1, 2, 3 and 4 to annex 1 regarding introduction into ATP of additional provisions on classification, checking and certification, as well as marking of special equipment that is both mechanical refrigeration equipment and heating equipment.</p>
<p>Reference information:</p>	<p>None</p>

Introduction

1. The Russian Federation is a large country located in climatic zones characterized by constant freezing temperatures in winter and constant above zero temperatures in the summer period; whereas the difference between outside temperatures during the winter and summer periods may reach 70–80 °C.

It is, therefore, inappropriate to keep two separate fleets of special equipment: mechanical refrigeration equipment and heating equipment. Nearly the entire fleet of special equipment allowing steady temperature levels to be maintained in cargo spaces and currently in service on the railways of the Russian Federation represents a symbiosis of the two categories defined by ATP as “mechanical refrigeration equipment” and “heating equipment”. The situation is similar in some other countries, too.

2. Worldwide, recent years have seen an increase in the manufacture of mechanical refrigeration equipment and heating equipment (as compared to overall production of special equipment) where air in cargo spaces is heated not with the help of electrical heating appliances but also using a mechanical refrigeration appliance in the so-called reverse heat pump mode. That is, the integration of the two categories of special equipment defined by ATP (apart from unified design and common automatic properties) has also penetrated the field of technical means for generating cold or heat. In the above-mentioned mechanical refrigeration-heating units, cold and heat is generated by the same technical appliances, using one and the same principle.

3. Certainly, the existing wording of ATP does not forbid certifying one and the same special equipment twice – both as mechanical refrigeration equipment and as heating equipment. Yet this implies two different procedures for testing and making expert checks and the issue of two separate certificates, which entails unjustified additional expenses for the owner of such special equipment, especially when both heat and cold are generated by the same appliance, and it is obviously excessive to use two different procedures for controlling and certifying it.

4. Nor does the current version of ATP address the issue relating to distinguishing marks for cases when special equipment unit is certified twice – both as mechanical refrigeration equipment of one of the six classes and as heating equipment of one of the two existing classes.

5. In view of the above, the Russian Federation has prepared proposals in the form of an informal document containing key points for amending the wording of annex 1 to ATP and appendices 1, 2, 3 and 4 to annex 1 in order to introduce a new category of special equipment – mechanical refrigeration and heating equipment, including checking, certification and marking.

If the majority of WP.11 members approve the proposed amendments, the Russian Federation will prepare a formal document for the next, 70th, session of WP.11, including a complete list of amendments to annex 1, appendices 1, 2, 3 and 4 to Appendix 1.

Proposals

6. To add the following clause to annex 1:

“5. Mechanically refrigerating and heating equipment. Insulated equipment with a separate mechanical refrigeration unit (equipped with either mechanical compressor or absorption appliance, etc.), either separately or shared by several equipment units, and heating (equipped with electrical heating appliances, etc.) or mechanical refrigeration-heating units allowing for both lowering temperature T_i in the empty body and then steadily maintaining it or increasing the said temperature and then maintaining it for at least 12 hours at constant levels without any additional input of heat, as described below.

Class A: T_i can be chosen between +12 °C and 0 °C inclusive, at average outside temperatures from -10 °C to +30 °C.

Class B: T_i can be chosen between +12 °C and 0 °C inclusive, at average outside temperatures from -20 °C to +30 °C.

Class C: T_i can be chosen between +12 °C and -10 °C inclusive, at average outside temperatures from -10 °C to +30 °C.

Class D: T_i can be chosen between +12 °C and -10 °C inclusive, at average outside temperatures from -20 °C to +30 °C.

Class E: T_i can be chosen between +12 °C and -20 °C inclusive, at average outside temperatures from -10 °C to +30 °C.

Class F: T_i can be chosen between +12 °C and -20 °C inclusive, at average outside temperatures from -20 °C to +30 °C.

The K coefficient of class B, C, D, E and F equipment should be equal to or less than 0.40 W/(m²·K).

The capacity of the heating unit or mechanical refrigeration-heating unit used in the heating mode should correspond to the relevant provisions of 3.3.1–3.3.5 of annex 1, appendix 2.”

7. To amend the heading of annex 1, appendix 1 as follows:

“Provisions relating to checking insulated, refrigerated, mechanically refrigerated or heated equipment, or mechanically refrigerating and heating equipment for compliance with the standards.”

8. To amend clause 5 of annex 1, appendix 1 as follows:

“The insulated bodies of ‘insulated’, ‘refrigerated’, ‘mechanically refrigerated’ and ‘heating’ transport equipment and ‘mechanically refrigerating and heating equipment’ ...” (further as the text reads)

9. To amend the first paragraph (up to the listing) of sub-clause 6 (c) (i) of annex1, appendix 1 to ATP as follows:

“if it is insulated equipment, in which case the reference equipment may be insulated, refrigerated, mechanically refrigerated or heated equipment, or mechanically refrigerating and heated equipment,...”

