

9 October 2020

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## **Global Registry**

**Created on 18 November 2004, pursuant to Article 6 of the Agreement concerning the establishing of global technical regulations for wheeled vehicles, equipment and parts which can be fitted and/or be used on wheeled vehicles (ECE/TRANS/132 and Corr.1) done at Geneva on 25 June 1998**

## **Addendum 6: United Nations Global Technical Regulation No. 6**

**United Nations Global Technical Regulation on Safety glazing materials for motor vehicles and motor vehicle equipment**

### **Amendment 2 – Appendix 1**

(Established in the Global Registry on 24 June 2020)

### **Proposal and report pursuant to Article 6, paragraph 6.3.7., of the Agreement**

- Authorization to develop an amendment to UN GTR No. 6 (Safety glazing) (ECE/TRANS/WP.29/AC.3/52).
- Technical report on the development of Amendment 2 to UN GTR No. 6 (Safety glazing) (ECE/TRANS/WP.29/2020/44).



UNITED NATIONS

## **Authorization to develop an amendment to UN Global Technical Regulation No. 6 (Safety Glazing)**

### **I. Objective**

1. The objective of this proposal is to develop, in the framework of the 1998 Agreement, an amendment to UN Global Technical Regulation (UN GTR) No. 6 on Safety Glazing to adapt the regulation to technical progress by providing optional use of thinner laminated-glass panes meeting mechanical strength requirements in front, exterior, forward-facing glazing of upper deck of double decked buses instead of laminated windscreen.

### **II. Background**

2. UN GTR No. 6 on Safety Glazing and door retention components was established in the Global Registry on 12 March 2008.

3. Amendment 1 to UN GTR No. 6 with adaptations to technical progress, notably concerning modifications of identification marks for windscreens, was established in the Global Registry on 9 March 2011.

4. In the 114th session of GRSG (9-13 April 2018), the expert from Finland introduced ECE/TRANS/WP.29/GRSG/2018/7, proposing optional use of thin and light weight laminated-glass panes for upper deck of double decked buses after complying mechanical strength tests, however exempting light transmission test. The proposal also included laminated-glass panes to have separate identification mark of "XI/D". Based on discussions GRSG adopted the revised proposal. The secretariat was requested to submit revised ECE/TRANS/WP.29/GRSG/2018/7 to WP.29 and to the Administrative Committee AC.1, for consideration and vote at their November 2018 sessions as draft Supplement 8 to the 01 series of amendments to UN Regulation No. 43 (Safety glazing).

5. The above mentioned amendment is based on the corresponding specifications for laminated glass panes as encompassed in UN Regulation No. 43. These prescriptions also exist in UN GTR No. 6. Presently both of these regulations UN Regulation No. 43 and UN GTR No. 6 does not allow laminated glass panes to be used for front of upper deck of double decked buses.

6. The supplemental provisions in UN Regulation No. 43 provide appropriate means to allow laminated glass panes to be used for front of upper deck of double decked buses. Therefore, it is considered appropriate to integrate these provisions in UN GTR No. 6 as well.

### **III. Subject of amendment**

7. The amendment to UN GTR No. 6 shall include:

- (a) Amendment of Part A - Statement of technical rationale and justification;
- (b) Amendment of Part B - Text of the global technical regulation, in particular:
  - (i) Addition of identification mark of "/D" in paragraph 4.1.2.3. to indicate it is mechanically enhanced laminated glass panes meeting 2260 g ball test and the headform test;
  - (ii) Amendment in the table of paragraph 5. containing list of tests for addition of above tests for laminated glass panes and footnote thereof for clarity on applicable tests;
  - (iii) Modification of text in paragraph 5.5.3.2. on the head-form test and addition of requirements for 2260 g ball test in paragraph 5.5.
- (c) Any further refinements or corrections as deemed appropriate.

#### **IV. Organization of process and timeline**

8. The proposal will be drafted by the experts from India. The amendments to the proposal will be developed in cooperation with all interested GRSG experts and agreed via e-mail communications. The meetings of interested experts are not planned, but will be organized, if necessary.
9. The proposed action plan:
  - (a) October 2018: Introduction and consideration of the proposal (informal document) at the 115th GRSG session;
  - (b) April 2019: Consideration of the final proposal and its possible adoption at the 116th GRSG session;
  - (c) June 2019: Adoption of the proposal by AC.3, if no remaining issues had existed;
  - (d) November 2019: Adoption of the proposal by AC.3, if all remaining issues had been solved.
10. The progress of works will be reported to AC.3 at its March 2019 and November 2019 sessions.

