

## ROANOKE CEMENT – VIRGINIA

January 2010

### The 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.

### The Solution:

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.



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



Thermal wrap to retain heat



Heat applied to bring up to application temp.





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





RUST GRIP® applied to 4mils dry film thickness over the highest peak of the surface profile.



Mixing the HPC® COATING



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



Top coat of **SUPERTHERM®** applied to 10mils dry film thickness

