

SAE:

Fire Containment Covers and Fire Resistant Containers

Presented to: IASFPWG

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Federal Aviation
Administration



FAA requested SAE to develop standards as a result of CAST Safety Enhancement SE 127:

- **SAE AS 6453 Fire Containment Covers (ISO 14186)**
- **SAE AS 6278 Fire Resistant Containers (ISO 19281)**



Fire Containment Covers (FCC)

- AS 6453 Fire Containment Covers was published In August 2013.
- TSO 203 (published in July 2014) references SAE AS6453 standard with modifications.
- Modifications are mostly for removal of references to non-FAA requirements, maintenance, pallet, and net requirements.



Cargo liner oil burner test



Full scale mockup fire test

A new project was approved to revise SAE AS6453 Fire Containment Covers in October 2015. The current version allows unlimited external flaming on the FCC if either:

- 1. The external flame is not in close proximity to a thermocouple, or**
- 2. The fire load had shifted and measured temperatures from thermocouples that are no longer within 4 +/- 1/2 inch from the FCC are no longer valid.**

It was previously agreed that this was not acceptable. The concern was that external flames could ignite adjacent unprotected cargo or aircraft structure or systems.

A revised draft version of the standard was added to the SAE committee member website on Oct 17, 2017. The revised standard contains wording that attempts to address the external fire concerns.

A working group meeting to discuss the proposed revision to the standard were not held during the October 2017 meeting.

Fire Resistant Containers (FRC)

- ISO/CD 19281 was published on Feb. 1, 2016.
- SAE standard AS 6278 Fire Resistant Containers is under development:
 - Differences between the two standards exist.
 - ISO standard requires all materials used in the construction of the FRC be subjected to the cargo liner oil burner test (CFR Part 25 Appendix F, Part III).
 - During the October 2017 SAE meeting, the working group's general consensus was the standard would now include two types of FRCs:
 - Type 1: Requires full scale testing and the cargo liner oil burner test applied only to the main panels of the FRC (structural members of the FRC not subjected to cargo liner test).
 - Type 2: Only requires the full scale mock-up test.
- Additional ISO/SAE harmonization is desired.

- FAA’s current “unofficial” position is cargo liner test method should be included in standard but exempting ULD frame members *might* be acceptable.
- FAA’s intention was to reference the SAE standard in a revision to TSO-C90.
- FAA is seeking industry input on the status of FCC/FRC use to provide data to the Commercial Aviation Safety Team (CAST) on hazmat fire risk reduction.
- Input will also be used to address NTSB recommendations to FAA on improvements to cargo fire safety.
- Data collection survey:
 - http://www.fire.tc.faa.gov/temp/FCC_FRC_Survey_2017.docx
 - Completed surveys should be sent to Joan Hughson, AIR-6B3, joan.hughson@faa.gov



Next SAE AGE-2A Cargo Handling Committee meeting is May 3-5, 2018 in Dubai, UAE.



FAA Update – TSO-C90 ULDs

- **TSO-C90 Revision e:**

- Anticipated release is now mid-2018
- Incorporates AS36100B Air Cargo ULDs and AS36102B Air Cargo ULDs-Testing Methods
- Incorporates TSO-C203 FCC and Pallet/Assembly Test requirements from AS6453

- **TSO-C90 Revision f:**

- Will be scheduled for release within a year of SAE AS6278 release
- Incorporates AS6278 FRC minimum performance requirements for FRC
- Will possibly include additional FCC requirements (i.e. transient flames)