



CASE STUDY

Power Plant Extends Slurry Pipe Life from 3 Months to Years with Durastatic® Pipe

— THE PROBLEM

A Central Illinois Light Col. (CILCO) facility burns high sulfur coal in power generation and employs an SO₂ scrubbing system to remove the sulfur pollutant from combustion gasses before their entry to the stack. The limestone slurry system handles approximately 340 tons of limestone daily which following milling and mixing with water, is used to scrub flue gas produced in the burning of 3,000 to 3,500 tons of high sulfur coal each day. The stone is ground in a wet ball mill, to which water is added until the ratio of water to limestone is 85:15 (in percent). CILCO found it necessary to replace worn steel piping at intervals as frequent as three months.

“Handling the heavy steel pipe requires several workmen as well as special handling equipment. The SO₂ scrubber could be down for 8 hours or more.”

GRUBISICH, CILCO

— THE SOLUTION

As a result of the recurring maintenance problems, a decision was made to replace sections of the limestone slurry system. The material selected for the new installation was solid urethane Durastatic® Pipe. Strong and durable, Durastatic® cast urethane pipe exhibits a 93 Shore A durometer but is flexible enough to accommodate slight bending. It has an elongation of 400% and a 6,000 PSI tensile strength. CILCO uses both 6-inch and 8-inch nominal O.D. pipe having inner diameters of 5.76 and 7.63 inches, respectively. Maximum working pressure is 50 PSI.

MARKET

Energy

SOLUTION

Media Handling

PRODUCT

Polyurethane Durastatic® Pipe

TECHNICAL SPECIFICATIONS

MATERIAL

Solid urethane Durastatic® Pipe, 93 Shore A

PRESSURE

50 PSI maximum working

MEDIA

Limestone slurry, 85:15 water to stone

SIZES

6" and 8" nominal O.D. (5.76" / 7.63" I.D.)

MECHANICAL

400% elongation, 6,000 PSI tensile

Tell us what you're working on.

One partner — from concept to production — for performance that can't stop.

[Get Started ›](#)

— THE RESULT

Before the installation of the Durastatic® urethane piping, CILCO found it necessary to replace worn steel piping at intervals as frequent as three months. Since installing more than 2 years ago, the pipe has shown very little sign of wear. Grubisich notes that, "Handling the heavy steel pipe requires several workmen as well as special handling equipment. The SO2 scrubber could be down for 8 hours or more. The Durastatic® urethane pipe installation eliminates time-consuming welding of steel pipe, as each of the sections was welded individually. When using fiberglass pipe, we had to lay-up fiberglass joints and allow them to dry, which also took about 8 hours." Grubisich notes that the Durastatic® urethane pipe is significantly lighter, weighing only 22lbs, for a 10-foot section compared to 150lbs for a 10-foot length of steel pipe.

**3 mo →
2+ yr**

STEEL REPLACEMENT INTERVAL TO
DURASTATIC®

22 lb

PER 10-FT SECTION, VS. 150 LB
STEEL

93A

SHORE A DUROMETER

Tell us what you're working on.

One partner — from concept to production — for
performance that can't stop.

Get Started ›