

STRONGWELL

APPLICATION PROFILE

INTAKE SCREEN ENCLOSURE DEFIES MIST AND HUMIDITY

The Toledo Edison Bayshore power plant in Toledo, Ohio, chose all-fiberglass materials when it needed to replace and enlarge its intake screen enclosures.

The 10' x 13' x 245' enclosure on the front of the power plant screenhouse used DURASHIELD® foam core panels (12" wide x 1" thick) and EXTREN® 10" and 8" wide flange beams for the walls and roof. Fiberglass doors, window frames, access ladders and ladder hoops were also used.

The screenhouse, located at the Maumee River Bay on Lake Erie, houses the main circulating pumps for the power plant and surrounds the intake screens which filter fish, ice, snow and debris from the lake water that is pumped into the plant for the steam turbine condensers. Previous attempts to use coated structural steel for the intake screen enclosure failed due to the very high level of mist and humidity in the area. The steel would get nicked and chipped from normal operations, and then the high humidity would cause it to rust.

Rob Warner, Maintenance Planner, said, "We chose fiberglass structural materials for several reasons. Obviously, the corrosion



was a major factor that we had to consider. Also, the lightweight feature of fiberglass was important to us since we have to remove sections of the lean-to roof when we pull the screens up for maintenance. The insulation in the DURASHIELD® panels keeps the water from freezing and makes it much more comfortable for the workers, too."

The DURASHIELD® enclosure resists corrosion from the moisture and chemical wash-down while providing an insulation factor of R-7. Even with temperatures as low as -20°F, there has been minimal frost inside.

TECHNICAL DATA

Product: Intake Screen Enclosures
Process: Pultrusion
Materials: DURASHIELD® fiberglass reinforced polyester foam core panels
EXTREN® Series 525 fiberglass reinforced polyester, fire retardant
Sizes: Overall Building Size:
10' high x 245' long x 13' wide
DURASHIELD® panels:
1" thick x 12" wide
EXTREN® structural shapes used:
10" x 10" x 3/8" Wide flange beam

10" x 10" x 1/2" Wide flange beam
8" x 8" x 1/2" Wide flange beam
8" x 8" x 3/8" Wide flange beam
6" x 6" x 1/4" Wide flange beam

For: Toledo Edison
User: Bayshore Power Plant



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