July 13, 1995

Dear International Aircraft Materials Fire Test Working Group Member:

Enclosed in this package is a copy of the Minutes/Information Package from the June 27-28, 1995, meeting held in Toulouse, France. Included in the package are copies of a few of the presentations given at the meeting.

The next working group meeting will be held Monday, November 13, 1995, at Harrah's Casino-Hotel in Atlantic City, New Jersey, prior to the International Conference on Cabin Safety Research. Special hotel rates are available. The reservation telephone number is 800-242-7724, in the United States and 609-441-5600, outside the United States. Please use the Reservation Code: FAA Cabin Safety Conference. It is recommended that you make your hotel reservations early as space is limited. A Meeting Return Form is enclosed in this package.

Please contact April Horner at 609-485-4471, or by fax at 609-646-5229, if you need any additional information.

We hope to see you in November.

Sincerely yours,

Richard G. Hill
Program Manager

Enclosures
INTERNATIONAL AIRCRAFT MATERIALS FIRE TEST WORKING GROUP MEETING MINUTES

AEROSPATIALE, TOULOUSE, FRANCE - JUNE 27, 1995
C.E.A.T., TOULOUSE, FRANCE - JUNE 28, 1995

TUESDAY, JUNE 27, 1995

Presentations and Updates By Task Group Leaders

Copies of Task Group Leader Presentations are included in this package.

#1 Continued Airworthiness Update - R. Hill

Explained field study and testing of in-service seat covers. The Report is in the final draft process. We will begin testing some of the fire blocked foams. H. Betz: Are you going to test graphite foams? R. Hill: I am not sure what materials we have, because we had difficulty getting airlines to supply foams for fire testing. S. Campbell: Did you get any years of service data? R. Hill: Yes, we received some. Bunsen Burner Tests for Continued Compliance - we used various panel materials (sidewalls, stowbins, ceiling materials). In general, these materials still passed the bunsen burner test. Generally, all the materials passed except for one partition panel because of afterburn, however, the materials that performed poorly were primarily foams. H. Betz: Did you also test old panels with new decorative materials on them? R. Hill: No, we used panels that were very old that were probably taken out of the plane prior to the OSU rule.

#2 Production Quality Assurance - R. Hill

The problem here is that we haven't gotten a lot of input from the task group members. What we are looking for is: Should we set a minimum for quality assurance?

#3 Minor Changes to Qualified Materials - R. Hill

The group originally decided to look at one particular area because this subject was so broad. We have asked Schneller to produce some panels with a wide range of colors from a reflective to an absorbent. We are talking about the material meeting the pass fail. S. Campbell: Schneller has data on panels tested with different colors. R. Hill: We have to put together one report that has all the information summarized and the advisory type material to go to the certification group for review for inclusion in the Handbook. We may need to assign responsibilities to task group members to put something together to be presented to certification people—we'll discuss that during the task group meeting later. This group needs to focus on preparing the report in order to accomplish its task.

#4 Material Systems Renovation and Repair Procedures

This task group is divided into 3 areas: refurbishment and renovation of cabin materials, repair of cabin materials, repair of cargo liners.

Renovation and Repairs - H. Betz

(A copy of data presented is included in this package).
S. Campbell: How often does the airline do the piggybacking procedure? H. Betz: Sometimes at turnaround time, because passengers sometimes have cases with sharp corners that rip the panel coverings and the panel has to be repaired immediately. You can tell by looking at a panel if it is piggybacked.

Comments - R. Hill: You must continually comply with the requirements in testing. We need a report explaining tests with an appendix that can be reviewed by certification people for possible inclusion in the Aircraft Materials Fire Test Handbook.

BLANKET AND PILLOW DISCUSSION - R. Hill

At the present time, there are no flammability requirements for blankets and pillows on aircraft. Pat Cahill has been running a number of tests for blankets and pillows. She has one test method that she is going to recommend. The FAA is not going to regulate pillows and blankets, but we are going to put out a suggested test method to buy blankets to. The test method may go into a TSO, but this has not been finalized. The test method Pat has looked into for blankets is a multiple-ply horizontal bunsen burner test. A report should be written in the near future and will be available to those interested. Pat has tested pillows also. The pillows have tested well. R. Miranda: when is the test method coming out? R. Hill: the final report will be ready in a couple months. R. Miranda: what form will this report be in? R. Hill: It will come out as an FAA Technical Center final report, and it may become a TSO. H. Betz: It should go into the Aircraft Materials Fire Test Handbook, because it will be a test method. R. Hill: Yes, we may include this test method in the Handbook.

