

Committee of Experts on the Transport of Dangerous Goods and on the Globally Harmonized System of Classification and Labelling of Chemicals

Sub-Committee of Experts on the Transport of Dangerous Goods

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Item 5 of the provisional agenda

Miscellaneous proposals of amendments to the Model Regulations on the Transport of Dangerous Goods

Salvage pressure receptacles

Transmitted by the parallel working group on salvage pressure receptacles

Report

1. The working group was attended by delegates from Germany, Switzerland, The United Kingdom, The United States of America, CGA, EIGA and ISO. The delegate from Germany chaired the working group supported by the delegate from ISO acting as secretary. The documents considered were ST/SG/AC.10/C.3/2009/16/Rev.1 (Germany), Informal documents INF.21 (United Kingdom) and INF.42 (CGA) of the thirty-sixth session and ST/SG/AC.10/C.3/2010/9 (Germany and United Kingdom).
2. The proposal was edited to remove all redundant text and subjective words.
3. The group agreed to limiting the water capacity of salvage pressure receptacles to 1 000 litres.
4. The requirements for use of salvage pressure receptacles were separated from those of salvage packagings by allocating them to a new paragraph 4.1.1.18.
5. The proposed prohibition on using salvage pressure receptacles for carrying pressure receptacles which comply with the Regulations was deleted since the working group agreed that the introduction of inspection after each use would ensure the integrity of the salvage pressure receptacle despite such additional use. A Note explaining the requirements in this case was introduced. The cost and complexity of using salvage pressure receptacles will make their use in such applications rare.
6. The working group considered whether salvage pressure receptacles could be used to carry packagings other than pressure receptacles. It was agreed that such use was possible, but in that case the salvage pressure receptacle should be considered as a salvage packaging and used in accordance with 4.1.1.17. The marking and transport document requirements would then be those applicable to salvage packagings. Again, the cost and complexity of using salvage pressure receptacles will make their use in such applications rare.
7. The proposed requirement for using Personal Protective Equipment was deleted. This provision was considered by the working group to be:
 - Inappropriate for a transport regulation, being in the field of worker safety;

- Ineffective since it was not feasible to specify equipment to cover all potential risks;
- Already addressed indirectly by the training requirements of 1.3.2 (c) (iii).

No similar provision is given for salvage packagings.

8. The availability of the approval certificate at the time of packing the salvage pressure receptacle was ensured by including a requirement in the use instructions. The specification of the approval certificate in 6.2.3.5 was amended to ensure it contained all relevant information for use.
9. The instructions on maximum permissible contents of the salvage pressure receptacle were adopted from a proposal in INF. 42 (CGA) supplemented by a warning to account for the volume of the contained equipment.
10. The requirements for marking and labeling were clarified based on similar requirements elsewhere in the Regulations.
11. A new provision covering inspection after each use was introduced. Periodic inspection requirements were also added.
12. Pressure relief device requirements are not given since these will be as specified in the technical code approved by the competent authority, consistent with the requirements for all other pressure receptacles in P200.
13. The proposed transitional arrangement was amended based on a suggestion from Switzerland.

Resulting proposal

Note: New text for the Model Regulation is underlined.

14. Add to 1.2.1:

“Salvage pressure receptacle means a pressure receptacle with a water capacity not exceeding 1 000 l into which are placed damaged, defective, leaking or non-conforming pressure receptacle(s) for the purpose of transport e.g. for recovery or disposal.”.
15. Insert a reference to salvage pressure receptacles in the definition of pressure receptacles in 1.2.1 to read:

“Pressure receptacle is a collective term that includes cylinders, tubes, pressure drums, closed cryogenic receptacles, metal hydride storage systems, bundles of cylinders and salvage pressure receptacles”.
16. Add a new paragraph

“4.1.1.18 Use of salvage pressure receptacles
4.1.1.18.1 In the case of damaged, defective, leaking or non-conforming pressure receptacles, salvage pressure receptacles according to 6.2.3 may be used.
NOTE: A salvage pressure receptacle may be used as an overpack in accordance with 5.1.2. When used as an overpack, markings shall be in accordance with 5.1.2.1 instead of 5.2.1.3.
4.1.1.18.2 Pressure receptacles shall be placed in salvage pressure receptacles of suitable size. More than one pressure receptacle may be placed in the same salvage pressure receptacle, only if the contents are known and do not react dangerously with each other (see 4.1.1.6). Measures shall be taken to prevent movement of the pressure

receptacles within the salvage pressure receptacle e.g. by partitioning, securing and cushioning.

