February 6, 2006

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Jamie Brooks, Manager of Marketing and Communications for the National Institute for Aviation Research has recently decided to pursue a new employment opportunity. All future NCAMP and NIAR e-bulletins will come from Marketing Assistant Tracee Friess, tracee.friess@wichita.edu. Please add this e-mail address to your list of safe senders.

A Message from Dr. Larry Ilcewicz, Chief Scientist & Technical Advisor, Federal Aviation Administration

“The AGATE program has proven that the concept of shared databases for composite material qualification can be managed within the industry. The FAA is glad to partner with NASA again in its new NCAMP center to provide further guidance and oversight.

While the FAA does not certify materials (that is, the FAA does not certify composites, aluminum or titanium), we have published policy and guidance documents that describe how composite material qualification and equivalency can be performed to support the use of industry shared databases in certification projects. Aircraft companies, which are participating through NCAMP, are interested in these procedures as applicable to multiple certification projects.

I am happy to see the level of enthusiasm and industry participation in NCAMP activities, which are intended to achieve a level of efficiency close to what exists for metal aircraft materials. More efficient practices for material control and data sharing benefit both the industry and regulatory bodies.”

Industry benefits from fabricating test panels

NCAMP is currently in the process of qualifying more prepreg materials into the shared database. Specifically, aerospace companies are fabricating test panels for use in these NCAMP qualification programs.

Aerospace companies benefit from fabricating test panels because they may be able to use the material properties directly. As illustrated in the chart below, panels from these three or five batches of prepreg material will form the qualification database. Companies that fabricate the panels from three or five batches of prepreg material may be able to use the material properties directly because the data that is generated is part of the original population. Companies fabricating one batch equivalency panels may also be able to use the data if equivalency is demonstrated. (Refer to MIL-HDBK-
Traditionally, aerospace companies are responsible for covering all the testing, prepreg material and panel fabrication cost. However, in the NCAMP qualification programs, the testing costs are covered by NCAMP/NASA, and prepreg costs are paid by material suppliers. Aerospace companies need only to provide labor, bagging material and cure cycles to fabricate the test panels. This process has multiple benefits to the participating companies and can widely increase the amount of qualified material available to design and manufacture composite parts.