

## NEWS RELEASE



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### **COMPOSITES COLLABORATION DEMONSTRATES LOW-COST MANUFACTURING TECHNOLOGY**

**Paris Air Show -- Le Bourget, France – June 15, 2009** - Bristol Aerospace, a division of Magellan Aerospace, in collaboration with Boeing Research & Technology and the Composites Innovation Centre in Winnipeg, MB, completed a research program to investigate out-of-autoclave processing for potential use in composite aircraft components. These composites can be cured in an oven under a vacuum bag with no additional external pressure applied. Next generation out-of-autoclave composites that offer performance comparable to traditional materials are now being developed by suppliers. The goal of the project was to demonstrate that an out-of-autoclave process could be used to fabricate components that would satisfy the strict requirements for aerospace grade parts.

High performance composite structures for aircrafts are typically manufactured using an autoclave, to cure components under the application of heat and pressure. This approach involves significant production costs from expenses required to purchase, operate, and maintain the necessary equipment and tooling. Out-of-autoclave processing is gaining increased interest in the aerospace industry as a potential opportunity for cost savings.

The study focused on potential applications for one commercially available material. Manufacturing trials were conducted at Bristol's Winnipeg plant in its state-of-the-art Composites Manufacturing Centre. All three partners were involved in inspection to assess the quality of the final test articles. "Our first attempt to produce a generic part using an out-of-autoclave manufacturing process proved to be a great success," said Shawna Boyko, Project Manager and Composites Engineering Technical Specialist at Bristol. "Inspection and coupon testing of the demonstration article showed good compaction and virtually no voids, exceeding typical quality requirements by a fair margin."

Based on positive results from the current program, Bristol intends to continue exploring alternative manufacturing methods for composite structures. Vice President and General Manager Don Boitson stated "Innovative manufacturing technologies such as out-of-autoclave processing presents an opportunity for us to reduce production costs while maintaining a high level of quality, increasing the value we provide to our customers."

The success achieved in this project encourages further collaborative research to include additional composite formulations and methodologies to ultimately match the properties of autoclave cured structures with the lower costs of out-of-autoclave curing.

**About Boeing**

Boeing is the world's leading aerospace company and the largest manufacturer of commercial jetliners and military aircraft combined. Through its Boeing Research & Technology organization, the company conducts its own research and development and also works with top government, private and university research centers, and companies throughout the world to find the most innovative and affordable technology solutions for aerospace applications.

**About the Composites Innovation Centre:**

The Composites Innovation Centre Manitoba Inc. (CIC) is a not-for-profit corporation that is jointly sponsored by private industry and government. Its mandate is to *support and stimulate economic growth through innovative research, development and application of composite materials and technologies for manufacturing industries*. This is achieved by working directly with industry, on industry sponsored projects that result in a measurable economic benefit to the project participants and the community. Projects are performed in a collaborative partnership with industry, government agencies, and educational establishments. To support these activities, the CIC is funded by and/or has affiliations with several government, research and educational establishments.

**About Magellan Aerospace:**

Magellan Aerospace is one of the world's most integrated aerospace industry suppliers. Magellan designs, engineers, and manufactures aeroengine and aerostructure assemblies and components for aerospace markets, advanced products for military and space markets, and complementary specialty products. Magellan is a public company whose shares trade on the Toronto Stock Exchange (TSX: MAL), with operating units throughout Canada, the United States and the United Kingdom.

**Forward Looking Statements:**

*This press release contains information and statements of a forward-looking nature and is based on assumptions and uncertainties as well as on management's reasonable evaluation of future events. These statements are not guarantees of future performance and involve risks and uncertainties that are difficult to predict, and/or are beyond the Corporation's control. A number of important factors could cause actual outcomes and results to differ materially from those expressed in these forward-looking statements.*

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