4.1.1.18.3 A pressure receptacle may only be placed in a salvage pressure receptacle if:

- (a) The salvage pressure receptacle is in accordance with 6.2.3.5 and a copy of the approval certificate is available;
- (b) Parts of the salvage pressure receptacle which are, or are likely to be in direct contact with the dangerous goods shall not be affected or weakened by those dangerous goods and shall not cause a dangerous effect (e.g. catalyzing reaction or reacting with the dangerous goods); and
- (c) The contents of the contained pressure receptacle(s) shall be limited in pressure and volume so that if totally discharged into the salvage pressure receptacle, the pressure in the salvage pressure receptacle at 65°C will not exceed the test pressure of the salvage pressure receptacle (for gases, see 4.1.4.1 P200 (3)). The reduction of the useable water capacity of the salvage pressure receptacle, e.g. by any contained equipment and cushioning, shall be taken into account.

4.1.1.18.4 The proper shipping name, the UN Number and label(s) as required for packages by Chapter 5.2 applicable to the dangerous goods inside the contained pressure receptacle(s) shall be applied to the salvage pressure receptacle for transport.

4.1.1.18.5 “Salvage pressure receptacles shall be cleaned, purged and visually inspected internally and externally after each use. They shall be periodically inspected and tested in accordance with 6.2.1.6 at least once every five years.”

17. Insert a reference to salvage pressure receptacles in 5.2.1.3:
 “Salvage packagings and salvage pressure receptacles shall additionally be marked with the word “SALVAGE”.”
18. Amend 5.4.1.5.3 to read:
 “For dangerous goods transported in salvage packagings or salvage pressure receptacles, the words “SALVAGE PACKAGING” or “SALVAGE PRESSURE RECEPTACLE” shall be included.
19. Insert a reference to salvage pressure receptacles in 6.2.3.3 to read:
 “For metallic cylinders, tubes, pressure drums, bundles of cylinders and salvage pressure receptacles, the construction shall be such that the minimum burst ratio (burst pressure divided by test pressure) is: (*remainder unchanged*)”.
20. Insert new paragraph 6.2.3.5 to read:
“6.2.3.5 Salvage pressure receptacles
To permit the safe handling and disposal of the pressure receptacles carried within, the design may include equipment not otherwise used for cylinders or pressure drums such as flat heads, quick opening devices and openings in the cylindrical part.
Instructions on the safe handling and use of the salvage pressure receptacle shall be clearly shown in the documentation for the application to the competent authority and shall form part of the approval certificate. In the approval certificate, the pressure receptacles authorized to be transported in a salvage pressure receptacle shall be indicated. A list of the materials of construction of all parts likely to be in contact with the dangerous goods shall also be included.

A copy of the approval certificate shall be delivered by the manufacturer to the owner of a salvage pressure receptacle.

The marking of salvage pressure receptacles according to 6.2.3 shall be determined by the competent authority in taking into account suitable marking provisions of 6.2.2.7 as appropriate. The marking shall include the water capacity and test pressure of the salvage pressure receptacle."

21. Add a note with a transitional provision to 6.2.3.5 to read:

"Note: These provisions for salvage pressure receptacles may be applied for new salvage pressure receptacles from 1 January 2013, unless otherwise authorized, and shall be applied for all new salvage pressure receptacles from 1 January 2014.

Salvage pressure receptacles approved in accordance with national regulations may be used with the approval of the competent authorities in the countries of use."
