CORROCOAT

Case study: **VEF for a polisher vessel**

Extended life for wet gas scrubbers.

Client
Power industry, Australia.

Application date
2003.

Scope of work
Remove existing rubber lining, and protect the vessel using Polyglass VEF.

Products
POLYGLASS VEF.

Substrate
Carbon steel.

Coating system
Grit blasted internally to SA 2½.
Pitfilled with Corrothane XTHA.
Applied Corrothane XT to a minimum dft of 1.5mm.
100% Spark tested and thickness checked.

Coating credentials
The steelworks underwent a 65 day shutdown to complete a full reline on the blast furnace. Included in the reline was the refurbishment and internal coating of the wet gas scrubber. This is designed to cool all inlet gases and scrub out contaminants using processed water.

The scrubber process water contains various chemicals creating a very corrosive cocktail, including salt, ammonia and sulphuric acid at an operating temperature of 101°C with potential short term peaks of 330°C. Over many years, corrosion had occurred resulting in severe pitting and significant loss of the metal substrate. Corrocoat Corrothane XT was spray applied and trowel applied to fill all pits on the internal surface of the scrubber.

Corrothane XT is a cold cured vinyl ester/polyurethane hybrid, loaded with flake glass. It was developed to provide advanced levels of performance in immersed conditions at temperatures up to 160°C, and in non-immersed environments up to 220°C.

The advanced levels of temperature and chemical resistance achieved by Corrothane XT have opened up a new route for design engineers, offering a cost-effective alternative to expensive metallurgical solutions for the long term protection of vessels operating in higher temperature service environments.

Photographs
Left: Wet gas scrubber.
Middle: Internal pit filling.
Right: Internal spray nozzles.

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