



FGD Outlet Duct Lining

PROBLEM:

A Mid-Central Utility installed limestone SO₂ scrubber systems on their three 700+ MW units in 1978, 1980 and 1984. As early as 1982, the ductwork from the scrubber outlet to the stack inlet was showing severe corrosion and metal loss. A particular problem with finding a suitable lining product was that the duct temperatures reached 400°F during startup and shutdown.

SOLUTION:

DUROMAR, INC., who has the only organic lining product which would standup to the temperature requirements, was given the project to line the entire duct from scrubber outlet to the stack. The product used was **HPL 2131** (formerly HPL 400) which was trowel applied at 80 mils DFT. **HPL 2131** is a heavily filled (Al₂O₃) 100% solid epoxy lining system, which like all **DUROMAR** products, requires no primer.

RESULTS:

The first unit was complete in 1982. In 1985, after about 3 years of successful operation with no signs of failure, the second unit ductwork was lined with **HPL 2131**, and the third unit in was lined in 1988.

CURRENT STATUS:

In 1991, the **HPL 2131** linings were inspected. Aside from some surface darkening due to the high temperatures, all the linings were in excellent condition with little, if any, material loss. However, the plant personnel, being very sensitive to the corrosion potential from their acid gases, decided to add a thin film topcoat of **DUROMAR HPL 4320** to the existing lining.

The existing lining was cleaned, neutralized, and brush blasted prior to recoating. After sandblasting, a few areas required patching with **HPL 2131** before overcoating. The **HPL 4320** was then spray applied in two (2) coats to give a 40 mil DFT. This improved the acid resistance of the system to a pH range of 0.5 - 12.5.

COMMENTS:

DUROMAR'S HPL 2131's excellent abrasion, chemical (pH range of 1.5 - 12.5), and temperature (400+°F) resistance allow it to be used in many different environments. The simplicity of the one-coat system makes it the most easy to apply and failure free lining system in the industry.

DUROMAR'S HPL 4320's superior chemical resistance (pH range of 0.5 - 12.5) and ease of application make it the product of choice whether used alone as a thin-film lining (40 mils DFT) or as a topcoat for enhanced chemical protection.



QUALITY SYSTEM
REGISTERED TO
ISO 9001:2000



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