

Cooling Water Pipe

Resin:	Vipel® F737 Isophthalic Polyester
Pigment:	Chroma-Tek® Dark Gray
Composite Application:	Pipe for cooling water system Fittings Exterior pipe coating
Dimensions:	Diameter From 2 in. to 72 in. (5.1 cm to 183 cm) Length Up to 40 ft. (12.2 m) per section > 2,000 ft. (>610 m) total system Nominal wall thickness 1-inch (2.5 cm) for largest pipe Up to 5.5 inches (14 cm) for flanges
Design Temperature:	145° F (63°C)
Installed:	2002-2003
Location:	Linden, New Jersey, USA

Beetle Florida uses Vipel® F737 resin to filament wind pipe for the cooling water system of a new, 1, 186-mega-watt generating facility of PSEG Power LLC. The natural gas-powered facility is being built next to an existing plant that will be retired when the new project is complete in 2003.



For optimum performance and processability, the Vipel® F737 resin is used to fabricate all composite applications in the cooling water system. When used with a C-veil that promotes a resin-rich surface, the Vipel® resin improves fluid flow inside the pipe. The Vipel® F737 isopolyester is also the base material for the exterior pipe coating which incorporates an ultraviolet inhibitor as well as a dark gray Chroma-Tek® pigment from AOC. AOC chemists designed the Chroma-Tek® pigment and vehicle package for superior compatibility with the laminating system.

“In addition to providing excellent corrosion resistance, the Vipel® F737 has very good handling and processing characteristics,” says Beetle Florida Vice President Tom Haber. The Vipel® resin formulation allows us to wind with longer gel times so we can make thicker laminates.” Composite pipe made with Vipel® F737 isopolyester has a lower mass than either steel or concrete which incur higher freight costs. Installation is less costly because the lighter composite pipe can be handled with smaller, less costly equipment and can be supplied in longer lengths that reduce installation steps.