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ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Transport
of Perishable Foodstuffs

**REPORT OF THE WORKING PARTY ON ITS SIXTY-SECOND SESSION
(6-9 November 2006)**

Addendum 1

Draft amendments to the ATP adopted at the sixtieth and sixty-first sessions

The secretariat reproduces below the text of the draft amendments to the ATP Agreement adopted at the sixtieth and sixty-first sessions as modified by the Working Party at the sixty-second session.

The Working Party decided to keep only draft amendments that had been adopted unanimously by all delegations.

* * *

Annex 1

Paragraph 1. Replace “characterized” with “specified”(twice).

After “than 0.40 W/m².K”, replace “;” with “and by” and “walls” with “side-walls”.

Delete:

“This second condition is, however, not required for transport equipment designed prior to the date of entry into force of this amendment^{3/} and built before that date or during a period of three years following that date.”.

Delete the footnote:

“ 3/ *The date of entry into force of this amendment is 15 May 1991.*”.

Paragraph 2. Delete: “with the aid of appropriate refrigerants and fittings”.

Replace “Such equipment shall comprise one or more compartments,” with “If such equipment includes one or more compartments,”.

In the last sentence, replace “coefficient of equipment” with “coefficient of refrigerated equipment”.

Paragraph 3. Read the text between brackets as follows: “(fitted with either a mechanical compressor, or an "absorption" device, etc.)”.

Second sentence, replace “the temperature inside the empty body” with “the temperature T_i inside the empty body”.

Replace “value t_i” with “inside temperature T_i” (twice) and “t_i” with “T_i” in paragraph 3.

Paragraph 4. Read as follows:

“**Heated equipment.** Insulated equipment, which is capable of raising the inside temperature of the empty body to, and thereafter maintaining it for not less than 12 hours without renewal of supply at, a practically constant value of not less than + 12 °C when the mean outside temperature, as indicated below:

10 °C in the case of class A heated equipment;
20 °C in the case of class B heated equipment.

The K coefficient of equipment of class B shall in every case be equal to or less than 0.40 W/m².K.”.

Paragraph 5. To be deleted.

Annex 1, Appendix 1

Paragraph 1. Read (a) as follows:

“(a) before equipment enters into service;”.

Paragraph 2. Amend with the following changes:

(a) Second sentence to be read: “If the unit tested meets class specification, the resulting test report shall be regarded as a Type Approval Certificate.”

(c) (ii) Replace “inside ventilation appliances shall be comparable;” with “inside circulating fans shall be comparable;”;

(c) (iii) (b) amend to read:

“(b) insulated equipment to which is complete in every detail but minus its mechanical refrigeration 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:” (rest unchanged)

Insert a new (d) as follows:

“(d) Modifications causing a reduction in the volume of the insulating material which are additional to the components stated in the manufacturer’s original type approval test report shall be allowed if they meet the following three conditions:

- the equivalent volume of accumulated insulating material of all components is less than 1/100th of the total volume of insulating material in the insulated unit;
- the minimum thickness of the remaining insulating material in terms of the components is 20 mm or more;
- are fitted by the body manufacturer.”

Re-number existing (d) as (e).

Paragraph 4. Amend as follows:

“4. A certificate of compliance with the standards shall be issued by the competent authority of the country in which the equipment is to be registered or recorded. This certificate shall conform to the model reproduced in appendix 3 to this annex.

The certificate of compliance, or a certified true photographic copy thereof, shall be carried on the equipment during carriage to be produced whenever so required by control authorities. However, if a certification plate, as reproduced in appendix 3 to this annex, is fixed to the equipment, the certification plate of compliance shall be recognized as equivalent to a certificate of compliance. Certification plates of compliance shall be removed as soon as the equipment ceases to conform to the standards laid down in this annex.

In the case of equipment transferred to another country, which is a Contracting Party to ATP, it shall be accompanied by the following documents so that the competent authority of the country in which the equipment is to be registered or recorded can issue a certificate of compliance:

- (a) in all cases, the test report - of the equipment itself or, in the case of serially produced equipment, of the reference equipment;
- (b) in all cases, the certificate of compliance issued by the competent authority of the country of manufacture or, for equipment in service, the competent authority of the country of registration. This certificate will be treated as a provisional certificate valid, if necessary, for three months;
- (c) in the case of serially produced equipment, the technical specification of the equipment to be certified (this specification must cover the same items as the descriptive pages concerning the equipment which appears in the test report).

