International Aircraft Materials Fire Test Working Group
Minutes of Meeting
September 24 and 25, 1991
Trauen, Germany

The meeting opened with introductions of the 29 attendees (see attached list). The first item of discussion was the OSU. The following is a summary of that discussion:

Upper Pilot Outage: It was agreed by all that upper pilot outage for any extended time could drastically change HR values. It was also agreed that 3 seconds should remain as the maximum allowable outage time. Only Schneller and Boeing indicated that they have tested materials that cause a problem. A suggestion was raise to try a spark igniter on the upper pilot. Three labs agreed to conduct test with an ignition system. They were Schneller, Polyplastex, and Boeing.

Standard Panel: Data was presented that showed a comparison of various labs testing a panel supplied by the FAA Technical Center. It was agreed that each lab should have a repeatable sample to be used to check the ongoing performance of the testing. It was agreed that this should be included as a requirement in the test method. However no agreement could be reached on a reproducible sample that could be used to compare labs. A group was set up to study the problem and make recommendations. The group is chaired by Polyplastex and includes Boeing, Douglas Aircraft Co., Fokker, Britsh Aerospace, and Jamco America.

OSU Smoke: It was agreed that unless there is a good correlation of data from the ongoing round robin, the present test program should be put on hold.

Other Items: It was suggested that terminology should be included in the OSU test method similar to the NBS method to determine the worst orientation of the sample. It was suggested that a note be included in the test method that it is to determine relative HR and not absolute. A discussion was held on eliminating the Bunsen Burner test for materials meeting the OSU and NBS requirements. It was agreed that although to date no one knew of a material used in an aircraft that would pass the OSU and NBS and fail the Bunsen Burner, it could not be ruled out. More thought should be given to limiting the need for the Bunsen Burner and the rational that would be used.

Discussion of the NBS test method was very short. An update on the work to develop a quicker method of calibration by NIST was presented. The group had no other problems for discussion on the NBS.

Due to the absence of CEAT the discussion on the calibration of the Bunsen Burner using propane was postponed. All in attendance were in agreement that the test should be changed to require Methane only. However the exact purity of Methane (90 to 99%) was questioned.

A short discussion was held on the Meeker Burner RR. It was stated that the RR had not yet begun, and was still open

to participation.

A presentation was made on the full scale seat component tests conducted by the FAATC. Preliminary data showed little improvement. Another series of tests to be conducted was outlined.

Discussion of the Oil burner tests centered on the airflow RR. Some preliminary data was presented. The Technical center has received data from only one other lab to date (DLR). The temperature mapping and airflow data from the other participating labs is needed to proceed.

Comments from the group indicated that there is a need for more advisory information on the testing of cargo patches.

Three test methods concerning electrical wire and cable were discussed. They were testing for Smoke, arc tracking, and flammability. Data was presented from an ongoing RR measuring smoke in the NBS chamber. An attempt is being made to determine if one gauge wire can be used, as representative, for all testing. A short discussion was held concerning the Technical centers arc tracking test method. Members were requested to submit any ideas on improved flammability testing of wire and cable.

One member expressed his dismay that this group was being used to consider test methods for wire and cable since there were committees in organizations such as ASTM and SAE doing the same.

A number of members agreed that the 60 degree flammability test for wire and cable specified in Part 25, Appendix F of the FAR's is difficult to understand. The relevance of the 30 degree angle was questioned. It was agreed that the test method should be rewritten and this 30 degree angle eliminated if round robin testing showed it to be insignificant.

There was some discussion regarding the development of a new material test method for the 21st century. The group agreed that we should start to think about it now. Most thought a new test is needed, however a few felt that the OSU should be modified. Members were asked to think about it for discussion at the next meeting.

The FAATC Stated that they are committed to updating all test methods in the Fire Test Handbook. The updating may include modifications to the equipment and / or procedures to improve repeatability, reproducibility, or reliability. Changes may also be made to simplify and/or minimize testing as well as to upgrade the level of safety where needed. For all proposed changes, data will be generated that shows that the present level of safety will be maintained or raised. New test methods, such as those for electrical wiring will be documented using the same format employed in the handbook.

The target date for completion of the handbook modification and other recommendations on requirements is March of 1993. The modifications, data and recommendations produced by the group will be transmitted to the regulatory authorities for their use. The work may, or may not be used

in whole, or in part, as the basis of future regulatory action.

It was agreed that it was too short of notice to expect comments at this meeting. The FAATC will send out updated / modify test methods prior to the next meeting. In some cases questions may be raised or areas of concern expressed rather than actual modification to the test methods made. Comments and discussion are expected on each of the test methods at the next meeting.

The meeting was adjourned and a tour of the DLR facilities provided for those who remained. We thank DLR for all their efforts in hosting the meeting. Members had high praise for DLR, their facilities and personnel. Some members may still be recuperating from the Barbecue. Thanks DLR for a job well done!

FAA-MEETING, DLR TRAUEN

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