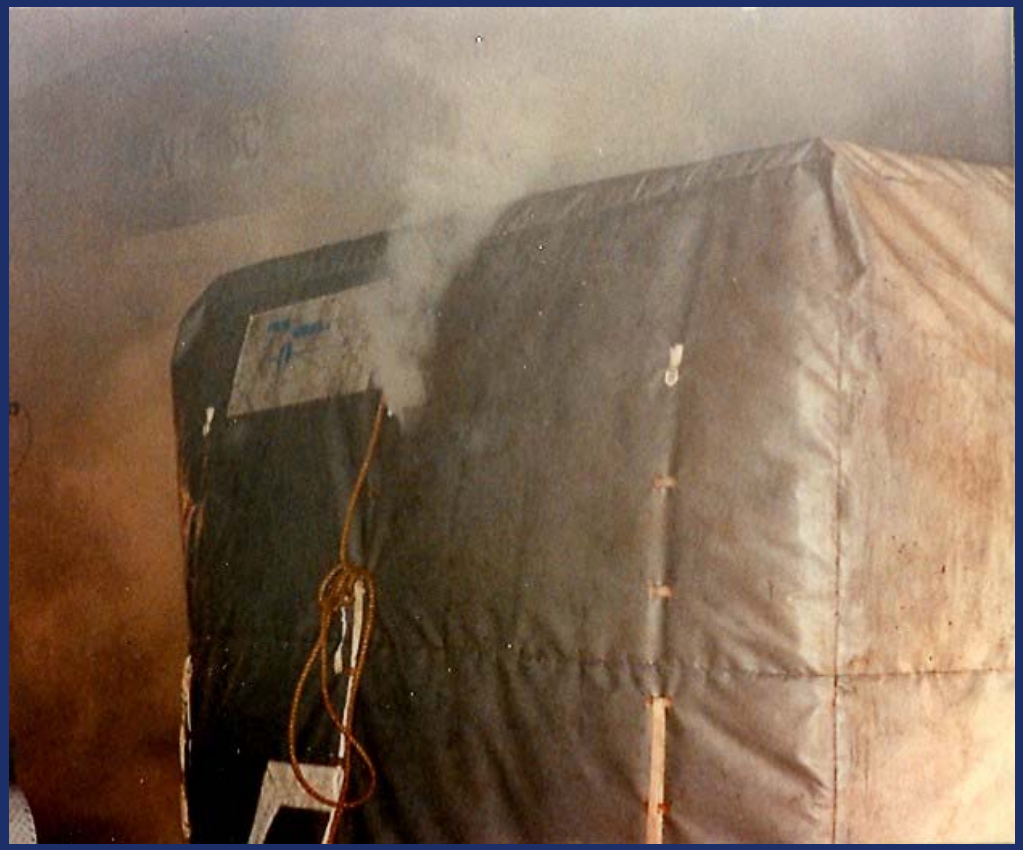
Fire Containment Cover ISO/DIS 14186, SAE AS6453 Standard Development



Federal Aviation Administration

Presented to: International Aircraft Systems Fire Protection Working Group. Koeln, Germany

By: Dave Blake, FAA Technical Center Fire Safety

Date: November 17, 2011

- **The FAA has requested that SAE develop a standard for Fire Containment Covers (FCC's).**
- **At least five ISO (International Organization for Standardization) working group meetings have been conducted to develop the standard.**
- **Participation in the working group has included EASA, FAA, Airbus, Boeing, FedEx, UPS, SATCO, and others.**

Current ISO Status:

