

CaseHistory

Wastewater Carbon Adsorption Vessels

Market Segment(s):

- Chemical Processing
- Scrubbers
- Tanks
- Wastewater

Composite Applications:

- Carbon adsorption vessels
- Ducting
- Isolation Dampers

Resin: Vipel® K022-C vinyl ester
E84 Class 1 fire rating with minimal antimony oxide addition

Manufacturing Processes: Filament Winding
Hand Lay-Up

Dimensions:

Vessel diameters:
Two Each 12 and 14 ft
(3.7 and 4.3 m)

Ducting diameters:
54 in (137 cm)

Ducting lineal total:
4,000 ft (1,220 m)

Design Temperature: 180° F (82°C)

Installed: 2002

Location: Village Creek
Wastewater Treatment Plant
Birmingham, AL, USA



In odor abatement, carbon adsorbers are used to remove H₂S from select points throughout the waste water treatment plant. For the vessels holding the carbon media, Belco Manufacturing, Belton, TX, USA, relies on the processing and performance characteristics of Vipel® K022-C vinyl ester.

The vessels must resist long-term exposure to the moisture laden hydrogen sulfide environment. To meet requirements for safety, the vessels and ducting must also meet E84 Class 1 requirements for flame retardance. “Because it is formulated to give us the viscosity we need, Vipel® K022-C is easy to manage and process,” says Belco Operations Manager Rick Ramirez. “The resin system processes well in chopper gun as well as filament winding and hand lay-up operations. We can make laminates up to one-inch (25 mm) thick with minimal warpage.”

Wastewater Carbon Adsorption Vessels, continued

About Belco Manufacturing

Belco Manufacturing Co. Inc., Belton, Texas, custom designs and manufactures corrosion-resistant composite products and systems for the chemical processing, pulp and paper, water and wastewater, metal and mining, petroleum, electronics, and power generating industries. For more information on Belco capabilities, contact Engineering Manager Guy P. Gentry, MSCE, PE, by phoning (254) 933-9000 or e-mailing ggentry@belco-mfg.com.



About AOC

AOC is a leading global supplier of resins, gel-coats, colorants, additives and synergistic systems for composites and cast polymers. AOC knows technology, lives quality and delivers service better than any other resin supplier. For more information, e-mail corrosionresins@aoc-resins.com, phone (901) 854-2800 or go to CorrosionResins.com or AOC-RESINS.com.