

Working Party on the Transport  
of Dangerous Goods

(Seventy-sixth session, Geneva,  
3-7 May 2004,  
agenda item 5 (b))

**PROPOSALS FOR AMENDMENTS TO ANNEXES A AND B OF ADR**

**Cylinders for use in hot air balloons and hot air airships**

**Transmitted by the Governments of the United Kingdom and Germany**

Ref. TRANS/WP.15/2004/36

“6XX Welded austenitic stainless steel or ferritic austenitic duplex steel and titanium receptacles which do not meet the requirements of Chapter 6.2 of ADR but have been constructed and approved in accordance with national aviation provisions for use as hot air balloon or hot air air ship fuel receptacles, and have been put into service (the date of initial inspection) before the 1 July 2004, may be carried by road provided they comply with the following:

- (a) the general provisions of 6.2.1;
- (b) the design and construction of the receptacles shall have been approved for aviation use by a national aviation authority;
- (c) in derogation from 6.2.1.1.1, the calculation pressure shall be derived from a reduced maximum ambient temperature of +40°C;
- (~~d~~) in derogation from 6.2.1.2, cylinders may be manufactured from rolled and annealed commercially pure titanium with the minimum requirements of  $R_m > 450 \text{ MPa}$ ,  $\epsilon_A > 20\%$  ( $\epsilon_A$  = elongation after fracture);
- (~~e~~) in derogation from 6.2.3, austenitic stainless steel cylinders may be used with a stress level up to 85% of the minimum guaranteed yield strength ( $R_e$ ) at a calculation pressure derived from a reduced maximum ambient temperature of +40°C;
- (~~f~~) the receptacles shall be equipped with a pressure relief device having a nominal set pressure of 26 Bar, the test pressure of these receptacles shall be not less than 26-30 Bar;
- (~~g~~) receptacles, where letter (c) is not applicable and which are -designed according to the reference temperature of ADR (65 °C) may-shall be equipped with relief

devices with a set pressure as specified by the competent authority of the country of use;

- (ch) the main body of the receptacles shall be carried in an outer, water resistant protective layer at least 25mm thick made from structural cellular foam or similar material;
- (f) the cylinder shall be transported fixed in a basket or an additional safety device;
- (g) the receptacles shall be marked with a clear, visible and durable label stating that the receptacles are for use only in hot air balloons and hot air air ships;
- ~~(j) the cylinders shall have been put in to service (the date of initial inspection) before the 1 July 2004;~~
- (k) the duration of service (from the date of initial inspection) shall not exceed 25 years.”

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