



# **Proposed Material Specifications for LRM**

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**SINGLE RESIN/FIBER ea SPEC**

- **The material specification methodology is founded on a single resin and single fiber (including form) combination covered by each specification**
- **This is not very practical for large scale production**
- **Dry fibers are qualified separately from any future resin combination and many forms are qualified to the same spec**
- **It is also usual for commercial reasons to qualify fiber from at least two sources**

## **2<sup>nd</sup> FAA Meeting on Composite Material Control**

Sept 2003

### **RECALCULATION AFTER “N BATCHES”**

- **Three batch material qualification (AGATE) method is acceptable to the FAA**
- **Following material qualification many other tests are conducted to demonstrate that part performance is adequate and in line with predicted response (strains and deflections)**
- **Also process controls are applied to production units**
- **The recalculation of allowables after n batches will be of no benefit**

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## Summary Comments

- **More testing is recommended than is industry practice, today**
- **These guidelines make LRM seem like a complicated and erratic system; in fact, it's more simple and more repeatable than hand layup and autoclave cure**
- **“highly skilled technicians” are not required to a level greater than hand layup**
- **We have little track record of LRM in production programs and studies should be conducted of production issues and variability before these guidelines are implemented**