

Comments on Fabric Material Procurement Document (9/17/2003):

statement of purpose - guidelines not requirements ... see J. Tomblin notes

what type of parts do these guidelines apply to? PSE? Damage tolerance

What is the change level for different weaver of same fiber

check non-weave defects for prepreg?

“recommended” tests? Check carefully wording of document (required, shall, must, recommend, ???)

5.3.1 non-solvent/non-hot melt prepregging process

testing frequency within batch 500 vs 2000 lbs - linear feet, sq feet, ??

table 5B 1 versus 3 batches - see 03/19 doc

tables 5C and 6 - specify test direction (warp - 0 degree direction)

make clear that batch acceptance tests are also equivalency tests

use of nominal per ply thickness for calculations

Comments on Fabric Material Procurement Document (9/17/2003):

nominal or off-nominal batches for qual?

spec designation = 1 material - how to deal with material substitutions?

Cure cycle differences - original database cure cycle versus end-user cycles (which to use for batch acceptance and implications)

Equivalency database issues (recalculation of allowables?)

How much cure cycle difference requires an equivalency evaluation

Should we address things like cure cycle/configuration differences for cocured sandwich panels with respect to “equivalency” demonstration?

Use of data from tests in document? For allowables, certification?

Give rationale for test frequency and type

FAA review/approval wordings - can DER/DMIRs be used? - remove wordings?

Test facility certification - how, who to do??

Fabric Prepreg Document Plan

- Clarify purpose and applicability of document
- Clarify wording re “required”, “must”, “recommend”, etc.
- Make consistent with DOT/FAA AR-03/19
- Add rationale for test frequencies, types
- Clarify test facility certification recommendation
- Clarify rationale for expanded equivalency database
- Clarify which subsets of data are recommended for:
 - Qualification
 - Batch acceptance
 - Equivalency database
 - Expanded material characterization
- Add discussion of approaches for material substitution
- Numerous other clarifications from reviewers and participants

Chris Ridgard, ACG

Use DOE to evaluate prepreg fabrication process parameters and curing process parameters

PCD = process spec for making prepregfs

Test panel process must represent production part quality

Data generated by material supplier can be used for supplier spec, industry spec, end-user spec

Laura Fournier, Toray

Too specific for guidelines (will they be strictly enforced?)

Shift of responsibility (liability) to supplier?

Short term issues need to be addressed before AMS spec available (supplier spec)

What is a representative process when multiple processes used to make parts

Add QPL or slash sheets to outline

Issue with specific batch definitions

Make batch definition general – leave batch definitions to spec

Define “roll” in the spec

Issue with expanded batch testing

Check layup thicknesses versus AGATE document

D5379 V-notch shear instead/option to +/-45 shear test method

3 or 1 batch for Level 3 equivalency testing?

Molly Stone, Cirrus

Need to keep focus on cost

Mike Stuart, Cytec

Need equivalency requirements in end-user specs

Need to add fiber line qualifications

Need to add weaver qual process

Solvent impregnation is less robust than hot melt (?)

Issues with equivalency baseline testing

CAI \Leftrightarrow BVID criteria (add damage resistance test?)

Matt Baxter, Boeing

Industry committee issues?

FAA involvement/approval issues?

Recalculation of spec limits

How was original material database generated (process?)

Test facility certification

ITAR/EAR regulations

KCs/KPPs – need to understand what to control