

Status Report by Chair of IWG for GTR 20 (Electrical Vehicle Safety) to the 72nd Meeting of Group of Experts on Passive Safety, December 07, 2022

Since the 71st meeting of GRSP in May, the IWG held its 24th meeting from June 8-10 (virtually), and its 25th meeting, from November 29 through December 1 (hybrid). It was our first in-person meeting since 2019 with more than 70 experts from CPs and the industry, such as Canada, China, European Commission, the EU Joint Research Center, India, Japan, Korea, the Russian Federation, and the United States, OICA, Automotive Innovators, Tesla, Nikola participating, and we even had a New York City Fire Department representative with us. The IWG discussed quite extensively which amendments would be viewed as significant improvements to the GTR under Phase 2.

IWG agreed that addressing Thermal Propagation (TP) would be a significant achievement and to that end, the EC presented a draft test procedure to test for thermal runaway initiation. The draft has incorporated results of research by and draws from work of other stakeholders, including China and ISO's upgraded standard 6469. The Contracting Parties (CPs) and industry experts have been requested to provide feedback on the draft before the next meeting of the TPTF. The Task Force (TF) on TP will meet in January to consolidate and evaluate the feedback received and reflect the proposed changes in the revised draft document. Furthermore, test labs of 4 CPs and industry stakeholders committed to participating in the first half of 2023 in round robin tests to validate the draft test procedure.

Canada presented on the results of its National Research Council's testing of batteries to initiate a thermal event in a battery cell and how the batteries self-corrected without thermal runaway to other cells being triggered. In addition to the discussion on the test procedures, the US was optimistic that it could resume early in 2023 the activities of the Sub-Group on the Documentation Method, which is being examined and considered as an alternative to the Thermal Propagation test. A discussion on recently reported incidents of electric vehicles that caught on fire while not in active driving mode, revealed a division among the CPs on whether the risks of TR in vehicles in park mode should be evaluated and addressed in Phase 2. The concern is that some of these incidents resulted in hazard conditions posing risks to by-standers, other vehicles and even the structures, such as public garages and private homes. The IWG will continue to examine this issue.

The issue of emissions of gases, aerosols and particles from electric batteries has been carefully studied by JRC, and a decision will be made early in 2023 on whether or not the IWG can address it in Phase 2. The IWG also carefully examined the current requirements in the GTR on Vibration Profile and Water Immersion, and agreed that there was not enough evidence to merit any changes to the requirements at this point, but will continue to monitor and collect field data and, if the evidence points to a specific vehicle safety problem, revisit the issues in future phases.

The IWG also heard a request to consider special labeling for EVs to make them easily identifiable, especially for the first responders in case of a crash. It was agreed that due to the complexity of the issue, the group will consult with the manufacturers, first responders and standard-setting organizations on a sensible approach. The issue of swappable batteries for L-category vehicles was also raised and the agreement was reached to consult with the CPs that are seeing incidents involving these batteries in the field and with IMMA to check with its constituents whether they are aware of problems with the batteries. JRC will continue to evaluate its research data on the toxicity and flammability of gases, aerosols and particles and the timing of the emission into the occupant compartment, whether there is enough evidence to act on the findings in Phase 2. To facilitate the completion of work by the TF and Sub-Group, an extension of 6 months has been requested at the 188th Session of WP.29. The WP.29/AC.3 granted the request and the IWG plans to submit an informal document to the 74th Meeting of GRSP in December.

My sincere appreciation for the hard work to the Co-sponsors and active CPs and the many industry experts who have devoted their expertise and time to the progress of IWG and to our Secretary Koshika-san of Japan. Thank you very much for your attention.
