



CLOSED MOLDING TRAINING TAKES OFF AT NCC

Earlier this fall, NCC established a new Closed Molding Cell to help educate the industry about improved closed molding techniques with a special emphasis on vacuum infusion. The first class was recently completed at NCC. Led by NCC engineer and technical specialist Andrew Loff, the class covered the basic principles of vacuum infusion along with application-specific information and demonstrations. One attendee, a manufacturer of medium-sized boats able to travel on land and water, provided positive feedback on NCC's ability to customize a demonstration applicable to the boat parts he had slated for vacuum infusion. The next commercial infusion class is scheduled for Feb. 5 – 6. A performance infusion class is scheduled for Feb. 12 – 13. Classes are limited to 15 attendees. Interested individuals can contact Andrew Loff at 937-297-9436 or email aloff@compositecenter.org.

MIDWEST SAMPE VENDOR NIGHT A SUCCESS AT NCC

The National Composite Center (NCC) hosted the Midwest SAMPE 5th Annual Advanced Materials And Composites Vendor Night and enjoyed record participation. Thirty companies exhibited to a broad audience of area engineers, scientists, technical managers and

students. Charles R. Saff, Boeing Technical Fellow from Boeing Phantom Works in St. Louis, Missouri, was the guest speaker. He spoke on "Assessing the Value of Technology for Aerospace Applications" and presented a video showcasing the first flight of Boeing's recently unveiled "Bird of Prey" technology demonstrator aircraft. The event provided an important stepping-stone toward helping to maximize participation for the upcoming International SAMPE Technical Conference (ISTC) in September 2003. The event is being held in Dayton to help commemorate the 100-year anniversary of powered flight and serve as a keystone event for the area's composite and materials community. Feedback from both vendors and attendees was positive. The event also created an environment conducive to strong networking. NCC extends a special thanks to Andy Loff, Tobey Cordell, Karla Strong, Katie Thorp and Jeff Haines for helping to make the event a success.

NCC AT THE 2002 CCAO/CEAO ANNUAL WINTER CONFERENCE AND TRADE SHOW

The National Composite Center (NCC) exhibited at the 2002 CCAO/CEAO Annual Winter Conference and Trade Show held Dec. 2 – 3 in Columbus, Ohio. In addition to promoting Fiber Reinforced Polymer (FRP) bridge

decks, NCC showcased different FRP deck options. CEAO introduced a new program called "Just Build" which will allow counties to use standard bridge designs. The advantages of Fiber Reinforced Polymer (FRP) bridge decks have secured composite technology's place in the infrastructure industry. As a center for excellence and a leading expert, NCC is aggressively spearheading efforts to advance the commercial acceptance of FRP materials and develop innovative techniques to lower material costs. In addition to continuing to build a key supplier base and provide important monitoring and inspection services, NCC complimented CEAO objectives by presenting new standard designs called "Bridge In The Box." The concept uses an FRP low profile deck along with standard girder spacing to provide a modular bridge design. Since engineering and design is minimized, the modular design can be cost effectively installed. The NCC booth was well attended by both county representatives and engineering firms and resulted in new leads from counties interested in using FRP decks.

NCC PRESENTS RAPID FIBER PREFORM EXPERTISE AT DEFENSE MANUFACTURING CONFERENCE 2002

The National Composite Center (NCC) presented a special paper on its P4A expertise at the Defense



Manufacturing Conference 2002 held Dec. 2 – 5 in Dallas, TX. One of the first organizations to make high performance preforms with robots, NCC first applied the P4 process to an application for the automotive industry. The success of that project led NCC to further adapt the process for the aerospace market through a P4A

(Programmable Powder Preform Process for Aerospace) project. Under contract to the Air Force Research Laboratory (AFRL) at Wright-Patterson Air Force Base, NCC effectively demonstrated the complex composite shapes and cost reductions possible with P4A. NCC was able to produce aircraft fairings, complex shapes and other secondary structures at a fraction of the cost of traditional methods. Examples include an access door for a fighter aircraft, which generated a cost savings of 46 percent and a nine percent reduction in weight when compared to other composite parts. A tailcone for a jet transport netted a cost savings of 80 percent with a two percent increase in weight when compared to composite assembly products. NCC further developed these technologies into what the Center today calls its signature Rapid Fiber Preform (RFP) process. NCC's expertise has strategically positioned the Center to birth an aerospace manufacturing parts company and produce flying parts. The major steps in these objectives are expected to take place over the next two years. NCC is currently in discussion with industry

manufacturing partners to whom NCC could hand off the start-up enterprise. Composite defense parts manufacturers and users at the conference displayed considerable interest in NCC's activities.

NCC FEATURED MONTHLY IN CF MAGAZINE

As The National Composite Center (NCC) continues to take strides toward advancing and helping to build the Fiber Reinforced Polymer (FRP) bridge deck and infrastructure markets, you'll want to check out the latest developments by reading NCC's column in the January issue of CF Magazine. NCC launched its new column in October 2002 and will be featured monthly in the magazine through 2003. The column covers ongoing progress for the bridge deck industry and the infrastructure market as well as providing technical tips and guidelines for engineers and bridge deck owners.

NCC SENDS SEASONS GREETINGS

As we close out another year of exciting developments and challenging activities and look forward to the New Year, packed with opportunity, we recognize and appreciate the important contributions of each of our members. We want to thank each of you for being a productive part of The National Composite Center

(NCC). On behalf of the staff at NCC we want to wish you and your families a safe and happy holiday.