

Thermal Propagation Task Force (TP-TF) Report

2022.3

Background and main activities

- Thermal propagation task force was formed after 22nd IWG meeting
 - China lead overall task of thermal propagation with two areas of focus, #1 (Testing approach) support by Canada and Japan and #2 (Documentation) support by the US and EU.
 - Documentation approach sub-group was formed and lead by the US
- Several meeting was held to facilitate the discussion for TP test
 - Jan 19-20 TP-TF meeting
 - Feb 24 Documentation sub-group meeting
 - March 1 Component-level test discussion meeting

Overview for meetings of TP-TF

TP-TF meeting in Jan 19-20

- Summary and discussion of round-table questions proposed by Canada
- Parking: All agree parking mode need to be addressed (JP – abstain due to no TR/TP events)
- Operational modes: need further discussion
- External warning: be shelved temporarily
- Component level test: need further discussion
 - Compared with vehicle level test, component-level test is easier to implement for test agencies, and the difficulty of sample preparation and overall cost are lower.
 - If the set judgment criteria are consistent with the vehicle level, the component-level test is more stringent than the vehicle level
 - Even with further research, the complete equivalence of the two methods couldn't be achieved due to the different objects of the component test and the vehicle test.
- Early detection: be shelved temporarily for test approach

Overview for meetings of TP-TF

TP-TF meeting in Jan 19-20

- Brainstorming activity for documentation approach[details in sub-group report]
 - The comparison of test approach and documentation approach
 - Challenge of the documentation approach
 - Ideas for the path forward for the documentation approach

Overview for meetings of TP-TF

Component-level test discussion meeting

- Japan presentation:
 - The component test could be validated clearer phenomenon and in the severer situations
 - Requirements for component tests should be same as vehicle tests
 - How to validate the smoke in the TP test is unclear not only component tests but also vehicle tests, which should be discussed furtherly
- China shared the component-level test experience in the implementation of GB standard
 - test method harmonized with EVS-GTR phase 1 is basically enforceable and repeatable for various types of RESS
 - According to the feedback of several test agencies, all mandatory tests are carried out at the component level so far

Overview for meetings of TP-TF

Component-level test discussion meeting

- Several proposal from China based on previous research and experience
 - General condition: Generally agreed with further clear description
 - Test mode: Complex and need further discussion
 - Initiation method: Stop-heating criteria need further discussion
 - Criteria for TR: Different opinion on it. Several CPs will share data in the next meeting
 - Pass/fail criteria: No comments in the meeting except for the definition of hazards
 - Definition of hazards: the important of smoke is generally agreed but not mature at this stage

Next-step work for TP-TF meeting

- Next-step topic [test approach]
 - Test mode
 - Stop-heating criteria in the external heating method
 - TR criteria
 - Smoke in the TP test
- Next meeting [test approach]
 - 7PM-9PM (CST, UTC+8) 8PM-10PM(JST, UTC+9) on Apr 26th.