W. Morgenroth: what about fire test requirements of footrests? R. Hill: in the U.S., we do not have anything like this. If our regulatory authorities were to ask me that question, I would say that it would have to meet the same requirements as the seat cushions. C. Lewis: We have never looked at anything like this at TCA, so I don’t know how we would handle this.

DISCUSSION ON CURRENT TEST METHODS - R. Hill

Are there any problems with the current test methods or any questions that anyone would like to discuss? We will be starting a worldwide round robin on the NBS and the OSU sometime within the near future (approximately 3 materials will be included). The FAA Technical Center will act as a liaison and will tabulate the data received. S. Hasselbrack: how does one obtain a list of the FAA approved NBS and OSU labs? R. Hill: the FAA does not approve labs. The FAA checks the equipment for conformity. This determines that the equipment conforms to test the material. Tell those who ask you to go to the FAA Certification Office and ask them for the labs they deal with.

WEDNESDAY, JUNE 28, 1995

HEAT FLUX TRANSDUCER ROUND ROBIN UPDATE - R. Hill

Explained transducer problems with calibration. Currently NIST and manufacturers are working together to identify problems. The FAA Technical Center has purchased 2 transducers from High Cal, Medtherm, and Thermogauge at 0-10 each to conduct another round robin. These will be delivered with a bare face and will be coated (painted) and calibrated at the FAA Technical Center. Each of the three companies and NIST will then calibrate these transducers also. S. Campbell: what is the target completion date of your round robin? R. Hill: It was to be completed by this meeting, however, at this time, only
two of the manufacturers have delivered the transducers we ordered. We hope to have this round robin completed by the end of the summer.

DISCUSSION ON AIRCRAFT MATERIALS FIRE TEST HANDBOOK -- R. Hill

Handbook will possibly be available on diskette. We are planning to send it to the Northwest Mountain Region for final review by September-October. We are presently working to input Chapters 9-13 and convert them to the new format (format of current draft of Chapters 1-8). There are also two new chapters. R. Hill reviewed changes in Handbook Chapters 1-8 since original publication in 1990.

CHAPTER 1

H. Betz: Where does sample go in center of front face or corner? S. Campbell: I thought we put in some words about worst case... R. Hill: We will check on this.

CHAPTER 2

No comments.

CHAPTER 3

No comments.

CHAPTER 4

No comments

CHAPTER 5

No comments.

CHAPTER 6

Not available at this time.

CHAPTER 7

No comments.

CHAPTER 8

No comments.

Member question: What about maximum temperature on oil burner tests? R. Hill: we are only concerned with minimum temperatures and heat fluxes. It is up to the manufacturer as to how they want to calibrate their burners.

R. Hill: The new Handbook may come out as an Advisory Circular, or it may come out as an FAA Technical Center report and be referenced in an Advisory Circular. We will include some wording to inform everyone that these changes are acceptable.

W. Lampa: Will the end Appendices be included (such as Appendix E and F)? R. Hill: Yes, send us any additions or changes as soon as possible for the end Appendices. W. Lampa:
will do this for the European area. W. Lampa: Add a note as discussed yesterday that the FAA and the GAA do not approve test labs to Appendix F. R. Hill: We will add something to Appendix F about this. R. Hill: If there is any new/changed information for the U.S. for the end Appendixes, please send it to us as soon as possible, also.

M. Reeves: Is there empirical data as to where the flame comes in contact with the seat cushions? R. Hill and S. Campbell: No, the test is designed to test the worst case design features of the seat.

