
Industry collaboration drives production development of new EMTEQ Interior Panels

By **Lauren Brunetti** on July, 20 2013 | Inflight Entertainment



On July 15th, Winnipeg-based EMTEQ Canada delivered its first set of composite interior panels to a major customer following four months of collaboration inside Manitoba's aerospace industry. EMTEQ joined forces with Composites Innovation Centre (CIC) and the Composites Research Network (CRN) to develop a manufacturing capability that demonstrates new technology.

EMTEQ Canada received approval on March 15th, 2013 from a major business aircraft customer to design an interior panel solution with goals of improving visual aesthetics and durability. EMTEQ went further by optimizing the design and process for lean manufacturing flow. "One of the ways that we can provide value to our customers is by eliminating waste in the process. To accomplish this, we develop unique fabrication technology that is married to our lean methodology," said David Vanderzwaag, EMTEQ Composite Product Manager. To shorten the development timeline, Vanderzwaag worked with Manitoba's composites experts, starting with the CIC.

With technical advice and financial support from the National Research Council of Canada Industrial Research Assistance Program, EMTEQ began collaborating with CIC in early 2012, when the need for a composites capability was identified. The CIC helped EMTEQ understand the requirements, infrastructure, and systems necessary for composites manufacturing operations. CIC Principle Engineer, Steve Crouch, assisted in new technology development that began with manufacturing trials at the CIC. Crouch led CIC resources to support EMTEQ throughout development and right into production.

2012 also saw EMTEQ engage with engineers from the Composites Research Network. CRN supported EMTEQ with knowledge-based engineering solutions to streamline the creation of its new composite manufacturing capability. Göran Fernlund, CRN Technical Director, noted "EMTEQ, with its commitment to innovation, is a natural partner for us."

Layup and Bagging Workshop" to close the gap. Drawing on subject matter experts from Boeing Canada Operations - Winnipeg, EMTEQ, and CRN, the CIC led the interactive workshop on-site at EMTEQ. "We were immediately impressed with the collaborative stance that the management from each entity took," says Manchur. "It is a real testament to how Manitoba's aerospace composites industry can come together for mutual benefit." EMTEQ learned superior layup and bagging strategies, and Boeing experts Rudy Braun and Don Jennings were able to review EMTEQ's approach to tooling, out-of-autoclave (OOA) and lean production. CRN is capturing workshop content in their online Knowledge in Practice Centre, and the CIC plans to make the workshop results available to other clients.

The EMTEQ-led industry collaboration successfully demonstrated an OOA, heated tooling process for aircraft interior panels that enables one-piece manufacturing flow. EMTEQ secured an order for an 18 aircraft program, and has achieved tremendous growth internally with this capability. EMTEQ Canada₁

started 2012 with 53 employees and now employs over 100 people. According to Udaya Silva, company's managing director in Canada, "This initial program is paving the way for EMTEQ in applying composite technology in aircraft interiors, particularly in business aviation, a market segment in which the company specializes. This is a perfect example of government, academic, and nonprofit collaborations elevating SMEs by leveraging regional strengths in technologies, in this case composites manufacturing."