

ROANOKE CEMENT

Virginia - January 2010

PROBLEM

The sulphur in the coal being burned is creating sulphuric acid when it condensates and the corrosive effect is corroding and reducing the structural integrity of the steel.

SOLUTION:

RustGrip - HPC Coating - SuperTherm

The Ceramic Thermal Barrier Protective Lining was applied behind Refractory Fire Brick and Insulation Brick on the inside of the Cyclone to protect the steel from sulphuric acid.

The system we used was to first apply [RUSTGRIP®](#) a [patented](#) and [certified](#) Functional Coating for Encapsulation of Rust and Bio-hazards. This functional coating will prevent any further corrosive deterioration of the metal.

A coating of [HPC® COATING](#) a Functional **Ceramic Insulation Coating Engineered to Block Heat up to 232°C / 450°F** protects the RUSTGRIP from the heat and helps to control the cold spots which cause spot condensation and corrosion that is very tough to control. Coating with the HPC COATING stabilizes the surface temperature across the surface to control these cold spots.

A top coat of [SUPERTHERM®](#) was applied to protect the HPC® COATING.



STEP 1 - Outside Preparation

The Cyclone was located 50 feet in the air and there was blowing snow during this time.



Thermal wrap applied to retain heat



Heat applied to bring up to application temp.



STEP 2: Inside Preparation

Assembly Scaffolding



Inside Preparation



Sandblasting to SSPC – SP6 Commercial Blast. Flash and mild rust are acceptable



Sand Blasted Metal Surface to approximately a 2 mil profile



STEP 3: RustGrip Application

[RUST GRIP](#)® applied to 4mils dry film thickness over the highest peak of the surface profile.



STEP 4: HPC Preparation

Mixing the HPC® COATING



STEP 5: HPC Application

HPC® COATING Application to the required dry film thickness depending on the temperature.



STEP 6: SuperTherm Application

Top coat of SUPER THERM® applied to 10mils dry film thickness