NEXT MEETING

The next meeting will be held on Monday, November 13, 1995, at Harrah’s Casino-Hotel in Atlantic City, New Jersey. A Meeting Return Form is included in this package. Special hotel rates are available, see cover letter for details.
RENOVATION/REFURBISHMENT

\[
\begin{align*}
\text{OR} & \quad \text{OR} + \quad \text{OR} & = & & 100/100 \text{ OR } 65/65/200 \\
\text{ANY COMBINATION} & & \text{ORIGINAL BASE PANEL} & \text{IF ORIGINAL BASE PANELS CANNOT BE OBTAINED, THEN:} \\
\text{TEST OR OR + 3 SURROGATE PANELS} & & & \text{EXAMPLE: ORIGINAL BASE PANEL HRR/HRP = 45/50} \\
\text{TEST PANEL 1 BASELINE = 55/55, TEST PANEL 1 WITH} & & \text{TEST PANEL 1 WITH} & = 60/60 \\
\text{TEST PANEL 2 BASELINE = 50/50, TEST PANEL 2 WITH} & & \text{TEST PANEL 2 WITH} & = 57/57 \\
\text{TEST PANEL 3 BASELINE = 45/45, TEST PANEL 3 WITH} & & \text{TEST PANEL 3 WITH} & = 49/49 \\
\text{WORST CASE 85% SAFETY FACTOR (5/5) = 14/14} & & \text{WORST CASE: 60/60 \text{ SAFETY FACTOR (5/5) = 65/65}} \\
\text{ADD 14/14 TO ORIGINAL 45/50 \times 59/64 "ACCEPTABLE"} & & \text{"ACCEPTABLE"}
\end{align*}
\]

RENOVATION/REFURBISHMENT

QUALIFICATION PROCESS REPEATED FOR OTHER INTERIOR PANELS

\[
\begin{align*}
\text{HONEYCOMB} & \quad \text{CRUSH CORE} \\
\text{THERMOPLASTIC} & \quad \text{ALUMINUM} \\
\text{SIDEWALL, STOWAGE BIN GALLEY PANEL ETC.}
\end{align*}
\]

QUALIFICATION PROCESS APPLICABLE ONLY WHERE

\begin{itemize}
\item ORIGINAL SUBSTRATE UNAVAILABLE
\item ORIGINAL O.S.U. TEST DATA IS AVAILABLE
\end{itemize}

QUALIFICATION PROCESS NOT ALLOWED IF

\begin{itemize}
\item ORIGINAL PANELS ARE LACKING O.S.U. TESTING DATA
\end{itemize}

SMOKE TESTING: $D_2 \times 200 \text{ D PANELS}$

**FILLER-ONLY TESTS**

- Teflon molds used to produce samples
- 2 thicknesses tested: .125" and .250"
- 5 TYPES OF FILLERS
  - ADTECH Corp. Micro Ultra Filler 15-1 (Boeing BMS 5-136A Type I Class I)
  - HSH Aerospace Finishes Interplan 100 SP Flexible Spatula Body Filler
  - Mankiewicz Alexit-Fst-Fuller 40914 Filler, 40914 hardened
  - Quadrant Chemical (PE-6003) Polyester Resin
  - Quadrant Chemical (PE-6013, Low Heat/Smoke) Polyester Resin

**.125" FILLER TESTS**

- Heat Release Rate
- Heat Release Peak

**.250" FILLER TESTS**

- Heat Release Rate
- Heat Release Peak

As requested by several filler manufacturers, the names have been left out. The names will be included in the final report submitted to ANM-000.
FILLER TEST QUESTIONNAIRE

40 LETTERS SENT TO WORKING GROUP MEMBERS (MOSTLY SUBGROUP 4)
9 RESPONDENTS
  METHOD I: FILLER ONLY ✔ ✔ ✔ ✔
  METHOD II: FILLER SYSTEM ✔ ✔
  OTHER ✔ ✔ ✔ ✔

COMMENTS/SUGGESTIONS
  • TEST METHOD I IS THE MOST STRAIGHTFORWARD
  • IF USING METHOD I, WHAT IS ACCEPTANCE CRITERIA?
  • USE METHOD I FOR SPATULA/PUTTY, METHOD II FOR SPRAY/BRUSH
  • USE BOTH METHODS I FOR SCREENING BAD FILLERS, II TO CONFIRM FINAL SYSTEM
  • TEST METHOD I IS INCONSISTENT WITH CURRENT FAA REGULATIONS
  • FAR 25.853 IS "PART-BASED" NOT INTENDED FOR INDIVIDUAL COMPONENTS OF PARTS

