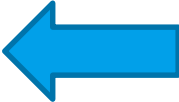



SAE A-22 AND AC20-135 REVISION – STATUS INTERNATIONAL AIRCRAFT SYSTEMS FIRE PROTECTION FORUM

May 14th, 2019

Phil Dang (Honeywell), John Ostic (Boeing) - Co-chairs

SAE A-22 Powerplant Fire Test and Flammability Committee formed in March 2018 to support FAA AC20-135 Update

WARRENDALE, Pa. ([PRWEB](#)) June 08, 2018 -- SAE International, the leading global association for aerospace, automotive and commercial-vehicle engineers, has been tasked by the Federal Aviation Administration (FAA) to develop industry aerospace standards to demonstrate compliance with FAA powerplant fire protection requirements. 

SAE International is forming a new technical committee, A-22 Fire Protection and Flammability Testing to develop industry standards for the testing of systems and components to assist with the design and certification of fire protection systems. The initial program of work includes the development of a suite of standards to assist with the update of FAA Advisory Circular AC 20-135 Powerplant Installation and Propulsion System Component Fire Protection Test Methods, Standards and Criteria. Methods to calibrate and setup a new sonic burner as an optional replacement for existing fire test burners will also be created. 

The objectives of the committee are to:

- Develop and publish SAE Technical Reports for testing of fire protection systems, components and structure
- Define test requirements for aircraft and propulsion systems
- Develop performance standards for certification testing of aircraft and propulsion systems
- Define the sensitivities and accuracy of equipment used to conduct fire and flammability testing
- Harmonize global testing methodologies

INITIAL PROGRAM OF WORK

Develop SAE standards or recommended practices to address the FAA Tasking Request to develop industry standards to update AC20-135, *Powerplant Installation and Propulsion System Component Fire Protection Test Methods, Standards and Criteria*. The proposed standards will be used to demonstrate compliance with powerplant fire protection requirements. In addition, methods to calibrate and setup a new sonic burner as an optional replacement for existing fire test burners will be developed.

Current SAE roster lists over 125 participants

Aviation Authorities from Brazil, Canada, China, Europe, and United States

Airplane manufacturers

Helicopter manufacturers

Engine manufacturers

Commodity manufacturers

Component manufacturers

Testing laboratories

Universities

Government standards and research organizations

Industry consultants

SAE Staff support

Effort has been divided into 5 different sub-groups or sub-committees to address different aspects of the testing standard

Two face-to-face meetings in 2018, three planned for 2019

SAE A-22 Sub-Group Structure

Group A G. Armstrong, B. Ciero

- Burner / Flame Temperature
- Flame Calibration Method
- TCs (Size, Type, Number)

