

Progress Report by PSG IWG

7th October 2019

Rep. of KOREA

Progress Report

- Chairmanship
 - Chair : Mr. Sung Bok EOM (KATRI, Rep. of Korea)
 - Co-Chair : Mr. Thomas Fuhrmann-Bäcker (Germany)
 - Secretary : Dr. Mueller von Kralik (CLEPA)
 - Technical sponsor : Rep. of Korea
- 19 meetings since 110th GRSG session
 - 5th PSG IWG meeting : 28th June, Webasto Gilching, Germany
 - Pre WEBEX meeting : 4th October
 - 6th PSG IWG meeting : 10th October, Geneve
 - 7th PSG IWG meeting : 24th April, Geneve
 - 8th PSG IWG meeting : 9th October, Geneve
 - 9th PSG IWG meeting : 9th April, Geneve
 - 10th PSG IWG meeting: 8th October, Geneve
 - 11th PSG IWG meeting: 1st April, Geneve
 - 10 Webex meetings of PSG IWG: 18th April until 26th September
 - 12th PSG IWG meeting: 7th October, Geneve

Progress Report

◆ 5th PSG IWG Meeting

- 28th June in Gilching, Germany

- 19 attendants(including 7 audio conference)
- Secretary reviewed current GTR proposal all-in-one.
- KATRI presented the rationale of proposal for limitation of CPA(Ceramic Printed Area)
- NHTSA submitted questionnaires regarding the detail information of Korean research and the justification of current proposal, etc.

◆ WEBEX Preview meeting

- 4th October

- 19 attendants via webex/audio
- KATRI presented the answer of NHTSA questions and shared opinions with members.
- Further discussion will be continued in 6th PSG meeting with additional explanation materials.

◆ 6th PSG IWG Meeting

- 10th October in Geneva

- 22 attendants(including 4 audio conference)
- KATRI reviewed the answer of NHTSA's question again with updated documents.
- NHTSA referred that more studies on CPA and verification for test procedure are necessary for amendment GTR 6.
- All members agreed to extend mandate 1.5 years more(by June 2018) and divide into two step approaches(urgent issues/further research on CPA).
- Amendments on scope and impact point(related to GRSG 107-23) which are urgent issues are agreed to propose in next GRSG session.
- Amendment proposal agreed and formalized sent to GRSG secretary in due time.

Proposal for amendment GTR 6

(Informal document will be submitted)

Part B, paragraph 2., Application/Scope, amend to read:

"2. This regulation applies to safety glazing intended for installation as windcreens or **panes or as partitioning**, ~~use of double windows panes, each pane is considered a separate item of glazing panes~~ on Category 1 and 2 vehicles as defined in Special Resolution No. 1 (S.R.1)

Part B, paragraph 6.3.2.3., amend to read:

"6.3.2.3. The point of impact shall be within 25 mm of the **geometric** centre of the **test piece** ~~supported area~~ for a drop height less than or equal to 6 m, and within 50 mm of the centre of the ~~supported area~~ **test piece** for a drop height greater than 6 m."

Update of Terms of Reference

(Informal document will be submitted)

- 4.2 Chairs of the IWG will manage various aspects of the work ensuring that the agreed action plan is implemented properly and that milestones and timelines are set and met.
- (a) 2016- ~~2015-2016~~ June 2018 : Meeting of the IWG, regular reporting to the Administrative Committee.
 - (b) ~~November 2016~~ June 2018 : Possible adoption of both Global Technical Regulation and UN Regulation.

Update of Terms of Reference

(Informal document will be submitted)

5.1 With regards to the definition of toughened glass, the IWG will review if the definition of toughened glass is appropriate to assure the safety of panoramic sunroof and then will clearly define the mechanical properties of toughened glass, if necessary. For example, toughened glass is expected to be stronger than before it was, i.e. before it underwent the toughening process.

The work of the Informal Group will follow a 2-step approach splitting the working tasks in paragraphs 5.2 and 5.3 into short-term (5.3) and medium-term (5.2) activities. For the task in paragraph 5.2 the Informal Group will review further work to be undertaken to understand better the effects for improving safety of panoramic sunroof glazing.

Update of Terms of Reference

(Informal document will be submitted)

5.2 Step 2

With regards to the 227g ball drop test, **the original task of the IWG will be extended to take further research results into account** to discuss the following:

- (a) Only using a 30cm x 30cm test piece for the 227g ball drop test
- (b) Using a test piece that reflects the representative characteristics of a finished product, on condition that a certain area of opaque obscuration, which is necessary for the fixing of the toughened glass to a vehicle, is excluded from impact point of toughened glass at a test.
- (c) Clarifying and harmonizing the UN Regulation and ISO with regards to the test
- (d) Decision on other test procedures to complement the 227g ball drop test**

Update of Terms of Reference

(Informal document will be submitted)

5.3 Step 1

The IWG shall also assess whether there should be further amendments to the classification of glazing, which may be installed as windscreen, other windows of a vehicle, and sunroof.

