



October 23, 2006

Dr. Ira Trocki
Egg Harbor Yachts, Inc.
PO Box 702
Egg Harbor City, NJ 08215

Dear Dr. Trocki,

I have analyzed the properties of the Egg Harbor 50 hull that is built with DIAB Core Infusion Technology and compared them with different construction methods for a similar boat. The methods I compared were: solid FRP, hand laid and infused; sandwich construction, hand laid and vacuum bagged with foam and balsa; and cold molded construction. In summary, what I have found is that the Egg Harbor 50 is:

Light Weight

When hand laid, typical solid FRP construction is 145% heavier than the DIAB Core Infusion Technology. Even when infused, solid FRP construction is 150% heavier since more glass reinforcement is needed to maintain the same thickness and glass weighs more than resin. In order to keep the weight as low as possible in solid FRP boats, smaller panel sizes are utilized. The panels can be thinner, but the framing system is much more extensive and heavy.

Even compared with common sandwich construction methods, the DIAB Core Infusion Technology methods produces lighter parts. A typical hand laid balsa core laminate is approximately 65% heavier, while a vacuum bagged balsa core laminate is still 53% heavier. Typical foam cored laminates have some weight savings over balsa core, but they are still 57% heavier than DIAB Core Infusion Technology for hand laid laminates and 30% heavier for vacuum bagged laminates.

Typical cold molded laminates are approximately 30% heavier than laminates built with DIAB Core Infusion Technology.

Stronger and Stiffer

For comparable solid FRP laminates of the same weight, DIAB Core Infusion Technology laminates are 8 times stronger and 17 times stiffer. The glass-to-resin ratio in infused laminates is higher making the fiberglass stronger, stiffer, and lighter. When comparing cold molded laminates of the same weight, DIAB Core Infusion Technology laminates are 3 times stronger and 1.4 times stiffer.

Best Regards,

A handwritten signature in blue ink, appearing to read 'James Jones'.

James Jones
Technical Services Manager

DIAB Inc.