Rebuild of the Cargo MPS Test Article
International Aircraft Systems Fire Protection Working Group

Presented to: IASFPWG Meeting
By: Dhaval Dadia
Date: Oct 31, 2018
Background

- Cargo MPS test articled developed a lot of natural leaks from repeated fire tests.
- Concerns with containment of agent and smoke from future test campaigns.
- Opted to reskin the inside of the cargo compartment with 16GA sheet metal.
- Re-instrument the compartment to a newer DAQ system.
Gutting and Framework
Reskin Progress

AFT Compartment

FWD Compartment

Oct. 31, 2018
Rebuild of the Cargo MPS Test Article
Air Exchange Mechanism
Cargo MPS Test Article Specs

- Instrumented with K-type Thermocouples, Pressure Transducers.
- 4 gas analysis sample probes capable of measuring CO, CO2, O2, Halon in each line.
Cargo MPS Task Group

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• During the rebuild process, several questions and concerns regarding certain specifications in the MPS materialized.
Concerns

- Galvanized steel used on 5 faces of the LD3 container.
- Concerns of toxic zinc fumes when temperatures reach above 392°F
Concerns

- Ball valve specification to be capable of opening in less than 0.1 seconds.
- The pneumatic actuator specified in the MPS is not capable of opening the ball valve at that rate.
Task Group Meeting

- 5:00 PM Wednesday Oct 31, 2018
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