

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**

19 September 2013

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Item 7 of the provisional agenda

Proposals of amendments to RID/ADR/ADN:

reports of informal working groups

**Report of the informal working group on test periods for
packing instruction P200**

Transmitted by the European Industrial Gases Association (EIGA)

Proposal for changes to P200

35. Add to para (10) packing instruction P200 of chapter 4.1.4.1 with the following:

"(10) Periodic inspection

Insert after "u"

ua: The interval between periodic tests may be extended to 15 years for aluminium alloy cylinders and bundles of such cylinders if the provisions of paragraph (13) of this packing instruction are applied. This shall not apply to cylinders made from aluminium alloy AA 6351. For mixtures, this provision 'ua' may be applied provided all the individual gases in the mixture have been allocated 'ua' in Table 1 or Table 2.

Insert after "v"

va: For seamless steel cylinders which are equipped with RPVs (see note below) that have been designed and tested in accordance with EN ISO 15996 and for bundles of seamless steel cylinders equipped with main valve(s) with a residual pressure device, tested in accordance with EN ISO 15996, the interval between periodic tests may be extended to 15 years if the provisions of paragraph (13) of this packing instruction are applied. For mixtures, this provision 'va' may be applied provided all the individual gases in the mixture have been allocated 'va' in Table 1 or Table 2.

"NOTE: "Residual Pressure Valve" (RPV) means a closure which incorporates a residual pressure device that prevents ~~moisture~~ ingress of contaminants by maintaining a positive differential between the pressure within the cylinder and the valve outlet. In order to prevent back-flow of fluids into the cylinder from a higher pressure source a "Non-Return Valve" (NRV) function shall either be incorporated into the residual pressure device or be a discrete additional device in the cylinder valve, e.g. a regulator.

Insert a new paragraph (13) in packing instruction P200 of 4.1.4.1

"(13) An interval of 15 years for the periodic inspection of seamless steel and aluminium alloy cylinders and bundles of such cylinders may be granted in accordance with special packing provision (ua, va) of paragraph (10), if the following provisions are applied.

1. General provisions

1.1 For the application of this section, the competent authority shall not delegate its tasks and duties to Xb bodies (inspection bodies of type B) or IS bodies (in-house inspection services).

1.2 The owner of the cylinders shall apply to the competent authority for granting the 15 year interval, and shall demonstrate that the requirements of sub-paragraphs 2, 3 and 4 are met.

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

- EN 1964-1 or EN 1964-2; or
- EN 1975; or
- EN ISO 9809-1; or EN ISO 9809-2; or
- ~~EN ISO 7866~~; or
- Annex I, parts 1 to 3 to Council Directive 84/525/EEC^a and 84/526/EEC^a

as applicable according to the table in 6.2.4 of RID/ADR.

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.

NOTE: This provision is considered to be fulfilled if the cylinder has been reassessed according to the procedure for the reassessment of conformity described in Annex III of the Directive 2010/35/EU of 16 June 2010. Cylinders and bundles marked with the United Nations packaging symbol specified in 6.2.2.7.2 (a) shall not be granted a 15 year interval for periodic inspection.

1.4 Bundles of cylinders shall be constructed such that contact between cylinders along the longitudinal axis of the cylinders does not result in external corrosion. The supports and restraining straps shall be such as to minimise the risk of corrosion to the cylinders. Shock absorbent materials used in supports shall only be allowed if they have been treated to eliminate water absorption. Examples of suitable materials are water resistant belting and rubber.

1.5 The owner shall submit documentary evidence to the competent authority demonstrating that the cylinders comply with the provisions of sub-paragraph 1.3. The competent authority shall verify that these conditions are met.

1.6 The competent authority shall check whether the provisions of sub-paragraphs 2 and 3 are fulfilled and correctly applied. If all provisions are fulfilled, it shall authorise the 15 year interval for the cylinders. In this authorisation a group of cylinders (see Note) covered shall be clearly identified. The authorisation shall be delivered to the owner; the competent authority shall keep a copy. The owner shall keep the documents for as long as the cylinders are authorised for a 15 year interval.

NOTE: *A group of cylinders is defined by the production dates of identical cylinders for a period, during which the applicable provisions of RID/ADR and of the technical code accepted by the competent authority have not changed in their technical content. Example: Cylinders of identical design and volume having been manufactured according to the provisions of RID/ADR as applicable between 1 January 1985 and 31 December 1988 in combination with a technical code accepted by the competent authority applicable for the same period form one group in terms of the provisions of this paragraph.*

^a Council directive on the approximation of the laws of the Member States relating to seamless steel and aluminium alloy gas cylinders, published in the Official Journal of the European Communities No. L 300 of 19.11.1984.

