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POWER GENERATION BOILER WATERWALL TUBE WEAR PROTECTION



(FIELD) COATINGS IN ACTION

Challenge:

To increase boiler running capacity, while decreasing maintenance costs. Due to the aggressive erosion of boiler waterwall tubes, plant was operating on (6) week up/ (2) week maintenance operation schedule. This schedule is completely unacceptable. Customer required (1) year minimum up time.

Background:

Anthracite coal is considered to be a high ranking coal, and is found in Pennsylvania. Anthracite refuse or culm was typically dumped by miners near operating mines.

In order to take advantage of culm as a resource, independent powder producers have utilized Circulating Fluidized Bed boiler technology to burn culm as a fuel in small power generating stations.



ARC

TWIN WIRE

PLASMA

HVOF

Coating Specifications:

Purtech 1065 tungsten carbide is a duplex carbide offering excellent wear resistance and toughness. Unlike other carbide materials, Purtech 1065 is not prone to spalling even at the high boiler operating temperatures.

Benefits:

- **7** Carbide Crystal hardness of Rc 75, Matrix hardness of Rc 60.
- **2** 24/7 field service
 - High toughness and low internal stresses ensure greater coating reliability.
- **4** Lower overall cost of operation.

Results:

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Purtech 1065 was applied to a band ranging from 2 feet to 6 feet above the refractory/ bare tube junction. Applied nominally 0.012" thick, the coating performed remarkably well. Customer achieved desired running capacity with significant savings in maintenance costs.

For more details on this application or to discuss your project needs, please call



WIRE METALLIZING

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