International Aircraft System Fire Protection Working Group (IASFPWG) – Installed Li Batteries Task Group

Al Carlo | Boeing Payloads Pressurized Compartment Fire Marshal

November 2, 2017
IASFPWG – Installed Li Batteries Task Group

Agenda

- Background
- Situation
- Target
- Proposal
- Summary
IASFPWG – Installed Li Batteries Task Group

Background

• International Aircraft System Fire Protection Working Group (IASFPWG) does not have active Task Groups concurrent with the meetings. There are consortiums for Halon Replacement for cargo and propulsion. There was a successful task group for handheld Halon replacement for a specific task of creating an SAE standard to support an ETSO that met outside of the meetings.

• Materials Fire Test Working Group schedules time for Task Groups as a part of their meetings.
  
  • Task Groups have been a successful method of achieving industry collaboration and concurrence.

• Examples:
  
  ▪ Vertical Flame Propagation Test Development (VFP)
  ▪ Standardization activity – Guidance and MOC
  ▪ New Heat Release Test Development (HR2)
IASFPWG – Installed Li Batteries Task Group

Situation

• Installed Li Batteries on Transport Aircraft have multiple Special Conditions (67), CRIs.

• Regulations, guidance, MOCs and test methods have not been fully standardized, harmonized and organized to address the complete set of requirements needed for certification (Cell, Battery, Device and Installation)
IASFPWG – Installed Li Batteries Task Group

Li Batteries Task Group would:

- Identify and allow industry experts to actively participate and share knowledge/best practices.
- Develop standardized regulations, guidance, MOCs and test methods.
- Seek to drive/facilitate up front collaboration to improve products with overall shorter flow.
- Result in effective, practicle and achievable airplane safety improvements.
- Result in a streamlined and consistent certification process across all OEMs.
IASFPWG – Installed Li Batteries Task Group
Proposal

- Organize the Systems Working Group similar to Materials Working Group
  - Schedule task group breakout sessions during meetings
  - Have additional virtual Task Group meetings between face-to-face meetings.

- New Installed Li Batteries Task Group proposal:
  - Leverage the RTCA work done for Li batteries (cell, battery and device level) to create similar guidance at the installation level
    - Standardize Means of Compliance to Special Conditions/CRIIs
    - Support development/update of related TSO/ETSO
    - Support development/update of Advisory Circulars (Guidance and MOCs)
    - Support development and validation of research test plans/testing and test methods
    - Support development of future regulations
IASFPWG – Installed Li Batteries Task Group

Summary

- Materials Working Group Task Groups have had successful collaboration developing requirements, test methods and guidance.

- Li Batteries activity is complex and needs more focused collaboration related to the installation aspects.

- Task Group approach could be beneficial for other subjects currently being worked in the Systems Working Group
  - Smoke Detection
  - Halon Replacement
  - Smoke Penetration
  - Lithium Batteries
    - PED – Passenger
    - PED – Airline Operation
    - Carriage as Cargo