1.7 ~~The competent authority shall monitor the owner of the cylinders for compliance with the provisions of RID/ADR and the authorisation given as appropriate, but at least every three years or when changes to the procedures are introduced.~~
The owner shall ensure compliance with the provisions of RID/ADR and the authorisation given as appropriate and shall demonstrate this to the competent authority on request but at least every three years or when significant changes to the procedures are introduced.

2. Operational provisions

2.1 Cylinders or bundles of such cylinders having been granted a 15 year interval for periodic inspection shall only be filled in filling centres applying a documented and certified quality system to ensure that all the provisions of paragraph (7) of this packing instruction and the requirements and responsibilities of EN 1919, EN 1920 or EN 13365 as applicable are fulfilled and correctly applied. The Quality System, according to the ISO 9000 (series) or equivalent, shall be certified by an accredited independent body ~~acceptable to~~ recognised by the competent authority. This includes procedures for pre- and post-fill inspections and filling process for cylinders, bundles of such cylinders and valves.

2.2 Aluminium alloy cylinders and bundles of such cylinders without RPVs having been granted a 15 year interval for periodic inspection shall be checked prior to every fill in accordance with a documented procedure which shall at least include the following:

- Open the cylinder valve or bundle main valve to check for residual pressure;
- If gas is emitted, the cylinder or bundle may be filled;
- If no gas is emitted, the internal condition of the cylinder or bundle shall be checked for contamination;
- If no contamination is detected, the cylinder or bundle may be filled;
- If contamination is detected corrective action is to be carried out.

2.3 Seamless steel cylinders fitted with RPVs and bundles equipped with main valve(s) with a residual pressure device having been granted a 15 year interval for periodic inspection shall be checked prior to every fill in accordance with a documented procedure which shall at least include the following:

- Open the cylinder valve or bundle main valve to check for residual pressure;
- If gas is emitted, the cylinder or bundle may be filled;
- If no gas is emitted the functioning of the residual pressure device shall be checked;
- If the check shows that the residual pressure device has retained pressure the cylinder or bundle may be filled
- If the check shows that the residual pressure device has not retained pressure, the internal condition of the cylinder or bundle shall be checked for contamination:
 - If no contamination is detected, the cylinder or bundle may be filled following repair or replacement of the RPV
 - If contamination is detected, a corrective action shall be carried out.

2.4 To prevent internal corrosion, only gases of high quality with very low potential contamination shall be filled into cylinders or bundles. This is deemed to be fulfilled, if the compatibility of gases/material is acceptable in accordance with EN ISO 11114 series, and the gas quality meets the specifications in EN 14175 or, for gases not covered in the standard, a minimum purity of [99.5%] by volume and a maximum moisture content of [40] ml/m³(ppm). ~~2.4~~ For nitrous oxide the values shall be a minimum purity of 98% by volume and a maximum moisture content of 70 ml/m³ (ppm)

2.5 The owner shall ensure that the requirements of 2.1 to, ~~2.2, 2.3 and 2.4~~ are fulfilled and provide documentary evidence of this to the competent authority on request.

~~2.465~~ The competent authority shall verify that the requirements of 2.1 to, ~~2.2 and, 2.3 and 2.4~~ are fulfilled and check this as appropriate, but at least every three years or when significant changes to the procedures are introduced.

~~2.5~~ The owner shall provide documentary evidence to the competent authority that the filling centre complies with the provisions of 2.1, 2.2 and 2.3.

~~2.76~~ If a filling centre is situated in a different RID Contracting State/Contracting Party to ADR, the owner shall provide on request to the competent authority on request additional documentary evidence that the filling centre is monitored accordingly by the competent authority of that RID Contracting State/ Contracting Party to ADR. See also 1.2

~~2.7~~ To prevent internal corrosion, only gases of high quality with very low potential contamination shall be filled into cylinders or bundles. This is deemed to be fulfilled, if the compatibility of gases/material is acceptable in accordance with EN ISO 11114 series, and the gas quality meets the specifications in EN 14175 or equivalent or, for gases not covered in the standard, a minimum purity of [99.5%] by volume and a maximum moisture content of [40] ml/m³.

3. Provisions for qualification and periodic inspection

3.1 Cylinders and bundles of such cylinders already in use, for which the conditions of sub paragraph 2 have been met from the date of the last periodic inspection to the satisfaction of the competent authority, may have their inspection period extended to 15 years from the date of the last periodic inspection. Otherwise the change of test period from ten to fifteen years shall be made at the time of periodic inspection. The periodic inspection report shall indicate that this cylinder shall be fitted with an RPV as appropriate. Other documentary evidence may be accepted by the competent authority.

3.2 If a cylinder with a 15 year interval fails the pressure test by bursting or leakage or if a severe defect is detected by a non-destructive test (NDT) during a periodic inspection the owner shall investigate and produce a report on the cause of the failure and if other cylinders (e.g. of the same type or group) are affected. In the latter case, the owner shall inform the competent authority. The competent authority shall then decide on appropriate measures and inform the competent authorities of all other Contracting Parties to RID/ADR accordingly.

