



Federal Aviation Administration

Memorandum

Date: October 15, 2007

To: See Distribution

From: Manager, Small Airplane Directorate

Prepared by: Leslie B. Taylor, ACE-111

Subject: PS-ACE100-2007-002; Policy Statement; 14 CFR Part 23, §§ 23.853, 23.855, 23.863 and 23.1359, Flammability of MIL-C-17/60, /93, /94, /113, /127, and /128 Coaxial Cable

Summary

This policy memorandum clarifies Federal Aviation Administration (FAA) certification policy on 14 CFR part 23 and the Airship Design Criteria (ADC). Coaxial cables with Type IX jackets, MIL-C-17/60, /93, /94, /113, /127, and /128, have been tested and found to comply with 14 CFR part 25, § 25.869(a)(4) and applicable section of Appendix F, part I (a)(3) for self-extinguishing. The self-extinguishing requirements in part 23 for the average burn length and the average flame time of the insulation and droppings are the same as part 25. Therefore, this coaxial cable meets or exceeds the part 23 requirements in Subparts D & F and may be installed in part 23 aircraft and airships without further flammability testing.

Applicability

This policy statement clarifies part 23, §§ 23.853, 23.855, 23.863 and 23.1359 for installing coaxial cable in part 23 aircraft. It applies to normal, utility, acrobatic, and commuter category airplanes. It also applies to non-rigid airships (ADC sections 4.39, 4.40 and 6.21) certificated in the normal category (14 CFR part 21, § 21.17(b)) with nine passenger seats or less.

References

§ 23.853	Passenger and crew compartment interiors
§ 23.855	Cargo and baggage compartment fire protection
§ 23.863	Flammable fluid fire protection
§ 23.1359	Electrical system fire protection

Policy

This policy applies to the coaxial cables with Type IX jackets (extruded fluorinated ethylene propylene (FEP)) listed below:

MIL-C-17/60 (RG142)
MIL-C-17/93 (RG178)
MIL-C-17/94 (RG179)
MIL-C-17/113 (RG316)
MIL-C-17/127 (RG393)
MIL-C-17/128 (RG400)

These coaxial cables can be installed in part 23 aircraft and airships without further flammability testing. The coaxial cables have been tested and found to comply with part 25, § 25.869(a)(4) and applicable section of Appendix F, part I (a)(3) for self-extinguishing. Part 25, Appendix F, part I (a)(3) requires insulation on electrical wire or cables be self-extinguishing when subjected to the 60 degree test. The average burn length may not exceed 3 inches, and the average flame time after removal of the flame source may not exceed 30 seconds. Droppings from the test specimen may not continue to flame for more than the average of 3 seconds after falling.

The self-extinguishing requirements in part 23 for the average burn length and the average flame time of insulation and droppings are the same as part 25. Therefore, this coaxial cable meets or exceeds the part 23 requirements for self-extinguishing flammability for electrical wire and cables in Subparts D & F of part 23.

Other MIL-C-17 coaxial cable not listed in this policy must be flammability tested per the applicable part 23 or ADC requirement.

MIL-C-17 includes some cables with Polyvinyl Chloride (PVC) jackets. These cables should not be used in new installations due to the toxicity, corrosiveness, and flammability characteristics of PVC by-products from burning.

Effect of Policy

The general policy stated in this document does not constitute a new regulation or create what the courts refer to as a "binding norm." The FAA Aircraft Certification Offices (ACOs) should implement this policy when applicable to the specific project. Whenever an applicant's proposed method of compliance is outside this established policy, it must be coordinated with the policy issuing office, for example, through the issue paper process or equivalent. Similarly, if the implementing office becomes aware of reasons that an applicant's proposal that meets this policy should not be approved, the office must coordinate its response with the policy issuing office.

Applicants should expect that the certificating officials will consider this information when making findings of compliance relevant to new certificate actions. Also, as with all advisory material, this policy statement identifies one means, but not the only means, of compliance.

For questions about this policy, please contact Mr. Leslie Taylor by telephone at (816) 329-4134, by fax at (816) 329-4090, or by e-mail at leslie.b.taylor@faa.gov.

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