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Working Party on the Transport of Dangerous Goods

Joint Meeting of the RID Safety Committee and the
Working Party on the Transport of Dangerous Goods
(Bern, 24-28 March 2003)

Amendment of ADR/RID

Transmitted by the European Liquefied Petroleum Gas Association (AEGPL) */

Summary :

It is proposed to add a new special requirement into Packing Instruction P200 to cover the requirements for periodic inspection of new types of LPG cylinders with a capacity of less than 15 litres.

Justification :

The current requirements included in para 6.2.1.6.1 on periodic inspection are not applicable to new types of small LPG cylinders with a capacity of less than 15 litres in service since 1997 in France and since 1998 in Belgium and Portugal.

These steel cylinders comply with ADR/RID requirements as far as their design and construction are concerned (ϵ and π cylinders).

They are coated with moulded polyurethane material protecting against impact and corrosion (see attached document) and therefore cannot suitably satisfy the external examination or the hydraulic pressure test requirements of para. 6.2.1.6.1 :

- external examination : the steel wall of the cylinder is not visible and so the external part of the polyurethane coating can only be examined.

*/ Circulated by the Central Office for International Carriage by Rail (OCTI) under the symbol OCTI/RID/GT/III/2003/6.

- hydraulic pressure test : for identical reasons, only pressure withstanding can be checked.

New testing procedures for the inspection of these new cylinders have been developed in parallel with the development of their design and manufacture.

These procedures are statistically based methods which have been agreed by the French competent authorities.

They include:

- specific rejection criteria at the time of filling : external examination of the polyurethane coating;
- testing on samples on a statistical basis per manufacture batches as far as periodic inspection is concerned.

Testing procedures include:

- burst tests in order to check the quality and the reliability of the manufacture of the pressure receptacles;
- uncoating of the polyurethane layer in order to check its good adhesivity and the absence of corrosion at the steel and polyurethane interface;

Intervals between the initial hydraulic pressure test and the following periodic inspection is currently being fixed at ten years starting from the date of manufacture with a first intermediary inspection after three years.

Longer intervals between 2 inspections might be considered when more experience has been gained.

Up to now (after 5 years in service), no incident has been recorded either in service or during the tests.

Proposal :

To create a new special requirement in P200 with the following content :

"For welded steel cylinders of capacity less than 15 litres, coated with a non-detachable plastic material and dedicated to the carriage of Liquefied Petroleum Gases, periodic inspection may be replaced by other testing procedures which shall guarantee an equivalent safety level :

- a) with the agreement of the Competent Authority(ies) of the country(ies) where periodic inspection and carriage take place;
- b) in accordance with the dispositions of a technical code or a standard recognised by the Competent Authority(ies) of the country(ies) where periodic inspection and carriage take place".

Annex

LPG CYLINDERS REQUALIFICATION WITHIN EU/CEN COUNTRIES							
COUNTRY	15 years acceptance/date	Comments	Type of tests				Authority requests
			Ext. Insp.	Int. Insp.	Pres. test	Others	
AUSTRIA	Yes		Yes		Yes		Quality management system + accordance to EN 1439 and 1440
SWITZERLAND	Yes/1997		Yes		Yes		Accordance to EN 1440. Yearly audit.
GERMANY	Yes	Cylinders manufactured from 1969. Under expertise for oldest cylinders.	Yes	Yes	Yes		Product and operation management system requested
BELGIUM	Yes		Yes	No	Yes	Pneumatic pressure test allowed	Accordance to EN 1439 and 1440. Periodical audit by qualified body. Date of the next requalification on the cylinder
FRANCE	Yes/1984	Cylinders manufactured after about 1960-1965. 5 years interval for older cylinders	Yes	No	Yes	Periodical burst tests on samples. Pneumatic test on camping cylinders	Possibility of self assessment Quality management system + periodical audit
SPAIN	Waiting for a response of the authority						
PORTUGAL	Yes	From date of manufacture for "e" cylinders. From last requalification date for others.	Yes	No	Yes		
UNITED KINGDOM	Yes		Yes	Yes	Yes/No	Pressure test according to company	Accordance to EN 1440 practices
IRELAND	Yes		Yes	Yes	No		None. Professional code of practice in accordance with EN 1440. New or refurbished valve.

LPG CYLINDERS REQUALIFICATION WITHIN EU/CEN COUNTRIES							
COUNTRY	15 years acceptance/date	Comments	Type of tests				Authority requests
			Ext. Insp.	Int. Insp.	Pres. test	Others	
ITALY	Possible, but not applied	10 years interval applied	Yes	No	Yes		Accordance to EN 1440 ?
DENMARK	Possible, but not applied	10 years interval applied. 5 years interval for cylinders manufactured before 1956	Yes	Yes	Yes		Accordance to EU directive 1999/36: Approved quality management system in accordance to 1999/36/EEC or EN 45004. Accordance to EN 1440.
FINLAND	Yes		Yes	Yes	Yes	Not more than 5% loss in weight	Accordance to EN 1440. New valve to be fitted.
SWEDEN	Yes		Yes	Yes	Yes	Not more than 5% loss in weight	Accordance to EN 1440. New valve to be fitted.