



Secretariat

Distr.
GENERAL

ST/SG/AC.10/C.3/2009/16/Rev.1
4 September 2009

Original: ENGLISH

**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

Thirty-sixth session
Geneva, 30 November – 9 December 2009
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 expert from Germany¹

NOTE: In this document, changes compared to document ST/SG/AC.10/C.3/2009/16 are shown in bold italics.

Introduction

1. For salvage packagings, suitable provisions exist in 4.1.1.17 and Chapter 6.1 of the Model Regulations including marking in 6.1.3.12. Although the definition of a salvage packaging in 1.2.1 may also cover salvage pressure receptacles, for the latter no specific provisions exist in 4.1.1.17 and Chapter 6.2. The expert from Germany submitted a proposal for inclusion of some requirements for salvage pressure receptacles at the last session of the Sub-Committee (*document ST/SG/AC.10/C.3/2009/16*). ***Following the discussion, the expert from Germany offered to present a revised proposal which would take account of the comments made.***

¹ In accordance with the programme of work of the Sub-Committee for 2009-2010 approved by the Committee at its fourth session (refer to ST/SG/AC.10/C.3/68, para. 118(d) and ST/SG/AC.10/36, para. 14).

2. The intention of this document is to propose some general requirements like a definition, provisions for competent authority approval and marking as well as to add to the transport document information on such receptacles for identification during transport including filling and emptying. This information is important for personal for loading and transport as well as for unloading such salvage pressure receptacles for further treatment/disposal of the damaged or leaking pressure receptacles packed inside, which may require special precautionary and protective measures.

3. This proposal does not address detailed technical requirements on the specific types of salvage pressure receptacles, as they may vary widely in design specifications and derogations from some technical requirements of Chapter 6.2. Only some general technical requirements are proposed to give guidance to the competent authority for the approval of salvage pressure receptacles.

Technical information

4. Although the aim of the provisions of the Model Regulation is to safely transport fully complying pressure receptacles, there are cases where pressure receptacles do not fully comply with the provisions, but still being filled with gas, are to be transported e.g. for purposes of safe emptying or disposal. This may happen after an accident but also in some special cases such as when pressure receptacles have been found on abandoned former industrial areas or are still present in enterprises which have been closed down, where it can no longer be verified whether the pressure receptacles have been correctly stored, maintained and kept in compliance with the applicable provisions. For certain gases such as toxic or persistent gases, specialised disposal facilities such as high temperature cracking and burning facilities are not always available on site or close by, therefore further transport of such non-complying *or not fully complying* pressure receptacles may be needed, including international transport if a country does not provide a suitable waste disposal facility on its territory. This clearly shows, that salvage pressure drums are not designed to transport fully functioning *and complying* pressure receptacles conforming to the provisions and that they are not intended to be used for the normal distribution of products to customers. They *should* only be used in case of a need to transport no longer complying pressure receptacle(s) for the purposes mentioned above.

5. In order to transport such pressure receptacles, which no longer fully meet the requirements of Chapter 6.2 (e.g. damaged, defective, leaking or non-conforming cylinders or pressure drums), specially designed pressure equipment is used, which can be designated as *salvage pressure receptacle*. With regards to the design requirements, these salvage pressure receptacles must be clearly distinguished from salvage packagings. In order to be serviceable, salvage pressure receptacles are not able to meet all design requirements of Chapter 6.2 (e.g. restrictions on openings in the cylindrical part, flat heads).

6. In order to achieve a common understanding *and to lay down* general requirements, it is proposed to add a definition and general requirements for approval, marking and identification.

7. Taking into account all necessary specifications for salvage pressure receptacles, an approval as non UN-pressure receptacle according to 6.2.3 is deemed to be appropriate. This should be made transparent for the users of salvage pressure receptacles for the logistical chain

from packing a pressure receptacle in a salvage pressure receptacle, during transport and to the final destination for unpacking the non-complying pressure receptacle under safe conditions e.g. by requiring suitable information to be delivered by the manufacturer to its clients as users and by adding provisions to the transport document to convey the safety information to transport personal as well as to the personal at the final destination.

Proposal

NOTE: New text for the Model Regulation is underlined and amended text compared to document ST/S/AC.10/C.3/2009/16 is shown in bold italics.

