B&W Roll Wheel® Pulverizer Wide Profile (WP) Tires for Increased Capacity

Babcock & Wilcox (B&W) understands the importance of optimizing pulverizer costs. We are committed to lowering operating and maintenance costs through new technology and enhancements. Our latest enhancement consists of a proprietary redesign of the B&W Roll Wheel® pulverizer tires and grinding segments (for sizes 89N and 89K) to increase pulverizer capacity and lower power consumption.

**Larger/wider tire**

This new proprietary asymmetric low profile wider tire design offers an approximate 17% increase in grinding surface area compared to a standard profile roll wheel tire. Field results indicate a potential 20% capacity increase and a 20% reduction of pulverizer power consumption (results vary with different operating conditions and coal types). For boilers which have five or more operating pulverizers, the increased capacity could result in reaching full load boiler capacity with one pulverizer utilized as a spare.

**Design features**

The evolutionary design of B&W's Wearesistor® wide profile roll wheel tires and grinding segments incorporate the following new features to improve reliability and overall performance, while reducing operating and maintenance costs:

**Roll wheel tire**

- Larger/wider tire with more wear area
- No drive lug pockets (eliminates potential cracking location)
- New shear lugs on tire clamp ring
- 1 in. lifting holes for ease of handling
- Same shrink fit, compatible with existing hubs

**Grinding segments**

- More wear material
- New lifting locations for handling
- New special wedge bolts
- Removal cavity on the bottom side of the grinding segment for easy removal
- Two wear indicator pockets

*B&W's wide profile roll wheel tires and grinding segments can improve pulverizer performance while reducing operating and maintenance costs.*

(Continued on reverse side)
Simple retrofit

These new wide profile roll wheel tires are fully compatible with existing B&W roll wheel hubs and ring seats. The retrofit consists of replacement tires, grinding segments and wedge bolts, along with minor modifications to the seal air piping and loading rods.

If your plant is seeking increased pulverizer capacity within your existing B&W Roll Wheel pulverizer footprint (sizes 89K and 89N), the redesigned wide profile tire can enhance your pulverizer performance.

In addition, B&W can rebuild your existing roll wheel assemblies with new WP tires.

Why choose B&W for your pulverizer modifications?

- We are continually researching, designing and testing improvements.
- We have extensive experience in grinding virtually all types and blends of coals.
- All retrofit parts and materials are engineered and manufactured to OEM specifications to ensure proper fit and performance.
- Our trained field engineering specialists will work closely with your plant for proper installation and to optimize operation.

<table>
<thead>
<tr>
<th></th>
<th>Standard Profile Predicted</th>
<th>Standard Profile Actual</th>
<th>Wide Profile Actual*</th>
<th>Wide Profile Actual*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coal flow, lb/h</td>
<td>108,000</td>
<td>109,000</td>
<td>120,000</td>
<td>130,000</td>
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<td>Primary air flow, lb/h</td>
<td>190,000</td>
<td>221,000</td>
<td>232,000</td>
<td>239,100</td>
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<td>Mill ΔP, in. w.c.</td>
<td>19.6</td>
<td>19</td>
<td>13.5</td>
<td>14.9</td>
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<td>Mill power, HP</td>
<td>535</td>
<td>683</td>
<td>428</td>
<td>432</td>
</tr>
</tbody>
</table>

* Measured at two different pulverizer loads

Measured capacity increase of 10 to 20%
Power reduction greater than 20%

Babcock & Wilcox
20 S. Van Buren Avenue
Barberton, Ohio 44203 USA
Phone: 330.753.4511
Fax: 330.860.1886

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