RECOMMENDED FILLER TEST METHOD

IF AREA TO BE REPAIRED IS:
  GREATER THAN 144 SQUARE INCHES ➞ SYSTEM TEST
  LESS THAN 144 SQUARE INCHES ➞ FILLER ONLY TEST

FILLER TEST ACCEPTANCE CRITERIA (REPRESENTATIVE THICKNESS):
  O.S.U. 100/100
  N.B.S. 200 D5

METHOD WILL USUALLY RESULT IN:
  TESTING OF SPRAY/BRUSH FILLERS IN THE SYSTEM FORMAT
  TESTING OF SPATULA/PUTTY FILLERS IN ISOLATION

DRAFT REPORT

• SENT TO ANM-100 (AIRCRAFT CERTIFICATION DIVISION, N.W. MOUNTAIN REGION)

• SUMMARY OF SUBGROUP 4 ACTIVITIES, INCLUDING:

  BACKGROUND
  TEST/WORK PERFORMED
  PROBLEM AREAS
  RECOMMENDATIONS

  PERTAINING TO CERTIFICATION OF
  CABIN INTERIOR RENOVATION
  CABIN INTERIOR REPAIR
  CARGO LINER REPAIR

• REVIEW DOCUMENT, SUBMIT CHANGES FOR INCLUSION IN FINAL REPORT
Experience of Heat Release Tests for Renovation and Repair

How to achieve a continuous compliance with the heat release rules
Problems of Testing

- Requirements by AC-Manufacturers
- Definition of test panel
- Selection of test lab
- Comparison to original test results
  - Availability of production dates
  - Quality of test results

⇒ Large number of tests necessary
⇒ Not audible
Sample for a Testing

- Scrapped panels for testing
- Test panels prepared
  - Original
  - Repaired
- Lab selected
  - Average acc. to latest round robin test
  - Approved by FAA and controlled by DER

☞ Original panel already failed!
Repairing by piggy backing

- Original panel failed in lab A
- Test with spare panel in lab B passed
- Difference between original and repaired panel within labs approx.. constant!
Repairing by painting

- Results are mainly dependant on paint thickness
- Behaviour of each paint system has to be determined
Proposal

- Definition of average values per A/C part type
  - Window panels
  - Bin doors
  - Ceiling panels etc..

- Calculation of heat release rate by basic data
  - Basic data determined by FAA/JAA approved lab

