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|  | United Nations | ECE/TRANS/WP.29/2020/21 | |
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**Economic Commission for Europe**

Inland Transport Committee

**World Forum for Harmonization of Vehicle Regulations**

**180th session**

Geneva, 10–12 March 2020

Item 4.8.10 of the provisional agenda

**1958 Agreement:  
Consideration of draft amendments to existing   
UN Regulations submitted by GRSG**

Proposal for Supplement 2 of 04 series of amendments to UN Regulation No. 110 (CNG and LNG vehicles)

Submitted by the experts from the Working Party on General Safety[[1]](#footnote-1)\*

The text reproduced below was adopted by the Working Party on General Safety (GRSG) at its 117th session (ECE/TRANS/WP.29/GRSG/96, para. 49). It is based on ECE/TRANS/WP.29/GRSG/2019/28 as amended by GRSG-117-28. It is submitted to the World Forum for Harmonization of Vehicle Regulations (WP.29) and to the Administrative Committee (AC.1) for consideration at their March 2020 sessions.

**Supplement 2 of 04 series of amendments to UN Regulation No. 110 (CNG and LNG vehicles)**

*Annex 3A,* *Table 6.7.,* amend to read:

"Annex 3A

(see next page)

Table 6.7

**Change of Design**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Design change | *Type of test* | | | | | | | | | | | | | | | |
| Burst  hydrostatic  A.12 | Cycling  Ambient temp  A.13 | Acid  environment  A.14 | Bonfire  A.13 | Penetration  A.16 | Flow  Tolerance  A.17 | | High temp  creep  A.18 | | Stress  rupture  A.19 | Drop test  A.20 | Permeation  A.21 | Boss  Torque  A.25 | Cycling  A.27 | | PRD  Performance  A.24 |
| Fibre manufacturer**\*\*** | X | X |  |  |  |  | |  | | X\* | X\* |  |  |  | |  |
| Metallic cylinder or  metal liner material | X | X | X\* | X | X\* | X | | X\* | | X\* | X\* |  |  |  | |  |
| Plastic liner material |  | X | X |  |  |  | | X | |  |  | X† | X† | X† | |  |
| Fibre material**\*\*\*** | X | X | X | X | X | X | | X | | X | X |  |  |  | |  |
| Resin material |  |  | X |  | X | X | | X | |  | **X** |  |  |  | |  |
| Diameter change ≤ 20 per cent | X | X |  |  |  |  | |  | |  |  |  |  |  | |  |
| Diameter change  > 20 per cent | X | X |  | X | X\* | X | |  | |  | X |  |  |  | |  |
| Length change ≤ 50 per cent | X |  |  | X‡ |  |  | |  | |  |  |  |  |  | |  |
| Length change  > 50 per cent | X | X |  | X‡ |  |  | |  | |  | X |  |  |  | |  |
| Working pressure change ≤ 20 per cent @ | X | X |  |  |  |  | |  | |  |  |  |  |  | |  |
| Dome shape | X | X |  |  |  |  | |  | |  |  |  |  |  | |  |
| Opening size | X | X |  |  |  |  | |  | |  |  |  |  |  | |  |
| Coating change |  |  | X |  |  |  | |  | |  |  |  |  |  | |  |
| End boss design  (Change in liner interface, composite interface or layer design) |  |  |  |  |  |  | |  | |  |  | X† | X† | X† | |  |
| Change in manufacturing Process | X | X |  |  |  |  | |  | |  |  |  |  |  | |  |
| Pressure relief device |  |  |  | X |  |  |  | |  | |  |  |  | |  | X |

Legend:

X=required

\* test not required on metal (CNG-1) designs

† Test only required on all composite (CNG-4) designs

‡ Test only required when length increases

@ Only when thickness changes proportional to diameter and/or pressure change

\*\* according to definition “equivalent fibre” in ISO 11119-3:2013

\*\*\* as long as change is no “new fibre type” as defined in ISO 11119-3:2013"

1. \* In accordance with the programme of work of the Inland Transport Committee for 2020 as outlined in proposed programme budget for 2020 (A/74/6 (part V sect. 20) para 20.37), the World Forum will develop, harmonize and update UN Regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.. [↑](#footnote-ref-1)