

## INTERNATIONAL AIRCRAFT MATERIALS FIRE TEST WORKING GROUP MEETING

JUNE 16-17, 1998

Hosted by Greiner, Linz, Austria

### TUESDAY, JUNE 16, 1998

"International Aircraft Fire and Cabin Safety Conference" Information – November 16-20, 1998

The next Working Group meeting will be part of this conference. The sessions included in the conference include interior materials fire safety, advanced materials fire safety, systems fire safety (halon replacement, fuel tank explosion protection), operational issues, evacuation, and crash dynamics. We will try to hold separate Task Group meetings during this week.

#### Presentations/Updates by Task Group Leaders

##### Full-scale Seat Tests – P. Cahill (FAATC)

The original date planned to run these tests was mid-to-late July. However, as of today, we have not received the polyester-filled seats that were to be part of this test program.

##### Continued Airworthiness – R. Hill

This Task Group is looking into the area of seat cushions and what can be done up front to assist with the continued airworthiness of the seat cushion to ensure that three or four years (or longer) later this seat will still meet the requirements.

##### Minor Changes to Qualified Materials – R. Hill

##### Surrogate Materials Heat Release Testing – R. Hill

Tim Marker is currently running some additional surrogate panel tests at the FAATC.

##### OSU Quality Assurance – M. O'Bryant

He suggested that the OSU operators put together a list of the things they do to keep their OSU's running consistently and obtaining consistent results from their OSU's.

He sent some extra panels to those labs that had outlying results after the last round of tests by member labs.

##### Heat Flux Transducers – R. Hill

The heat flux transducer specification (calibration method) will be included in the next edition of the Aircraft Materials Fire Test Handbook. This specification is included in this Minutes package.

##### New Thermal Acoustic Insulation Work – P. Cahill

Explained tests she will be conducting on thermal acoustic insulation.

### Burn Length Determination – P. Cahill

The definition of vertical Bunsen burner burn length determination is included in the latest version of Aircraft Materials Fire Test Handbook.

### Results of Evaluation to Standardize Test Forms – H. Betz

Reviewed the final form design and gave overview of what has been done in designing new forms. R. Hill: Did you consider including all the information recorded on these forms in a database. H. Betz: Yes, we have already done that.

### Similarity Issues – I. Weichert

Provided background on this Task Group. This group was formed at the March 1998 Working Group meeting. It hopes to continue the work done by Sally Hasselbrack's Similarity of Fabrics Task Group that concluded its work as of the March 1998 meeting. This Task Group will look at materials other than the wool-nylon materials examined by Sally's Task Group.

### Potential Fire Threats – R. Hill

Provided background on this newly established Task Group (established at March 1998 Working Group meeting).

### FAATC Watermist Program – R. Hill

Previously, the FAA in conjunction with other authorities had conducted a major program on cabin watermist in preventing the spread of postcrash fires. A cost/benefit analysis was done that showed that it was 8 times more expensive than the number of lives that would be saved. We are looking into the design and testing/research of a cargo watermist system. This issue will be addressed in more detail at the November 16-20, 1998, conference in Atlantic City, New Jersey.

### Discussion on Current Test Methods/Problems – R. Hill

H. Betz: Requested an annual summary and Working Group discussion on postcrash fire data. R. Hill – we can put something together and discuss it as part of the Potential Fire Threats Task Group.

### Aircraft Materials Fire Test Handbook Update

The complete draft has been given to the FAA Northwest Mountain Region for review. Once their review is complete, edits will be made, and the document will be published. Once publication has been approved, the document will be posted on the Internet as well. The goal is to keep the Handbook a 'living' document so that edits/modifications/additions may be made instantly. Once the Handbook publication date is known, it will be posted on the FAA Technical Center Website. S. Smith: Would you be able to put the draft form of the Handbook on the Internet so that we (industry) may use it as a reference? R. Hill: I will ask Jeff Gardlin (FAA Northwest Mountain Region Certification Office) about that later this week?

### FAATC Burnthrough Tests Done with Aluminum Frames – R. Hill

Results of these tests can be found at the FAATC Website:

<http://www.asp.tc.faa.gov/FAATC/AAR422/index.html>

## Separate Task Group Meetings

### **WEDNESDAY, JUNE 17, 1998**

#### Task Group Leader Summaries

##### Thermal Acoustic Insulation Task Group – P. Cahill

The group would like to test contaminated (dirty, etc.) insulation blankets and electrical ignition sources. Orcon will provide some test samples.

##### Seat Fire Blocking Textbook Task Group – S. Hasselbrack

Provided additional pages to textbook to Task Group members (initial draft distributed to Task Group at March 1998 meeting).

##### Potential Fire Threats Task Group – R. Hill

Two major concerns were electrical ducting insulation and electrical wiring. The Task Group members have been asked to make a list of materials where the test method for those materials may not be adequate for the fire scenario in that area. We were also asked to come up with a list of recent incidents to compile incidents that could have been threatening to the airport. The FAATC will put together this list.

##### Similarity of Dress Covers – I. Weichert

(This was the initial meeting of this Task Group). This Task Group is a continuation of the Task Group Sally Hasselbrack chaired in the past couple of years. This Task Group will continue similarity work on materials other than those addressed by Sally's previous Task Group. The manufacturers were asked to provide material specifications.

##### Production Quality Assurance – M. O'Bryant/C. Lewis

A minimum Q/A plan for a small supplier was reviewed. Discussed OSU at length. This group is still in the process of collecting data. The group is also in the process of obtaining copies of various test and specification documents which will be reviewed once provided.

R. Hill: Does anyone see a need for a new Task Group to be established? Consensus: No.

##### Aircraft Blanket Test Method – P. Cahill

This test method has been put on the Internet as a Flight Standards Informational Bulletin (FSIB). It is also included in the Aircraft Materials Fire Test Handbook. The FAA is currently looking into how to reference this document since it is not a required test method. This test method provides information to airlines on how to purchase fire resistant blankets.

#### Next Meeting/Closing

As stated earlier, the next meeting will be incorporated into the November 16-20, 1998, International Aircraft Cabin and Fire Safety Conference in Atlantic City, New Jersey. The spring 1999 meeting will be hosted by Boeing in Washington State in early March 1999. We are currently looking for a host for the Summer 1999 meeting.