In the case of equipment transferred after it has been in use, the equipment may be subject to a visual inspection to confirm its identity before the competent authority of the country, in which it is to be registered or recorded, issues a certificate of compliance.”

Annex I, Appendix 2

Paragraph 1. Amend to read:

“K coefficient. The overall heat transfer coefficient (K coefficient) of the special equipment is defined by the following formula:

$$K = \frac{W}{S \cdot \Delta T}$$

where W is either the heating power or the cooling capacity, as the case may be, required to maintain a constant absolute temperature difference ΔT between the mean inside temperature T_i and the mean outside temperature T_e , during continuous operation, when the mean outside temperature T_e is constant for a body of mean surface area S.”.

Paragraph 2. Read the last sentence as follows:

“In determining the two surface areas S_i and S_e , structural peculiarities and surface irregularities of the body, such as chamfers, wheel-arches and similar features, shall be taken into account and shall be noted under the appropriate heading in test reports; however, if the body is covered with corrugated sheet metal the area considered shall be that of the plane surface occupied, not that of the developed corrugated surface.”.

Paragraph 3. Replace “ (θ_i) ” with “ (T_i) ”.

Paragraph 4. Replace “ (θ_e) ” with “ (T_e) ”.

(a) At the end, insert “and”.

Paragraph 5. Replace “ θ_i ” with “ T_i ” and “ θ_e ” with “ T_e ”.

Paragraph 6. Replace “°C” with “K” (three times), “thermal capacity” with “heating power or cooling capacity” (twice) and “internal and external temperatures” with “inside and outside temperatures”.

Paragraph 7. Replace “Insulating capacity” with “K coefficient”.

Paragraph 8. First indent, amend to read: “Whatever the method employed, the mean temperature of the insulated chamber shall throughout the test be kept uniform, and constant in compliance with paragraph 1.7 of this appendix, to within ± 0.5 K, at a level such that the temperature difference between the inside of the body and the insulated chamber is $25 \text{ }^\circ\text{C} \pm 2$ K, the average temperature of the walls of the body being maintained at $+ 20 \text{ }^\circ\text{C} \pm 0.5$ K.”.

Second indent to be deleted.

Paragraph 9. (first sentence to be deleted).

Amend the second sentence to read: "During the test, whether by the internal cooling method or by the internal heating method, the mass of air in the chamber shall be made to circulate continuously so that its speed of movement of the air 10 cm from the walls is maintained at between 1 and 2 metres/second."

Paragraph 10. Replace "applied" with "used" (twice), "(resistors and the like)" with "(resistors etc.)", "an air blower" with "fans", "all interval surfaces" with "all inside surfaces" and "2 °C" with "2 K".

Paragraph 13. Replace "2 °C" with "2 K".

Paragraph 15. To be deleted.

Paragraph 17. Replace "Insulating capacity" with "K coefficients" and "tested" with "measured".

Paragraph 18. Amend the first indent to read: "Throughout the test, the mean temperature of the insulated chamber shall be kept uniform, and constant in compliance with paragraph 6 of this appendix, at a level such that the difference in temperature between the inside of the tank and that of the insulated chamber is not less than $25\text{ °C} \pm 2\text{ K}$, with the average temperature of the tank walls being maintained at $+20\text{ °C} \pm 0.5\text{ K}$ ".

Second indent to be deleted.

Paragraph 19. Amend to read: "The mass of air in the chamber shall be made to circulate continuously so that the speed of movement of the air 10 cm from the walls is maintained at between 1 and 2 metres/second."

Paragraph 20. Amend to read:

"An electrical heating appliance (resistors, etc.) shall be placed inside the tank. If the tank has several compartments, an electrical heating appliance shall be placed in each compartment. The electrical heating appliances shall be fitted with fans with a delivery rate sufficient to ensure that the difference between the maximum temperature and the minimum temperature inside each compartment does not exceed 3 K when continuous operation has been established. If the tank comprises several compartments, the difference between the mean temperature in the coldest compartment and the mean temperature in the warmest compartment shall not exceed 2 K, the temperatures being measured as specified in paragraph 21 of this appendix."

