GTR13 Phase 2 Summary of Jan 29, 2021 Co-sponsors Meeting

Attendees:

M. Koubek (NHTSA) Y. Sakamoto (METI) Y. He (CATARC) S. Kim (KATRI)

S. Kuppa (NHTSA) Takahashi (METI) J. Zheng (Zhejiang Univ) Y. Fujimoto (Secretary)
I. MacIntire (NHTSA) Y. Nozaki (MLIT) W. Hao A. Ryan (Asst. to Secretary)

P. Broertjes (EC) K. Yabe (JASIC) Lan Hao (CATARC)

I. Summary of Discussion Results

Possible ways to treat item in GTR13
Case A: Part 2 (Requirements)
Case B: Part 2 but as CP option
Case C: Part 1 (Rationale only)
Case D: Do not include in GTR13

	Co-sponsors					CPs		
	CN	EC	JP	KR	US	CA	EN	DE
(1) Permeation	Agree	Agree	Agree	Agree	Agree	Agree	?	=EC?
(2a) Receptacle LDV/HDV (H35)	Α	А	А	А	А	?	?	=EC?
(2b) Receptacle HDV (H70-HF)	B or C	<mark>B</mark> or C	B or C	Reserve B or C	С			
(3a) Initial burst pressure (%NWP) 70 MPa	200	200	200	200	200	200	?	=EC?
(3b) Initial burst pressure (%NWP) 35 MPa	225	200	200	200	200	200		
(4) Material compatibility validation method	D or C	A or B CP should not use own requirements	A or B	Reserve	Reserve	Disagree	?	=EC?

(1) Permeation criteria

SAE had proposed permeation criteria for LDV and HDV (GTR13-6-20). In previous meetings, all CP except European Commission (EC) had agreed to SAE proposal. **EC** noted that while data from HDV and conformable tanks would be helpful, if no issues have been raised thus far, then could accept SAE proposal.

Result (1): EC agreed. All co-sponsors agreed with GTR13-6-20.

(2a, 2b) Receptacle geometry requirement

Should the geometry requirement be included the GTR? Cosponsors considering split between HDV and LDV and pressure levels (35 vs. 70 MPa). Note that the IWG agreed to refer to the ISO standard with issued year if necessary.

US believes as ISO 17268 is still pending changes, they can agree with "C." If split into LDV and HDV, then US can agree with LDV as "A", HDV as "C" but explain HDV in Part 1.

EC prefers to regulate on UN level but if not, could do it on EC level. Prefers a top-down approach such that long drives through various countries could be possible (avoid LPG/CNG situation).

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CN would prefer having requirements in GTR as this topic is important for China in the mandatory standards but can accept "C." **JPN** can accept either "B" or "C." **KOR** can accept "A" or "B", with further discussion in the domestic market.

Result (2a, 2b): <u>If Korea agree with "case C: Part 1 only" co-sponsors can get consensus.</u> **Note by Secretary:** "B" for H70-HF will be difficult since the standard is not yet completed.

(3a, 3b) Initial burst pressure reduction for containers to 200% NWP.

While there is agreement on reduction to 200% NWP for 70 MPa tanks, **CN** maintains keeping 225% NWP for 35 MPa tanks. Cosponsors must make decision on 35 MPa cylinders if there is no consensus. Also, language in current GTR13 does not specifically state "35 MPa", only "NWP of 70 MPa or less..." CN posited how many manufacturers make cylinders for 50MPa; EC cautioned that we should not be too prescriptive to avoid stifling innovation.

Result (3a, 3b): No consensus. China requests keeping 225% for 35 MPa tanks. It is necessary to find compromised solution. There was a proposal to apply CP option for 35 MPa.

Note by Secretary: The current GTR13 5.1 states "...All new compressed hydrogen storage systems produced for on-road vehicle service shall have a NWP of 70 MPa or less...". It is necessary to specify the range of pressure for any compromised solutions for 35 MPa (e.g., "225% up to 35 MPa").

(4) Material hydrogen compatibility validation method

EC supports A or B. In the case of B, it is important to require that if a CP does not adopt the requirement in GTR13, it must not apply its own requirements. **JP** supports EC position. **CN** supports case C or D. **KOR** reserves its position, waiting for test results from its national institute. **US** also reserves its position, needing time for internal discussions.

Result (4): <u>No changes to the positions and thus no consensus.</u> Continued consultation by the SAE group on Material Compatibility led by Mr. San Marchi is warranted.

II. Schedule of Phase 2 project

Chair reported that an 18-month extension was approved in WP29.

Secretary proposed timeline:

Mar '21	9th IWG, review 1st draft by TF0
Jun/Jun '21	10th IWG
Sep/Oct '21	11th IWG
Dec '21	Informal proposal to GRSP
May '22	Formal proposal to GRSP
Dec '22	Approval in WP.29

Note by Secretary: We did not have time to confirm the schedule but has been previously discussed.

III. Status of the other items

- Sled test: EC testing has been completed and a proposal to TF1 will be provided soon.
- TPRD direction: OICA will make proposal to TF1.
- Extension of tank service life: OICA will make proposal to TF1.
- Next IWG in March: The main topics will be the discussions from each TF leader and the 1st draft by TF0.

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IV. Other items

Label for HDV/T

Netherlands made a proposal to amend UNR134 regarding the vehicle labels. Should this requirement be added to GTR13 also?

Result: To be discussed in the next IWG.



• Revision of UN R134

UN R134 should be revised according to the results of the Phase 2. Separate discussions or TF are necessary for affected CPs and industries.

Result: To be discussed within CPs of 58 agreement to separate this from GTR13 IWG.