8. Add to 1.2.1:

“Salvage pressure receptacle means a special pressure receptacle into which are placed damaged, defective, leaking or non-conforming pressure vessels with a water capacity not exceeding 1000 l (e.g. pressure receptacles) for the purpose of transport e.g. for recovery or disposal.”.

9. 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, bundles of cylinders and salvage pressure receptacles;”.

10. Amend the heading of 4.1.1.17 to read:

“Use of salvage packagings and salvage pressure receptacles”.

11. Add paragraphs 4.1.1.17.4 to 4.1.1.17.8 as follows:

“4.1.1.17.4 In case of damaged, defective, leaking or non conforming **or not fully complying** pressure receptacles, salvage pressure receptacles according to 6.2.3 may be used. Salvage pressure receptacles *should* not be used for the **transport of pressure receptacles, which without any doubt fully comply with the provisions.**”.

4.1.1.17.5 Pressure receptacles shall be placed in salvage pressure receptacles of suitable size. More than one pressure receptacle may only be placed in the same salvage pressure receptacle, if the identity of the gases is known and if the gases contained do not react dangerously with each other (see 4.1.1.6). Appropriate measures shall be taken to prevent excessive movement of the pressure receptacles within the salvage pressure receptacle e.g. by adding appropriate means for partitioning, securing and cushioning. Damaged parts shall be carefully protected against contact with the body of the salvage pressure receptacle.

4.1.1.17.6 A pressure receptacle may only be placed in a salvage pressure receptacle if ~~((deleted: “the type of pressure receptacle is”))~~ authorized in the approval certificate and if the salvage pressure receptacle meets the requirements for pressure and tightness as laid down for the gas in packing instruction P 200 [table 1 or 2]*. A pressure receptacle fully complying with the requirements and **which is not** damaged, defective or leaking **should** not be placed in a salvage pressure receptacle for transport.

** NOTE: The expert from the United Kingdom is in favour to include table 3 of P 200 as well. However, table 3 of P 200 lists several highly dangerous substances not assigned to Class 2. Because of the risks including subsidiary risks of such substances, the expert from Germany would welcome some more explanations from the expert from the United Kingdom on the need to cover substances of table 3 in the provisions for salvage pressure receptacles and on any potential need for additional safety measures, e.g. in an informal document, so that the Sub-Committee can decide as appropriate.*

4.1.1.17.7 If the gas in the damaged pressure receptacle is classified as *division 2.1* or *2.3*, *appropriate* personal protective equipment shall be used during the packing and unpacking process.

4.1.1.17.8 All labels required for the gas inside the damaged pressure receptacle shall be applied to the salvage pressure receptacle for transport.

12. Insert a reference to salvage pressure receptacles in 5.2.1.3 in order to read:

“Salvage packagings and salvage pressure receptacles shall additionally be marked with the word “SALVAGE”.”.

13. 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. In case of salvage pressure receptacles, the consignor shall *provide* a copy of the approval of the competent authority of the country having granted the approval *either with the salvage pressure receptacle or added to the transport document. He shall further provide instructions on the safe operation of such devices to users.*”.

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).

14. Insert new paragraph 6.2.3.5 to read:

“6.2.3.5 Salvage pressure receptacles

The water capacity of a salvage pressure receptacle may exceed 1 000 l to the extent necessary for the transport of pressure receptacles with a water capacity of up to 1000 l. To permit the safe handling and disposal of the pressure vessels carried within, the design may include special equipment otherwise not *used* for cylinders or pressure drums like flat heads, quick opening devices and openings in the cylindrical part. *These deviations – including alternative measures imposed – and instructions on the safe handling of such devices* shall be clearly shown in the documentation for the application to the competent authority and shall form part of the approval.

In the approval certificate, the ((*deleted: type(s) of*)) pressure receptacles and the group(s) or division(s) of gases authorized to be transported in a damaged pressure receptacle being placed in a salvage pressure receptacle shall be clearly indicated. A copy of the approval shall be delivered by the manufacturer to any user 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. In addition, the marking shall include the maximum usable volume or water capacity of pressure vessels (e.g. receptacles) and the maximum permissible pressure of pressure receptacles that are authorized to be transported inside the salvage pressure receptacle."

15. 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 being used as approved by the competent authority before 1 January 2014 may continue to be used as determined by that authority.”
