



Corrosion and Abrasion Protection

Featuring Watershield III™

Project:
Rehabilitating Mining Ball Mills

Location:
Louisiana, U.S.

Owner:
Global Equipment Manufacturer

Applicator:
Advanced Construction Coatings

Coating System:
Watershield III™ with AE-4
80 - 125 mils

Total Area:
2,000 square feet

Date Completed:
August 2010

PROBLEM:

One of the world's leading equipment manufacturers for the Mining, and Oil & Gas Industries wanted to convert dry ball mills into wet mills. These 10' x 10' retired ball mills were going to be rehabilitated for a South America refinery that would use them for grinding oily and sandy sludge. The sludge was being refined to allow it to pump into a coker unit for further treatment.

The inside of the steel ball mill drums needed protection from corrosion and the sand & metal balls used to crush the sludge material. Extreme service conditions required a coating that would properly adhere to the surface, while providing good abrasion and corrosion resistance. Extending the service life of the retired ball mills would provide substantial cost savings for the refinery, eliminating the need to buy expensive new steel material.

SOLUTION:

SPI's Watershield III™ polyurea was

ultimately selected due to the coating's good corrosion and abrasion resistance. Utilizing the NACE-SSPC-10 near white metal surface preparation standard, the applicator abrasive blasted the steel surfaces to remove years of built-up corrosion damage.

Next, SPI's Watershield III™ polyurea coating, with AE-4 (adhesion enhancer), was spray-applied at 80 - 125 mils. The AE-4 admixture increases adhesion to properly prepared substrates and eliminates the need to use a primer.

RESULTS:

The project manager carefully inspected the rehabilitated ball mills. Both the equipment manufacturer and end client were completely satisfied with the finished product. The OEM was able to extend the equipment's service life, saving them money, while reducing their eco-footprint.



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