

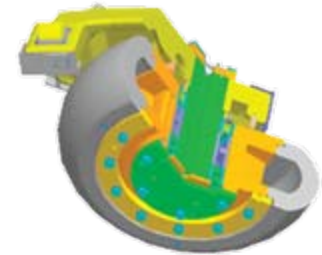
Cladding Technology



HP Journal Assembly



RB/RP/RPS/RS Journal Assembly



MPS Roll Wheel Assembly

CLAD-TECH™ Processes and Images

Patented CLAD-TECH™ process WORKS!

- After 4 years of service (processing 2 MILLION TONS of North Dakota lignite) the Pulverizer Grinding Roll (on the right - below) shows minimal wear and could easily process ANOTHER 2 million tons of lignite!



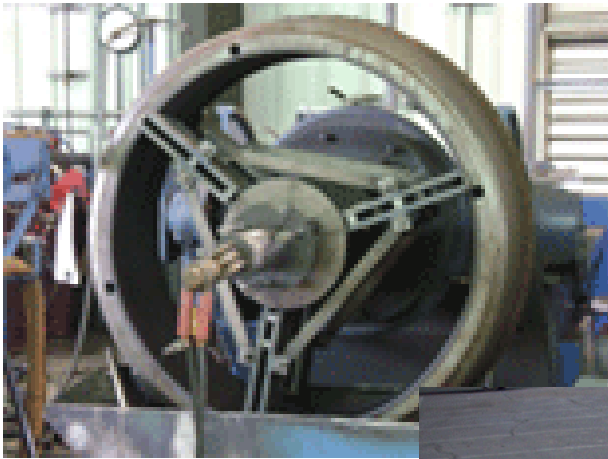
This Pulverizer Grinding Roll was rebuilt using the best of the current industry standard.

This roll needs rebuilding!



This pulverizer Grinding Roll was rebuilt using our patented CLAD-TECH™ Tungsten Carbide Matrix process. This Roll could still process ANOTHER 2 million tons of coal!

1003 HP Grinding Roll



1003 HP Grinding Roll mounted on positioner ready for weld overlay process.



After the roll has been overlaid to bring it to the original OEM specifications, the roll is grooved and ready for our Tungsten Carbide Matrix.



Finished Rolls, ready for shipment.

1003 HP Rolls



1003 HP Journal Assemblies in from customer for overlay and Clad-Tech™ C300TC Tungsten Carbide Matrix, plus bearing end-play check and oil seal replacement.

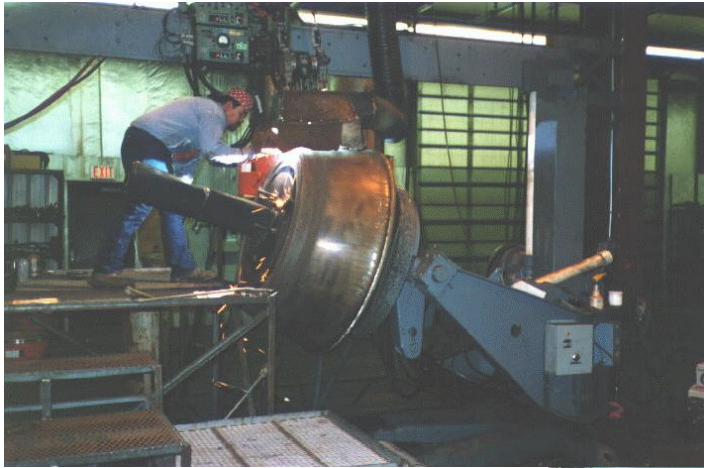


Completed 1003 HP Grinding Roll and re-mounted on Journal Assembly.

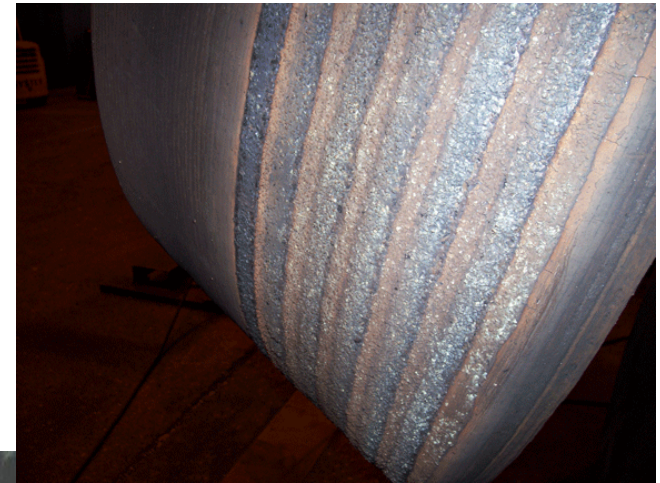


Rebuilt 1003 HP Journal Assemblies in special shipping containers ready for shipment to the customer.

