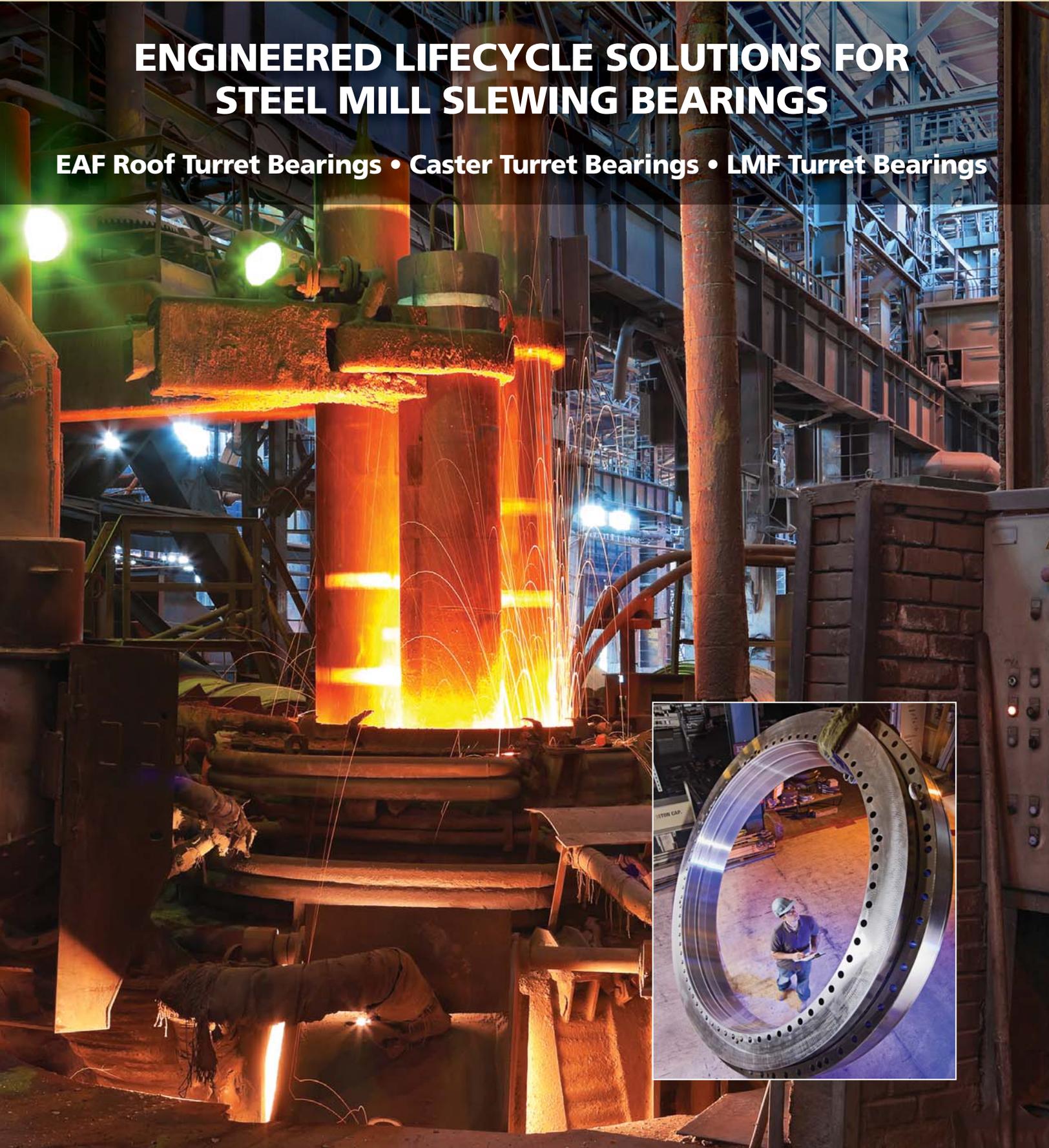
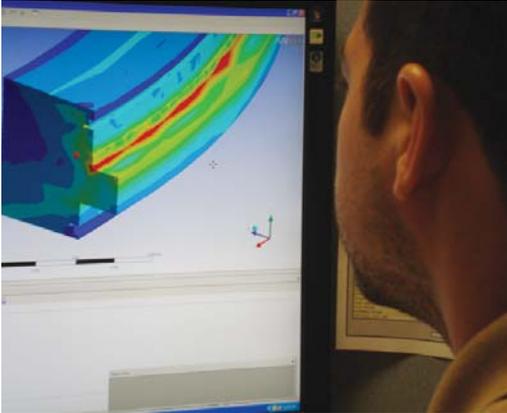


ENGINEERED LIFECYCLE SOLUTIONS FOR STEEL MILL SLEWING BEARINGS

EAF Roof Turret Bearings • Caster Turret Bearings • LMF Turret Bearings



EXPERT ENGINEERING AND ADVANCED HEAT TREAT CAPABILITIES FOR FEWER CHANGEOUTS

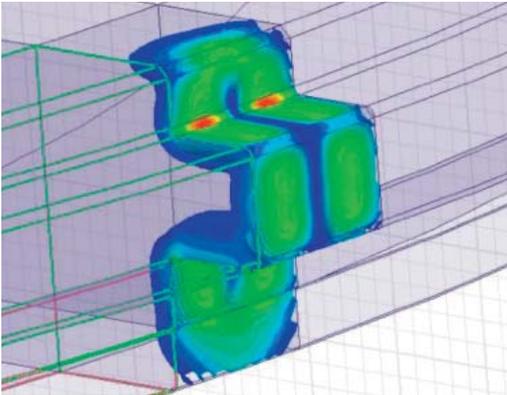


Messinger engineers customized bearing solutions for each customer's specific needs to reduce downtime costs from the very beginning of the bearing's life cycle. This upfront engineering analysis culminates in greater bearing capacity and longer life which means fewer changeouts for our customers.