10. To supplement sub-clause 6 (c) of annex1, appendix 1 as follows:

“(v) (a) if it is mechanically refrigerating and heating equipment, in which case the reference may be mechanically refrigerating and heating equipment,

- the conditions set out in (i) above shall be satisfied;*
- and*
- the effective refrigerating capacity of the mechanically refrigerated appliance or mechanically refrigerating-heating appliance per unit of the inside surface area, under the same temperature conditions, should be greater or equal;*
- the source of heat should be identical; and*
- the capacity of the heating appliance per unit of inside surface area should be greater or equal;*

or

(b) if it is mechanically refrigerating and heating equipment, in which case the reference may be insulated equipment that is complete in every detail but minus its mechanically refrigerated unit, heating unit or mechanically refrigerating-heating unit, which will be fitted at a later date. The resulting aperture will be filled, during the measurement of the K coefficient, with close-fitting panels of the same overall thickness and type of insulation as is fitted to the front wall. In which case:

- the conditions set out in (i) above shall be satisfied;*
- and*
- the effective refrigerating capacity of the mechanically refrigerated or mechanically refrigerating-heating unit fitted to the insulated reference equipment shall be as defined in annex1, appendix 2, paragraph 3.2.6;*
 - the source of heat shall be identical; and*
 - the capacity of the heating appliance per unit of inside surface area should be greater or equal”.*

11. To add paragraph 3.4 to annex 1, appendix 2, sorting out the definitions of the effectiveness of the thermal appliance of mechanically refrigerating and heating equipment by analogy with the methods, testing procedures and appropriateness criteria for mechanically refrigerated equipment (paragraph 3.2 of annex 1, appendix 2) and heated equipment (paragraph 3.3 of annex1, appendix 2).

12. To amend the first paragraph (including the listing) of clause 6 of annex 1, appendix 2, as follows:

*“To verify, as prescribed in appendix 1, paragraphs 1 (b) and 1 (c), to this appendix, the effectiveness of the thermal appliance of each item of refrigerated, mechanically refrigerated or heated equipment, **or mechanically refrigerating and heating equipment** in service, the competent authorities may:*

- Apply the methods described in sections 3.1, 3.2, 3.3 **and 3.4** of this appendix; or*
- Appoint experts to apply the particulars described in sections 5.1 and 5.2 of this appendix when applicable, as well as the following provisions:”*

13. To add sub-clause 6.4 to annex 1, appendix 2, containing the standards and requirements for checking the effectiveness of the thermal appliance of mechanically refrigerating and heating equipment in service. Accordingly, to amend the numbering of sub-clauses 6.4 and 6.5 in the existing wording of annex 1, appendix 2 to 6.5 and 6.6, respectively.

14. In sub-clause 6.5 of the existing wording of annex 1, appendix 2, to add “mechanically refrigerating and heating equipment” in all cases, throughout the text, where the categories of special equipment are listed.
15. To supplement clause 7, annex 1, appendix 2 with relevant test reports and expert examination reports regarding mechanically refrigerating and heating equipment.
16. To amend annex 1, appendix 3 reflecting introduction of a new category of special equipment – mechanically refrigerating and heating equipment. To amend the model ATP certificate, respectively.
17. To add the following lines to the Table in annex 1, appendix 4:

<i>Transport equipment</i>	<i>Distinguishing marks</i>
...	...
<u><i>Class A mechanically refrigerating and heating equipment with normal insulation</i></u>	<u><i>BN A</i></u>
<u><i>Class A mechanically refrigerating and heating equipment with heavy insulation</i></u>	<u><i>BR A</i></u>
<u><i>Class B mechanically refrigerating and heating equipment with heavy insulation</i></u>	<u><i>BR B</i></u>
<u><i>Class C mechanically refrigerating and heating equipment with heavy insulation</i></u>	<u><i>BR C</i></u>
<u><i>Class D mechanically refrigerating and heating equipment with heavy insulation</i></u>	<u><i>BR D</i></u>
<u><i>Class E mechanically refrigerating and heating equipment with heavy insulation</i></u>	<u><i>BR E</i></u>
<u><i>Class F mechanically refrigerating and heating equipment with heavy insulation</i></u>	<u><i>BR F</i></u>

Justification

18. One of the key objectives of ATP mentioned in the preamble to the Agreement is to promote expansion of trade in perishable foodstuffs. Achievement of this goal hinges directly on a number of factors, including compliance with the requirements for selection of special equipment for preserving the quality and security of perishable foodstuffs, regular checks and certification, international cooperation among the competent bodies in the area of ATP. No less important for boosting trade in perishable foodstuffs is the economic factor, including the net cost of such carriage.

19. The net cost of the carriage of perishable foodstuffs within the framework of ATP is significantly influenced by the need for regular checks and certification of special equipment. Bringing the standards, requirements and procedures connected to the checks and certification of special equipment into compliance with the existing practice of carriage of perishable foodstuffs does much to enhance such carriage.

20. Introduction of the category of special mechanically refrigerating and heating equipment will reduce the costs of using ATP for checking and certifying such transport equipment.

Costs

21. There are no additional costs. The standards and requirements for checking and certifying mechanically refrigerating and heating equipment are based on the standards and requirements for mechanically refrigerated equipment and heated equipment already contained in ATP. There will be no need to introduce any additional requirements for ATP’s test stations or experts.

In contrast, introduction of the category of special mechanically refrigerating and heating equipment will help reduce the overall costs of checking and certifying similar transport equipment.

Feasibility

22. The proposed amendments will provide better conditions for meeting the key objectives of ATP, including promotion of international trade in perishable foodstuffs.

Requirements similar to those proposed herein are contained in some normative or technical documents already in force, including the Container Rules of the Russian Maritime Register of Shipping. In particular, this document introduces the category of a mechanically refrigerating and heating container: *“a mechanically refrigerating and heating container is an insulated container with a mechanical refrigeration appliance or cooling medium, and a heating unit.”*

Enforceability

23. No problems are expected regarding the tests and expert checks on mechanically refrigerating and heating equipment. All control procedures, methods and standards are similar to those contained in ATP for mechanically refrigerated and heated equipment. Also envisaged is correspondence of the classes of mechanically refrigerating and heating equipment to those of mechanically refrigerated equipment and heated equipment as defined in ATP.
