

# STRONGWELL

## APPLICATION PROFILE



### AEP FINDS ANSWER TO CORROSION PROBLEM WITH FRP MATERIAL

American Electric Power (AEP) of Columbus, Ohio approached Strongwell in September, 1993, to provide an alternative conveyor drip pan. Using standard FRP components, fabricated drip pans were used to replace 1,700 lineal feet of existing pans. This main coal conveyor at the Mountaineer Plant in West Virginia feeds the coal boilers that provide steam to the facility. The purpose of the drip pans is to collect fines (coal dust) and small particles of coal that fall off the conveyor and keep them from falling to the ground. Several times each week the pans are washed down to prevent the coal dust from accumulating more than 1/2" deep, which could lead to the possibility of spontaneous combustion or structural fatigue.

The design criteria for this application included structural as well as abrasion and chemical resistant specifications. The drip pans had to be strong enough to support one man on a free span of 30'-1/4" with a maximum of 1/4" deflection over the span. The material had to be resistant to the acid conditions produced by coal as well as the abrasion of frequent shoveling and high pressure wash down. In addition, they had to be constructed with watertight connections.

After comparing FRP to 3/16" thick 304 stainless steel and coated carbon steel, AEP awarded the project to Strongwell. They determined FRP to be the superior material for this application for its corrosion resistance, ease of handling, weight savings when compared to other materials, and competitive pricing.

The three sided U-shaped drip pans were prefabricated in sections 20' long and shipped directly to the Mountaineer Plant where they were set into place and connected with a neoprene gasketing material.

### TECHNICAL DATA

Product:	Coal Conveyor Drip Pans
Process:	Pultrusion
Materials:	EXTREN® Series 525 fiberglass reinforced polyester, fire retardant
Sizes:	1/4" and 3/8" Plate 3" x 3" x 3/8" Angle
For:	American Electric Power



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