Coal Pulverizer Rolls



A coal Pulverizer Grinding Roll being rebuilt to original dimensions.



Close up of Clad-Tech™ C300TC Tungsten Carbide Matrix weld overlay applied to Pulverizer Grinding Roll



A finished coal pulverizer Grinding Roll.

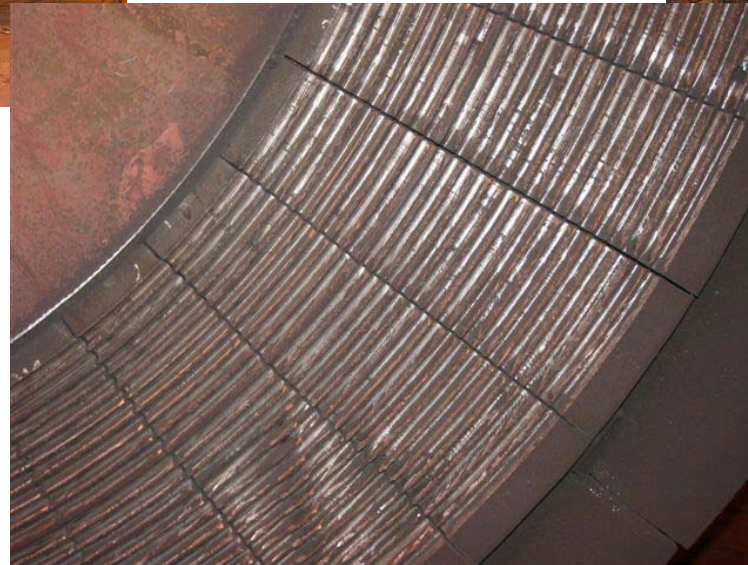
Bull Ring Segments



Pulverizer Bull Ring Segments setup on fixture ready for grooving.



Bull Ring Segments grooved and ready for application of Clad-Tech™ C300TC Tungsten Carbide Matrix weld overlay.

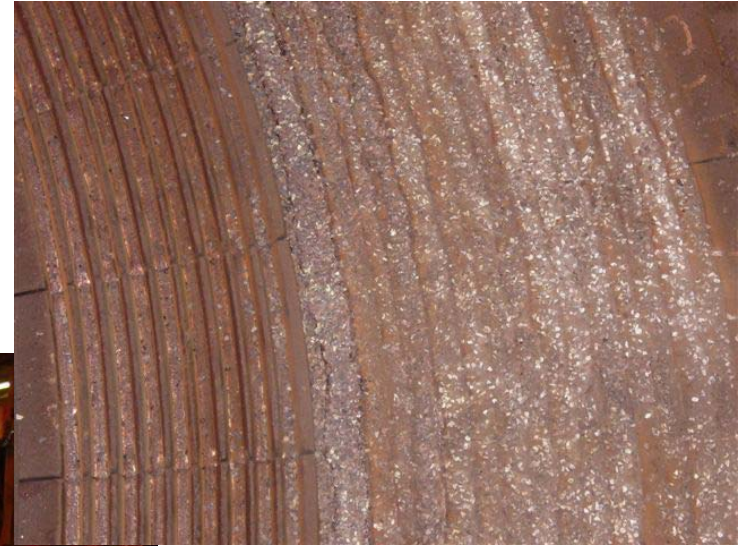


Close up of grooved Bull Ring Segments

Bull Ring Segments



Air Arcing the
grooves
in Bull Ring
Segments



Close up of
tungsten carbide
overlay, with a few
grooves left to fill.



Bull Ring Segments finished with our CLAD-TECH™ C300TC Tungsten Carbide Matrix weld overlay. These Bull Ring Segments will last over two times longer than original OEM segments.