

# INTERNATIONAL AIRCRAFT MATERIALS FIRE TEST WORKING GROUP MEETING

MARCH 10-11, 1998

Hosted by Orcon Corporation at the Waterfront Plaza Hotel, Oakland, California

## TUESDAY, MARCH 10, 1998

### Presentations/Updates by Task Group Leaders

#### Full Scale Seat Tests (P. Cahill/R. Hill)

We are trying to get materials from Task Group members for these tests. The deadline to receive materials from Task Group members is June 1, 1998. These tests are to look at the design philosophy to see if the test method really simulates what occurs during full scale testing. Four sets of triple seats will be tested.

#### New Thermal Acoustic Insulation Work (P. Cahill)

Reviewed this Task Group's accomplishments.

#### Continued Airworthiness (J. Davis)

Work still in process.

#### Minor Changes to Qualified Materials (R. Hill)

Explained testing concern with color changes on panels.

#### Surrogate Materials Heat Release Testing (T. Marker)

Reviewed results of surrogate panel tests conducted at FAATC to date.

#### Similarity of Fabrics (S. Hasselbrack)

Made some modifications to seat fabric similarity report based on comments by Task Group members. The report covers the wool materials. Draft will be distributed to core Task Group members for review.

#### Materials Textbook (S. Hasselbrack)

Explained work on the Materials Textbook that the Task Group is preparing for publication through this Working Group.

#### OSU Quality Assurance (M. O'Bryant)

Presented results of latest round robin tests. This information is included in this Minutes package.

#### Burn Length Determination (P. Cahill)

Discussed new work in the area of Thermal Acoustic Insulation testing.

#### Results of Evaluation to Standardize Test Forms (H. Betz)

Presented latest version of the Standardized Test Form after incorporating the comments he received. Explained form design and changes made to it. R. Hill: How can we use these standardized forms? Should we include these forms in the Aircraft Materials Fire Test Handbook as forms that have been found to be acceptable? Response: Yes. R. Hill: Hanns will provide these forms to us for one more review by Working Group members.

#### Forms Discussion (I. Weichert)

Showed examples of how test forms can be impossible to read. Explained difficulties with some of the forms completed by aircraft component manufacturers and in what ways they are incomplete. His discussion included problem areas with similarity reports provided by seat cushion manufacturers.

Proposed a new form for seat cushion similarity justification. R. Hill: The Standardized Forms Task Group should work on this.

#### Potential Fire Threats (R. Hill)

We (this Task Group) will evaluate the various materials in the aircraft that are not judged properly by the test that is required for them.

#### Discussion on Current Test Methods/Problems

Discussion on TSO for blankets. Airline representatives (Delta, Continental) at this meeting do not see a problem with developing a TSO for blankets. It would be beneficial as far as the airlines knowing what they are purchasing. The blanket test will be included in the Aircraft Materials Fire Test Handbook. R. Hill: Should the TSO include any information on meeting the TSO other than the test method? The FAA, TCCA, and the other authorities will discuss this issue further to make the final decision about whether a TSO is necessary or not.

P. Cahill will address the issue of burn length/self-extinguishment in the Aircraft Materials Fire Test Handbook.

#### Oil Burner Seat Test (P. Cahill)

Pat clarified that Oil Burner tests must be run in accordance with the Rule per FAR Part 25, Appendix F **OR** per the Aircraft Materials Fire Test Handbook and not parts of each. This concerns air velocity. In order to standardize the flame in the seat test, we have to standardize the airflow rate.

#### Seat Cushion Tests (R. Hill)

This issue addresses the testing of Seat Cushions that are not fully covered with outer fabric. How are these tests supposed to be conducted? The side that you put close to the burner during the test has to be representative of the seat as it will be installed in the aircraft.

### **WEDNESDAY, MARCH 11, 1998**

Next Meeting (G. Pichler-Greiner): The next meeting will be hosted by Greiner in Linz, Austria, on June 16-17, 1998.

#### **Task Group Leader Reports**

Thermal Acoustic Insulation Task Group (P. Cahill): P. Cahill will develop a test plan.

Full Scale Seat Test Task Group (P. Cahill): June 1, 1998, is the deadline for the materials to be received at the FAATC for this test.

Production Quality Assurance (QA) - C. Lewis: First meeting of this (re-formed) Task Group (TG). General view that Production QA is an issue that needs to be addressed, and that the TG should attempt to define basic guidelines / key elements that need to be considered in the development of a QA system. Discussions focused on extent of problem and associated issues, available background information, and way forward. Main actions at this time include definition of problem, acquisition of information on QA systems from different sectors of industry (already supplied by major US aircraft manufacturer) and characterization of production processes. *(Report to be available at a later date.)*

Continued Airworthiness (J. Davis): We need to get a copy of ATA-100. We want to make sure that whatever recommendations we make fit in to the proper format. We are looking into various types wear testing.

Final Report on Seat Similarity (S. Hasselbrack): We will issue the first report as written on wool, nylon.

First Draft of Materials Textbook (S. Hasselbrack): Received comments from Task Group members and will incorporate them into draft.

OSU Quality Assurance (M. O'Bryant): Working with OSU operators. A copy of the "QA Task Group Performance Evaluation Report for 1998" (reformatted version) is included in this package.

November 1998 Working Group Meeting: Rooms will be provided (at the FAATC or Harrah's) for the Task Groups to meet during this week. Task Group chairmen should let us know if they would like time and space for a Task Group meeting. Also, let us know if certain Task Group meetings should not overlap. Task Group Leaders should let

April Horner know one month prior to the meeting if they will need time and space for a Task Group meeting during that week (when you make your request to April for space be sure to tell her how much time you will need and how many people you expect to attend).

#### Presentations by Working Group Members

Burnthrough Development (J. Townsend-Johns Manville): Presented results of testing conducted at Johns Manville Technical Center including test design, equipment, etc.

Burnthrough Test Results (J.F. Petit-CEAT): Explained test rig set up and presented results of burnthrough tests on materials supplied by Orcon Corporation.

Michael Mitzlaff: Presented work done in cooperation by Metzeler, Greiner, and Lantal.

#### Open Discussion on DOT Test Method Harmonization

Group Member comment: It could work if there were standardized tests, but each transportation authority set their own pass/fail criteria. R. Hill: It is possible that if the tests were standardized, the cone calorimeter may be required for running the standardized tests because it is the more modern piece of test equipment.