ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Transport of Perishable Foodstuffs

Sixty-third session
Geneva, 12-15 November 2007
Item 5 (c) of the provisional agenda

PROPOSALS OF AMENDMENTS TO THE ATP

New proposals
Annex 1, Appendix 2, paragraph 49

Transmitted by the Government of the Netherlands

SUMMARY

Executive summary: Introduce additional requirements to support a uniform way of in-use testing of thermal appliances.

Action to be taken: Amend paragraph 49 (b) of Annex 1 Appendix 2.

Introduction

1. In 2002, France introduced for national use different maximum cooling down times for in-use tests of the cooling appliance dependent on the ambient temperature. WP.11 was informed about this in document ECE/TRANS/WP.11/2002/6, which contained a complete procedure. Germany proposed to adopt only the timetable of this procedure for introduction in the annexes of the ATP. Although there was agreement on the principle of the proposal that passing the test should not be dependent on the ambient temperature, the appropriateness of the proposed times remained unproven.

2. Because the proposed data were not justified in an acceptable way for the Netherlands and because many bodies in the Netherlands use thin sidewalls of 45 mm, it was decided to ask the Dutch national testing station to perform some tests under controlled circumstances. In addition to this, a number of field tests are being carried out on 9 year old equipment to gather practical information.

3. However, the first test in the testing station in the spring of 2007 was not completely successful; some factors arose, which had a direct influence on the time needed to reach the class temperature for an in-use cooling appliance test. These factors need to be dealt with before amendments to test times based on ambient temperatures can be adopted.

4. The factors are:
   - The number and placing of the temperature sensors in and outside the body and, if more than one sensor is used, which sensor is used to determine test time (needs to be laid down in the ATP);
   - The time needed for defrosting the evaporator.

Proposal

5. The following amendments are proposed:
   - In paragraph 49 (b) of Annex 1, Appendix 2, introduce the following text before the last sentence:
     "The outside temperature shall be measured on the centre of one of the sides of the body, 10 cm from the surface. If the test is conducted outside, the side not directly in the sun shall be used. The internal temperature shall be measured at the outlet of the evaporator and at 2/3 distance from the front of the body 10 cm below the top. The temperature of the last temperature sensor to reach the class limit shall be used to determine the test time. The time used by the cooling appliance to defrost the evaporator shall be deducted from the total test time."

Optional if part 1 is adopted: The following table may be adopted in paragraph 49 (b) of Annex 1, Appendix 2 for independent mechanically refrigerated equipment.
Justification

6. Test results can only be compared if the circumstances of testing are more or less identical. By fixing the number and place of the temperature sensors, the test times will become more comparable making the adoption of more precise testing times possible in the future. It is therefore of paramount importance to adopt the amendments in part one of the proposals.

7. If the number and place of the sensors and the deduction of defrosting times can be decided upon it will become possible to adopt a table of test times in relation to ambient temperature, as presented in part 2 of the proposal as a starting point. The data are based on the field tests performed over 2007 in the Netherlands (see annex 1). The tests in the Netherlands can be considered to be more severe than in other countries because of the high placing in the body of the temperature sensors (see annex 2). In the future, it may be possible to fine-tune the test times if the main circumstances are comparable.

8. The position of the temperature sensor at 2/3 distance from the front of the body for in-use testing of the thermal appliance in the Netherlands is based on the place of the sensors for the temperature recorder. In daily use the temperature in this position should be able to be maintained by the cooling appliance for conformity with EC legislation.

9. Time to defrost the evaporator should be deducted from the total test time because the amount of moisture in the body is a factor dependent on the weather and on the previous use of the individual equipment. Equipment used for relatively moist goods should not be discriminated against in relation to equipment used for the transport of drier goods.

10. The deduction of defrost time is a practice in many Contracting Parties of the ATP.

11. With the adoption of provisions for multi-temperature multi-compartment (MTMC) equipment it may be possible that special conditions are necessary for in-use tests. The way to deal with older MTMC equipment and the equipment according to the new provisions should be discussed in relation to these proposals.

Safety: safety is not impaired.

Feasibility: no problems expected with the introduction of the amendments. Additional costs can be expected for testing bodies using only 1 temperature sensor at this moment. The standard transitional period of 6 months after the amendment coming into force is sufficient.

Enforceability: no problem foreseen.
Annex 1

Data on in-use tests of thermal appliances performed in the Netherlands in the first months of 2007

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<th>coeff K</th>
<th>Year of constr</th>
<th>Brand Appl.</th>
<th>Refrigerant</th>
<th>Year of constr</th>
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<th>T class</th>
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Annex 2

Place and number of temperature sensors

Drawing used with kind permission of A&F, the ATP testing station in the Netherlands (part of Wageningen University)

A: United Kingdom (CRT).

B: Proposed by Sweden in INF 6, 62\textsuperscript{nd} session of WP.11.

C: Germany (Tüv)
   C 1: centre of interior
   C 2: rear part of vehicle

D: France
   D 1: exit of evaporator into interior of the body
   D 2: intake of evaporator from the interior of the body

E: Netherlands (RDW)
   E 1: exit of evaporator into interior of the body
   E 2: at 2/3 of interior behind front wall.