Periodic inspection of non-UN closed cryogenic receptacles

Transmitted by the Government of France¹,²

Summary

Executive summary: This proposal aims to clarify the requirements related to the periodic inspection of non-UN closed cryogenic receptacles.

Action to be taken: Add requirements that were contained in RID/ADR 2009 to 6.2.3.5.2 and P203.

¹ In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, programme activity 02.7 (c)).
² Circulated by the Intergovernmental Organization for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2013/46.
Introduction

1. There seem to be some inconsistencies in the requirements related to the periodic inspection of non-UN closed cryogenic receptacles. In order to better understand the situation, it is necessary to recall the changes made to RID/ADR since 2009.

RID/ADR 2009

2. Paragraph (9) of P203 on periodic inspection stipulates that “receptacles shall be subjected to periodic inspections in accordance with the provisions of 6.2.1.6 and 6.2.3.5 respectively. Periodic inspections shall be carried out every 10 years.”

3. In 6.2.3.5.2, it is stipulated that “closed cryogenic receptacles shall be subjected to periodic inspections and tests by a body authorised by the competent authority in accordance with the periodicity defined in packing instruction P203 of 4.1.4.1 to verify external conditions, condition and operation of pressure relief devices and be subjected to a leakproofness test at 90% of the maximum working pressure. The leakproofness test shall be carried out with gas contained in the pressure receptacle or with an inert gas. Checking shall be performed by means of a pressure gauge or by vacuum measurement. The thermal insulation need not be removed.”

4. In addition, in table 6.2.4, under “for periodic inspection and test”, reference is made to standard EN 1251-3:2000 Cryogenic vessels — Transportable, vacuum insulated, of not more than 1 000 litres volume — Part 3: Operational requirements, which deals with periodic inspection.

RID/ADR 2011

5. 6.2.3.5.2 and paragraph (9) of P203 have been deleted.

6. 6.2.4.2, Periodic inspection and test, contains a reference to standard EN 1251-3, which is to be applied for periodic inspections and tests of non-UN closed cryogenic receptacles.

RID/ADR 2013

7. A new paragraph (8) of P203 on periodic inspection stipulates that “the periodic inspection and test frequencies of pressure relief valves in accordance with 6.2.1.6.3 shall not exceed five years”.

8. The new 6.2.1.6.3 stipulates that “pressure relief valves for closed cryogenic receptacles shall be subject to periodic inspections and tests”.

9. Standard EN 1251-3 cited in 6.2.4.2 is to be applied for periodic inspections and tests of non-UN closed cryogenic receptacles.

10. In our view, the requirements of RID/ADR on closed cryogenic receptacles need to be clarified. Therefore, we propose adding provisions to 6.2.3.5.2 and packing instruction P203 as follows.

Proposals

11. In chapter 6.2, replace the “deleted” 6.2.3.5.2 with:

“6.2.3.5.2 Closed cryogenic receptacles shall be subjected to periodic inspections and tests by a body authorised by the competent authority in accordance with the
periodicity defined in packing instruction P203 of 4.1.4.1, in accordance with the following provisions:

Check of the external conditions of the receptacle and verification of the equipment and the external markings;

Leakproofness test at 90% of the maximum working pressure, carried out with gas contained in the pressure receptacle or with an inert gas. Checking shall be performed by means of a pressure gauge or by vacuum measurement.”

12. Add the following sentence to paragraph (8) of P203:

“The periodic inspection and test frequencies of non-UN closed cryogenic receptacles in accordance with 6.2.3.5.2 shall not exceed 10 years.”

Justification

13. The introduction of specific requirements related to periodic inspections and tests of non-UN closed cryogenic receptacles will clarify the situation and improve safety.