

Wastewater Duct System

Resin	Vipel® F010 vinyl ester
Composite Applications	Cylindrical and rectangular ducts; shutoff and balancing dampers, T sections, elbows, fan transitions; duct supports, guides and anchors
Manufacturing Processes	Filament Winding Hand Lay-Up
Cylindrical Duct Diameter	5 feet (152 centimeters)
Location	Jefferson County, Alabama
Installed	2001



Through its Plastics division, the JTI Companies, Inc., turned to the vinyl ester resin technology and service of AOC to help build a durable new odor control ducting system. JTI provided the detail design, support system engineering and composite cylinders and fittings for a new duct system.

The composite ducting is a critical component of the odor collection system of the new Valley Creek influent pump water station for Jefferson County, Alabama. Components of the duct system is connected using flanged and butt-and-wrap joints. To complete the system, JTI provided filament wound composite cylindrical sections as well as open-molded composite shutoff and balancing dampers, tee sections, elbows, fan transitions, rectangular ducts and the JOVE™ support system.

For this job, Vipel® F010 vinyl ester from AOC provided good fiber wetting of both the continuous fiberglass roving used in filament winding and the chopped strand mat and woven roving used in hand lay-up. The resin processed well over a wide 40 to 100°F (4.5 to 38°C) temperature range.

“Viscosity has been consistent throughout the project, and we were able to achieve all our required gel times which ranged from ten minutes to two hours,” says Jerry Winters, Plant Manager for JTI.

“This resin has been user-friendly in either the hand lay-up or filament winding operations,” Winters adds. “We could not have asked for a better performing resin or more helpful technical support from AOC.

Their support was extremely helpful in determining the promoters and inhibitors to use with out catalysts.”

Located in Birmingham, Alabama, The JTI Companies, Inc., is a blend of companies that serves the corrosion market. JTI Companies provide non-metallic specialty engineering, construction, plastics fabrication and metal working services and products. More information is available on the Internet at www.jtijove.com.


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