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**COMMITTEE OF EXPERTS ON THE TRANSPORT
OF DANGEROUS GOODS**

**Sub-Committee of Experts on the
Transport of Dangerous Goods**
(Eighteenth session, 3-14 July 2000,
agenda item 2)

DEVELOPMENT OF PROVISIONS FOR THE TRANSPORT OF GASES

Transmitted by the European Liquefied Petroleum Gas Association (AEGPL)

1. INTRODUCTION

As far as LPG is concerned, the last version of the provisions for gas receptacles needs to be amended in particular to take into account the resolutions of the last meeting of December (cf. report of the Working Group on "Gas Receptacles and MEGCs, ST/SG/AC.10/C.3/34, annex 1 and ST/SG/AC.10/C.3/34/Add.1).

The concerned items are :

- Item 14 : the requirements of the appendix of ISO 10297 was proposed for consideration for the testing of unprotected valves
- Item 16 : the issue of the use of pressure relief devices (PRD) for LPG cylinders
- Item 21 : the agreement to add the special provisions "m" to butane, propane & isobutane needs to be taken into account
- Item 30 : circulation of EN standards to the Working Group Members

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2. PROPOSAL:

Reference: Paragraph 4.1.6.1.4 – (General requirements)

Reference	Current text	Proposed modifications	Remarks
(d)	Valves are designed and constructed in such a way that they are inherently able to withstand damage without leakage of product [ISO 19297 – Annex A].	<i>To add a reference to prEN 13152 & prEN 13153 for LPG cylinder valves.</i>	<ul style="list-style-type: none"> • ISO 10297 exclude LPG • The impact test values in ISO 10297 are not sufficient for LPG cylinder valves.
	For pressure receptacles with valves as described in (b) and (c), the requirements of ISO 11117:1998 shall be met; [for unprotected valves as described in (d), the requirements of the annex of ISO 10297 shall be met].	<i>To add : For unprotected LPG cylinder valves as described in (d), the requirements of prEN 13152 & prEN13153 shall be met.</i>	

Reference : Section 4.1.6.2 – Packing Instruction P 200 (Proposals – EIGA)

Reference	Current text	Proposed modifications	Remarks
200 (a)	“Other pressure receptacles shall be fitted with a PRD where specified by the competent authority”	<i>AEGPL recommend to leave the phrase as it is without any disposition for LPG. The fitting of PRD's on LPG cylinders should not be mandatory.</i>	
200 (f)	“For low pressure liquefied gases, ... the test pressure will be at least equal to the vapour pressure (absolute) of the liquid at 65°C minus 1 bar”.		<p>The test pressure for LPG cylinders : design pressure (15 bar for Butane & 30 bar for Propane).</p> <p>The vapour pressures are respectively :</p> <ul style="list-style-type: none"> - Butane : 7b (65 °C) 8b (70 °C) - Propane : 28b (65 °C) 30b (70 °C) <p>Even if the values are very close, requiring 65°C for the minimum temperature corresponding to vapour pressure is less stringent than ADR.</p>

Reference	Current text	Proposed modifications	Remarks
200 (I)	<p>[m : interval between inspections for steel cylinders may be extended to 15 years : (a) (b)]</p> <p>z : ... transport of gases under an N.O.S. description</p>	<p><i>The brackets should be removed perhaps with some dispositions regarding quality assurance (see German proposal).</i></p> <p><i>To add the following dispositions for LPG mixtures :</i> <i>“other criteria may be used for filling of welded steel cylinders intended for the carriage of substances of 2°F, UN number 1965 :</i></p> <p><i>a) with the agreement of the competent authorities of the countries where the transport is carried out; and</i></p> <p><i>b) in compliance with the provisions of a national code, or a standard recognised by the competent authorities, or of standard ISO/DIS 10691 “Transportable Welded Steel Cylinders for LPG – Procedures for checking at the time of filling”.</i></p> <p><i>When the criteria for filling are different from those of P 200(f), the transport document shall include the statement : “Transport in accordance with packing instruction P 200, special requirement z” and the indication of the reference temperature used for the calculation of the filling factor.</i></p>	<p>LPG is totally non corrosive. Filling procedures should be guaranteed by a suitable quality assurance system especially for some countries of the third world.</p>
Table of products	<p>p. 18 : line “Butane”</p> <p>p. 19 : line “Hydrocarbon gas mixture, liquefied N.O.S.”</p>	<p><i>Special requirement “m” should be added (cf. resolution taken during the December meeting – Item 21).</i></p> <p><i>The 9 mixtures of LPG should be re-introduced in this row with special requirements “m & z”.</i></p>	

Reference: Chapter 6.2 – Requirements for the Construction & Testing of Pressure Receptacles for Gases

Reference	Current text	Proposed modifications	Remarks
6.2.1.3.7		<p>To include into the table :</p> <ul style="list-style-type: none"> - <i>prEN 13152 : Testing & Specifications of LPG Cylinders Valves – Self Closing</i> - <i>prEN 13153 : Testing & Specifications of LPG Cylinders Valves – Manually Operated.</i> 	
6.2.1.6.2		<p>To include into the table :</p> <ul style="list-style-type: none"> - <i>EN 1442 : Transportable & Refillable LPG Welded Steel Cylinders – Design & Construction</i> - <i>EN 417 : Transportable & non-Refillable LPG Cylinders</i> 	No standard for “LPG Welded Steel Cylinders – Design & Construction” is yet included in the table of standards..
6.2.1.6.2		<p>To add a note at the bottom of the table :</p> <p><i>”For LPG, the use of composite cylinders complying with ISO 11119-1, 11119-2 & 11119-3 shall be subject to the agreement of the competent authorities”.</i></p>	