

6th Triennial FAA Research Fire Safety Conference

Abstract

Fire Safety Assessment of Electrical Devices under regard of Airworthiness Authorities Requirements

Caused by the new possibilities of modern electronic equipment and the demands for passenger entertainment there is an increasing number of electrical equipment and devices introduced into the pressurized section of Airbus commercial aircrafts during the last years. This generates a new challenge for the field of materials fire safety engineering, as these devices can be often found in hidden areas or have to be integrated in existing compartments inside the cabin and cargo section of aircrafts due to space limitations.

This presentation shows now a holistic and harmonized approach of the fire safety assessment and testing of such electrical equipment and components in regard to airworthiness authorities materials fire safety requirements and additional safety needs. It introduces different safety levels that are applied to electrical devices in dependence of their installation location inside the pressurized section, operating parameters and equipment design. Furthermore it shows how to identify critical components used for the construction of electrical equipments and how to apply the existing material fire safety test methods to these identified components.

The presented concept will ensure in a general way all necessities are followed to keep a high level of safety at Airbus commercial aircrafts and to help increase the passenger safety during flights today and for future aircraft projects.

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