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Civil Aviation / Aviation civile
Aircraft Certification Branch / Certification des aéronefs
Regulatory Standards/ Normes réglementaires (AARDH)
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Your file / Votre référence
NPRM 00-09
Our file / Notre référence

January 18th, 2001

AARDD 5009-6-525

Department of Transportation Dockets,
Docket No. FAA-2000-7909,
400 Seventh Avenue SW.,
Room Plaza 401,
Washington, DC 20590

Subject: **NPRM 00-09** - Improved Flammability Standard for Thermal/Acoustic Insulation
Materials Used in Transport Category Airplanes

Dear Sir:

Transport Canada (TC) fully endorses the objectives of the subject rulemaking activity.

TC supports the proposed rules, with the following comments:

Part 25:

- Agree with proposed Part 25 change and associated test methods. However, notwithstanding variability in *flame propagation* testing (being addressed), concerned that variations in manufacturing/assembly, with attendant (possibly significant) variability in flammability performance may result in non-compliant items being installed in production - needs to be addressed.
- Consider that there is a need to more specifically 'capture' what constitutes 'thermal/acoustic insulation': any/all materials that are part of systems intended for thermal and/or acoustic purposes,

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sound-deadening materials and coatings (how to test?), small elements, elastomeric components, tapes, etc..?

- Consider that there is a need to more specifically define which elements in the lower half of the fuselage do / do not have to comply with *burnthrough resistance* (e.g. insulation on ducts, underside of flooring, etc.?).
- In view of the criticality of installation to achieve *burnthrough resistance*, recommend the development of advisory material to address the need for ‘mechanisms’ to assure that the defined configuration (overlaps, attachments type and number/pitch, etc.) is achieved in manufacturing/production and maintained in in-service maintenance/repair (similarly applies to ‘Proposed Part 121 change’).

Parts 91, 121, 125 and 135:

- Support proposed application to aircraft operating under parts 91, 121, 125 and 135, in regard to both *flame propagation* and *burnthrough*. Consider proposed 2 & 4-year timeframes reasonable, but suggest reduced times are achievable and should be considered, as compliant material systems are available and design parameters have largely been established (particularly for *flame propagation*) (and as the final rule is not likely to be published for a number of months).
- Propose that criteria for application of *flame propagation* on existing type designs ‘manufactured before 2 years after the effective date of the rule’ be based on when insulation is ‘removed/re-installed’ rather than when it is “installed as replacement”, as former will more rapidly implement safer materials in the fleet and is practicable to do in a cost-effective manner, while latter may ‘encourage’ repair of damaged insulation, potentially resulting in deterioration of flammability performance.
- In addition, suggest that installation of *new* insulation (i.e. where there was none by design or as delivered, or where it has been removed in service) needs to be addressed. Consider that such installations should comply with *flame propagation* irrespective of the date of manufacture of the aircraft, as this will enhance safety and is practicable to do in a cost-effective manner. Also recommend that consideration be given to requiring that *new* insulation installations on the skin below the floor comply with *burnthrough resistance* - situation equivalent to that of ‘newly-manufactured’ aircraft - as consider that this is, in most cases, achievable in a cost effective manner.

Editorial:

- Both § 25.856 & § 121.312(3) refer to “*flame penetration resistance*”, while part VII of Appendix F refers (both in its title and text) to “*burnthrough resistance...*”. Also, § 25.856 and

Parts 91, 121, 125 & 135 refer to “*flame propagation*” only, while part VI of Appendix F refers to “*flammability and flame propagation*”. Suggest wording be made consistent.

- Suggest that, for clarity and definiteness, headings of § 91.613, 121.312, 125.113 & 135.170 (“Materials for compartment interiors”) be modified to reflect the broader coverage resulting from the incorporation of flammability criteria for thermal/acoustic insulation (e.g. ‘*materials flammability*’), inasmuch as subject materials are not, strictly speaking and in many cases, in ‘compartment interiors’ - this may impact other paragraphs.

TC has initiated regulatory action to propose comparable standards/regulations in Canada.

TC wishes to thank the FAA for the opportunity to comment on the subject proposed rules, and remains at the FAA’s disposal to discuss further and work towards the achievement of harmonized final rules.

Yours truly,

Original signed by

Maher Khouzam
Chief, Regulatory Standards
Aircraft Certification