



Economic Commission for Europe**Inland Transport Committee****Working Party on the Transport of Dangerous Goods****Joint Meeting of the RID Committee of Experts and the
Working Party on the Transport of Dangerous Goods**

Berne, 25-28 March 2024

Item 5 (b) of the provisional agenda

**Proposals for amendments to RID/ADR/ADN:
new proposals****Pressure vessels that are constructed to a design code
recognised by a national competent authority****Transmitted by the European Cylinder Makers Association (ECMA)*,******Introduction**

1. Pressure vessels for the storage of high-pressure gases at fixed locations have historically been metallic pressure vessels that could be of seamless or welded construction. Today there are pressure vessels that can have a non-metallic liner with a composite material overwrap.
2. One of the main reasons to use pressure vessels of a composite construction is to have a lower weight when installed, for example, on the roof of a building.
3. Due to the nature of the construction of these pressure vessels there are additional requirements that need to be applied when the pressure vessels are transported for assembly, maintenance, or disposal. Some designs of composite pressure vessels require a minimum pressure be maintained during carriage and this could be at least five bar and possibly up to 20 bar. The reason for this is to ensure that the liner of the pressure vessel does not separate from the wrapping during carriage.
4. To maintain the integrity of the pressure vessels they would be carried with one of the following three gases: UN 1002 Air compressed, UN 1066 Nitrogen compressed or UN 1956 Compressed gas, n.o.s. The reason UN 1956 is included as it is possible that a pressure vessel has been tested using a mixture of nitrogen and hydrogen and whilst the pressure vessel has been evacuated and filled with nitrogen there could be small traces of hydrogen remaining hence the request to include UN 1956.
5. These pressure vessels are not intended to be used for the carriage of gases.

* A/78/6 (Sect.20), table 20.5.

** Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2024/20.



6. The pressure vessels are constructed to design codes recognised by a national competent authority.

7. The exemptions related to the carriage of gases (see 1.1.3.2 (c)) have a limit of 200 kPa (2 bar) and it is considered that to increase this pressure would not be practical as it could exempt the carriage of many gases from the regulations.

Proposal

8. To be able to move pressure vessels that are constructed to a design code recognised by a national competent authority with UN 1002 Air compressed or UN 1066 Nitrogen compressed or UN 1956 Compressed gas, n.o.s. a new special provision is proposed:

"xxx Pressure vessels made to design codes recognised by a national competent authority may be carried for the purpose of assembly, maintenance or disposal with up to 20 bar of UN 1002 AIR COMPRESSED or UN 1066 NITROGEN COMPRESSED or UN 1956 COMPRESSED GAS, N.O.S. provided each pressure vessel is marked in accordance with 5.2.1 and labelled in accordance with 5.2.2.

Closures of pressure vessels shall be protected during carriage.

The transport document shall include the following statement: "Carriage in accordance with special provision xxx".

In Chapter 3.2, Table A, for UN Nos. 1002, 1066 and 1956, insert "xxx" in column (6).

Justification

9. This special provision will permit the carriage of pressure vessels constructed in accordance with a design code recognised by a national competent authority to be carried for the purpose of assembly, maintenance or disposal whilst containing either UN 1002 Air compressed or UN 1066 Nitrogen compressed or UN 1956 Compressed gas, n.o.s.

Safety Implications

10. None foreseen.
