CASE HISTORY

VpCI®-386 Clear VpCI®-309 Powder

DATE
March 2002

CUSTOMER
Power Plant

LOCATION
Alabama, USA

PROBLEM

In preparation for a new power plant construction, the dismantled smokestacks and heat exchangers arrived nearly two years prior to the planned start. These large sections of the power plant are stored outdoors and arrived partially corroded. The environmental conditions in Alabama are highly corrosive with temperature and humidity swings. Cortec® VpCI®-386 and VpCI®-309 were chosen to preserve the integrity of these crucial power plant components. If the smokestacks were unusable at the time of construction due to corrosion, it would delay construction by up to two years, as the parts are custom fabricated in Asia.

Additionally, the customer needed a solution that was non-toxic, easy to apply and would not need to be removed prior to construction.

SOLUTION AND APPLICATION

The stacks were prepared by blasting surface contaminants and scale before application of the protective coating. A 1.5 to 2.0 mil (37.5-50 microns) DFT coating of VpCI®-386 Clear was then applied by rollers to the inner diameter (ID) of the smokestack sections. Due to the profile of the ID of the smokestacks, any areas where the VpCI®-386 coating was less than 1.5 mil (37.5 micron) were recoated to ensure protection. The outer diameter of the smokestack sections were already painted and required no additional protection.

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SOLUTION AND APPLICATION

VpCI®-309 Powder (0.3 ounce per cubic foot; (300 grams/m^3) was applied to the exchangers using an aspirator. This method of application was easiest to use, required no water and effectively provided protection throughout each exchanger. Once the powder traveled to the ends of the exchangers, the end caps were replaced and taped off.

CONCLUSION

The use of VpCI®-386 Clear protected the ID of the smokestacks and limited the spread of existing corrosion in an environmentally sound alternative to solvent-based coatings. VpCI®-309 was the only effective means of protecting the exchangers as nitrite inhibitors were considered by the customer to be toxic. The combination of Cortec® coatings and powder protected these crucial power plant asset's and prevented construction delays due to corrosion.

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