



CASE STUDY:

METAL-ROK® Cricket Wall Shapes for Wet Ash Hoppers

EQUIPMENT

- Two - 300 MW coal fired boilers wet ash hoppers

PRODUCT

- METAL-ROK® precast cricket wall shapes
- METAL-ROK® refractory/steel fiber containing product sold as a precast shape
 - Pre-Fired
 - Excellent thermal shock resistance
 - Excellent strength & toughness
 - Exhibits tensile strength in excess of 10,000 psi

APPLICATION

- Previous practice was to fabricate steel “cricket wall fulcrum” applying refractory over steel structure.
- Steel fabrication would fail and need to be replaced every 12 months (Field cast – TUFFCRETE® FS)
- Failure of cricket wall allowed for water levels to drop in both hoppers when one hopper was being emptied.
- Failure of cricket wall exposed ash hopper to the steel structure to possible damage from physical abuse as well as corrosion

INSTALLATION

- Unit 8 - 11 METAL-ROK® cricket wall shapes installed

RESULTS

- After 24 months:
 - Shapes showed minimal wear
 - Shape technology allowed for individual hoppers to maintain water levels during the process of emptying and refilling adjacent hopper
 - Shapes were left in service for a 2nd campaign in Unit 8
- 4 months later, METAL-ROK® cricket wall shapes installed in Unit 7-11 based on the success of Unit 8.



Previous cricket wall



Cricket wall installation



METAL-ROK® cricket wall shapes installed with TUFF-FLO® 47 cast underneath within the steel support



METAL-ROK® cricket wall shapes after 15-month campaign. Steel support structure compromised.



Updated – 10/28/19

Allied Mineral Products, Inc. supplies an entire line of monolithic refractories for the metals industry. For more information or a complete evaluation of your refractory requirements, please contact your local Allied representative.