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Working Party on the Transport of Dangerous Goods  
(Bern, 24-28 March 2003)

PERIODIC INSPECTION OF FIBRE-REINFORCED PLASTICS (FRP) TANKS

Transmitted by the Government of the Netherlands \*/

Executive summary:	The intention of this proposal is to include the requirement of internal examination of the FRP tank in the inspections according to 6.8.2.4.3.
Action to be taken:	Amend 6.9.5.2 of ADR and RID
Relevant documents:	TRANS/WP.15/AC.1/1998/7 (OCTI/RID/GT-III/1998/7) and TRANS/WP.15/AC.1/1998/7/Rev. 1 (OCTI/RID/GT-III/1998/7/Rev.1)

Introduction:

The present requirements in Chapter 6.9 (Requirements for the design, construction, equipment, type approval, testing and marking of fibre-reinforced plastics (FRP) tanks) were drafted by a special working group in the "old" structure of ADR (Appendix B.1c) and presented to the RID/ADR Joint Meeting in document TRANS/WP.15/AC.1/1998/7 (OCTI/RID/GT-III/1998/7). Recently, however, it was noticed that a specific requirement for this kind of tank: the internal inspection at shorter intervals than for metallic tanks, was unfortunately not taken over in the restructured text, presented in TRANS/WP.15/AC.1/1998/7/Rev. 1 (OCTI/RID/GT-III/1998/7/Rev.1). This omission was possibly caused by a misunderstanding of a footnote, containing a reservation concerning alignment of ADR to that effect.

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\*/ Circulated by the Central Office for International Carriage by Rail (OCTI) under the symbol OCTI/RID/GT/III/2003/13.

Proposal:

Amend 6.9.5.2 as follows:

- 6.9.5.2 For the periodic inspection of tanks the requirements of 6.8.2.4.2 to 6.8.2.4.4 shall apply. In addition, the inspection in accordance with 6.8.2.4.3 shall include the examination of the internal condition of the shell.

Justification:

Practice over several decades has shown that some internal liner materials of FRP tanks are liable to cracking. Due to this phenomenon, the internal liner loses its function of protecting the structure of the tank wall against attack by the load. If cracking is detected in an early stage, the liner can often be repaired before the material of the tank wall itself is affected adversely. Inspection every six years for tank vehicles and every five years for tank-containers in accordance with 6.8.2.4.2 for this purpose has proven to be too long; reduction of the interval to three years for tank vehicles and two and a half years for tank-containers by including internal examination in the periodic leakproofness test procedure in accordance with 6.8.2.4.3 on the other hand make the problem controllable.

Safety: the proposed measure will affect safety positively.

Feasibility: no problems.

Enforceability: no problems.

Economical aspects: very limited because of combination with existing testing procedure.

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