Group B D. Laborie

- Post Test Burning / Backside Ignition
- Test Pass/Fail Criteria

Group C S. Pugliese

- Fireproof / Fire resistant Definitions
- Panel Size

Group D P. Booth, G. Wozniak

- Standard Environmental / Operating Conditions

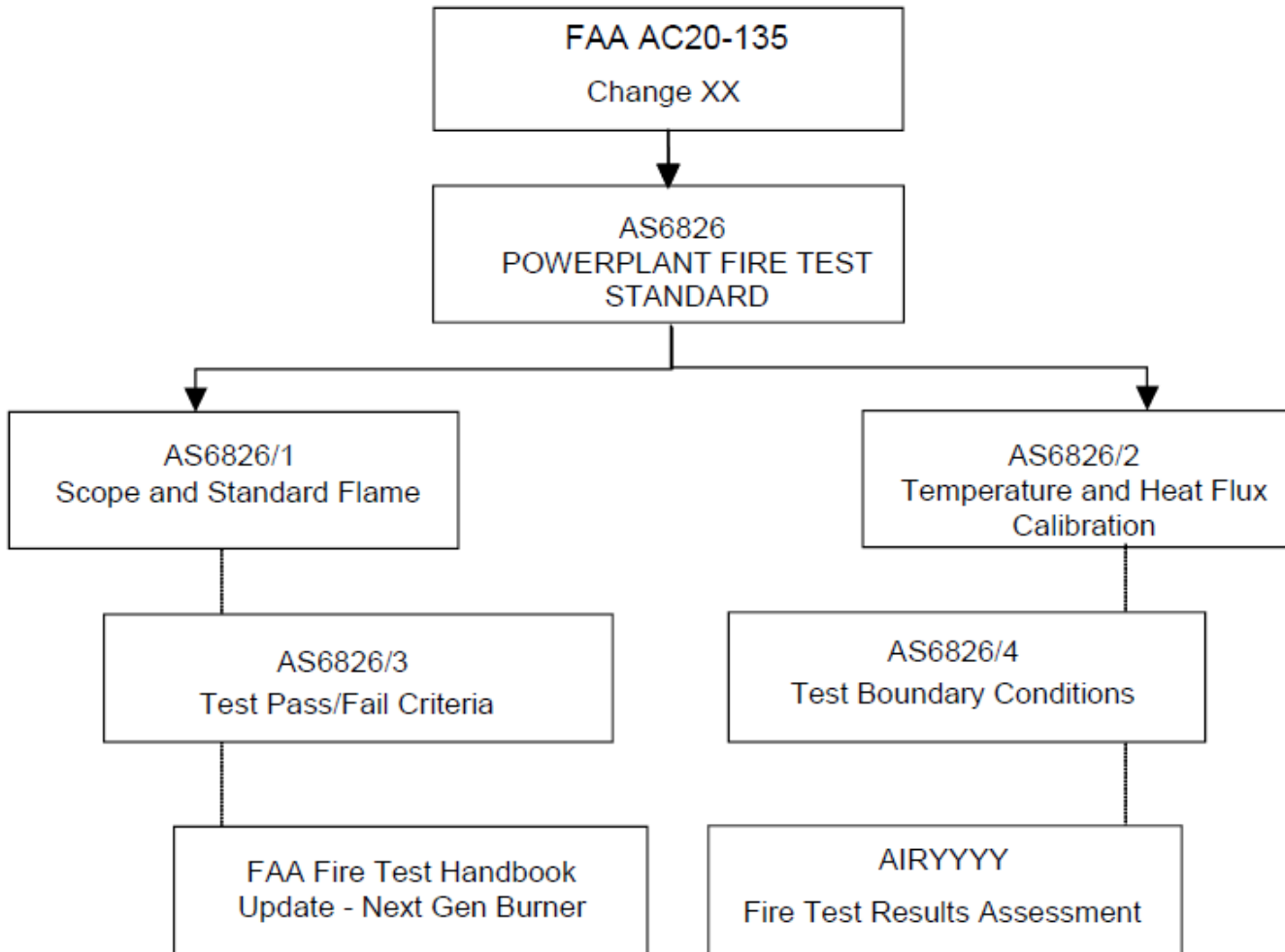
TC Testing M. Kelly

- Industry testing in progress of TCs size, type, and aging cycles to evaluate impact on temperature measurements

Panel Testing B. Stewart

- FAA / Spirit Aero baseline composite panel testing for evaluation of equivalent damage with NG burner

AS6826 Powerplant Fire Test Specification – Anticipated Structure



SAE A-22 Fire Test Specification - Roadmap actions for AC20-135 Revision

May 14-15, 2019 Update

- ✓ March 2018 - Industry working sub-groups to continue as SAE A-22 committee based on FAA request of SAE
- ✓ May 9th & 10th 2018 – Industry/FAA/EASA/TCCA Kick-off Meeting hosted by EASA (May 9th) and SAE / Hilton (May 10th) in Cologne, Germany
- ✓ June 28th 2018 - SAE A-22 committee telecom – go-forward with one fire test standard or specification and several sections, in support of AC20-135 revision
- ✓ July – October 2018 – SAE A-22 sub-group working telecoms and TC testing
- ✓ November 1st and 2nd 2018 - SAE A-22 meeting in Atlantic, City hosted by FAA Tech Center
- **Technical Report - Document Sections Draft Writing: *June 2018 to June 2019***
 - Including regulatory agencies' reviews and comments
- **Document(s) for final SAE balloting approval: *June 2019 to December 2019***
- **SAE document(s) publication: January - May 2020**
- **FAA Revision, AC20-135 Revision to reflect SAE document(s): May 2020 – December 2020**
 - Legacy burners only
 - Next Generation burner – post December 2020