ISO/DIS 14186 is listed as in Stage 40.00, DIS Registered

International harmonized stage codes

STAGE	SUBSTAGE						
				90 Decision Substages			
	00 Registration	20 Start of main action	60 Completion of main action	92 Repeat an earlier phase	93 Repeat current phase	98 Abandon	99 Proceed
00 Preliminary stage	00.00 Proposal for new project received	00.20 Proposal for new project under review	00.60 Close of review			00.98 Proposal for new project abandoned	00.99 Approval to ballot proposal for new project
10 Proposal stage	10.00 Proposal for new project registered	10.20 New project ballot initiated	10.60 Close of voting	10.92 Proposal returned to submitter for further definition		10.98 New project rejected	10.99 New project approved
20 Preparatory stage	20.00 New project registered in TC/SC work programme	20.20 Working draft (WD) study initiated	20.60 Close of comment period			20.98 Project deleted	20.99 WD approved for registration as CD
30 Committee stage	30.00 Committee draft (CD) registered	30.20 CD study/ballot initiated	30.60 Close of voting/ comment period	30.92 CD referred back to Working Group		30.98 Project deleted	30.99 CD approved for registration as DIS
40 Enquiry stage	40.00 DIS registered	40.20 DIS ballot initiated: *5 months*	40.60 Close of voting	40.92 Full report circulated: DIS referred back to TC or SC	40.93 Full report circulated: decision for new DIS ballot	40.98 Project deleted	40.99 Full report circulated: DIS approved for registration as FDIS
50 Approval stage	50.00 FDIS registered for formal approval	50.20 FDIS ballot initiated: 2 *months*. Proof sent to secretariat	50.60 Close of voting. Proof returned by secretariat	50.92 FDIS referred back to TC or SC		50.98 Project deleted	50.99 FDIS approved for publication
60 Publication stage	60.00 International Standard under publication		60.60 International Standard published				
90 Review stage		90.20 International Standard under periodical review	90.60 Close of review	90.92 International Standard to be revised	90.93 International Standard confirmed		90.99 Withdrawal of International Standard proposed by TC or SC
95 Withdrawal stage		95.20 Withdrawal ballot initiated	95.60 Close of voting	95.92 Decision not to withdraw International Standard			95.99 Withdrawal of International Standard

- **SAE AS6453 project has been initiated under the Cargo Handling Committee, AGE-2A, titled "Air Cargo Pallet Fire Containment Covers". Scope of work is to develop a new standard for FCC's.**

Schedule:

- **Preliminary Draft Release for Ballot by AGE-2A. 10/2012**
- **Ballot Comment Resolution Period Completed. 12/2012**
- **SAE Releases New Standard AS6453. 2/2013**
- **FAA TSO-C90 Revision Draft Completed. 3/2013**
- **Public Comment Period Begins. 7/2013**
- **TSO-C90 Revision Finalized and Released. 9/2013**

EASA CS25 Amendment 8 Change Information

Class F Cargo Compartment Classification.

Similarly, if FCCs are proposed as a means of compliance for the new Class F compartment, it is likely that in order to meet the intent they must also meet these standards (i.e. Part III of Appendix F for the sides and top and Part I of Appendix F for the bottom). However, based on full scale qualification testing there is evidence that alternative materials, not fully in compliance with Part III of Appendix F, might also be acceptable for FCC side and top portions, as long as they are successfully tested and meet the intent of the rule.