Paragraph 23. Replace "2 °C" with "2 K".

Paragraph 25. To be deleted.

Paragraph 30. To be deleted.

Replace "**EFFICIENCY**" with "**EFFECTIVENESS**".

Paragraph 32. Amend to read:

“The empty equipment shall be placed in an insulated chamber whose mean temperature shall be kept uniform, and constant to within ± 0.5 K, at $+ 30$ °C. The mass of air in of the chamber shall be made to circulate as described in paragraph 9 of this appendix.”.

Paragraph 40. In the last sentence, replace “(if any) of” with “with any”.

Paragraph 47. Replace the first sentence with:

“The test shall be continued for 12 hours after the difference between the mean inside temperature and the mean outside temperature of the body has reached the level corresponding to the conditions prescribed for the class to which the equipment is presumed to belong. In the case of new equipment, the above temperature difference shall be increased by 35 per cent.”.

Paragraph 49. In (a), replace « $\Delta\theta$ » with « ΔT » and « $\Delta\theta'$ » with « $\Delta T'$ ».

In (c), replace «°C» with «K».

In (d)(i), replace «If the results are unfavourable» with «If the results are not acceptable».

In (d)(ii), amend the last sentence to read : «If the results of the examinations and of the determination of effectiveness are acceptable, all the equipment in question may be kept in service in its initial class for a further period of six years.».

Paragraph 51. Amend to read:

“When attached to either a calorimeter box or the insulated body of a unit of transport equipment, and operating continuously, this capacity is:

$$W_o = W_j + U \cdot \Delta T$$

where

U is the heat leakage of the calorimeter box or insulated body, Watts/°C.

ΔT is the difference between the mean inside temperature T_i and the mean outside temperature T_e of the calorimeter or insulated body (K),

W_j is the heat dissipated by the fan heater unit to maintain each temperature difference in equilibrium.”.

Paragraph 52. Amend to read:

“The refrigeration unit is either fitted to a calorimeter box, or the insulated body of a unit of transport equipment.

In each case, the heat leakage is measured at a single mean wall temperature prior to the capacity test. An arithmetical correction factor, based upon the experience of the

testing station, is made to take into account the average temperature of the walls at each thermal equilibrium during the determination of the effective refrigerating capacity.

It is preferable to use a calibrated calorimeter box to obtain maximum accuracy.

Measurements and procedure shall be as described in paragraphs 1 to 15 above; however, it is sufficient to measure U the heat leakage only, the value of this coefficient being defined by the following relationship:

$$U = \frac{W}{\Delta T_m}$$

where:

W is the heating power (in watts) dissipated by the internal heater and fans;

ΔT_m is the difference between the mean internal temperature T_i and the mean external temperature T_e ;

U is the heat flow per degree of difference between the air temperature inside and outside the calorimeter box or unit of transport equipment measured with the refrigeration unit fitted.

The calorimeter box or unit of transport equipment is placed in a test chamber. If a calorimeter box is used, $U \cdot \Delta T$ should be not more than 35% of the total heat flow W_o .

The calorimeter box or unit of transport equipment shall be heavily insulated.”.

Paragraph 53. At the end of the second indent, add: “, with refrigerant flow measurement being accurate to $\pm 5\%$ ”.

Paragraph 54. Amend the beginning of (e) to read:

“(e) *Heat quantity:* The heat dissipated by the electrical resistance fan heaters shall not exceed a flow of 1 W/cm^2 and the heater units shall be protected by a casing of low emissivity.”

(rest unchanged).

Paragraph 55. Amend to read:

“Test conditions

(i) The average air temperature at the inlet(s) to the refrigeration unit shall be maintained at $30 \text{ }^\circ\text{C} \pm 0.5 \text{ K}$.

The maximum difference between the temperatures at the warmest and at the

coldest points shall not exceed 2 K.

- (ii) Inside the calorimeter box or the insulated body of the unit of transport equipment (at the air inlet to the evaporator): there shall be three levels of temperature between -25 °C and +12 °C depending on the characteristics of the unit, one temperature level being at the minimum prescribed for the class requested by the manufacturer with a tolerance of ± 1 K.

