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RESINS | GEL COATS | COLORANTS

# CASE HISTORY



## Cooling Water Pipe

**Market Segments:** Pipe  
Power & Energy

**Composite Application:** Pipe for cooling water system  
Fittings  
Exterior pipe coating

**Resin:** Vipel® F737 Isophthalic Polyester

**Pigment:** Chroma-Tek® Dark Gray

**Manufacturing Process:** Hand Lay Up

**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 AOC's Vipel F737 resin to filament wind pipe for the cooling water system of a new, 1,186 megawatt 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

## Cooling Water Pipe, continued

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C-veil that promotes a resin-rich surface, the Vipel resin improves fluid flow inside the pipe. 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.

### About AOC

AOC is a leading global supplier of resins, gel coats, colorants, additives and synergistic material systems for composites and cast polymers. For more information on AOC technology, quality and service, e-mail [corrosionresins@aac-resins.com](mailto:corrosionresins@aac-resins.com), phone (866) 319-8827, or go to [AOC-RESINS.com](http://AOC-RESINS.com).