- Repair decisions with HRR manual
### Calculation of the Heat Release

#### UPPER DECK - CABIN HEAT CALCULATION AFTER OVERHAUL

<table>
<thead>
<tr>
<th>Code</th>
<th>Components</th>
<th>Sqm Total</th>
<th>AVG HRR</th>
<th>AVG HR</th>
<th>sqm repaired</th>
<th>Repair Method</th>
<th>New HRR</th>
<th>New HR</th>
<th>Average Revised HRR</th>
<th>Average Revised HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>DADO</td>
<td>1.5</td>
<td>48,0</td>
<td>53,0</td>
<td>0.0</td>
<td>Piggy Backed</td>
<td>58</td>
<td>55,7</td>
<td>48,0</td>
<td>56,2</td>
</tr>
<tr>
<td>B</td>
<td>SIDEWALLS</td>
<td>3.8</td>
<td>55,0</td>
<td>52,0</td>
<td>1.0</td>
<td>Paint</td>
<td>60,5</td>
<td>54,6</td>
<td>56,4</td>
<td>54,9</td>
</tr>
<tr>
<td>C</td>
<td>PSU-AREAS</td>
<td>4.7</td>
<td>52,0</td>
<td>50,0</td>
<td>4.7</td>
<td>Piggy Backed</td>
<td>62</td>
<td>52,5</td>
<td>62,0</td>
<td>53,0</td>
</tr>
<tr>
<td>D</td>
<td>BIN-DOORS</td>
<td>6.8</td>
<td>40,0</td>
<td>45,0</td>
<td>0.0</td>
<td>Piggy Backed</td>
<td>50</td>
<td>47,3</td>
<td>40,0</td>
<td>47,8</td>
</tr>
<tr>
<td>E</td>
<td>CLOSURE-AREAS</td>
<td>1.2</td>
<td>51,0</td>
<td>52,0</td>
<td>0.0</td>
<td>Piggy Backed</td>
<td>61</td>
<td>54,6</td>
<td>51,0</td>
<td>55,1</td>
</tr>
<tr>
<td>F</td>
<td>CEILING-PANELS</td>
<td>6.8</td>
<td>55,0</td>
<td>52,0</td>
<td>6.8</td>
<td>Piggy Backed</td>
<td>65</td>
<td>54,6</td>
<td>65,0</td>
<td>55,1</td>
</tr>
<tr>
<td>G</td>
<td>LAVATORIES</td>
<td>6.9</td>
<td>57,0</td>
<td>55,0</td>
<td>4.0</td>
<td>Paint</td>
<td>62,7</td>
<td>57,8</td>
<td>60,3</td>
<td>58,0</td>
</tr>
<tr>
<td>H</td>
<td>GALLEYS (Sell)</td>
<td>1.3</td>
<td>50,0</td>
<td>48,0</td>
<td>0.0</td>
<td>Paint</td>
<td>55</td>
<td>50,4</td>
<td>50,0</td>
<td>50,6</td>
</tr>
<tr>
<td>I</td>
<td>DIVIDERS</td>
<td>6.2</td>
<td>45,0</td>
<td>42,0</td>
<td>0.0</td>
<td>Paint</td>
<td>49,5</td>
<td>44,1</td>
<td>45,0</td>
<td>44,3</td>
</tr>
<tr>
<td>J</td>
<td>STARWAY</td>
<td>1.0</td>
<td>55,0</td>
<td>50,0</td>
<td>0.5</td>
<td>Paint</td>
<td>60,5</td>
<td>52,5</td>
<td>57,8</td>
<td>52,8</td>
</tr>
<tr>
<td>M</td>
<td>DOOR # LH &amp; RH</td>
<td>1.0</td>
<td>49,0</td>
<td>53,0</td>
<td>1.0</td>
<td>Piggy Backed</td>
<td>59</td>
<td>55,7</td>
<td>59,0</td>
<td>56,2</td>
</tr>
</tbody>
</table>

**Average per Zone**

<table>
<thead>
<tr>
<th>AVG HRR</th>
<th>AVG HR</th>
<th>sqm</th>
<th>Repair Method</th>
<th>New HRR</th>
<th>New HR</th>
</tr>
</thead>
<tbody>
<tr>
<td>41.2</td>
<td>55.7</td>
<td>55.2</td>
<td>Piggy Backed</td>
<td>64.32</td>
<td>58.0</td>
</tr>
</tbody>
</table>

**New HRR = Avg HRR + Δ-Number**

**Average Revised HRR =**

\[
\text{Avg HRR} \times \text{sqm not repaired} + \text{New HRR} \times \text{sqm repaired}
\]

\[
\text{sqm}
\]
Aims and Objectives

- Minimise costs
  - Testing
  - Samples

- Controllable continuous compliance
  - Different materials
  - Different methods of repairs
  - Decisions of optimum repair methods
Experience of Heat Release Tests for Renovation and Repair

Test Results from different original Panels

<table>
<thead>
<tr>
<th>Heat Release Tests on Original Panels</th>
<th>Test Lab</th>
<th>Peak Ave</th>
<th>Total Ave</th>
<th>Original Window Panel Piggy Backed</th>
<th>Peak Ave</th>
<th>Total Ave</th>
</tr>
</thead>
<tbody>
<tr>
<td>Window panel 737-300</td>
<td>A</td>
<td>52.1</td>
<td>69.5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>44.6</td>
<td>55.3</td>
<td>Original Window Panel Piggy Backed</td>
<td>53.5</td>
<td>61.4</td>
</tr>
<tr>
<td>Original Ceiling Panel 747-400</td>
<td>A</td>
<td>53.2</td>
<td>64.4</td>
<td>Original + 20 • m 404-12</td>
<td>52.7</td>
<td>72.5</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td></td>
<td></td>
<td>Original + 40 • m 404-12</td>
<td>51.9</td>
<td>72.0</td>
</tr>
<tr>
<td>Origin1: Lavatory Wall 747-400 other Airline</td>
<td>C</td>
<td>not available</td>
<td>not available</td>
<td>Original 24.6 mm Piggy backed</td>
<td>68.4</td>
<td>66.3</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>not available</td>
<td>not available</td>
<td>Original 18.3 mm Piggy backed</td>
<td>69.0</td>
<td>71.2</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>not available</td>
<td>not available</td>
<td>Original 18.3 mm Piggy backed</td>
<td>63.2</td>
<td>63.1</td>
</tr>
<tr>
<td>Original 747-400 Lavatory door</td>
<td>D</td>
<td>67.2</td>
<td>61</td>
<td>Original 24.6 mm new decorated</td>
<td>62.0</td>
<td>62.2</td>
</tr>
<tr>
<td>Schneller Std Panel</td>
<td>A</td>
<td>44.5</td>
<td>36.3</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>31.8</td>
<td>30.2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Test Lab A shows results above 65/65, even though Aircraft Manufacturer achieved results less than 55/55
- A similar result showed Lab B
Published Heat Release Requirements in Maintenance Manual

