

# Flammability Standardization Task Group

International Aircraft Materials Fire  
Test Working Group Meeting

Michael Jensen

# FAA ISSUE PAPER

Last week a small focus group met with the FAA Transport Airplane Directorate in Renton, Washington to further discuss standardization/ harmonization regarding the application of FAA flammability regulations. As many may know, the FAA stopped development of a Boeing Issue paper regarding these issues in favor of engaging the industry task group to propose broader policy that affects all US companies and not just Boeing. This standardization issue has been embraced by the Directorate's top management as an urgent priority. Prior to our meeting, the FAA developed a proposed policy memo (see attached) and pre-coordinated it with TCCA, ANAC & EASA. The proposed policy memo was then presented to us on the 20th of August and released on the FAA's website.

# FAA ISSUE PAPER

- [http://www.faa.gov/aircraft/draft\\_docs/](http://www.faa.gov/aircraft/draft_docs/)
- Click on “Policy” and it is the second item.

# FAA ISSUE PAPER



## Federal Aviation Administration

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### Memorandum

Date: Proposed

To: See Distribution

From: Manager, Transport Airplane Directorate, Aircraft Certification Service, ANM-100

Prepared by: Jeff Gardlin, Aerospace Engineer, ANM-115, 425-227-2136

Subject: Policy Statement on Flammability Testing of Interior Materials

Memo No.: ANM-115-09-XXX

Regulatory Reference: Part 25, §§ 25.853(a) and (d), and appendix F

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# FAA ISSUE PAPER

## **Summary**

This policy statement provides guidance on acceptable methods of compliance with the flammability requirements of Title 14, Code of Federal Regulations (14 CFR) part 25 for commonly constructed parts, construction details, and materials.

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- Two Parts to Issue Paper
  - Part 1 – Items Acceptable without additional data
  - Part 2 – Methods of Compliance that Require Supporting Data
  - Total of 44 items

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## Part 1, acceptable methods without additional data

| Reference Number | Feature / Construction                        | 25.853(a) Bunsen Burner Test Requirement/Similarity  | 25.853(d) Heat Release and Smoke Test Requirement/Similarity |
|------------------|---|--|--|
| 9                | Skin testing (FASE - Face As Separate Entity) | <p>Data may be collected from each face of a sandwich panel independently.</p> <p><b>Note:</b> The test coupon is a completed sandwich panel. The data from each face may be used to substantiate a panel construction when the panel thickness is greater than 0.25" and the thickness is the only difference between the core materials.</p> | Not applicable.  |

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## Part 2, methods of compliance that require supporting data

| Reference Number | Feature / Construction                                       | 25.853(a) Bunsen Burner Test Requirement/Similarity  | 25.853(d) Heat Release and Smoke Test Requirement/Similarity   |
|------------------|--|--|--|
| 10               | Surfacing materials (pin-hole filler, sweep and sand, Bondo) | No test requirement when surfacing material is controlled within an approved process specification to assure conformance to flammability requirements, or that these materials do not contribute to the propagation of a fire. | No test requirement when surfacing material is controlled within an approved process specification to assure conformance to flammability requirements, or that these materials do not contribute to the propagation of a fire. |
| 11               | Backside decorative  | Test of a panel with a backside decorative substantiates a panel with a backside that has no decorative.   | Test of a panel with a backside decorative substantiates a panel with a backside that has no decorative.   |

