

**Summary Report by Chair of IWG for GTR 13 (Hydrogen-Powered Vehicles) to
the 70th Meeting of GRSP (December 9, 2021)**

The IWG on GTR 13 and its Task Forces have been meeting regularly, almost bi-weekly in some cases, with the last meeting of the IWG taking place on October 12, as the time of the submission of the technical draft was quickly approaching. The IWG experts represent government, industry and academia of Asia, Europe and North America and we managed to hold frequent meetings to accommodate the different time zones. We were working very hard to have a solid draft reflecting all the technical amendments completed by the time of the 70th meeting of GRSP on December 6-10, to fulfill the mandate but at the end, it was my decision to hold the document back to ensure full transparency and inclusiveness of the process to the end.

To give you a quick pre-view, under the Phase 2 we have considered, based on the feedback from CPs and the industry, several important amendments, improvements to the GTR 13, specifically,

- 1) to expand the scope of the GTR 13 to Heavy-duty vehicles and consider expanding the service life of the container;
- 2) to consider and address concerns with the refueling of pressurized hydrogen, including the receptacle requirements to prevent freezing, for example;
- 3) to review and update several of the test requirements to, among other things accommodate the new hydrogen container conformable tank design; and to consider burst pressure requirements;
- 4) to review and update the fire test to make it more objective and reproducible;
- 5) to consider concerns with material compatibility and the “Humid Gas Stress Corrosion Cracking” phenomenon

We will continue to evaluate how to fully address the Service life extension and number of cycles, TPRD venting direction, and the results of the EU sled test research results as well as side impact test that we have agreed to deal with in the next Phase, if given the opportunity.

Action Task: To be able to complete and present the result of the technical deliberations by the IWG, we ask the GRSP experts to grant us an additional 6-month extension so that we can present the draft amendments under Phase 2 to the May 2022 meeting of GRSP.