

GRINDING ROLL & WELD OVERLAY SERVICES



RileyPower
a Babcock Power Inc. company

GRINDING ROLLS AND TIRE RESURFACING

Riley Power has an excellent reputation of supplying new grinding rolls and grinding roll resurfacing (overlay) that does not spall or chunk off during service. In fact, our success rate is 99.7% against spalling or chunking.

For new grinding rolls, we start with a cast steel core and build up the outside profile with one of our three weld overlay products to the OEM diameter and angle. After welding is complete, the tapered bore is finished machined to the proper taper angle to ensure proper blue fit (target 80% or better) contact is made with the lower housing.

For rolls to be resurfaced (if not previously overlaid by Riley Power), the existing weld overlay is removed so the core material is exposed prior to welding back to the OEM profile. This ensures different vendor wires are not mix matched which greatly reduces the potential for spalling and heel chunking often found with other suppliers hard-facing products. If Riley Power previously overlaid the roll, then only a single clean-up cut is typically required before welding can begin.

Riley Power's Weld Overlay options for new rolls and resurfaced rolls

Riley Power has three weld overlay options that can be used on both new rolls and existing resurfaced rolls.

C100S High Chrome Overlay GOOD

C100S is Riley Power's base offering and comparable in performance to most other "high chrome" overlay options available in the market. Users should expect to see similar results compared to other high chrome overlay products. C100S is a weld overlay deposit of high chrome-iron alloy recommended for applications subject to severe abrasion and moderate impact and heat.

It develops a very tight (3/8" to 1/2") cross checking pattern. Multiple layers are applied using our proprietary process. These weld deposits are not machinable or forgeable and can be used in hot wear applications up to 900°F.



Before



After

(continued on page 2)

FEATURES / BENEFITS

- Welding on large worn castings reduces replacement cost by more than 50%
- 99.7% success rate against spalling
- Increase milling availability
- Improved wear life

Weld Overlay for your grinding roll and tire needs.

Why throw out your worn roll when you can apply DURATECH™ Tungsten Carbide weld overlay to extend the life of these large castings? All resurfacing work is performed at Riley's Service Center, which offers the following:

The Process

- Prior to applying weld, visual and dye penetrant inspections are done to ensure any existing cracks or flaws have been identified
- Riley Power will then restore to OEM diameter or specification
- No filler material is used in any part of the process
- Riley Power has a variety of competitively priced weld wires available, should our premium wire not be required depending on application



BETTER**C200S Chrome Carbide Overlay**

C200S is Riley Power's mid-grade offering and comparable to other companies premium weld overlay products. Users can expect better wear protection results compared to the high chrome option for only a small price increase. C200S is a specially formulated chromium carbide alloy designed to produce a high concentration of uniformly distributed small primary chromium carbides in an austenitic matrix. This formulation has been optimized to result in a superior weldability for a broad range of single and multiple layer applications. The high concentration of small primary carbides greatly improves wear resistance and toughness over conventional chromium carbide alloys. Many users have reported a 1.5X-2.5X increase in wear performance with this product when compared to the C100S overlay option.

BEST**DURATECH™ Tungsten Carbide Process**

DURATECH™ is Riley Power's premium wear performance product. This is a proprietary process that was patented and trademark protected. In this product, a new or worn Roll/Tire is built to the OEM dimensions using our C100S overlay before the roll is grooved in the high wear area, then, Tungsten Carbide particles are embedded during the final overlay process providing superior wear resistance in the highest wear area on the Grinding Roll/Roll Wheel Tire. The DURATECH™ wear protection is only applied to the high wear area, however, custom wear protection options are available if requested.

FEATURES / BENEFITS (CONTINUED)**INCREASE LIFE CYCLE**

- "New" pulverizer performance for more operating hours
- Maximum grinding capacity is maintained for longer periods between overhauls; fineness remains higher for a longer period of time
- Pulverizer differential pressure remains low, preserving primary air system margins
- Power consumption stays lower



Tungsten Carbide

SAFETY³ PEOPLE. POWER. PROJECTS.

We're giving safety the third degree.

Babcock Power Inc. and its subsidiaries place the safety, health and security of our people at the core of our company values. Our team is our most valuable resource, generating solutions everyday to deliver safe, clean, reliable energy globally. With a keen focus on safety, Babcock Power Inc. conducts business in a manner that protects our people, our customers and the environment. From innovation to generation, we are proud of our award-winning safety record and are committed to operating with integrity and excellence.

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