

CaseHistory

Houseboat Manufacturing Is Styrene Free



A 14 by 40 feet Catamaran Cruiser is launched into service.

Resins:	EcoTek™ H164 No Styrene Unsaturated Polyester Hydropel® Vinyl Ester Barrier Coat
Gel Coat:	Vibrin® Unsaturated Polyester
Composite Applications:	Cabins, hulls, bulkheads, galley sinks, Slides, gates, rails and other features
Manufacturing Processes:	Hand Lay-Up Spray-Up
Range of Boat Dimensions:	8 feet by 31 feet (2.4 by 9.4 meters) to 14 feet by 58 feet (4.3 by 17.7 meters)

For more than 30 years, Catamaran Cruisers has been making houseboats that are highly affordable, durable, stable, maneuverable and fuel efficient. With the company's move to a new EcoTek™ styrene-free resin from AOC, Catamaran Cruisers is the first in the marine sector to adopt a material that is better for the environment.

Catamaran Cruisers uses the hand lay-up and spray-up processes to manufacture cabins, hulls, bulkheads, galley sinks, slides, gates, rails and other features of fiber-reinforced polymer (FRP) composite. Typical composite boat construction uses a resin that is formulated to incorporate styrene. However, the new EcoTek H164 polyester resin that Catamaran Cruisers now uses shows how the company strives to be far better than typical.

Houseboat Manufacturing Is Styrene Free continued

In a composite resin formulation, styrene serves as a diluent for wetting out reinforcing fibers and as a reactive monomer that helps transform the resin into a molecularly-crosslinked polymer. EcoTek H164 polyester has a revolutionary, AOC-patented formulation that replaces styrene with diluent monomers with lower volatility and fewer emissions.

“A primary reason for switching to the EcoTek resin is to create a healthier and safer work environment for our employees,” said company President Dirk Wiley. “Workplace exposure to volatile organic compound (VOC) emissions is significantly reduced. Reduced emissions are also better for the Environment and make our product more attractive to customers looking to make greener buying decisions.”

HAP-Free Technology

Unlike styrene, alternative monomers in the EcoTek resin are not regulated as hazardous air pollutants (HAPs) by the U.S. Environmental Protection Agency (EPA). “Our emissions into the air are only about fifteen percent of what we are allowed for our operation,” said Wiley. “We are staying ahead of the game with help from AOC who is working with us to bring our emissions down even more.”

Wiley said EcoTek H164 resin also helps Catamaran Cruisers make a more state-of-the-art boat. That’s because the resin works well in a proprietary manufacturing process that is engineered for a lighter more durable composite laminate. Reduction in the use of heavy wood in major areas results in weight savings of up to 30 percent. Catamaran Cruisers’ new construction techniques have increased insulation properties and fuel efficiency. One customer claimed up to a 50 percent fuel savings with the lighter construction.

The new EcoTek green resin for lamination is part of an AOC material system that Catamaran Cruisers uses to make superior marine composites.

Composite construction starts with a Vibrin® gel coat designed by AOC specifically for marine applications. For maximum resistance to surface blistering, the gel coat is backed up with a barrier coat manufactured with a high performance Hydropel® vinyl ester resin from AOC.

Wiley pointed out that an AOC shipment comes with more than material technology. “AOC provides very good delivery, service and support,” he said. “Their people are very helpful and knowledgeable,” he said.

“From laboratory testing to technical assistance with our environmental program, AOC is an excellent resource for whatever we need.”

About Catamaran Cruisers

Catamaran Cruisers manufactures a full line of houseboats, ranging in size from a trailerable 8 feet by 31 feet (2.4 by 9.4 meters) boat to full-time “live-aboards” up to 14 feet by 58 feet (4.3 by 17.7 meters) in size. The spacious houseboat cabins are built on double catamaran hulls that feature individual composite bulkheads every three feet and a hard chine for a smoother houseboat ride. For more information, phone (800) 365-1255, e-mail sales@catamarancruiser.com or go to www.catamarancruiser.com on the Internet.

About AOC and EcoTek™

AOC is a leading supplier of green materials and systems for composites and cast polymers. EcoTek green technologies includes products made with renewable content, renewable content and/or styrene-free chemistry. AOC knows technology, lives quality and delivers service better than other supplier. To discover more about EcoTek technologies, go to www.green-resins.com.

