



2nd FAA Workshop on Composite Material Control

September 16-18, 2003

Westin O'Hare

Chicago, IL





Registration

- Sign in will continue until 13:30



- Please see Michelle Thomsen at desk in outside door to meeting room



Welcome

- Thank you for taking time from your activities to support this effort
- We appreciate the time each of you has spent on looking at the documents and preparing for the workshop.
- Chicago ACO Welcome





Introduction of Presenters



- Larry Ilcewicz
 - FAA Chief Scientific and Technical Advisor, Advanced Materials
- Steve Ward
 - SW Composites, Lead Fabric Project
- Will McCarvill
 - Commercial Chemistries, Fabric Project
- Gregg Bogucki
 - Consultant, Lead LRM Project, Procurement
- Larry Gintert
 - Concurrent Technologies, Co-Lead LRM, Process
- John Bayldon
 - Northwestern University, LRM Project
- Lester Cheng
 - FAA Aerospace Engineer, Small Airplane Directorate,



Participant Introductions



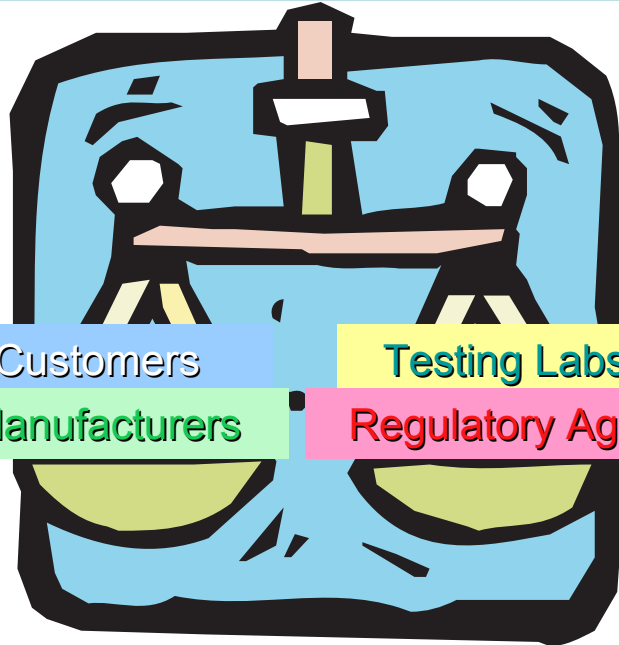
- In turn please stand and introduce yourself
 - Name
 - Affiliation
 - In a few words what is your interest and expectation for this workshop?





Balancing Needs

Standardization



- Interested Parties
 - ✓ Customers, Current & Potential
 - material quality and reliability
 - ✓ Testing Labs
 - ✓ standardization of test methods
 - ✓ Regulators - compliance with regulations
 - ✓ Manufacturers - financial returns



Specifications/Standards



The ISO 9001-2000 View

• Past

- ⊗ Little or no improvement in material performance. Meeting requirements was simply a “badge of the wall.”
- ⊗ Development did not involve all interested parties.
- ⊗ Insufficient return on investment or no business advantage.

• Future

- √ Material exceeds interested parties expectations. Meeting requirements means continual improvement.
- √ All interested parties share common values, culture of trust & empowerment.
- √ Customer loyalty, retention of market share gain.



Specifications/Standards



The ISO 9001-2000 View

- Past

- ⊗ Quality Assurance was a post activity event, focused on inspection & test after product was made.
- ⊗ Quality Assurance acted as a regulator to control the supply of material. Sorted good products from bad & authorized release of only good product.
- ⊗ Collection of data.

- Future

- √ Quality Control focus on preventing failures during the process.
- √ Quality Control reviews key processes [e.i. Last 3 months of data] to establish if the process/material properties are stable.
- √ Collection of data for a purpose.



FAA Overall Vision of Composites Control



- Current state of the art
 - What we can do now
 - Best Practice
- Short term improvements
 - Two to five years to accomplish
 - Currently investigated new techniques
- Long term improvements
 - Ten years +
 - Focused research to develop identified and yet to be discovered characteristics and techniques



Workshop Objectives

- The objectives of this workshop are to:
 - Review the results and recommendations of this FAA sponsored research on material procurement and material processing specifications (Fabric and LRM).
 - Recommend further research activities where current quality assurance methods and techniques do not achieve a desired degree of composite materials reliability.
 - Establish standardized control approach for new processes to eliminate need to reshape industry practice at a future time.



Review of Criteria



- This afternoon and tomorrow morning we will review the documents.
- The authors will discuss the technical details, philosophy and strategy rationale of their documents
- A team of reviewers will give the workshop a view of the documents from their perspective.
- We have selected a diverse group of reviewers to get an “across the industry” view of these documents including suppliers, OEMs and regulators



Comment on FAA Criteria



- On Wednesday Afternoon
 - We will divide into three groups to allow discussion on each document
 - Fabric Material Procurement Criteria
 - LRM Material Procurement Criteria
 - LRM Material Processing Criteria
 - These discussions will be summarized at the end of the day.
- Thursday
 - We will as a group review the key discussion areas developed in the breakout sessions.
 - Review the comments and identify actions.



Future Research Activities



- On Thursday we will explore future areas of material control.
 - Introduce FAA plans for bonded structure.
 - Facilitated discussion on the FAA plans



Operating Procedures for the Workshop



- Please refrain from interrupting the presentations.
- Please wait to be recognized before asking questions or making comments.
- We will take a short five to ten minute break each hour.



Refreshment Breaks



- Each morning and afternoon there will be a refreshment break.
 - Tuesday Afternoon
 - 3:15 PM
 - Wednesday
 - 10:15 AM
 - 3:00 PM
 - Thursday
 - 10:30 AM
- Breakfast outside this room at 7:00 AM
- Lunch tomorrow in Lasalle room.



Information



- Workshop Website
 - <http://www.niar.twsu.edu/faa/>
- FAA Technical Center Library
 - <http://actlibrary.tc.faa.gov>
 - Click on the banner "Search the Library's Catalog" on the home page to get to the document search function. You must search for the entire document number to find the reports.
 - All FAA AR reports from 1996 are available in PDF.
- Comment Return
 - John Tomblin
 - Attn: FAA/NASA Workshop
 - 1845 N. Fairmount
 - Wichita, KS 67260-0093
 - Email Comments to:
 - john.tomblin@wichita.edu
 - Subject: 2nd FAA Workshop