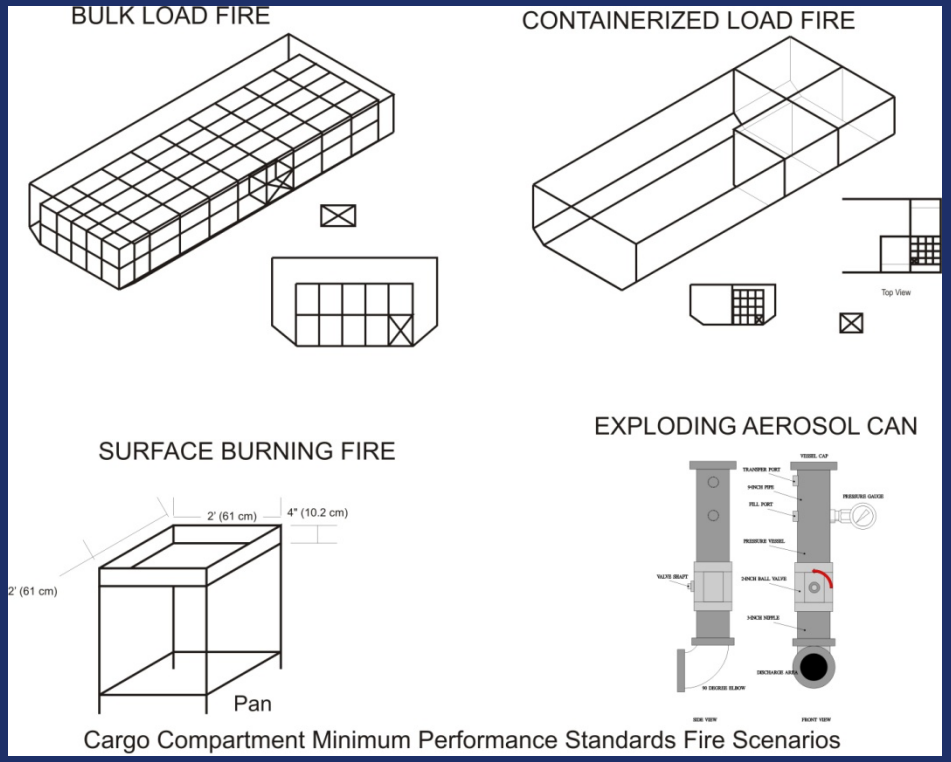
It is recommended that the Agency be contacted for concurrence when FCC or Container qualification is envisaged in order to address the relevant test method.

Unless evidence can be presented to support a different design, if FCCs are used as a means of compliance, they should completely surround all cargo, including underneath the cargo, except for obviously nonflammable items, such as metal stock, machinery, and nonflammable fluids without flammable packaging. Because the fire is controlled or extinguished within the isolated compartment, but is separated from the actual cargo compartment boundaries, the cargo compartment liner requirements of CS 25.855(c) would not apply. However, the effects of the heat generated by the contained/covered fire should be evaluated to ensure that adjacent systems and structure are not adversely affected. For certification purposes, test data with the actual design configuration and possible fire sources would have to be provided. The temperature and heat load time history measurements at various locations above, around and below the FCC are needed to ensure the continued safe function of adjacent systems and structure. The time history data should be used to establish the length of protection time afforded by the system and subsequent AFM limitations for cargo or baggage compartment fire protection times. The operator would then use these times for route planning purposes.

- **EASA ?**
- **There has been discussion on developing another ISO/SAE Standard to apply to fire resistant ULD's but to date a working group for this has not been established.**

Questions?

