

RESOLUTION A.737(18)
adopted on 4 November 1993
AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR SAFE CONTAINERS (CSC), 1972

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AMENDMENTS TO THE INTERNATIONAL CONVENTION
FOR SAFE CONTAINERS (CSC), 1972

THE ASSEMBLY,

RECALLING article IX of the International Convention for Safe Containers (CSC), 1972, on the procedure for amending any part of the Convention,

HAVING CONSIDERED the amendments to the International Convention for Safe Containers (CSC), 1972, adopted by the Maritime Safety Committee at its sixty-first session and communicated to all Contracting Parties in accordance with paragraph 2(a) of article IX of that Convention,

1. ADOPTS, in accordance with paragraph 2(b) of article IX of the International Convention for Safe Containers (CSC), 1972, the amendments to the Convention and its Annexes set out in the Annex to the present resolution;
2. NOTES that, in accordance with paragraph 2(c) of article IX of the Convention, the said amendments shall enter into force twelve months after the date on which they are accepted by two thirds of the Contracting Parties;
3. REQUESTS the Secretary-General, in conformity with paragraph 2(b) of article IX of the Convention, to communicate the said amendments to all Contracting Parties for their acceptance.

W/0221a

ANNEX

AMENDMENTS TO THE INTERNATIONAL CONVENTION FOR
SAFE CONTAINERS (CSC), 1972

1 Paragraphs 14 to 16 of article II (Definitions) are amended to read:

"14. "Maximum Operating Gross Mass" or "Rating" or "R" means the maximum allowable sum of the mass of the container and its cargo. The letter "R" is expressed in units of mass. Where the Annexes are based on gravitational forces derived from this value, that force, which is an inertial force, is indicated as "Rg".

15. "Tare" means the mass of the empty container including permanently affixed ancillary equipment.

16. "Maximum Permissible Payload" or "P" means the difference between maximum operating gross mass or rating and tare. The letter "P" is expressed in units of mass. Where the Annexes are based on the gravitational forces derived from this value, that force, which is an inertial force, is indicated as "Pg".

New paragraphs 17 to 19 are added as follows:

"17. The word "load", when used to describe a physical quantity to which units may be ascribed, signifies mass.

18. The word "loading", for example, as in "internal loading", signifies force.

19. The letter "g" means the standard acceleration of gravity, "g" equals 9.8 m/s²."

2 Annex I, subparagraph 1(b) of regulation 1 is amended to read:

"(b) On each container all maximum gross mass markings shall be consistent with the maximum gross mass information on the Safety Approval Plate."

Subparagraph 2(a) is amended to read:

"(a) The plate shall contain the following information in at least the English or French language:

"CSC SAFETY APPROVAL"

Country of approval and approval reference

Date (month and year) of manufacture

Manufacturer's identification number of the container or, in the case of existing containers for which that number is unknown, the number allotted by the Administration

Maximum operating gross mass (kg and lbs)

Allowable stacking load for 1.8 g (kg and lbs)

Transverse racking test force (Newtons)"

A new paragraph 5 is added as follows:

"5 A container, the construction of which was completed prior to*, may retain the Safety Approval Plate as permitted by the Convention prior to that date as long as no structural modifications occur to that container."

3 Annex I, subparagraphs 1(c) and 1(e) of regulation 9 are amended to read:

"(c) maximum operating gross mass capability;"

"(e) allowable stacking load for 1.8 g (kg and lbs); and"

4 Annex I, subparagraphs (c) and (e) of regulation 10 are amended to read:

"(c) maximum operating gross mass capability;"

"(e) allowable stacking load for 1.8 g (kg and lbs); and"

5 Annex I, the fourth, fifth and sixth lines of the model of the Safety Approval Plate reproduced in the appendix are amended to read:

"MAXIMUM OPERATING GROSS MASS kg lbs
ALLOWABLE STACKING LOAD FOR 1.8 g kg lbs
TRANSVERSE RACKING TEST FORCE Newtons"

6 Annex I, items 4 to 8 of the appendix are amended to read:

"4. Maximum operating gross mass (kg and lbs).

5. Allowable stacking load for 1.8 g (kg and lbs).

6. Transverse racking test force (Newtons).

7. End-wall strength to be indicated on plate only if end-walls are designed to withstand a force of less or greater than 0.4 times the gravitational force by maximum permissible payload, i.e. 0.4 Pg.

8. Side-wall strength to be indicated on plate only if the side-walls are designed to withstand a force of less or greater than 0.6 times the gravitational force by maximum permissible payload, i.e. 0.6 Pg."

7 The first sentence of the Introduction to annex II (Structural safety requirements and tests) is amended to read:

"In setting the requirements of this annex, it is implicit that in all phases of the operation of containers the forces as a result of motion, location, stacking and gravitational effect of the loaded container and external forces will not exceed the design strength of the container."

* Date of entry into force of the amendments.

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- 8 Annex II, section 1(A) - Lifting from corner fittings - the text concerning test loadings and applied forces is amended to read:

"TEST LOAD AND APPLIED FORCES

Internal load:

A uniformly distributed load such that the sum of the mass of container and test load is equal to 2R. In the case of a tank-container, when the test load of the internal load plus the tare is less than 2R, a supplementary load distributed over the length of the tank is to be added to the container.

Externally applied forces:

Such as to lift the sum of a mass of 2R in the manner prescribed (under the heading TEST PROCEDURES)."

- 9 Annex II, section 1(B) - Lifting by any other additional methods - is amended to read:

"TEST LOAD AND APPLIED FORCES

TEST PROCEDURES

Internal load:

(i) Lifting from fork-lift pockets:

A uniformly distributed load such that the sum of the mass of container and test load is equal to 1.25R.