- Boeing 747-400 (MM 25-00-00)
  - max. repair for decor foil 100 sq. inch (page 808)
  - painting allowed no restriction (page 701)
- Airbus A340 (MM 25-00-00)
  - repair size not determined (page 817)
  - painting not excluded (page 820)
- Airbus A320/321 (MM 25-00-00)
  - repair for decor foil 124 sq. inch (page 841)
  - painting allowed no restriction procedures for different paint systems (page 837 ff.)

⚠️ With approved documents no continuous compliance with the heat release rule feasible!
## Heat Release (HR) B747-400

### Cabin Components Decision Diagram

<table>
<thead>
<tr>
<th>Cabin Components</th>
<th>Handling of Cabin Component Are Zonal</th>
<th>Paint System 404-12 LAC Thickness</th>
<th>Paint System 404-12 LAC Thickness</th>
<th>HR 65/65 Requirement</th>
<th>Piggy</th>
<th>Zonal Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>µm 20-40</td>
<td>µm 40-50</td>
<td></td>
<td></td>
<td>A/C B747-400</td>
</tr>
<tr>
<td>Dado- Panels</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Window Panels MD &amp; Frames UD</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td>X*</td>
<td></td>
</tr>
<tr>
<td>PSU- Panels</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Body inside</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Body outside</td>
<td>X</td>
<td></td>
<td></td>
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<tr>
<td>Doors</td>
<td>X</td>
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</tr>
<tr>
<td>Endcaps</td>
<td>X</td>
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<tr>
<td>Closure panels</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td>Ceiling panels MD</td>
<td>X</td>
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<tr>
<td>Lower ceiling panels</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Door linings</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Door frame linings</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
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**Note:** *Only if existing laminate is not removable*
# Boeing OSU and Smoke Data Summary

**Data Sources:** Qualification. OC. Baseline Panels of Studies

**Constructions:**
- A - 1 ply/ 1 ply, 0.125-inch thick
- B - Cl 3/ 0.188-inch core/ Cl 2 or 4/MAT
- C - 2 ply/ 2 ply, 0.5-inch thick
- D - 6 ply/6 ply, 0.75-inch thick
- E - 8800/ 0.125-inch core/120 /2 BRK--/crowfoot/glass mat

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<th>S.D.</th>
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<td>George J. Danker</td>
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NOVEMBER 13, 1995
MEETING RETURN FORM

INTERNATIONAL AIRCRAFT MATERIALS
FIRE TEST WORKING GROUP

NOTE: YOU WILL NOT RECEIVE MINUTES OF THIS MEETING UNLESS
THIS FORM IS RETURNED.

☐ I will not be able to attend, but please send me the meeting minutes.

The next meeting will be held on November 13, 1995, at Harrah's Casino Resort in Atlantic City, New Jersey. If you plan to attend or would like to receive copies of the Minutes, you must return this form by Friday, October 13, 1995.