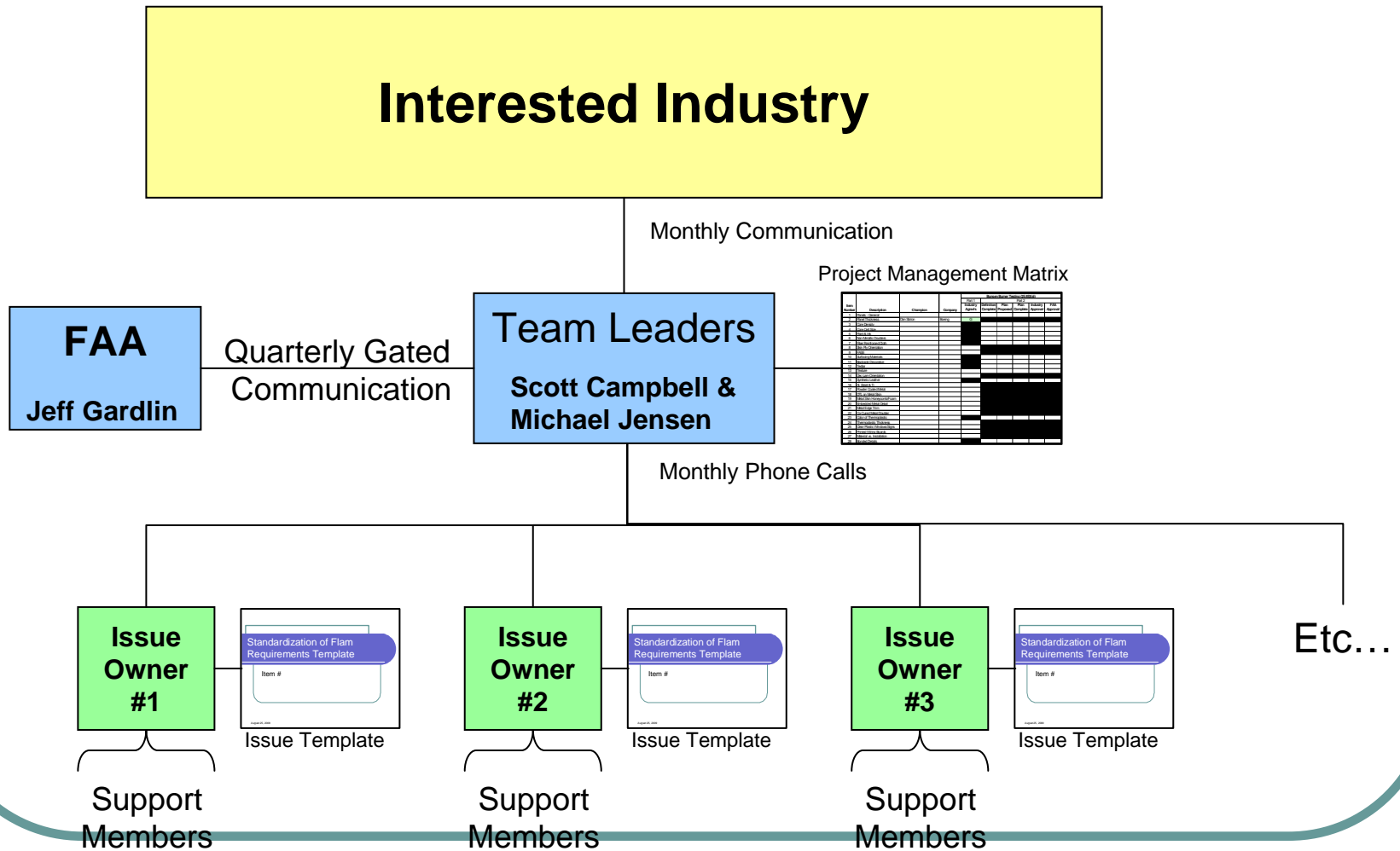


# Standardization of Flammability Requirements

## Task at Hand

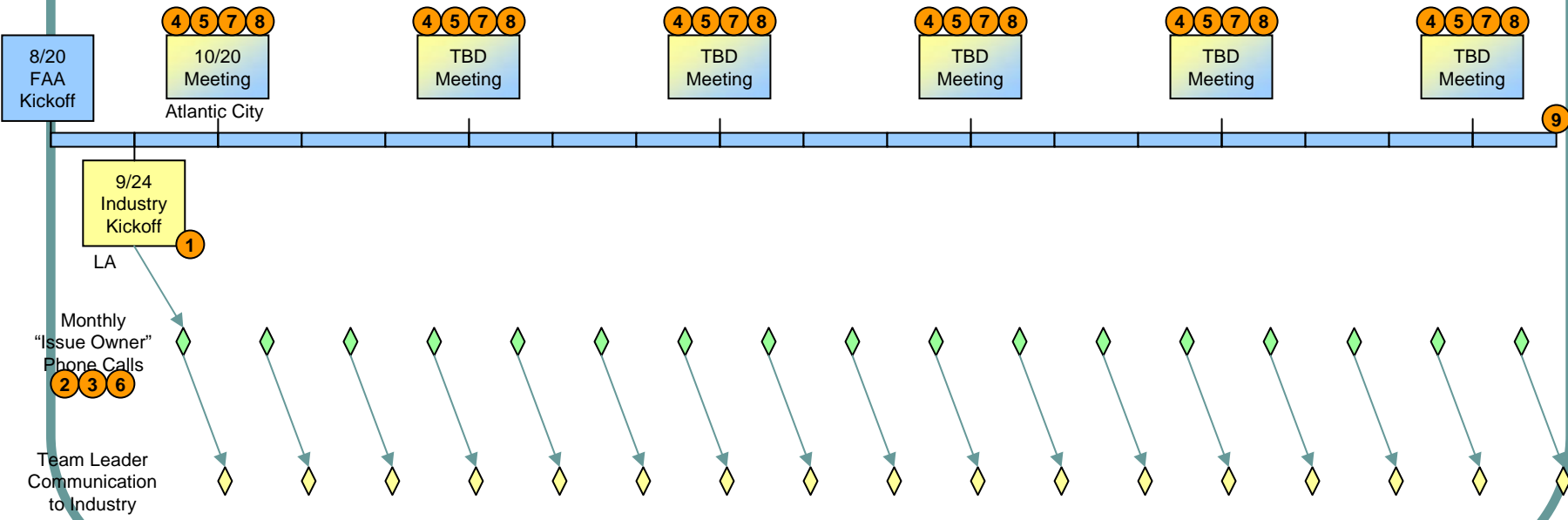
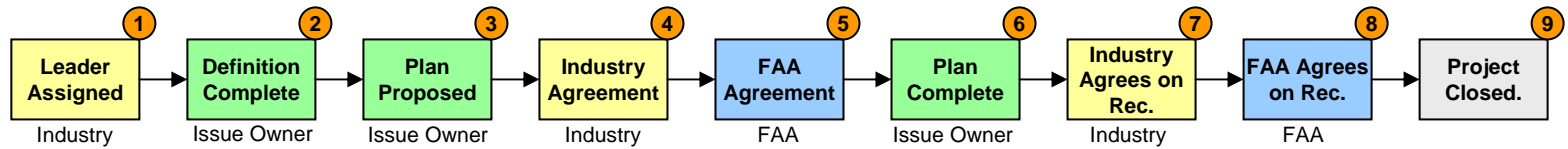
- Validate each item is stated clearly so it is understood and applied equally by all
- Develop analysis/test plan to provide substantiation that Part 2 items hold true

# Standardization of Flammability Requirements Project Structure



# Standardization of Flammability Requirements

## Project Structure



# Standardization of Flammability Requirements

## Communication

- Sharepoint site hosted by C&D Zodiac
- Everyone has access to view
- Team members have access to post comments, information and vote
- Analysis/test plans and final reports will be approved by Industry team for submittal to FAA

# Standardization of Flammability Requirements

## What Now?

- We have 18 months from release of Issue paper to resolve Part 2 items
- Team needs Task Leaders for the open items
- Need team members on each item

# Standardization of Flammability Requirements

## Panel Construction

|                       |                |
|-----------------------|----------------|
| <b>2 &amp; 24</b>     | Thickness      |
| <b>6, 7, 8, 9, 11</b> | Skin Ply       |
| <b>3 &amp; 4</b>      | Core Variables |
| <b>18 &amp; 19</b>    | Metal Skins    |

## Attached Items (Bonded)

|                |                |
|----------------|----------------|
| ★ <b>28-41</b> | Attached Items |
|----------------|----------------|

## Decorative / Color

|                   |                             |
|-------------------|-----------------------------|
| <b>5</b>          | Paint / Ink                 |
| <b>12, 13, 14</b> | Tedlar, texture and pattern |
| <b>15</b>         | Synthetic leather/Suede     |
| <b>17</b>         | Powder coated metal         |
| <b>23</b>         | Plastic color               |

## Panel Features

|                         |              |
|-------------------------|--------------|
| <b>20, 21, 22</b>       | Bonded Metal |
| ★ <b>33 &amp; 43a-f</b> | Edge Fill    |
| <b>42</b>               | Inserts      |
| <b>44</b>               | Fillet Seals |

