

GRSP TF on the transposition of GTR 13 Phase 2 to UN-R 134 (16)

Meeting Date: 07/09/2023 9:00 am – 11:00 am (CET)

Location: Microsoft Teams Meeting

Participants:

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| <input checked="" type="checkbox"/> Alex Milward (LUXFER) | <input checked="" type="checkbox"/> Morinaga (KHK) |
| <input checked="" type="checkbox"/> Amy Ryan (TOYOTA) | <input checked="" type="checkbox"/> Okada Masako |
| <input checked="" type="checkbox"/> Andres Fernandes Duran (IVECO) | <input checked="" type="checkbox"/> Paul Dijkhof (KIWA) |
| <input checked="" type="checkbox"/> Annett Schuessling | <input checked="" type="checkbox"/> Richard Trott (FORVIA) |
| <input checked="" type="checkbox"/> Ansgar Pott (HYUNDAI) | <input checked="" type="checkbox"/> Romary Daval (LUXFER) |
| <input checked="" type="checkbox"/> Antoine Azzopardi (FRANCE) | <input checked="" type="checkbox"/> Salim Abdennadher (RENAULT) |
| <input checked="" type="checkbox"/> Christian Bonato (JRC, EU) | <input checked="" type="checkbox"/> Seonghoon Kim (HYUNDAI) |
| <input checked="" type="checkbox"/> Daniel Frame (ARROWHEAD) | <input checked="" type="checkbox"/> Shougo Suda (TOYOTA) |
| <input checked="" type="checkbox"/> Frank Otremba (NPROXX) | <input checked="" type="checkbox"/> Sina Smits (BMW) |
| <input checked="" type="checkbox"/> Gerhard Gissibl (BMW) | <input checked="" type="checkbox"/> Tatsumi Takehana (KHK) |
| <input checked="" type="checkbox"/> Gilles Jouvenot (PLASTIC OMNIUM) | <input checked="" type="checkbox"/> Tohru Nakanishi (METI, JAPAN) |
| <input checked="" type="checkbox"/> Hans Lammers (NETHERLANDS) | <input checked="" type="checkbox"/> Valentin Hettrich (DAIMLER TRUCK) |
| <input checked="" type="checkbox"/> Harald Beck (MAN) | <input checked="" type="checkbox"/> Volker Rothe (STELLANTIS) |
| <input checked="" type="checkbox"/> Hiroaki Tamura (JARI) | <input checked="" type="checkbox"/> Vuthy Phan (VOLVO) |
| <input checked="" type="checkbox"/> Ikuya Yamashita (HONDA) | <input checked="" type="checkbox"/> Wataru Okoyama (MLIT) |
| <input checked="" type="checkbox"/> Klaus Weis (HEXAGON) | <input checked="" type="checkbox"/> Ylva Castenhag Blömstrom (SCANIA) |
| <input checked="" type="checkbox"/> Koie (METI) | <input checked="" type="checkbox"/> Yoshio Fujimoto (NTSEL) |
| <input checked="" type="checkbox"/> Masaaki Iwasaki (TOYOTA) | <input checked="" type="checkbox"/> Yoshinori Tanaka (NTSEL) |
| | <input checked="" type="checkbox"/> Yuto Sekiya (KHK) |

Minutes:

1. Welcome
2. Remote TPRD
 - Questions from France:
 - Could the removal and reinstallation of the supply lines during the hydraulic sequential test be jeopardizing the test results?
 - Response from Forvia: reconnecting lines is not uncommon and with special care taken during the procedure this should not be a big issue.
 - Can the order of the hydraulic sequential test be changed for the remote TPRD to not having to demount and reinstall the supply lines for the remote TPRD before and after the drop test of the CHSS.
 - This would need to be discussed on GTR 13 level.
 - A paragraph was dropped from the justification section and needs to be included back in
 - COP: Who is in charge for checking CHSS for damages?

- If the CHSS manufacturer sends the container without the supply lines, then the vehicle manufacturer will perform the inspections and provides the records to the container manufacturer. If the container is provided to the vehicle manufacturer with the supply lines, the CHSS manufacturer conducts the tests.
- Example documents provided by Luxfer as basis for Japanese discussion.
 - Japanese experts are still reviewing the documents and will need more time to review.
- Question from Japan:
 - What are the criteria for determining the necessity for an additional TPRD?
 - There are no fixed definitions when additional TPRDs are required. Each manufacturer has their own requirements. At Luxfer, cylinders with a length up to 1.6m one TPRD is installed. Cylinders over 1.6m tend to need two TPRDs, one in the valve and one in the end-plug. Cylinders over about 3m tend to need an additional TPRD.
 - It is a design decision to address the localized fire test. Sometimes, there are additional internal requirements by the OEM that will require additional TPRDs.
- Question by Arrowhead:
 - If a remote TPRD activates before the test has entered the engulfing fire stage, can it be considered a passing of the test?
 - Response from KIWA: If the cylinders react with a safe behaviour, i.e., venting, it is a successful test.
- BMW will prepare a presentation regarding TPRDs and conformable tanks for one of the next meetings.
- Proposal to continue the discussions in a designated TF on the remote TPRDs.

3. Material Compatibility

- Feedback from Japanese experts: *(Japan update)UNR134 TF Final opinion for remaining issues_rev.pptx* after GTR 13 phase 1 an industrial policy dialogue between the EU and Japan was held in October 2014
 - In this dialogue the importance of establishing material test methods was confirmed
 - Japan can agree to option A (material tests in Annex 8 without alternative testing methods and without SAE reference) as well as option D (no material requirements, maintaining status quo, of national requirements applying)
 - In-depth discussions by each countries' material experts are expected based on the related data and with sufficient time (e.g. towards the GTR 13 Phase 3, also to discuss in advance at SAE will be one idea).
 - The material whitelist that summarizes the proven materials complied with the material standards of each country based on SAE

J2579 Appendix B 3 (equal to GTR 13 Phase 2, Part 1, M) should be discussed.

- However, whether or not it can be quoted in UN R134 amendment will depend on the agreement of the regulatory authorities of each country.
- The appropriate standards can be quoted in UN R134 excluding inappropriate standards like ISO 11114-4.
- Manufacturer declaration on materials, is not common in Japan.
- There are several UN regulations which have been signed by Japan that include the manufacturer declarations, e.g., UN-R 100, UN-R 156 and UN-R 157. See also document *Regulations with manufacturer declaration.xlsx*. This list is not comprehensive.

- HG-SCC
 - Japanese position:
 - It is very important to evaluate the SCC in humid air for Aluminum alloys, especially outside the containers. Any other suggestions are welcome and will be discussed in GTR 13 Phase 3.
 - The HG-SCC test method which described in the GTR 13 Phase 2, Part 1, N will be **the simplest and lowest cost** test method.
 - Also this test method will be effective to add proven Aluminum alloys to the whitelist. In addition, 6061-T6 alloy can be added in the whitelist immediately using the proven data which Japan already has.
- Overall:
 - No consensus on any options
 - Discussions on the material requirements need to continue and should be based on the development in standards, a potential collaboration of experts on ISO TC 197 and 58 level could bring harmonization of requirements.

4. Next steps/ Conclusion:

- No working document will be submitted on this matter at this point.
- The discussions will continue.

5. Next meeting for TF:

- October 5, 2023
 - 8 am – 9 am (CET)
 - 3 pm – 4 pm (JST /KST)