



Coal Exhauster Wear Plate Repair

PROBLEM:

A southeastern utility was experiencing excessive material loss on the wear plates around the outlets of the coal crusher exhausted fans. Since these plates were made of special hardened alloys, welding repair was expensive and time consuming. Attempts at rebuilding with a troweled on epoxy mastic over thick metal support screens, only gave a short time protection. Also, the work involved in welding the support screens and then troweling the material to a depth of up to 1 inch was still time consuming and expensive.

SOLUTION:

The wear plate resembled an 8' diameter washer with a 3.5' inner hole. The heaviest wear was in the 10-12 o'clock position. **DUROMAR HAR**, 100% solids, high abrasion resistant product was used to reprofile and line the effected area. The final average film thickness was 50 mils DFT. No support screen or welding was required.

RESULTS:

After 14 months of operation, the wear plate was examined. Only about 1/3 to 1/2 of the **DUROMAR HAR** remained but the wear plate itself did not show any additional metal loss. The surface was washed with **MEK** to remove loose duct and oils. Additional **DUROMAR HAR** was added to give a thickness in the heavy wear areas of about 90 mils DFT and 60 mils elsewhere to ensure year to year protection with no wear plate material loss.

CURRENT STATUS:

During each subsequent outage the wear plates were inspected and additional **HAR** was added as needed. The original wear plate is still in service and only small amounts of **HAR** are used for each outage. Since **HAR** is easily mixed and applied and cures quickly, repairs can be easily done, even during a short emergency outage, if necessary.

COMMENTS:

The epoxy matrix makes **HAR** an excellent choice for many high abrasion applications. **DUROMAR HAR** uses *silicon carbide* as its abrasion resistant filler. This, coupled with its high temperature resistance, over 400°F, and wide pH range, makes it an outstanding selection in areas requiring both chemical and abrasion resistance.



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