

# New process demonstrated at MARTEC

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MOREHEAD CITY — Efforts to make fiberglass boat components more inexpensive and with less environmental impact are gaining attention in the industry.

Making that technology available in an educational setting benefits not only students but the institution, as well.

The N.C. Marine Training and Education Center at Carteret Community College hosted about two dozen attendees last week for a demonstration of the latest closed-mold fiberglass infusion technology using spray-able latex reusable bags.

Bryan Gray, chairman of marine technologies with the MARTEC faculty, said the demonstration on March 4 is an example of how inventors and industry can come together in a way that both trains the area's workforce and bolsters the college's mission. Companies supply MARTEC with expertise, materials and donations and offer demonstration events. Attendees can take that technology directly into the field in a community where boat manufacturing continues to be a significant industry sector.

"We try to do at least one or two (demonstrations) a year but I'm going to try and increase that to keep industry in the community college and donors and technology," Mr. Gray told the News-Times.

Demonstrations like the one last week accomplish two objectives for the MARTEC program. They bring in suppliers, giving students "a chance to shake hands with boat builders and the industry," Mr. Gray said. They also give those in the industry a chance to see what students are doing.

"They also donate a lot of materials," Mr. Gray said.

The event focused on Sprayomer technology developed by Rich Rydin of SR Composites LLC of Henderson, Nev. It's a method of making a natural rubber vacuum bag by spray processes for closed molding of fiberglass components.

Dr. Rydin is the co-inventor of the process, which keeps the fiberglass fumes largely sealed inside a



## Infusion technology

Attendees check the progress of parts in process during a recent closed-mold fiberglass infusion demonstration at the N.C. Marine Training and Education Center at Carteret Community College. The latest technology uses spray-able latex rubber to seal the mold. (Mark Hibbs photo)

latex rubber bag that seals tightly by use of a vacuum.

“In my mind it’s the best of the reusable bags,” Dr. Rydin said. “Its tear strength is very high and, because of that, it can be a lot thinner.”

That thinness means it squeezes the fibers together for good compaction, allowing for strength and precise detail in the finished product and a safer environment in which it’s used.

“The only exposure to resin is these little buckets,” Dr. Rydin said, referring to two 1-gallon pails from which the fiberglass material is drawn by vacuum hoses into the mold. “Closed molding means the amount of exposed surface area of wet part, it’s none. It’s all contained.

“That’s much safer for people using it, in terms of long-term exposure. It’s just a cleaner process – there’s less grinding, less rework.”

The demonstration allows the firm to reach out to potential customers, its distributors here and the faculty at the college.

“I didn’t know this resource was here,” Dr. Rydin said. “Now that we know its here, I think this can become a place to teach the folks going out in the field.”

“Last year we did a demonstration like this using silicone bags, which is where the industry was, but silicone is a lot harder to work with. You have more solvents that you have to use. Working with this, the bag right here, it’s completely environmentally friendly,” Mr. Gray said.

Other industry representatives were also in attendance, including Marty Manno, regional sales manager with DIAB, a New Jersey company that’s one of the world’s largest manufacturers of core material for reinforcing fiberglass.

Some in attendance are already putting the advanced technology to work.

Broadus Rose of Lookout Boat Window Frames, a manufacturer of fiberglass replacement window frames for boats with an Atlantic Beach mailing address and facilities on Bridges Street in Morehead City and at Jarrett Bay Marine Industrial Park near Beaufort, attended the demonstration. Closed-molding techniques have made a difference for his company and the MARTEC demonstrations are a big help.

Mr. Rose seeks to increase his production rate and do it in a greener way.

“I think it’s one of the greatest things this area has,” Mr. Rose said of the MARTEC program. “This is where I learned how to do all this.”

Mr. Rose isn’t a traditional student. He attends as a continuing education student, taking classes, some two or three times.

“I’ve learned new ways to do things for expediency and cost effectiveness. Where we were taking a

day and half to turn out one of these windows, we can now do in about two hours. This is where the industry is going,” Mr. Rose said.

The technique is so clean, it can be done wearing a coat and tie, Mr. Rose said. Fumes are minimal and production costs are drastically reduced.

“The up-front cost is expensive but it’s actually going to cost less because you get a better resin-to-glass ratio plus you cut your time down, your labor, tremendously,” he said.

Orders for the company’s replacement windows are typically 10-14 at a time. With old techniques, a job could take a couple of weeks to complete.

“We can do them in a day,” Mr. Rose said of the new technology.

His company offers curved windows that meet Lloyds of London’s open-water transit standards.

They include laminated safety glass, produced by a craftsman from Holland now operating in South Carolina. The product is unique, Mr. Rose said.