



## 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

Bern, 10-11 September and Geneva, 14-18 September 2020

Item 3 of the provisional agenda

#### Standards

### Amendment to the requirements of EN ISO 18119

Transmitted by the European Industrial Gases Association (EIGA)\*, \*\*

#### Introduction and Background

1. In the report of the Working Group on Standards of the Joint Meeting held in September 2018 it was agreed to refer to EN ISO 18119, *Gas cylinders - Seamless steel and seamless aluminium-alloy gas cylinders and tubes - Periodic inspection and testing* into Chapter 6.2. This standard is a significant development in the periodic inspection and testing of seamless steel and seamless aluminium alloy gas cylinders and represents many years of global experience.

2. The following was adopted for RID/ADR 2021:

“6.2.4.2 In the table, under “Periodic inspection and test”:

- After the existing row for “EN 1802:2002 (except annex B)”, add the following new entry:

EN ISO 18119:2018	Gas cylinders - Seamless steel and seamless aluminium-alloy gas cylinders and tubes - Periodic inspection and testing <i>NOTE: Notwithstanding clause B.1 of this standard, all cylinders and tubes whose wall thickness is less than the minimum design wall thickness shall be rejected.</i>	Mandatorily from 1 January 2023
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”

“6.2.3.5.1 Replace NOTE 3 with the following text:

*“NOTE 3: The check of 6.2.1.6.1 (b) and the hydraulic pressure test of 6.2.1.6.1 (d) may be replaced by ultrasonic examination carried out in accordance with EN ISO 18119:2018 for cylinders and tubes of seamless steel or seamless aluminium alloy. Notwithstanding clause B.1 of this standard, all*

\* 2020 (A/74/6 (Sect.20) and Supplementary, Subprogramme 2).

\*\* Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2020/63.

*cylinders and tubes whose wall thickness is less than the minimum design wall thickness shall be rejected.””.*

3. At the end of the note it is stated: “*Notwithstanding clause B.1 of this standard, all cylinders and tubes whose wall thickness is less than the minimum design thickness shall be rejected.*”

4. This sentence does not take fully into account the entire content of Annex B of EN ISO 18119 and in particular the reference to ISO/TR 22694:2008 *Gas cylinders — Methods for establishing acceptance/rejection criteria for flaws in seamless steel and aluminium alloy cylinders at time of periodic inspection and testing.*

5. During the development of EN ISO 18119, considerable work was carried out by the participating experts in developing rejection criteria for a gas cylinder. Part of this work recognised that there could be quantifiable, localised areas of the gas cylinder that was below the minimum wall thickness yet still be safe to continue in service. In both previous standards (ISO 6406 and ISO 10461 that were referred in the UN Model Regulations), a qualitative allowance of local area(s) below minimum wall thickness was/were in use for many years, without producing any problems. The advantage of ISO 18119 is to quantify the maximum size of the acceptable defects.

6. Reference to ISO 18119 in the UN Model Regulations has been adopted by the Sub-Committee of Experts on the Transport of Dangerous Goods, supported by the expert of the United States where these acceptance criteria are already used, without the addition of the requirement reflected in paragraph 3. The addition of this requirement is restrictive and does not reflect advances in inspection technology. The ultrasonic method allows the detection of small imperfections, which were not detectable by the external/internal visual inspections followed by a hydrotest.

## **Proposal**

7. The proposal is to remove the last sentence of NOTE 3 in 6.2.3.5.1 (*Notwithstanding clause B.1 of this standard, all cylinders and tubes whose wall thickness is less than the minimum design thickness shall be rejected.*)

## **Justification**

8. To align with the UN Model Regulations.

## **Safety Implications**

9. None foreseen

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