## **Technical Report on the development of Amendment 2 to UN Global Technical Regulation (UN GTR) No. 6 (Safety glazing)**

### **I. Background**

1. The objective of this proposal is to amend UN Global Technical Regulation (UN GTR) No. 6 regarding safety glazing materials for motor vehicles and motor vehicle equipment (hereafter, safety glazing materials).
2. The technical provisions of UN GTR No. 6 are intended to ensure a good view of the road to the driver of a vehicle without causing distortion of his vision. It also ensures that objects or stones thrown against the glazing do not penetrate with a high speed into the occupant compartment and that the occupants are not ejected through the windscreen in the event of a crash.
3. UN Global Technical Regulation (UN GTR) No. 6 on Safety Glazing was established in the Global Registry on 12 March 2008 by consensus of the Contracting Parties and published under the reference ECE/TRANS/180/Add.6 and its Appendix 1. For the development of UN GTR No. 6, relative stringency of three safety glazing regulations in which UN Regulation No. 43, the Federal Motor Vehicle Safety Standard (FMVSS) No. 205 and the JAPAN, Safety Regulations for Road Vehicles, Article 29 were compared.
4. The first and latest amendment to UN GTR No. 6 on safety glazing was established in the Global Registry on 9 March 2011 with the aim to have uniform product identification marking in UN GTR 6 with those of UN Regulation No. 43.
5. At the fifty-third session of the Executive Committee of the 1998 Agreement (AC.3), the representative of India presented the informal document WP.29-175-30, requesting AC.3 authorization for the development of an amendment to GTR No. 6 under the sponsorship of his country. AC.3 agreed with the proposal, invited GRSG to start working on these issues and requested the secretariat to distribute WP.29-175-30 with an official symbol.
6. AC.3 at its fifty-fourth session adopted ECE/TRANS/WP.29/2018/167 tabled by India to officially request the authorization to start work on developing the Amendment 2 to UN GTR No. 6.
7. ECE/TRANS/WP.29/AC.3/52 (Action plan was approved in 55th session of AC.3 (13-14 March 2019)).

### **II. Process organization**

8. In 114th Session of GRSG, India had suggested to enable approval of mechanically improved "Laminated Glass Panes" in UN GTR 6 in line with UN R 43. Informal document GRSG-114-20 (Initial suggestion was principally approved in 114th GRSG (9–13 April 2018)).
9. In 115th session (9–12 October 2018) of GRSG actual text of amendment prepared by India as Informal document GRSG-115-38, was approved for conversion into working document.
10. ECE/TRANS/WP.29/GRSG/2019/4 (Expert from Germany commented on justification and placement of clauses in 116th session Geneva, 1–5 April 2019). Document incorporating comments from the German expert was shared with them for their review).
11. The expert from India presented ECE/TRANS/WP.29/GRSG/2019/35 (Document incorporating comments from German expert) was discussed in 117th Session of GRSG (8–11 Oct 2019). The document proposed by India is approved by GRSG subject to consideration by WP.29 and AC.3 at their sessions on March 2020.

### III. Development of the UN GTR

12. The objective of the proposal is to develop, in the framework of the 1998 Agreement, an amendment to UN GTR No. 6 on Safety Glazing to adapt the provisions to technical progress to enable the approval of the laminated-glass panes with improved mechanical properties.

13. Addition of headform test and 2260 g ball tests will improve safety. Panes have lesser light transmission requirement compared to windscreen, hence it will improve cost effectiveness as the heat transferred will be less and can retain the temperature inside for the longer time.

14. The development of the draft language for updating the GTR involved consideration of the differences between the respective 1998 Agreement and 1958 Agreement. Specific solutions for the different technical items were developed whereby GRSG experts were requested to support and contribute in the process.

15. The Amendment 2 to UN GTR No. 6 incorporates:

(a) Addition of identification mark of "/D" in paragraph 4.1.2.2.2. to indicate it is mechanically enhanced laminated glass panes meeting 2260 g ball test and the headform test;

(b) Corrections in identification marking in Paragraph 5, Table 1 in line with amendment 1 to UN GTR 6;

(c) Amendment in the table 1 of paragraph 5. containing list of tests for addition of above tests for laminated glass panes and footnote thereof for clarity on applicable tests;

(d) Addition of new paragraphs 5.5.2.2 on the head-form test and paragraph 5.5.2.3 for 2260 g ball test.

### IV. Conclusion

16. Following the adoption of the draft Amendment 2 to UN GTR No. 6 at its 117th session, GRSG requests AC.3 voting for establishing this Amendment 2 (as proposed in ECE/TRANS/GRSG/2019/35) in the Global Registry.

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