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# AIREX BALTEK BANOVA

**Breaking New Ground with the Hybrid Core Concept and a  
“Supplier Alliance”**



**Scout Boats uses AIREX® foam to break into a new market segment and a new facility**

When Scout Boats designed their new 42 LXF they knew that the hull and deck could not be constructed in a conventional or conservative way. To meet performance goals the entire hull was designed with **AIREX® foam cored**,



**sandwich laminates.** This created the typical problem for production boat builders; how to ensure a high quality, void free laminate? Scout, with their commitment to best practices decided to laminate the AIREX® with a core bonding adhesive. This turned out to be a time consuming decision that also failed to achieve the desired hull weight. **Scout opted to investigate if switching to resin infusion could be the solution.**

The vacuum infusion process can balance many goals; high performance; high laminate quality; low weight; ease of manufacture and cost effectiveness. Good surface finish can be a concern however. **The cosmetic appeal of the new boat would need to be at least equal to a traditional open molded hull**, but the ambition was to be even more aesthetically pleasing.

After much consideration, a team of suppliers consisting of 3A Composites (**Core Materials**), Vectorply (**Reinforcements**), Magnum Venus Products (**Resin delivery equipment**) and Composites One (**Customer Service and Distribution**) was specially chosen to assist Scout in this endeavor. According to Scout Boats Director of Manufacturing William Ferguson, “**We chose this team because they were focused on our needs and the attention to detail was second to none.**”

**3A’s Technical Service Engineers collaborated with Vectorply’s engineering team** to develop the laminates for the entire hull. Building on 3A Composites’ experience with achieving a high quality surface finish, a number of options were considered. While these did produce the desired cosmetic finish, a boat as large as the **420 LXF** would also need to be light enough to maintain top of the line performance in the water. Scout was willing to try new products to meet these must-have goals and after extensive testing selected epoxy resin for the hull.

Not many boat builders make the leap to infusion along with a change in resin type. Scout recognized that it was a worthwhile investment.

After the skin coat, the hull incorporates **Vectorply’s knitted E-glass multi-axial fabric** as well as some carbon fiber reinforcements. **AIREX® C70.130 PVC foam** is used on the bottom, **AIREX® T92.130 PET** foam in the sides and **AIREX® T92.320** high density PET foam in the transom. Since PET has a higher heat distortion temperature than other foams, and can be supplied in knife-cut contourable (CK) sheets to minimize resin uptake, **AIREX® T92 Easy Processing** foam was particularly suited for this project. Furthermore, the T92.320 is supplied pre-



perforated using 3A Composites' **Sealperf™** process. This makes the product much more cost effective than other high density foam materials.

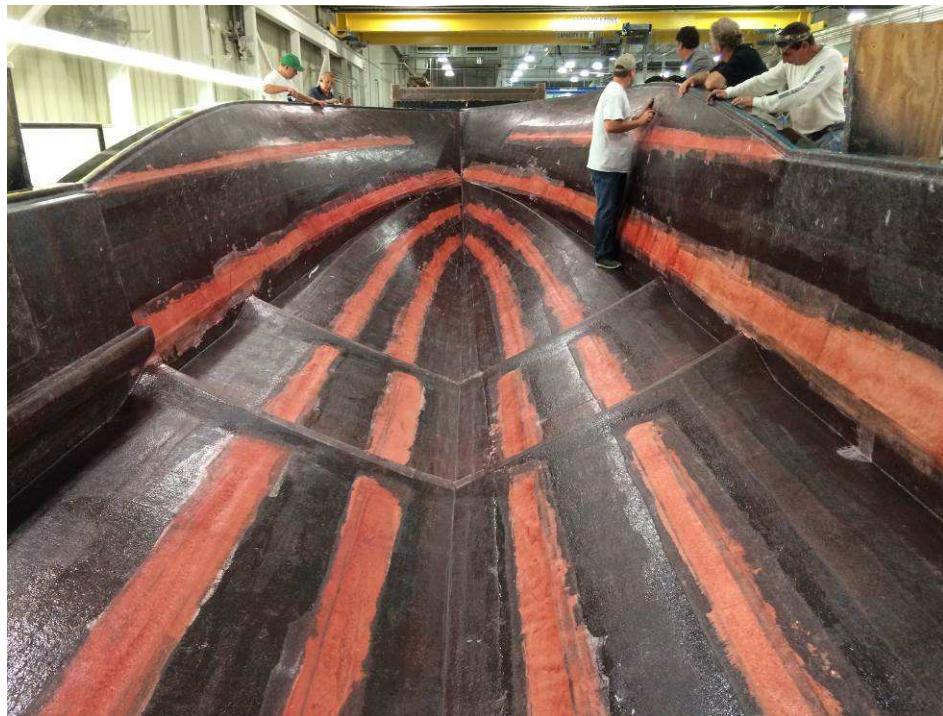
The results realized **drastic savings in time and weight**. Labor time to build the hull was **20 percent lower** than open molding with a **50 to 60% drop** in post finishing. The already lightweight hull achieved a further **15% weight reduction**. The cosmetics are even better than expected.

With on-going support from 3A Composites and the rest of the **supplier alliance**, Scout plans to also infuse the 380 and 350 models as well as the stringers and consoles.

To find out how 3A Composites can help your business, contact us by phone or email:

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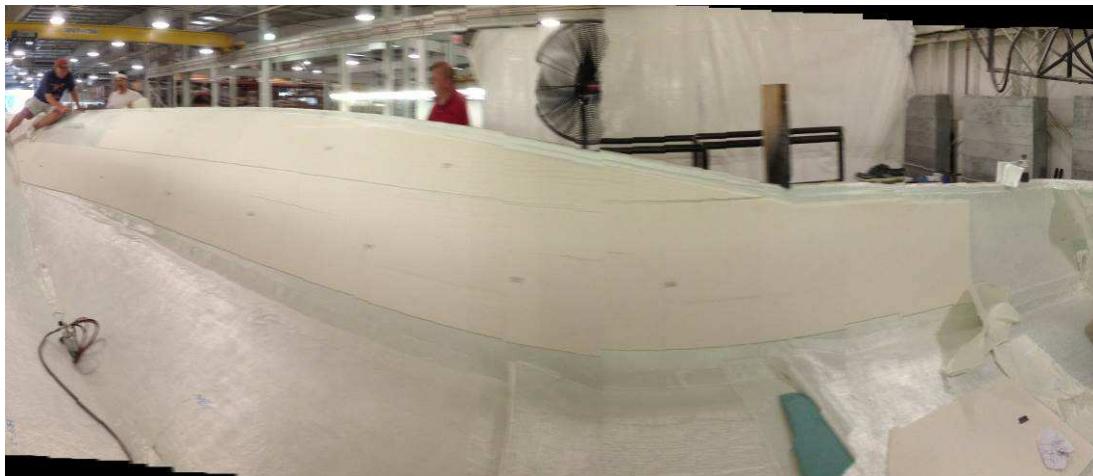
Bare hull with skin coat and filled strakes:



Placement of AIREX C70.130 core kit:



AIREX® T92.130 Hull Sides core kit:



Resin injection:

