

Proposal for amendments to document ECE/TRANS/WP.29/GRSG/2007/28
(Draft gtr on Safety Glazing Materials)

A. PROPOSAL

Objective

It is proposed that the requirements concerning the energy absorption by windscreens during head impact test are left to the decision of the Contracting Parties to the 1998 Agreement.

Amendment 1

Paragraphs 4.2. to 4.2.2., amend to read:

"4.2. ~~Installation~~ **Particular provisions**

4.2.1. Installation

[...*unchanged*]

4.2.2. **Headform test**

Each Contracting Party, as defined under the 1998 Agreement on global technical regulations (gtr), may decide not to apply the provisions of paragraphs 5.4.3. and 5.5.3.2. under national or regional law."

Amendment 2

Paragraph 5., amend to read:

"5. Performance Requirements

	Windscreens			Panes					
	Laminated glass		Glass plastics	Uniformly toughened glass		Laminated glass		Double glazed unit <u>1/</u>	Glass plastics
Marking	II	II/P	III	I	I/P	IV	IV/P	V	VI
Light transmittance	5.1.1.	5.1.1.	5.1.1.	5.1.1.	5.1.1.	5.1.1.	5.1.1.	5.1.1.	5.1.1.
Resistance to abrasion	5.1.2.	5.1.2.	5.1.2.		5.1.2.	5.1.2.	5.1.2.		5.1.2.
Resistance to temperature changes		5.2.1.	5.2.1.		5.2.1.		5.2.1.		5.2.1.
Resistance to fire		5.2.2.	5.2.2.		5.2.2.		5.2.2.		5.2.2.
Resistance to chemicals		5.2.3	5.2.3.		5.2.3.		5.2.3		5.2.3
Resistance to radiation	5.3.1.	5.3.1.	5.3.1.		5.3.1.	5.3.1.	5.3.1.		5.3.1.
Resistance to high temperature	5.3.2.	5.3.2.	5.3.2.		5.3.2.	5.3.2.	5.3.2.		5.3.2.
Resistance to humidity	5.3.3.	5.3.3.	5.3.3.		5.3.3.	5.3.3	5.3.3.		5.3.3.
Optical distortion	5.4.1.	5.4.1.	5.4.1.						
Image separation	5.4.2.	5.4.2.	5.4.2.						
Fragmentation				5.5.1.1.	5.5.1.1.				
Head-form	5.4.3. <u>2/</u>	5.4.3. <u>2/</u>	5.4.3. <u>2/</u>					5.5.3.2. <u>2/</u>	
2,260 g Ball	5.4.4.	5.4.4.	5.4.4.						
227 g Ball	5.4.5.	5.4.5.	5.4.5.	5.5.1.2.	5.5.1.2.	5.5.2.1.	5.5.2.1.		5.5.2.1

1/ Each component pane shall satisfy the appropriate tests for the type of glazing.

2/ See paragraph 4.2.2.

B. JUSTIFICATION

The assessment of the ability of a laminated windscreen to absorb impact energy is considered as a significant feature in relation to the safety of vehicle occupants. This issue has been discussed at length within the group of experts who have acknowledged the validity of a dynamic test performed on full-size samples.

UNECE Regulation No. 43 and Article 29 of the Japanese Safety Regulation provide for a test using a headform of 10 kg dropped on a real windshield from a height of 1,5 m. This test is described in Standard ISO 3537 : 1975.

By contrast, the North American Standard ANSI/SAE Z26.1 — 1996 *American National Standard for Safety Glazing Materials* [...] includes only a large ball (2,26 kg) drop test from a height of 4,0 m which gives penetration information on small samples.

The group of experts designated by GRSG, under the recommendation of WP.29, is proposing both tests in the draft gtr on safety glazing materials, acknowledging that both tests provide relevant, complementary information on the lamination process and, in particular, prediction on the behaviour of the polyvinyl butyral foil (which gives laminated windscreens its energy absorption properties).

However, performing the headform test as described in UNECE Regulation No. 43 requires an expert judgment to decide whether the windscreen has passed or failed the test, and this has not been recognised as objective enough to be included in the draft gtr. At this stage, it has to be concluded that sufficient expertise is missing to include objective pass/fail criteria relating to the European/Japanese headform test.

Therefore, as the European Countries and Japan continue to claim that the headform tests give key information about the lamination process, it is proposed that each contracting party to the 1998 Agreement may decide whether or not to apply these provisions in national/regional law.
