

Aircraft Ducting

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- Issues regarding the duct flammability test were briefly discussed at the Triennial Conference in October, 2010. They were:
 - Why do we need this test and what do we need to test?
 - Are the results of the intermediate-scale flammability testing performed at the Technical Center indicative of the behavior of these ducts located in other areas of the aircraft?
(configuration and environmental effect on fire propagation)
 - What about ducts covered with insulation material that is compliant with CFR 25.856a? Do they need to be tested?
 - Can the Task Group submit a list of questions to the ARAC?

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- Response:
 - The FAA made the decision to review and upgrade (via new test methods) the flammability tests that impact materials in hidden areas of the aircraft. Such as:
 - Thermal/acoustical insulation - CFR 25.856a
 - Wire
 - Ducts
 - We found that the Bunsen burner test does not adequately characterize the flammability of these items.
 - What do you need to test?
 - Our job is to make the test method as good as we can. What requires testing will be decided later.
 - When the radiant panel test method becomes a Rule, “ducts” will be required to meet this test and if the duct passes, that duct can be used anywhere in the aircraft.

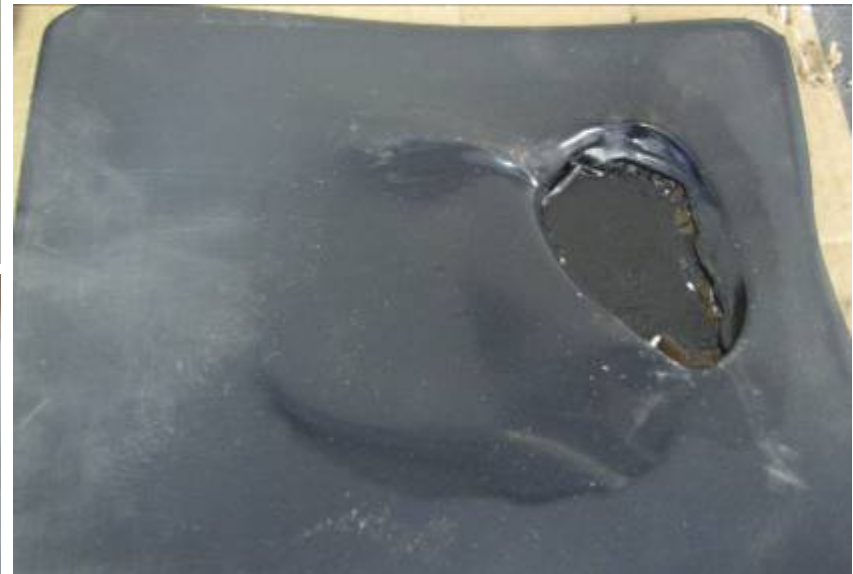
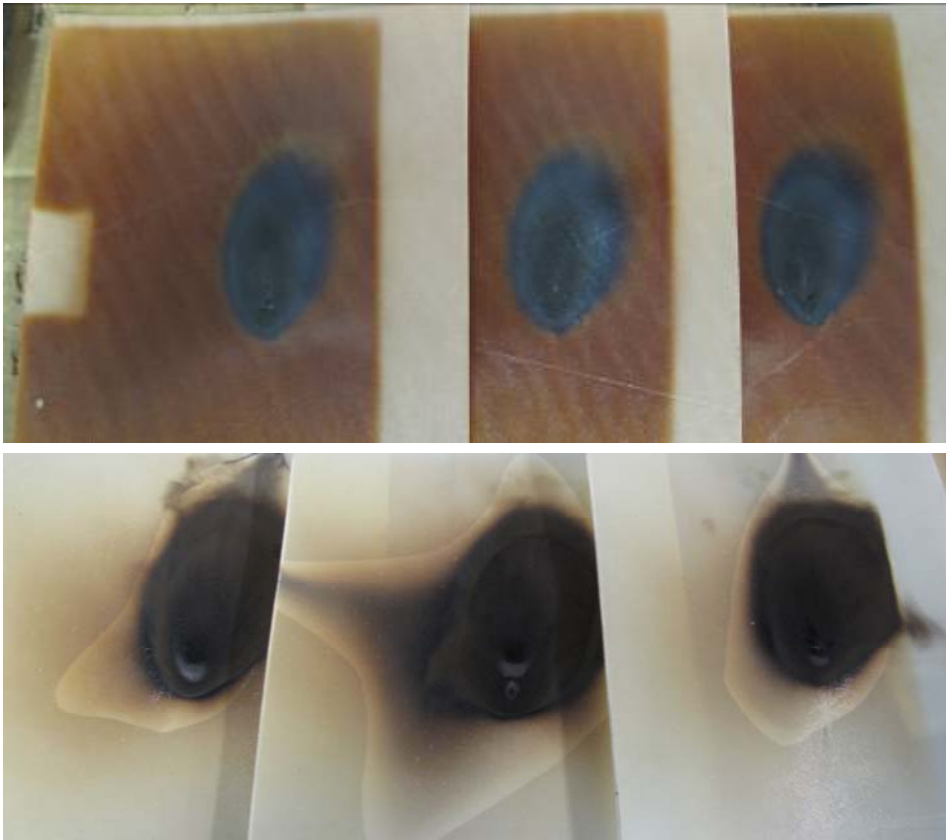
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- Response (continued):
 - If anyone has doubts and concerns about configurations and environmental conditions other than that tested at the Technical Center, we would advise you to design your own test protocol and perform testing.
 - When the AC was written for thermal/acoustical insulation, the document stated that if the substrate (duct) does not have to meet 25.856, a thin aluminum sheet may be used (acting as the substrate).
 - When the radiant panel test for ducts becomes a Rule, the FAA will require that the duct and the duct covering (insulation) be tested separately. However, if the duct is wrapped with a robust insulating jacket and there is data that shows that it would protect the duct, than the FAA would consider cases on an individual basis. Moreover, the FAA would also consider some type of general criteria for this.
 - The ARAC committee is composed of a variety of interested parties. There are representatives from industry, government, OEMs, etc. There are members in the Task Group that have a representative in the ARAC. Questions should be addressed to the ARAC rep on an individual basis.



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- Task Group Agenda
 - Recent duct testing done at the Tech Center.



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- Task Group Agenda *(continued)*
 - Latest test method (Draft Version 2.5)
 - Other concerns