## Other

|                    |                         |
|--------------------|-------------------------|
| <b>1 &amp; 27</b>  | General                 |
| <b>10</b>          | Surfacing Materials     |
| <b>16</b>          | Metal Parts             |
| <b>25</b>          | Clear Signs and Windows |
| <b>26</b>          | Printed Wiring Boards   |
| ★ <b>Adhesives</b> |                         |
| ★ <b>Potting</b>   |                         |
| <b>Small Parts</b> |                         |

# Standardization of Flammability Requirements

## Panel Construction Variables

| Item Number(s)        | Description    | Team Leader    | Support Team  |
|-----------------------|----------------|----------------|---|
| <b>2 &amp; 24</b>     | Thickness      | Boeing         | Driessen, Boeing, Schneller, Heath Tecna, SELL, JAMCO |
| <b>6, 7, 8, 9, 11</b> | Skin Ply       | Martin Spencer | SELL, C&D, Heath Tecna, Boeing                        |
| <b>3 &amp; 4</b>      | Core Variables | Jim Del Pinto  | C&D, SELL, Heath Tecna                                |
| <b>18 &amp; 19</b>    | Metal Skins    |                | Heath Tecna, Altitude, Bucher                         |

# Standardization of Flammability Requirements


## Panel Features

| Item Number(s) | Description  | Team Leader                         | Support Team  |
|----------------|--------------|-------------------------------------|---|
| 20, 21, 22     | Bonded Metal |                                     | 3M, Driessen,   |
| ★ 33 & 43a-f   | Edge Fill    | Patrick Zimmerman,<br>Klaus Boesser | 3M, C&D, Driessen Dassault, Sell,<br>Bostik, Altitude, Henkel, Boeing |
| 42             | Inserts      | Dan Slaton                          | Driessen, Boeing, C&D, Sell   |
| 44             | Fillet Seals |                                     | Driessen, Schneller,  |



# Standardization of Flammability Requirements

## Attached Items

| Item Number(s)   | Description    | Team Leader | Support Team  |
|--|----------------|-------------|---|
|  <b>28-41</b> | Attached Items | Lisa Gras   | 3M, AAL, JAMCO, Boeing, Delsen, Dassault, Cessna, Sogerma, Bostik, Henkel |

# Standardization of Flammability Requirements

## Decorative/Color

| Item Number(s)        | Description                       | Team Leader        | Support Team  |
|-----------------------|-----------------------------------|--------------------|---|
| <b>5a</b>             | Paint                             | Ingo Weichert      | Airbus, Mankiewicz, NWA, Goodrich (seating), Boeing                       |
| <b>12, 13, 14, 5b</b> | Tedlar, texture and pattern / ink | Michael Miler      | NWA 3M, AAL, Boeing, C&D, Embraer, Heath Tecna, Sell, Schneller, Driessen |
| <b>15</b>             | Synthetic leather/Suede           | Francisco Landroni | Embraer, Goodrich (seating), Sogerma                                      |
| <b>17</b>             | Powder coated metal               |                    | Goodrich (seating), Bucher  |
| <b>23</b>             | Plastic color                     | Michael Miler      | Goodrich (seating), Schneller   |

# Standardization of Flammability Requirements

## Other

| Item Number(s) | Description             | Team Leader    | Support Team  |
|----------------|-------------------------|----------------|---|
| 1 & 27         | General                 | Dan Slaton     | Bombardier, Boeing  |
| 10             | Surfacing Materials     | Martin Spencer | Heath Tecna, 3M, C&D, Boeing                                |
| 16             | Metal Parts             |                | C&D, Boeing   |
| 25             | Clear Signs and Windows | Ke-winn Chan   | Sogerma   |
| 26             | Printed Wiring Boards   |                | Panasonic (Russ Roth), Delsen, Boeing                       |
| ★ Adhesives    |                         |                | 3M, AAL, Henkel, Boeing, Bostik, Dassault, Bombardier, C&D  |
| ★ Potting      |                         |                | 3M, Henkel, Boeing, C&D                                     |
| Small Parts    |                         |                | Heath Tecna, Delsen, Bombardier, Boeing, Goodrich (seating) |