Rationale with respect to long-term fire-resistance test

In GTR 20 Phase 1, it was concluded that additional discussions were required on some critical issues, where research and testing of methods was still in progress or needed to be verified by Contracting Parties. One of these topics was a potential long-term fire-resistance test.

However, no field evidence has come up that would justify such a test. The reported number of electric vehicle fires in the field remains rather scarce despite its strongly growing presence in the different markets worldwide. But neither in production nor in transport nor in normal vehicle use have accidents been reported that would have been mitigated or prevented by a long-term fire resistance test. [1, 2]

Moreover, a presentation shown by OICA in the GTR 20 Phase 2 discussions [3] has shown that a long-term fire-resistance test does not provide additional safety benefits. Based on several sources referenced in the presentation, no added vehicle fire hazard caused by a burning battery has been shown. This is in line with several scientific studies in this subject [4, 5, and references cited therein].

Thus, a mandatory long-term fire-resistance test would be a regulatory burden for electric vehicles without bringing any safety benefit for the customers.

[1]https://wiki.unece.org/download/attachments/72024290/EVS17-E1TP-0200%20%5BOICA%5DACEA%20study%20European%20field%20data.pdf?api=v2

[2]https://wiki.unece.org/download/attachments/72024290/EVS17-E1TP-0100%20%5BOICA%5DUnited%20States%20EV%20Fire%20Incident%20Field%20Data%20Review.pdf?api=v2

[3]https://wiki.unece.org/download/attachments/51972351/EVS1412-201.pdf?api=v2

[4] Long, R. T. Jr., Blum, A., Bress, T., & Cotts, B. (2013). Best Practices for Emergency Response to Incidents Involving Electric Vehicles Battery Hazards: A Report on Full-Scale Testing Results. Quincy, MA: The Fire Protection Research Foundation.

[5] Watanabe, N., Sugawa, O., Suwa, T., Ogawa, Y., Hiramatsu, M., Tomonori, H., … Honma, M. (2012, September). Comparison of fire behaviors of an electric-battery-powered vehicle and gasoline-powered vehicle in a real-scale fire test. In Proceedings from Second International Conference on Fires in Vehicles-FIVE (pp. 195-205). Chicago.