The container shall be placed on bars which are in the same horizontal plane, one bar centred within each fork-lift which is used for lifting the loaded container. The bars shall be of the same width as the forks intended to be used in the handling, and shall project into the fork pocket 75% of the length of the fork pocket.

Externally applied forces:

Such as to lift the sum of a mass of 1.25R in the manner prescribed (under the heading TEST PROCEDURES).

Internal load:

(ii) Lifting from grappler arm positions:

A uniformly distributed load such that the sum of the mass of container and test load is equal to 1.25R. In the case of a tank-container, when the test load of the internal load plus the tare is less than 1.25R, a supplementary load distributed over the length of the tank is to be added to the container.

The container shall be placed on pads in the same horizontal plane, one under each grappler arm position. These pads shall be of the same sizes as the lifting area of the grappler arms intended to be used.

Externally applied forces:

Such as to lift the sum of a mass of 1.25R in the manner prescribed (under the heading TEST PROCEDURES).

(iii) Other methods:

Where containers are designed to be lifted in the loaded condition by any method not mentioned in (A) or (B)(i) and (ii) they shall also be tested with the internal load and externally applied forces representative of the acceleration conditions appropriate to that method."

- 10 ANNEX II, Paragraphs 1 and 2 of Section 2 - STACKING - are amended to read:

"1. For conditions of international transport where the maximum vertical acceleration varies significantly from 1.8 g and when the container is reliably and effectively limited to such conditions of transport, the stacking load may be varied by the appropriate ratio of acceleration.

2. On successful completion of this test the container may be rated for the allowable superimposed static stacking load, which should be indicated on the Safety Approval Plate against the heading ALLOWABLE STACKING LOAD FOR 1.8 g (kg and lbs)."

- 11 Annex II, section 2 - STACKING - the text concerning test loadings and applied forces is amended to read:

"TEST LOAD AND APPLIED FORCES

Internal load:

A uniformly distributed load such that the sum of the mass of container and test load is equal to 1.8R. Tank-containers may be tested in the tare condition.

Externally applied forces:

Such as to subject each of the four top corner fittings to a vertical downward force equal to 0.25 x 1.8 x the gravitational force of the allowable superimposed static stacking load."

- 12 Annex II, section 3 - CONCENTRATED LOADS - is amended to read:

"TEST LOAD AND APPLIED FORCES

TEST PROCEDURES

(a) On roof

Internal load:

None.

Externally applied forces:

A concentrated gravitational force of 300 kg (660 lbs) uniformly distributed over an area of 600 mm x 300 mm (24 in x 12 in).

The externally applied forces shall be applied vertically downwards to the outer surface of the weakest area of the roof of the container.

(b) On floor

Internal load:

Two concentrated loads each of 2,730 kg (6,000 lbs) and each added to the container floor within a contact area of 142 cm² (22 sq in).

The test should be made with the container resting on four level supports under its four bottom corners in such a manner that the base structure of the container is free to deflect.

A testing device loaded to a mass of 5,460 kg (12,000 lbs) that is 2,730 kg (6,000 lbs) on each of two surfaces having, when loaded, a total contact area of 284 cm² (44 sq in) that is 142 cm² (22 sq in) on each surface, the surface width being 180 mm (7 in) spaced 760 mm (30 in) apart, centre to centre, should be manoeuvred over the entire floor area of the container.

Externally applied forces:

None."

- 13 Annex II, the heading and subheading of section 4 are amended to read respectively:

"TEST LOAD AND APPLIED FORCES" and "Internal load:".

- 14 Annex II, section 5 - LONGITUDINAL RESTRAINT (STATIC TEST) - the text concerning test loadings and applied forces is amended to read:

"TEST LOAD AND APPLIED FORCES

Internal load:

A uniformly distributed load, such that the sum of the mass of a container and test load is equal to the maximum operating gross mass or rating R. In the case of a tank-container, when the mass of the internal load plus the tare is less than the maximum gross mass or rating, R, a supplementary load is to be added to the container.

Externally applied forces:

Such as to subject each side of the container to longitudinal compressive and tensile forces of magnitude R_g, that is, a combined force of 2 R_g on the base of the container as a whole."

- 15 Annex II, the first paragraph of section 6 - END-WALLS - is amended to read:

"The end-walls should be capable of withstanding a force of not less than 0.4 times the force equal to gravitational force by maximum permissible payload. If, however, the end-walls are designed to withstand a force of less or greater than 0.4 times the gravitational force by maximum permissible payload such a strength factor shall be indicated on the Safety Approval Plate in accordance with annex I, regulation 1."

- 16 Annex II, section 6 - END-WALLS - the text concerning test loadings and applied forces is amended to read:

"TEST LOAD AND APPLIED FORCES

Internal load:

Such as to subject the inside of an end-wall to a uniformly distributed force of 0.4 Pg or such other force for which the container may be designed.

Externally applied forces:

None."

- 17 Annex II, the first paragraph of section 7 - SIDE-WALLS - is amended to read:

"The side-walls should be capable of withstanding a force of not less than 0.6 times the force equal to the gravitational force by maximum permissible payload. If, however, the side-walls are designed to withstand a force of less or greater than 0.6 times the gravitational force by maximum permissible payload, such a strength factor shall be indicated on the Safety Approval Plate in accordance with annex I, regulation 1."

- 18 Annex II, section 7 - SIDE WALLS - the text concerning test loadings and applied forces is amended to read:

"TEST LOAD AND APPLIED FORCES

Internal load:

Such as to subject the inside of a side-wall to a uniformly distributed force of 0.6 Pg or such other force for which the container may be designed.

Externally applied forces:

None."

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