UNITED

NATIONS

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Economic and Social Council

Distr.
GENERAL

TRANS/WP.15/2000/12
6 March 2000

Original: ENGLISH

ECONOMIC COMMISSION FOR EUROPE

INLAND TRANSPORT COMMITTEE

Working Party on the Transport of Dangerous Goods
(Sixty-eighth session, agenda item 4 (a), Geneva, 15-19 May 2000)

PROPOSALS TO ALIGN TWO PARTS OF ADR COVERING THE FITTING OF SAFETY VALVES TO PRESSURISED TANKS/TANKERS

Safety Valves - Marginals 211 233 and 212 233

Transmitted by the European Liquefied Petroleum Gas Association (AEGPL)

Executive Summary:	It is proposed to align the relief valve requirements for tankers with those for portable tanks.
Action to be taken:	Amendment to marginals 211 233 and 212 233.
Related documents:	UN Recommendations.

1. INTRODUCTION

The restructured text of ADR to be published in 2001 contains two options for the fitting and sizing of safety valves to pressure tanks, when required, and it is necessary to align these two requirements.

The existing requirements in marginals 211 233 and 212 233 state:

"Safety valves shall meet the following requirements:

Para. (1). Shells intended for the carriage of gases of 1°, 2°, or 4°, may be provided with not more than two safety valves whose aggregate clear cross sectional area of passage at the seating or seatings shall not be less than 10 cm^2 per 30 m^3 or part thereof of the receptable's capacity.

These shells .....valves is prohibited.

Para (3) Shells intended for ..... to the competent authority.

The above is included in the restructured ADR text in chapters 6.8.3.2.6 to 6.8.2.3.2.12.

In the 2001 edition of ADR, there will be a reference to Portable Tanks in Appendix B.1e and the content of this is based on the UN requirements for Portable tanks and in particular para. 6.7.3.7. Pressure relief devices'.

The above is included in the restructured ADR text in Chapter 6.7.

2. JUSTIFICATION

The current provisions in ADR for safety valves on gas tankers are based on no more than two valves with a total cross-sectional area of 20 cm^2 per 30m^3 or part thereof or the receptacle's capacity. The text adopted for portable tanks, in line with the UN requirements for portable tanks, relates safety valve capacity to receptacle surface area, based on the fact that heat transfer into the vessel will be through the receptacle walls and will be proportional to exposed area. Attached summaries indicate that the two methods give similar levels of safety and this proposal brings consistency of approach.

3. PROPOSAL

It is proposed to replace the beginning of marginal 211 233 and marginal 212 233 with the following text in conformance with the restructured chapter 6.7 on portable tanks which in turn refers to UN chapter 6.7:

Para (1) Shells intended for the carriage of gases of 1°, 2°, or 4° may be provided with valves the combined delivery capacity of which shall be sufficient that, in the event of total fire engulfment, the pressure (including accumulation) inside the shell does not exceed 120% of the set pressure of the safety valve. Spring loaded relief devices shall be used to achieve the full relief capacity prescribed. In the case of multi-purpose tanks, the combined delivery capacity of the safety valves shall be taken for the gas which requires the highest delivery capacity of the gases allowed to be transported in tanks.

Remainder of insertion of the whole paragraph 6.7.3.8.1.1 of the UN Regulation.

Para (2): Unchanged.

Para (3): Unchanged.