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**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, 25-28 March 2024

Item 5 (b) of the provisional agenda:

**Proposals for amendments to RID/ADR/ADN:  
new proposals****Proposal for amendment to packing instruction P200 in 4.1.4.1  
of RID/ADR to permit the interval between the periodic  
inspection of Liquefied Petroleum Gas cylinders  
manufactured according to EN 14140 to be extended from 10  
to 15 years****Transmitted by Liquid Gas Europe\*,\*\****Summary*

<b>Executive summary:</b>	Transitional measure 1.6.2.9 allows the competent authority (authorities) of the country (countries) where the periodic inspection and the carriage take place to permit a period of 15 years between periodic inspections for EN 14140 Liquefied Petroleum Gas (LPG) cylinders manufactured before 1 January 2015. However, 4.1.4.1 P200 (12) (1.3) does not currently list EN 14140 as a standard to which the period between periodic inspections may be considered to be extended from 10 to 15 years for cylinders manufactured from 1 January 2015.
<b>Action to be taken:</b>	Amendment to packing instruction P200 (12) (1.3) in 4.1.4.1 of RID/ADR to permit the interval, subject to the national competent authority approval, between the periodic inspection of LPG cylinders manufactured according to EN 14140 after 1 January 2015 allowed to have 15 years between periodic inspections in conformity with RID/ADR in accordance with a technical code accepted by the national competent authority.

\* 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/2024/17.



<b>Related documents:</b>	Informal documents INF.14 and INF.47, submitted on September 19–27, 2023, Joint meeting by Liquid Gas Europe and INF.6 to the March 2024 Joint Meeting.
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## I. Background from joint meeting September 2023

1. In September 2023, the delegate from Liquid Gas Europe presented informal documents INF.14 and INF.47. After due consideration, the joint meeting asked Liquid Gas Europe to produce a formal paper for the March 2024 Joint Meeting with a more detailed justification of the concerns raised. This document is based on informal documents INF.14 and INF.47 and is also accompanied by an informal support paper produced by Instituto Tecnológico de Gás (ITG), the accredited certification body in Portugal and technically recognised for carrying out inspections of gas installations and gas distribution networks and branches (informal document INF.6). This informal document also includes more details regarding EN 14140 cylinders in circulation in Europe and information about pre-fill inspection and monitoring of cylinders.

## II. Background to changes requested

2. The 2015 edition of RID/ADR was amended to permit certain gases of P200 to have their test periods extended from ten to fifteen years. The current edition of RID/ADR contains a transitional measure in 1.6.2.9, applicable to pressure receptacles and receptacles for Class 2, as follows: "The provisions of packing instruction P200 (10), special packing provision v of 4.1.4.1 applicable until 31 December 2010 may be applied by RID Contracting States/Contracting Parties to ADR to cylinders constructed before 1 January 2015."

3. Therefore, the wording of RID/ADR 2009 applies to transitional measure 1.6.2.9. In RID/ADR 2009, the provisions of packing instruction 4.1.4.1 P200 (10), special packing provision 'v' are as follows:

*"v: The interval between inspections for steel cylinders may be extended to 15 years:*

- (a) With the agreement of the competent authority (authorities) of the country (countries) where the periodic inspection and the carriage take place; and*
- (b) In accordance with the requirements of a technical code or a standard recognised by the competent authority, or standard EN 1440:1996 "Transportable refillable welded cylinders for liquified petroleum gas (LPG) – Periodic requalification".*

4. EN 14140 was first referenced in RID/ADR 2005 and is referenced in RID/ADR 2009, section 6.2.4 (both EN 14140:2003 and EN 14140:2003+A1:2006). EN 14140 is currently referenced in RID/ADR 2023 section 6.2.4 (latest version EN 14140:2014+AC:2015), but only cylinders manufactured before 1 January 2015 are allowed to have their periodic inspection interval extended to 15 years.

5. Standard EN 14140 was developed by CEN TC286, the same group of experts that developed EN 1442 (Transportable refillable welded steel cylinders for LPG - Design and construction). EN 14140 provides an equivalent level of safety and quality to those cylinders designed and manufactured under EN 1442. EN 14140 is a more demanding standard than EN 1442 for traditional carbon steel cylinders. EN 14140 was first published in 2003 and has been subjected to several improvements by amendments, corrigenda, and revisions, resulting in EN 14140:2014 + AC:2015, which is referenced in RID/ADR 2023.

6. More than half of the EN 14140 cylinders in circulation in Europe have entered service since 2009, with only those manufactured before 1 January 2015 allowed to be marked P15Y. A high number of EN 14140 cylinders manufactured between 2003 and 2008 belonging to the same operator have been allowed to have 15 years between periodic, and no safety issues have been recorded. In practice, no noticeable difference has been reported, in terms of failures, between 10 and 15-year periodic inspection intervals, for EN 14140 cylinders.

7. After more than twenty years of experience with EN14140, there are no indications of lower safety in its use compared to classic carbon steel containers.

### III. Pre-fill inspection and monitoring of cylinders

8. The current standard for inspection before, during, and after filling is EN 1439:2021 (required by 4.1.4.1, P200 (12), 2, 2.1), it requires that before cylinders are accepted for filling, they are inspected for bulges, dents, cuts, gouges, cracks, lamination, isolated corrosion pits, area corrosion, general corrosion, chain pitting or line or channel corrosion, crevice corrosion, and other damage. There are specific requirements to check the foot-ring area for damage and corrosion. All external surfaces of the cylinder inspected during the periodic inspection are also inspected at the time of filling. Cylinders that are rejected at the time of filling due to the defects listed above are either scrapped or undergo rectification work before they can be returned to service.

9. The inspection required by EN 16728 for periodic inspections of transportable refillable LPG gas cylinders other than traditional welded and brazed steel cylinders, is of greater scope than that indicated in the requalification of carbon steel cylinders by EN 1440. The inspection process during packaging and requalification, in the case of P15Y marking, must be audited by an inspection body, unlike for a 10-year cylinder.

10. LPG of a quality mandated by 4.1.4.1 P200 (12) (2.5) does not cause internal corrosion in steel cylinders.

### IV. Draft proposal

11. Amend P200 (12) (1.3) in 4.1.4.1 as follows (new text is shown in bold, underlined):

"1.3 Cylinders manufactured since 1 January 1999 shall have been manufactured in conformity with the following standards:

- EN 1442; or
- **EN 14140; or**
- EN 13222-1; or
- Annex I, parts 1 to 3 to Council Directive 84/527/EEC<sup>a</sup>

as applicable according to the table in 6.2.4.

Other cylinders manufactured before 1 January 2009 in conformity with RID/ADR in accordance with a technical code accepted by the national competent authority may be accepted for a 15-year interval if they are of equivalent safety to the provisions of RID/ADR as applicable at the time of application ".