Comments from ISO/TC 197 WG18 Convener on HG-SCC Test Incorporation into UN ECE R134

WG 18 manages two standards:

- ISO 19881-2018 “Gaseous hydrogen — Land vehicle fuel containers”
- ISO 19882-2018 “Gaseous hydrogen — Thermally activated pressure relief devices for compressed hydrogen vehicle fuel containers”

Perspective on the approach to be taken to incorporate / adopt a new test procedure into industry standard:

1. Clearly define the failure mode arising from the clearly defined service condition(s) that the test is designed to address
2. Demonstrate that the proposed test can discriminate against known “bad” actors and known good “actors”, making sure that the items under test are representative of actual designs (alloy, forming, heat treat, temper, etc.)
3. Achieve industry consensus on proposed test procedure

For the case of the HG-SCC test, to be included as mandatory test requirement in UN ECE R134, these 3 requirements have not been met:

1. HG-SCC has not been linked to any in-service failure of a hydrogen vehicle fuel container, or system component
2. No data has been provided to confirm that A6061-T6 in the same condition as formed type 3 liners or forged alloy valve bodies meets the requirements of this test procedure
3. Industry consensus has not yet been achieved; Industry experts are still conflicted; Inclusion in Part I of UN GTR 13 Phase 2 does not constitute technical consensus

Recommendation: HG-SCC is not yet ready to be incorporated into UN ECE R134 (not until all 3 requirements have been met)