



## PLANT UPGRADES BEARING CONVERSIONS – KEEP YOU AHEAD OF THE COMPETITION

**Primetals Technologies is constantly innovating and improving oil film bearings for flat mills. This new technology is always available on new bearings, but MORGOIL® also strives to retrofit the improvements to older bearing designs, thus allowing older mills to increase the performance of their back-up roll bearings. This helps to ensure that investments in MORGOIL® bearings give mills access to the latest technology throughout its life.**

### YOUR CHALLENGE

As a rolling mill operator, you face increasing demands from your customers to supply higher quality grades of material, with tighter tolerances on gauge, which can have a serious impact on your business if your existing equipment is not capable of achieving these requirements. There is also additional pressure to improve quality, productivity, profitability and utilization, as well as tighter environmental controls, which need to be considered throughout the mill's entire life cycle.

### OUR SOLUTION

Mills are operating at a higher load capacity and in order to keep up with the changing demands of today's customers, you need to take advantage of small but steady technological advances to ensure optimum production in your mill. As an original equipment manufacturer and a full line supplier, Primetals Technologies offers true life-cycle support. We can provide you with a unique range of products and services to maximise mill utilization and productivity.



NISCO Plate Steckel Mill

- The new KLX® bearing conversion offers higher load capacity for the same size bearing
- MORGOIL® provides an effective sealing solution whether a mill is wet or dry
- Our locking systems are specifically developed in order to improve the accuracy and consistency of bearing mounting, leading to improved running conditions



Morgoil® LD Locking system upgrade



Morgoil® bushing reconditioning

### BEARING CONVERSIONS AND UPGRADES

The KLX® is the latest evolution of the MORGOIL® bearing, offering higher load capacity for the same size bearing and lower part counts to simplify maintenance, plus reduce initial and operational costs. The central feature of the KLX® is the new sleeve, which better distributes rolling load and the resulting hydrodynamic pressure field, enabling an increase in capacity for the same size bearing.

### LOAD CARRYING COMPONENT UPGRADES

- KLX Conversion for ultimate load carrying capacity and accuracy
- Long Key bearings can be converted to short key
- Roller and Bratt Mount Bearings can be converted to MORGOIL® bearings

### MAIN BENEFITS

- Higher capacity
- Reduced size
- Reduced investment cost
- Reduced operational cost

### SEALING CONVERSIONS AND UPGRADES

Effective sealing is of critical importance in bearing design. Sealing encompasses more than the elastomer sealing element. It is important that all components function together as a sealing system to address the total leakage issue. MORGOIL® has spent thousands of hours testing and evaluating various seals, seal end plate designs and features and other components to put together several systems based on a specific mill's needs.

### MAIN BENEFITS

- No leakage in or out of the bearing.
- Ease of mounting and dismounting
- Cost effective
- Reduced operational cost

### LOCKING CONVERSIONS

Existing MORGOIL® and roller bearing mechanical locks can be retrofitted with new fully hydraulic locks, enabling safe and consistent mounting of both backup and work roll bearings.

### MAIN BENEFITS

- Exact and uniformly distributed bearing and mounting force
- Quicker and much safer assembly in the roll shop
- Improved lives of bearing components
- Productivity and quality improvements by proper bearing mounting

### ADVANTAGES OF BEARING UPGRADES

- Equipment has just become too old and worn to produce a quality product
- A mill may want to produce tougher grades requiring higher stand capacities
- A mill may want to increase rolling speed and production
- A mill may be adding a processing line and have to run slower, perhaps stopping under load
- An old mill is being sold and being bought up to current standards
- Mills may want to upgrade to MORGOIL® bearings from rolling element bearings to increase speed and capacity
- Mill utilisation is maximised
- Accurate product gauge is achieved
- Oil losses and strip contamination are eliminated
- Safer operating practices are ensured
- Equipment operating life is extended

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