

E and EL Pulverizer Bottom Ring Assembly

Purpose

Advise owners and operators of The Babcock & Wilcox Company (B&W) E and EL pulverizers of a revised recommendation for checking the bottom ring and yoke seating surfaces.

Problem

Significant rework at assembly is often required to achieve the 80% bluing transfer between the yoke and bottom grinding ring seating surfaces. In many cases this rework is not necessary because the bluing method requires better seating surface contact than what

is really needed for pulverizer reliability. A more practical flatness criteria and checking method is needed to avoid unnecessary work.

Background

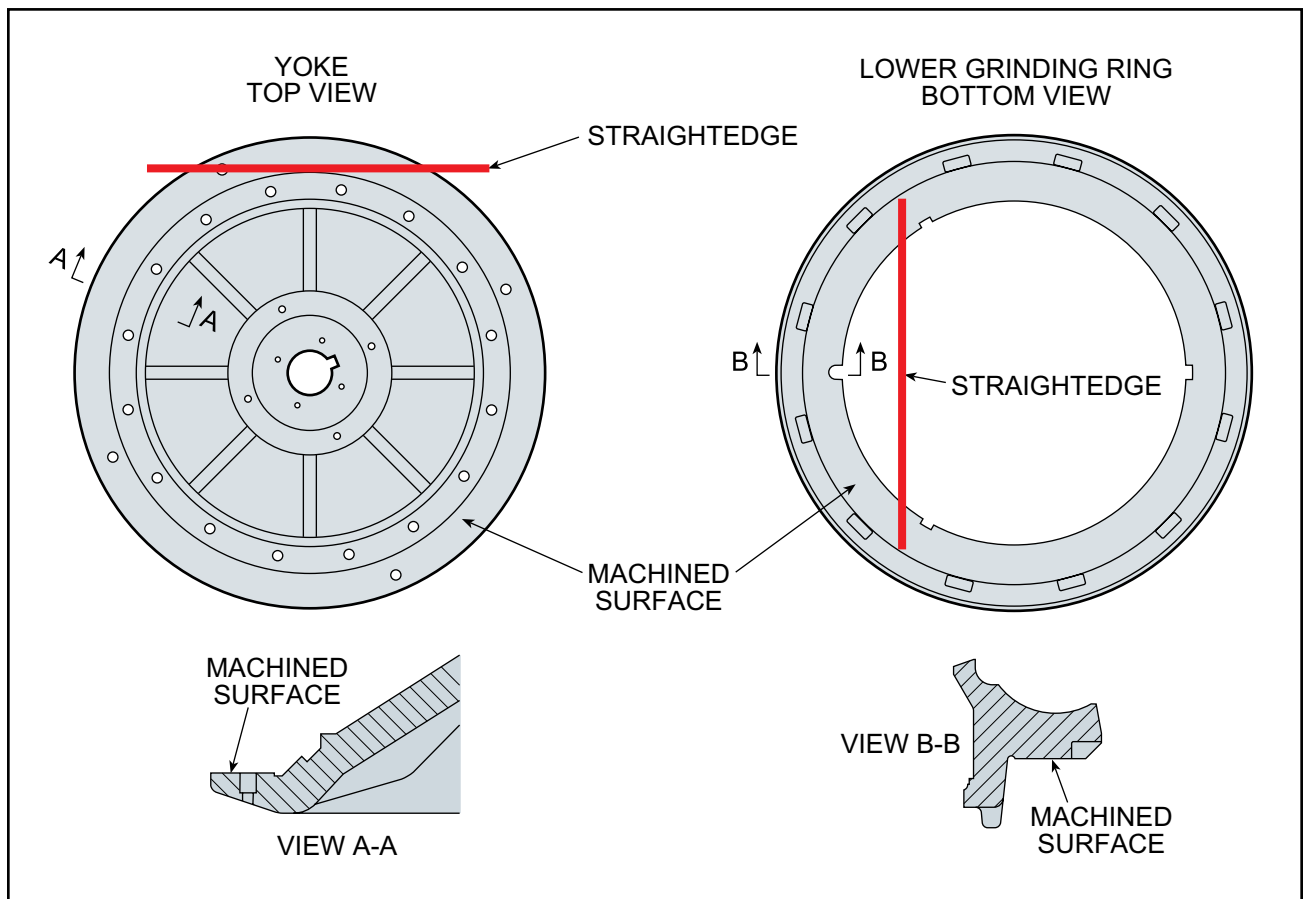
For many years B&W has recommended that the bearing surface of the bottom ring to the yoke should have 80% contact, verified by *bluing*. It was believed that this excellent bearing contact was required to prevent ring breakage. More recent analysis of bottom ring breakage indicates: 1) the majority of broken rings are caused by thermal differential

stresses within the ring; 2) the ring is not as brittle as previously believed; and 3) the ring is strong enough to tolerate discontinuities in the bearing surface.

Recommendation

Utilize the following dimensional acceptance criteria and suggested inspection method for the yoke and bottom ring seating surface flatness:

The seat is flat within 0.005 in. (0.127 mm) across a chord that extends from the outside diameter (OD), across the



(Continued on reverse side)

inside diameter (ID), and back out to the OD. Measure with a straightedge and feeler gauge at four different chords distributed around the circumference of the surface.

B&W uses this procedure for shop inspection of new bottom grinding rings. The bluing method may still be used, but if the desired contact pattern is not achieved, this straight edge procedure should be used before pursuing any rework. If the seating surface does not meet this straightedge criteria, contact B&W's Field Engineering Services.

For high temperature, two-piece bottom rings, the same recommendations apply to the yoke and grinding ring, and also to the top and bottom seating surfaces of the ring seat. The ring seat must be well supported to avoid temporary distortion of the seating surfaces.

B&W Support

Contact Field Engineering Services through your local B&W district service office to coordinate your inspection and rebuild efforts and to answer any questions.

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