

Waste Compartment Fire Containment MOCs



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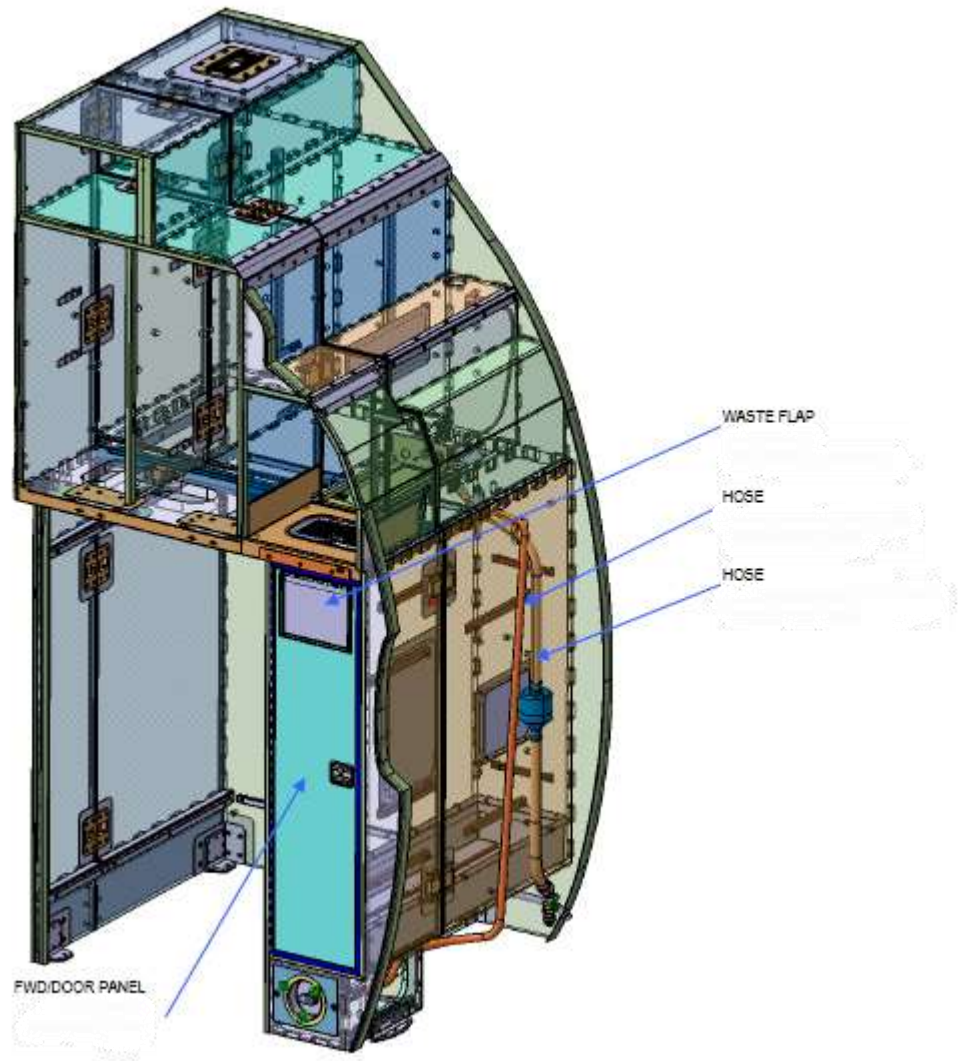
IAMFTWG- Montargis, France

Waste Compartment Fire Containment

14 CFR 25.853(h)

All Waste Compartments, Meal Trolleys & Waste Trolleys must be substantiated by Test or Analysis.

Industry/Regulators lack harmonized published methods of compliance (MOCs) to substantiate by analysis.



Waste Compartment Fire Containment

Zodiac Aerospace has compiled approximately 15-17 MOCs accepted by various customers including our ODA.

Only a few of these are specifically mentioned in FAA ACs

The others are straight forward often using aspects of the flammability Policy Statement.

Additionally several test aspects are not harmonized.



Waste Compartment Fire Containment- Test Parameters

What about smoke?

14 CFR 25.853(h) nor AC25-17A mentions nothing about smoke.

Only the Fire Test Handbook Chapter 10 par. 10.8.4 states: “Smoke will be contained within the waste compartment/container to the extent that the smoke level produced in the cabin does not create a hazardous condition or interfere with fire fighting procedures”

Some applicants test per the AC and not reference the handbook.

