

- The following charts were shown in the Damage in Sandwich Construction breakout session on Friday May 11, 2007 in order to initiate discussions



Breakout Session on Damage in Sandwich Construction

Primary Objectives:

Fluid ingress phenomenon in composite sandwich structures.
Damage in Sandwich Construction Composite Structures.

Secondary Objectives:

Design Recommendations
Maintenance Recommendations
Repair Recommendations



Notes from breakout session on damage in sandwich construction

GAG cycling of disbond sandwich construction

- Standard test methods
- Mechanics of disbond growth in sandwich

Fluid Ingression

- Known fluid ingression/migration mechanisms (there is already a path)
 - Intercellular diffusion (good cell wall)
 - Permeable cell wall
 - Poorly machined honeycomb (poor bond)
 - Filleting quality
 - Freeze/thaw
 - Porous or discontinuous adhesive (adhesive type/process)
 - Permeability as a function of age/load sensitivity

Notes from breakout session on damage in sandwich construction

Fluid Ingression (other areas of concern)

Infrared thermal shock (de-icing)

Implications of water ingression (drying/repair)

Not creating a fluid path from repairs

Improved NDI techniques for fluid ingression

Long-term thermal exposure/susceptibility to moisture ingression

Sonic fatigue influence on fluid ingression