Update and Correction to Cargo Compartment MPS Report



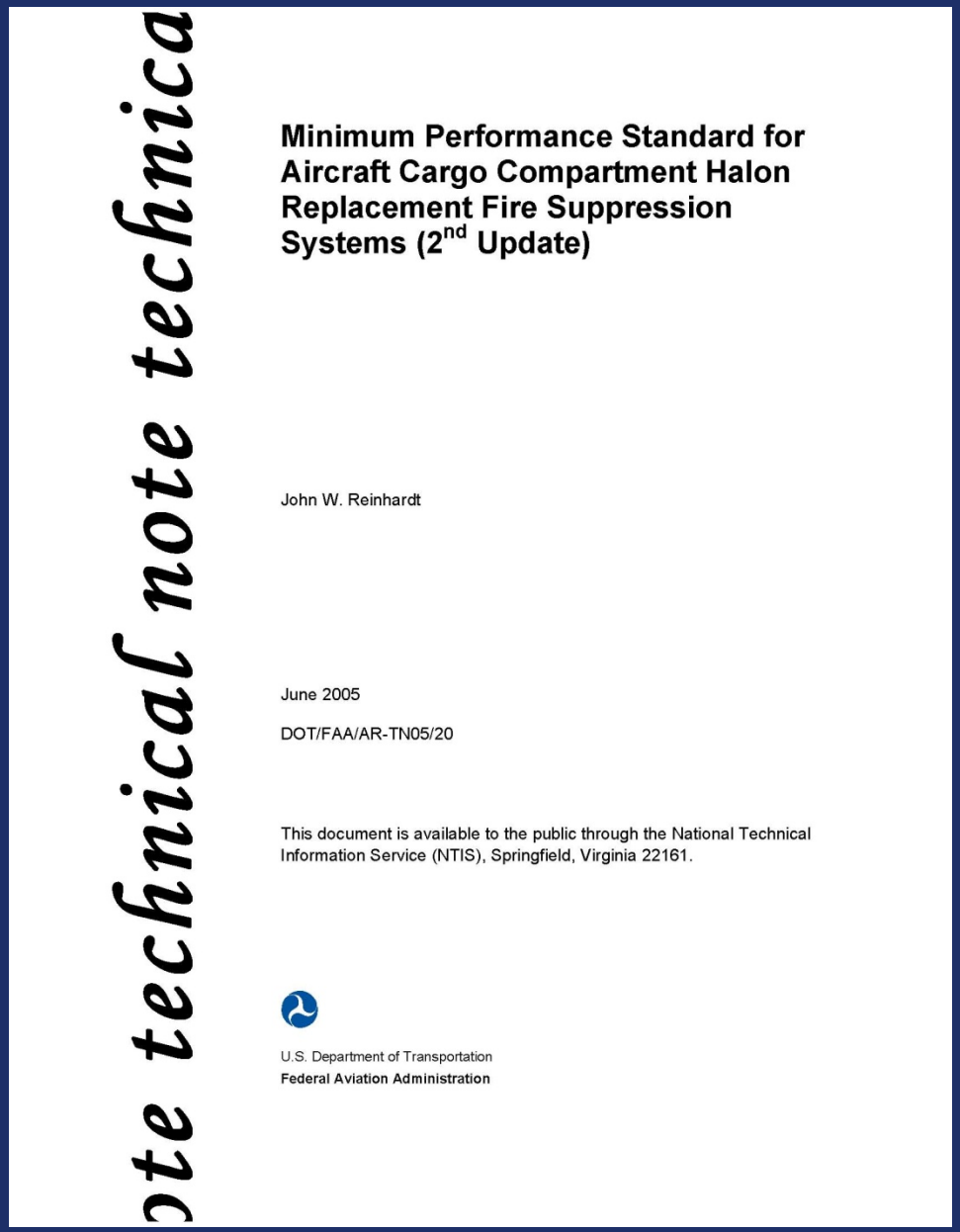
Cargo Compartment Minimum Performance Standards Fire Scenarios

Presented to: International Aircraft Systems Fire Protection Working Group. Koeln, Germany

By: Dave Blake, FAA Technical Center Fire Safety

Date: May23-24, 2012

Federal Aviation Administration


ote technical note technica
Minimum Performance Standard for Aircraft Cargo Compartment Halon Replacement Fire Suppression Systems (2nd Update)
John W. Reinhardt
June 2005
DOT/FAA/AR-TN05/20
This document is available to the public through the National Technical Information Service (NTIS), Springfield, Virginia 22161.
U.S. Department of Transportation
Federal Aviation Administration

- **The conversion of ºF-min to ºC-min in the area under the ceiling temperature curve in the acceptance criteria section and table has been corrected.**
- **The duration for which the area under the ceiling temperature curve is computed has been corrected.**
- **The wording describing the calculations of test results has been clarified.**
- **The report will be re-issued under a new report number: TC-TN12/11**

Working Group Question.

Should the cargo compartment MPS and/or the FAA FCC TSO include a lithium ion/lithium metal battery fire scenario?