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World Forum for Harmonization of Vehicle Regulations (WP.29)

DRAFT SUPPLEMENT 1 TO REGULATION No. 110

(Specific components for CNG)

Note: The text reproduced below was adopted by the Administrative Committee (AC.1) of the amended 1958 Agreement at its twenty-first session, following the recommendation by WP.29 at its one-hundred-and-twenty-seventh session. It is based on document TRANS/WP.29/2002/40, not amended (TRANS/WP.29/861, para. 161).

Figure 1-2, Tests applicable to specific Classes or components, (excluding cylinders),

Column concerning "Ozone Ageing", replace "A" with "X" for Classes 0, 1 and 3 only;

Column concerning "CNG Compatibility", replace "A" with "X" for Classes 0 to 4;

Column concerning "Dry-Heat Resistance", replace "A" with "X", for Classes 0, 1 and 3 only.

Annex 3,

Paragraph 1., amend to read:

"1. SCOPE

This annex sets out minimum requirements for light-weight refillable gas cylinders. The cylinders are intended "

Paragraph 4.2., item c), should be deleted.

Paragraph 6.3.2.4., amend to read:

"6.3.2.4. Sulfide stress cracking resistance

If the upper limit of the specified tensile strength for the steel exceeds 950 MPa, the steel from a finished cylinder shall be subjected to a sulphide stress cracking resistance test in accordance with appendix A to this annex, item A.3. and meet the requirements listed therein."

Paragraphs 6.10.2. and 6.10.3. should be deleted.

Paragraph 6.17., table 6.3., correct in the first column (CNG-1 All metal burst pressure [Mpa]) the value of "450" to read "45".

Annex 3, paragraph 11.1., amend to read:

"11.1.

a) Mandatory information

(i) "CNG ONLY";

(ii) "DO NOT USE AFTER XX/XXXX", where "XX/XXXX" identifies the month and the year of expiry 1;

(iii) ...

..... "

Annex 3, Appendix A, item A.3, amend to read:

"A.3. Sulphide stress cracking test for steel

Except as identified in the following, testing shall be conducted in accordance with Method A-NACE Standard Tensile Test procedures, as described in NACE Standard TM0177-96. Tests shall be conducted on a minimum of three tensile specimens with a gauge diameter of 3.81 mm (0.150 inches) machined from the wall of a finished

cylinder or liner. The specimens shall be placed under a constant tensile load equal to 60 per cent of the specified minimum yield strength of the steel, immersed in a solution of distilled water buffered with 0.5 per cent (mass fraction) sodium acetate trihydrate and adjusted to an initial pH of 4.0, using acetic acid.

The solution shall be continuously saturated at room temperature and pressure with 0.414 kPa (0.06 psia) hydrogen sulphide (balance nitrogen). The tested specimens shall not fail within a test duration of 144 hours."

Annex 50, amend to read:

"ANNEX 50

OPERATING TEMPERATURES

	Engine compartment	Assembled on the engine	On board
Moderate	- 20 °C ÷ 105 °C	- 20 °C ÷ 120 °C	- 20 °C ÷ 85 °C
Cold	- 40 °C ÷ 105 °C	- 40 °C ÷ 120 °C	- 40 °C ÷ 85 °C

_____ "

Annex 5G, amend to read:

"ANNEX 5G

OZONE AGEING

1. The test has to be in compliance with ISO 1431/1.

The test piece, which has to be stressed to 20 per cent elongation shall be exposed to air at 40 °C with an ozone concentration of 50 parts per hundred million during 72 hours.

2. No cracking of the test piece is allowed.

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