6.1

(b) Chair (Republic of Korea), Co-Chair (Germany) and a secretary (CLEPA) will manage IWG.

◆ 7th PSG IWG Meeting

- 24th April in Geneva

- 22 attendants (including 6 audio conference)
- NHTSA explained that planned research program is delayed due to budgetary and prioritization discussions ongoing (like other major programs)
- General agreement that the outcome of the NHTSA or other member state programs on PSG breakage need to be waited for, before finally defining any regulatory or process / testing amendments to existing regulations.
- Decision a) to wait for status info on NHTSA research program, b) in parallel update data base on field actions and c) prepare for IWG road-map discussion in next WEBEX meeting mid September, before f-2-f decision meeting in Geneva on 9th October 2017

◆ 8th PSG IWG Meeting

- 9th October in Geneva
- 20 attendants (including 4 audio conference)
- KOREA presented status of test activities on CPA verification
- NHTSA presented verbally the status of planned testing activities on CPA verification
- Presentation of KOREA for next steps of IWG and verbal proposal of NHTSA was discussed intensively within the IWG.
- Co-Chair has changed from Mr. Damm to Mr. Fuhrmann
- Decision :
 - NHTSA will prepare proposal in formal manner (4 weeks)
 - IWG will start WEBEX meetings to find best possible alignment between both proposals for a common GTR6 amendment
 - Possible extension of mandate will be informed next year April

◆ 9th PSG IWG Meeting

- 9th April in Geneva

- 16 attendants (including 3 audio conference)
- None of the expected research activities were started or achieved due to budget financing issues
- No new significant failure information from field globally
- All members agreed to extend mandate 2 years more (by April 2020), but keep terms of reference to have time to finalize IWG orderly.
- Support from industry requested on enamel future developments for PSG
- Amendment proposal agreed and formalized sent to GRSG secretary in due time.
- Minutes of meeting will be uploaded this week to UNECE page

Update of Terms of Reference

(Informal document will be submitted)

- 4.2 Chairs of the IWG will manage various aspects of the work ensuring that the agreed action plan is implemented properly and that milestones and timelines are set and met.
- (a) 2016-~~June 2018~~ April 2020: Meeting of the IWG, regular reporting to the Administrative Committee.
 - (b) ~~June 2018~~ April 2020 : Possible adoption of both Global Technical Regulation and UN Regulation.

◆ 10th PSG IWG Meeting

- 8th October in Geneva

- 16 attendants (including 2 audio conference)
- Study from Korea shows reduction in CPA area of roof design between 2016 and 2018 without change of legal regulations
- GFE gave information on internal tests with different CPA by their members, but test results spread too much to give indication
- No other research was started or done
- All members agreed that based on data of today a change of regulations with regards to CPA is not feasible to be implemented
- Proposal of in-/formal recommendation on CPA is fully supported by members and proposal will be prepared for review in 11th session
- Minutes of meeting will be uploaded this week to UNECE page

◆ 11th PSG IWG Meeting

- 1st April in Geneva

- 13 attendants (including 2 audio conference)
- Data research from CLEPA with support from GFE on 75 glass panels shows wide variety of CPA dimensions. This is confirmed by OICA.
- CPA data research presentation from KATRI based on Korean data shows an average of ~35-36% CPA on glass panels.
- Review of glass panels review took longer than planned: 109pcs (CLEPA & KATRI)
- Recommendation draft from Co-Chair was reviewed and agreed as basis for final recommendation.
- All members agreed that intensive discussions are needed in short timing via several WEBEX meetings to prepare final draft of recommendation until next session in Oct. 2019
- All members attending are willing to support recommendation finalization in due time for end of IWG PSG mandate.
- Minutes of meeting will be uploaded this week to UNECE page

◆ 12th PSG IWG Meeting

- 7th October in Geneva

- 12 attendants (including 2 audio conference)
- 10 Webex sessions since 11th PSG IWG meeting to clarify open points and prepare informal document "Mutual Resolution No.4"
- CPA limitation values agreed between experts during these Webex sessions being CPA width $\leq 125\text{mm}$ and CPA area coverage $\leq 45\%$.
- Recommendation draft from Co-Chair was the basis for preparation of Mutual Resolution text and aligned with IWG members in Webex meetings
- M.R. format was aligned with support from UNECE secretary last week
- Final content of M.R. No.4 reviewed in rounds in 12th PSG IWG meeting and released for hand-in as informal document to GRSG secretary
- All members of IWG PSG have strongly supported CPA limitation agreement process as well as finalization of recommendation as M.R. No.4 in due time.
- PSG IWG hopes for smooth process to release M.R. No.4 in 118th GRSG
- Minutes of meeting will be uploaded this week to UNECE page