



## Wastewater Carbon Adsorption Vessels

**Market Segments:** Chemical Processing  
Scrubbers  
Tanks  
Wastewater

**Composite Application:** Carbon adsorption vessels  
Ducting  
Isolation Dampers

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

**Manufacturing Process:** 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.”

### 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](mailto:ggentry@belco-mfg.com).

### About AOC

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