Here's how we increase bearing capacity, extend bearing life and reduce changeouts and downtime:

Expert Engineering Capabilities

- Comprehensive feasibility studies
- Customized bearing solutions
- Sealing solutions customized to each customer's operating environment
- Detailed technical analysis
 - > FEA modeling
 - > Advanced software packages
 - > Bolted connection design
 - > Gearing
- Bearing life optimization
 - > Custom roller crowning
 - > Internal bearing maximization
 - > Superior heat treatment capabilities



Industry Leading Heat Treatment Capabilities

- Advanced induction heat treatment process modeling
- Superior case depth capabilities
- Custom heat treatment profiles designed for each customer's specific thrust, radial and moment loading conditions
- Destructive and non-destructive inspection and verification



MESSINGER INDUCTION HEAT TREATING EQUIPMENT HANDLES BEARINGS UP TO 25 FT IN DIAMETER AND 30,000 LBS TO ENSURE PRECISE BEARING HARDNESS.

VALUE-ADDED SUPPORT SERVICES FOR THE LIFE CYCLE OF YOUR BEARING

Comprehensive Installation Assistance And Field Service

Messinger Bearings provides expert field service support over the lifetime of the bearing to protect your valuable investment and keep downtime to a minimum.

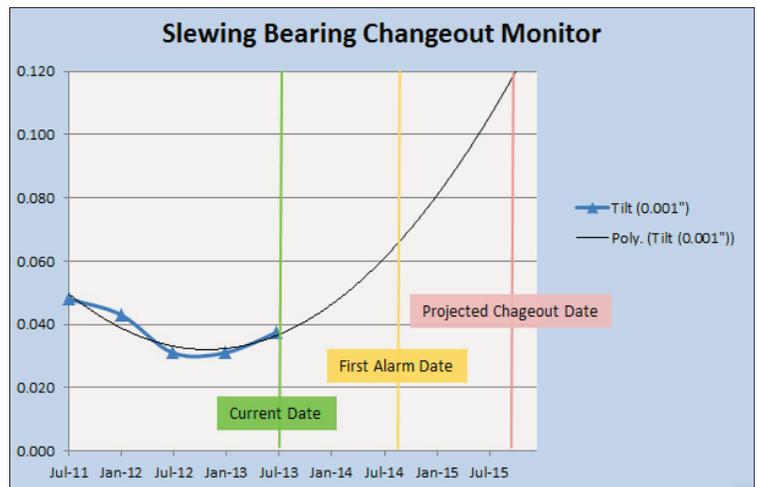
From the moment the bearing is installed, Messinger works with its customers to provide on-site bearing analysis, allowing our team to assess and track bearing performance while it is in operation. This service furnishes critical information and provides trended data back to the customer that can be used to more accurately predict the ideal time for a bearing change-out.

Messinger Field Service includes:

- In-application monitoring and predictive reporting
- Failure analysis
- On-site consultation

Predictive Maintenance

Messinger's predictive maintenance aids the customer in avoiding unexpected down time and assists in scheduling for a planned change out of the slewing bearing.



On Site Inspections

When a bearing is removed from service, Messinger's field service team can inspect it in the field and have it sent to Messinger's facility to receive a closer look prior to repair.





Storage & Replacement

Proper storage of slewing ring bearings is a necessity for critical spares in heavy industry. There are several different methods including recertification, interval lubrication and rotation, and storage tanks.

Messinger offers both long and short term storage solutions to fit your budget and ensure that your replacement bearing is in peak condition at the time of installation.



Messinger Bearings field service team is ready to assist you with storage solutions, installation assistance, predictive maintenance, and field inspections throughout the lifetime of your slewing bearing.

PRECISION MANUFACTURING & REMANUFACTURING

Messinger is the logical choice when you need a large bearing remanufactured.

Messinger's Remanufacturing Support

1. Fast deliveries
2. Quality workmanship – ISO 9001:2000
3. Engineering solutions specific to each customer's bearing
4. Warranty on service

Experience counts for big bearing remanufacturing.



Messinger's Remanufacturing Process

1. Inspect bearing as received
2. Disassemble bearing
3. Perform detailed analysis of bearing
4. Perform non-destructive analysis as required
5. Grind and polish bearing races as required
6. Replace rolling elements as required
7. Replace damaged components as required – such as seals, separators, hardware, etc.
8. Assemble
9. Inspect and ship



Supporting Older Original Equipment

Messinger continues to manufacture, repair and support bearings that are on older equipment designed by Mesta Machine, Alliance Machine, Cold Metal Processing, United Engineering & Foundry, Philadelphia Gear, and other OEMs. Applications include:

- Plate mills
- Hot strip mills
- BOF drives
- Flying shears
- Large overhead cranes
- Blooming mills
- Slabbing mills
- Plate levelers
- Rotary crop shears
- Cold strip mills
- Pickling mills
- Roll grinders
- Four high roll



WE ENABLE SUPERIOR MACHINE PERFORMANCE THROUGH EXPERT BEARING SOLUTIONS.



Messinger possesses unique large bearing manufacturing capabilities to meet the specifications and delivery requirements of heavy industry. Since 1912, Messinger Bearings has been focused on engineering and manufacturing custom bearings that provide the best solution for our customers' applications.

Messinger is in an elite category of manufacturers capable of producing extremely large bearings. We are the only North American manufacturer to produce and repair rolling element bearings up to 25 feet in diameter.

Contact Messinger to learn how our core skills and experience can deliver unparalleled technical support, expert field service, and timely delivery to help you maintain superior machine performance.



For application assistance or to get a quote, visit our web site.

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