3.3 If internal corrosion and other defects as defined in the periodic inspection standards referenced in 6.2.4 have been detected, the cylinder shall be withdrawn from use and shall not be granted any further period for filling and carriage.

3.4 Cylinders or bundles of such cylinders having been granted a 15 year interval shall only be fitted with valves designed and tested according to EN 849 or EN ISO 10297. After a periodic inspection a new valve shall be fitted, except that valves which have been refurbished or inspected according to EN ISO 22434 may be re-fitted.

4. Marking

Cylinders and bundles of such cylinders having been granted a 15 year interval for periodic inspection in accordance with this paragraph shall have the date (year) of the next periodic inspection as required in section 5.2.1.6 (c) updated and at the same time additionally be marked clearly and legibly with "P15Y". This marking shall be removed if the cylinder or bundle of such cylinders is no longer authorised for a 15 year interval.

36. Complete "Table 1: Compressed gases" and "Table 2: Liquefied and dissolved gases" of PACKING INSTRUCTION P200 as follows (new text underlined)

P200		PACKING INSTRUCTION (cont'd)										P200
Table 1: COMPRESSED GASES												
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar ^b	Maximum working pressure, bar ^b	Special packing Provisions	
1002	AIR, COMPRESSED	1A		X	X	X	X	10			<u>ua</u> , <u>va</u>	
1006	ARGON, COMPRESSED	1A		X	X	X	X	10			<u>ua</u> , <u>va</u>	
1046	HELIUM, COMPRESSED	1A		X	X	X	X	10			<u>ua</u> , <u>va</u>	
1049	HYDROGEN, COMPRESSED	1F		X	X	X	X	10			d, <u>ua</u> , <u>va</u>	
1056	KRYPTON, COMPRESSED	1A		X	X	X	X	10			<u>ua</u> , <u>va</u>	
1065	NEON, COMPRESSED	1A		X	X	X	X	10			<u>ua</u> , <u>va</u>	
1066	NITROGEN, COMPRESSED	1A		X	X	X	X	10			<u>ua</u> , <u>va</u>	
1072	OXYGEN, COMPRESSED	1O		X	X	X	X	10			s, <u>ua</u> , <u>va</u>	
1954	COMPRESSED GAS, FLAMMABLE, N.O.S	1F		X	X	X	X	10			z, <u>ua</u> , <u>va</u>	
1956	COMPRESSED GAS, N.O.S.	1A		X	X	X	X	10			z, <u>ua</u> , <u>va</u>	
1957	DEUTERIUM, COMPRESSED	1F		X	X	X	X	10			d, <u>ua</u> , <u>va</u>	
1964	HYDROCARBON GAS MIXTURE, COMPRESSED, N.O.S.	1F		X	X	X	X	10			z, <u>ua</u> , <u>va</u>	
1971	METHANE, COMPRESSED or NATURAL GAS, COMPRESSED with high methane content	1F		X	X	X	X	10			<u>ua</u> , <u>va</u>	
2034	HYDROGEN AND METHANE MIXTURE, COMPRESSED	1F		X	X	X	X	10			d, <u>ua</u> , <u>va</u>	

P200		PACKING INSTRUCTION (cont'd)										P200
Table 1: COMPRESSED GASES												
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar ^b	Maximum working pressure, bar ^b	Special packing Provisions	
3156	COMPRESSED GAS, OXIDIZING, N.O.S.	10		X	X	X	X	10			z, ia, va	

^a Not applicable for pressure receptacles made of composite materials.

^b Where the entries are blank, the working pressure shall not exceed two thirds of the test pressure.

P200		PACKING INSTRUCTION (cont'd)									P200
Table 2: LIQUEFIED GASES AND DISSOLVED GASES											
UN No.	Name and description	Classification code	LC ₅₀ ml/m ³	Cylinders	Tubes	Pressure drums	Bundles of cylinders	Test period, years ^a	Test pressure, bar	Filling ratio	Special packing provisions
1013	CARBON DIOXIDE	2A		X	X	X	X	10	190	0.68	ra, <u>ua</u> , <u>va</u>
									250	0.76	ra, <u>ua</u> , <u>va</u>
1070	NITROUS OXIDE	2O		X	X	X	X	10	180	0.68	<u>ua</u> , <u>va</u>
									225	0.74	<u>ua</u> , <u>va</u>
									250	0.75	<u>ua</u> , <u>va</u>
1080	SULPHUR HEXAFLUORIDE	2A		X	X	X	X	10	70	1.06	Ra, <u>ua</u> , <u>va</u>
									140	1.34	Ra, <u>ua</u> , <u>va</u>
									160	1.38	Ra, <u>ua</u> , <u>va</u>

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