Others have personal subjective criteria for the smoke requirement.

Waste Compartment Fire Containment- Smoke Continued

Smoke density is heavily impacted by the size of the waste compartment and size of the test chamber.

Small receptacles if burned to completion would generate very little smoke.

Smoke generation is also impacted by the probable time to smoke/fire detection.

How to determine smoke generated has no significant impact?



Waste Compartment Fire Containment- Shimming gaps

Shim size and placement- not standardized.

Shimming doors/flaps w/ metal trim that overlaps the door surround panels vs. nested door/flap designs that overlap internal metal door support trims.

Do we shim designs with mechanically attached compressed seals that yield a 'zero' gap?

How to standardize?



Waste Compartment Fire Containment- 50% Flame Front and Temperature Spike

Test Requires a 50% flame front on the top surface of trash ignited before closing the compartment.

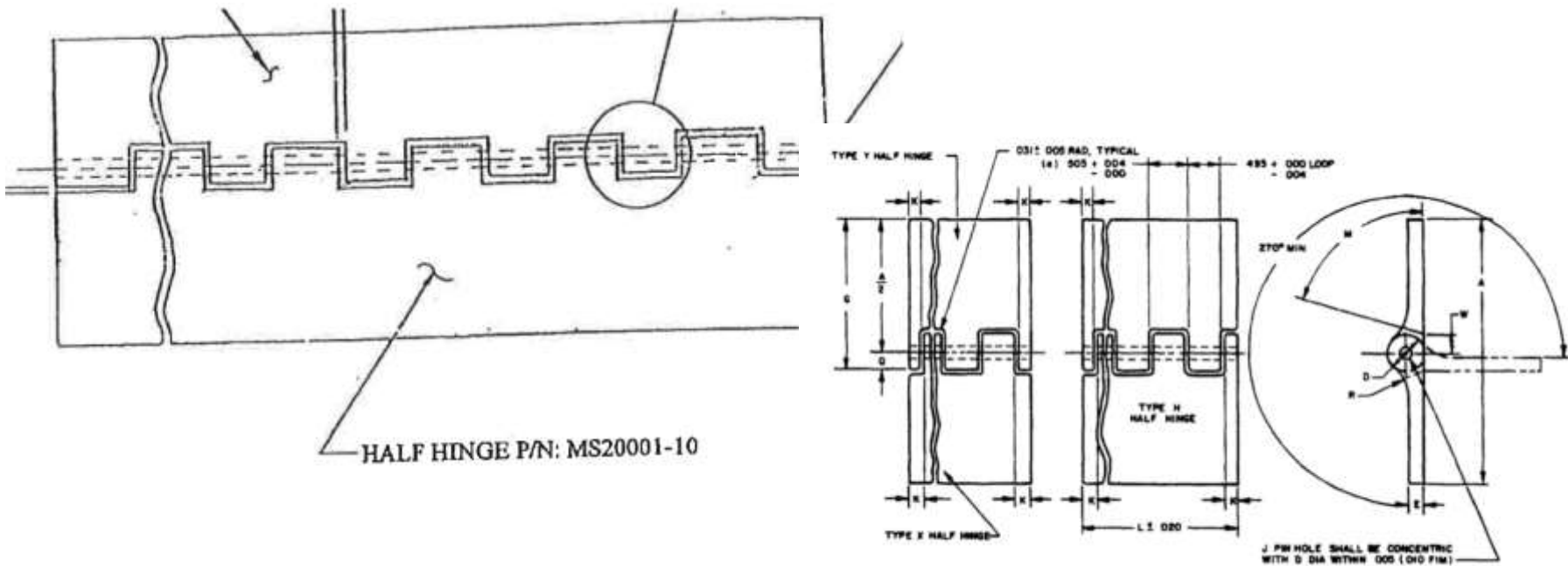
What to do if the 50% requirement is met but not centered under the thermocouple? (The thermocouple graph may not show as prominent of a temperature spike.)

How to standardize?



Waste Compartment Fire Containment- Hinge gaps

Air gap through hinges- Can we create standard values for comparing designs using the same hinge?



Purpose of Proposed Task Group

Harmonize and publish industry and regulator accepted 25.853(h) Similarity requirements & MOCs for waste compartments and galley trolley carts.

Develop new MOCs as needed.

Discuss test set up and test parameters- harmonize as necessary.