PLEASE COMPLETE THE FOLLOWING INFORMATION:

NAME: ____________________________________________

COMPANY: _________________________________________

PHONE: ________________________ FAX:________________

ADDRESS: __________________________________________

CITY, STATE, ZIP: ________________________________

COUNTRY: _________________________________________

RETURN THIS FORM BY FAX BY FRIDAY, OCTOBER 13, 1995, TO:

APRIL HORNER
FAX: 609-646-5229

OR CALL:

PHONE: 609-485-4471

U.S. Department of Transportation
Federal Aviation Administration
INTERNATIONAL CONFERENCE ON
CABIN SAFETY RESEARCH

November 14-16, 1995
Harrah's Casino-Hotel
Atlantic City, New Jersey
USA

Jointly Sponsored by:

European Joint Aviation Authorities
Transport Canada Aviation
United States Federal Aviation Administration

CONFERENCE OBJECTIVE:
Present to the aviation community proposed Cabin Safety Research Actions (e.g. FAA-TCA proposed Cabin Safety Research Program and Plan; other authorities programs) and obtain feedback on the same.

Agenda items will include:
- Overview of proposed FAA-TCA Cabin Safety Research Program and Plan
- Organization and Methodology of FAA-TCA Program and Plan
- Organization and Methodology of other authorities programs
- Presentations and discussion on Evacuation
- Presentations and discussion on Crash Dynamics
- Presentations and discussion on In-flight Emergencies
- Presentations and discussion on Fire Safety

In addition, there will be an opportunity for attendee participation in the development of specific comments and recommendations on the Plan.

Registration Fee:
There is no Registration Fee for this Conference, however, space may be limited.

For additional information, please complete the information below:
NAME: ___________________________________________
TITLE: ___________________________________________
COMPANY: _________________________________________
ADDRESS: _______________________________________
               _______________________________________
               _______________________________________
PHONE: ___________________ FAX: ___________________

Fax or mail this information to:
April Horner (GSC)
Conference Coordinator
Federal Aviation Administration (FAA) Technical Center
Fire Safety Section, AAR-422
Building 287
Atlantic City International Airport, NJ 08405
FAX: 609-646-5229
AGENDA

INTERNATIONAL AIRCRAFT MATERIALS FIRE TEST WORKING GROUP MEETING

To Be Held At
Aerospatiale and CEAT, Toulouse, France

June 27-28, 1995

TUESDAY, JUNE 27, 1995

8:10  Aerospatiale Bus Pick-up at Place Wilson (across from Gaumont Cinema)
8:40  Arrive at Aerospatiale
9:00-9:30 Opening and Introduction - R. Hill (FAA Technical Center)
Aerospatiale Video Presentation
9:30-11:10 Presentations and Updates by Task Group Leaders
  9:30-9:50   #1 Continued Airworthiness
                - Final Report & Recommendations on
                  Continued Compliance
                - Seat Fire Blocking Layers
                - Large Surface Panels
  9:50-10:10   #2 Production Quality Assurance
10:10-10:30   #3 Minor Changes to Qualified Materials
10:30-10:50   Break
10:50-11:10   #4 Material Systems Renovation & Repair Procedures
11:10-11:30  Renovation and Repairs - H. Betz (Lufthansa)
11:30-12:30 Separate Task Group Meetings
                #1 Continued Airworthiness
                #2 Production Quality Assurance
                #3 Minor Changes to Qualified Materials
                #4 Material Systems Renovation & Repair Procedures
12:30-2:00    Lunch
2:00-2:30    Task Group Discussion/Task Group Leader Reports/Assignments
2:30-3:00    Blanket and Pillow Discussion
3:00-3:15    Break
3:15-4:00    Discussion on Current Test Methods (OSU/NBS/Oil Burner/Bunsen Burner)
4:00-4:45    New Topics
5:00         Aerospatiale Bus Departs to Place Wilson

WEDNESDAY, JUNE 28, 1995

8:10        CEAT Bus Pick-up at Place Wilson (Gaumont Cinema)
8:40        Arrive at CEAT
9:00-9:15   Ongoing Round Robin Testing Updates
            Heat Flux Transducer Round Robin Updates
9:15-10:45  Discussion on Aircraft Material Fire Test Handbook Test Methods
            9:15-9:45     Chapters 9-13
            9:45-10:45   Chapters 1-8 Presentation on Changes/Updates
10:45-11:00 Break
11:00-11:45 Test Method Videos
            Vertical Bunsen Burner Video
            New Videos
11:45-12:15 Discussion on Fuselage Burnthrough Test Method
12:15-1:00  General Discussion/Closing
1:00-2:00   Lunch
2:15        Bus Departs to Place Wilson