The mean inside temperature shall be maintained within a tolerance of ± 0.5 K. During the measurement of refrigerating capacity, the heat dissipated within the calorimeter box or the insulated body of the unit of transport equipment shall be maintained at a constant level with a tolerance of $\pm 1\%$.

When presenting a refrigeration unit for test, the manufacturer shall supply:

- Documents describing the unit to be tested;
- A technical document outlining the parameters that are most important to the functioning of the unit and specifying their allowable range;
- The characteristics of the equipment series tested; and
- A statement as to which prime mover(s) shall be used during testing.”.

Paragraph 56. Amend as follows:

- (a) Replace “3 °C” with “3 K” and amend the last sentence to read: “It shall then be lowered by 5 K below the lower limit class temperature;”;

- (b) Third indent: replace “power output,” with “capacity, with”;

Sixth indent: replace “for each” with “accordingly”.

Paragraph 57. Read the last indent as follows:

“with automatic controls of the refrigeration unit which unload individual cylinders (to tune the capacity of the refrigeration unit to motor output) the test shall be carried out with the number of cylinders appropriate for the temperature.”.

Paragraph 58. Amend (ii) to read as follows:

- “(ii) the rate of air circulation is that specified by the manufacturer.

If the air circulation of a refrigeration unit’s evaporator fans are to be measured, methods capable of measuring the total delivery volume shall be used. Use of one of the relevant existing standards, i.e. BS 848, ISO 5801, AMCA 210-85, DIN 24163, NFE 36101, NF X10.102, DIN 4796 is recommended;”.

MODEL No. 2 A

Replace “θ” with “T”.

MODEL No. 2 B

Replace “θ” with “T”.

MODEL No. 4 A

(French version only).

MODEL No. 4 B

(French version only).

MODEL No. 4 C

(French version only).

MODEL No. 5

(French version only).

MODEL No. 6

(French version only).

Annex 1, Appendix 3

Amend title A to read:

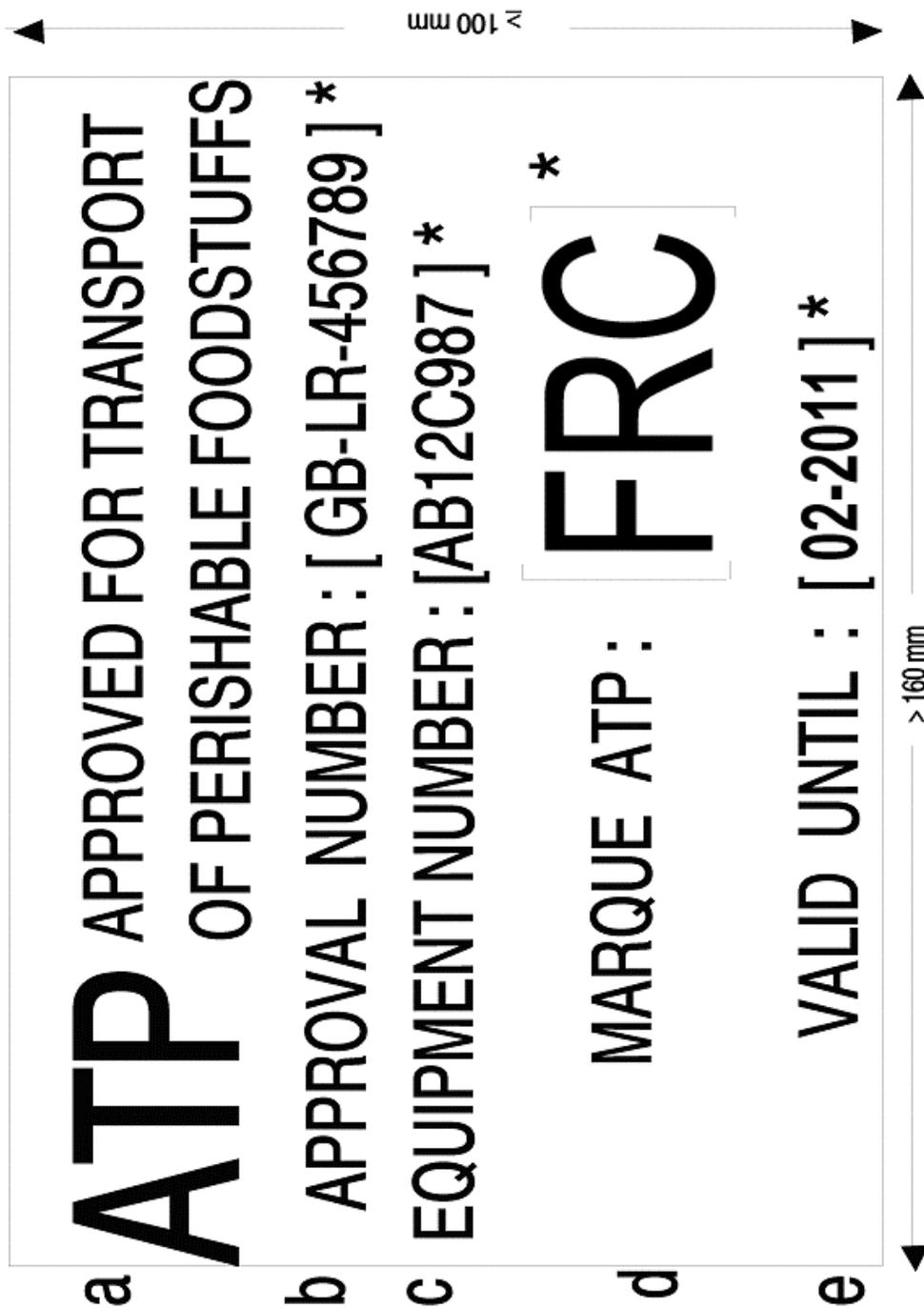
- “A. FORM OF CERTIFICATE FOR INSULATED, REFRIGERATED, MECHANICALLY REFRIGERATED OR HEATED EQUIPMENT USED FOR THE INTERNATIONAL CARRIAGE OF PERISHABLE FOODSTUFFS BY LAND”**

Amend title B to read:

- “B. CERTIFICATION PLATE OF COMPLIANCE OF THE EQUIPMENT, AS PROVIDED FOR IN ANNEX 1, APPENDIX 1, PARAGRAPH 4”**

Model of certification plate:

Replace with the following:



* The particulars in square brackets are given by way of example

Annex 1, Appendix 4

First sentence, replace “paragraph 5” with “paragraph 4”.

Delete the following:

“Class B mechanically refrigerated equipment with normal insulation FNB^{1/}

Class C mechanically refrigerated equipment with normal insulation FNC^{1/}

Class E mechanically refrigerated equipment with normal insulation FNE^{1/}

Class F mechanically refrigerated equipment with normal insulation FNF^{1/2}”

Delete the footnote: “^{1/} See transitional provisions in paragraph 5 of this annex.”

At the end of the appendix, replace the model with:

“Model:

FRC 2 - 2011

2 = month (February) of expiry of the
2011 = year) certificate”

Annex 2, Appendix 1

Amend to read:

**“MONITORING OF AIR TEMPERATURES FOR TRANSPORT OF
PERISHABLE FOODSTUFFS QUICK-FROZEN**

The transport equipment must be fitted with a suitable recording instrument to monitor, at frequent and regular intervals, the air temperatures to which quick-frozen foodstuffs intended for human consumption are subjected.

The measuring instrument must be certified by an accredited body and the documentation must be available for the approval of the competent ATP authorities.

The measuring instruments must comply with standards EN 12830 (Temperature recorders for the transport, storage and distribution of chilled, frozen, deep-frozen/quick-frozen food and ice cream - Tests, performance, suitability) and EN 13486 (Temperature recorders and thermometers for the transport, storage and distribution of chilled, frozen, deep-frozen/quick-frozen food and ice cream - Periodic verification).

Temperature recordings obtained in this manner must be dated and stored by the operator for at least one year or longer, according to the nature of the food.

Measuring instruments shall comply with the provisions of this Appendix one year after the date of entry into force of the above provision. Measuring instruments already installed, but which do not conform to the above standard, before this date can continue to be used until 31 December 2009.”
