

Integrated Maintenance Solutions

At Timken, our integrated maintenance solutions are grounded in our knowledge of motion, friction, lubrication and metallurgy. With more than 100 years of friction management experience, we are uniquely qualified to manage, repair and maintain our customers' power transmission systems.

We leverage this experience to provide metal manufacturers with a total systems approach to mill maintenance. Because every customer is unique, we begin our process by diagnosing root-cause problems found in ferrous and nonferrous facilities, including hot mills, cold mills, processing lines and casting machines. We then prescribe a maintenance program to help improve your mill's performance and reduce costs.

From individual component repair to mill maintenance management programs, turn to Timken industrial services for your complete maintenance solutions:

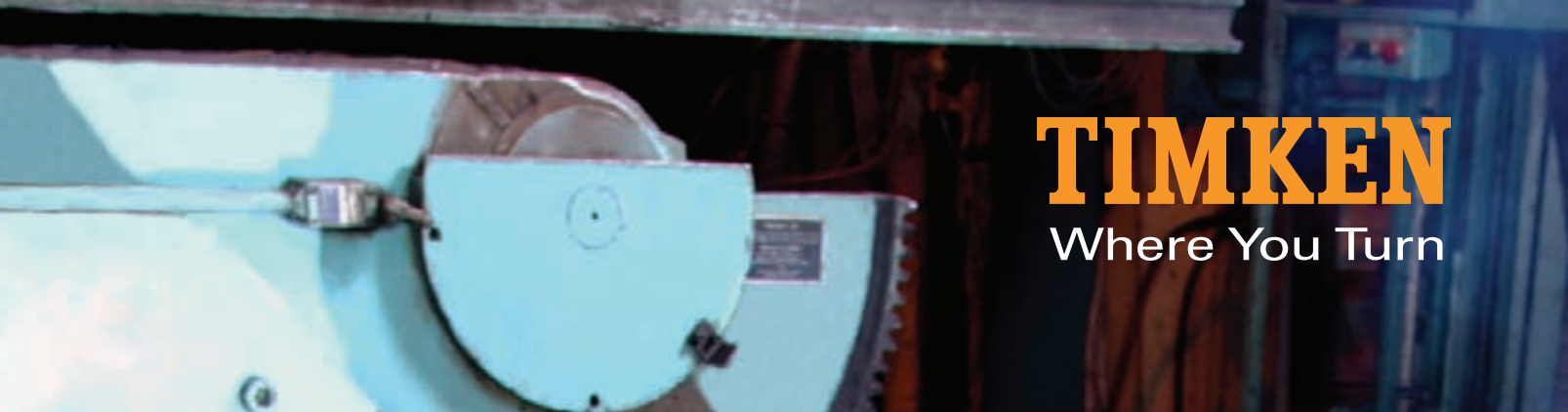
- **Bearing Repair**
- **Chock Maintenance and Repair**
- **Chock Bearing Maintenance**
- **Roll Repair and Overlays**
- **Roll Bearing Maintenance**
- **New Chock and Roll Manufacturing**
- **Coupling Repair**
- **Chock Lok®**
- **Reliability Services**
- **Combined Mechanical Services**
- **Mill Maintenance Management**
- **Inventory Programs**
- **Training**

Save Time and Money
Lowering rolling costs per ton and achieving higher yields are critical to keeping your mill competitive in today's market. We work closely with customers to identify the precise combination of bearings, related products and services to help maximize productivity and improve overall equipment effectiveness. Our wide range of rebuild and remanufacturing capabilities simplify your maintenance schedules, extend component life and save up to 60 percent off the cost of buying new.

Experience You Trust
As the maintenance needs of mills continue to change, having a reliable, expert resource for integrated maintenance solutions is vital. At Timken, you have access to experience that comes from nearly 90 years of steel mill operation and more than 100 years of bearing manufacturing.

Timken is the only manufacturer of its kind to offer a full-range of maintenance and repair services in addition to owning and operating its own steel mills. As a complete supplier of bearings, greases, seals, condition monitoring equipment and integrated maintenance services, we have the unique advantage of developing and refining products and services right in our own mills. We understand the maintenance needs of today's mills from the inside out.

Timken's Faircrest Steel Plant



TIMKEN
Where You Turn

Integrated Maintenance Solutions



The Timken Company

The Timken Company keeps the world turning, with innovative friction management and power transmission products and services, enabling our customers to perform faster and more efficiently. Timken is Where You Turn™ for better performance.

For More Information

To learn more about Timken industrial services and our integrated maintenance solutions, contact your local Timken representative or visit www.timken.com.

TIMKEN
Where You Turn

Bearings • Steel •
Precision Components • Lubrication •
Seals • Remanufacture and Repair •
Industrial Services

www.timken.com

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MILLTECSM – Mill Maintenance Management

MILLTEC, our around-the-clock mill maintenance management program, brings a century of friction management experience and highly trained engineering workforce to your mill. With this on-site program, Timken assumes full responsibility for the maintenance of your rolls, chocks, bearings and other related equipment. This includes roll and chock system maintenance, vendor oversight, warehouse management, record-keeping, condition monitoring and bearing refurbishment.

- **Increase productivity**
- **Reduce operating costs, change over and breakdown**
- **Extend bearing and equipment life**
- **Decrease inventory of bearings, chocks, rolls and other related equipment**
- **Increase focus on core competency**



Bearing Repair

Repairs can be made on a variety of bearing types and sizes. When preventive maintenance programs accompany reconditioning, bearings reach their peak potential. Our service engineering team partners with your maintenance group to analyze the bearing and determine the proper remanufacture process type. Remanufacturing is available for any bearing type or brand – even competitor products.

- **Can often return bearings to like-new specifications**
- **Increase bearing life by up to three times**
- **Save up to 60 percent off the cost of buying new**
- **Restore bearings in one-third the time**
- **Ideal for work roll and backup roll bearings**



Chock Bearing Maintenance

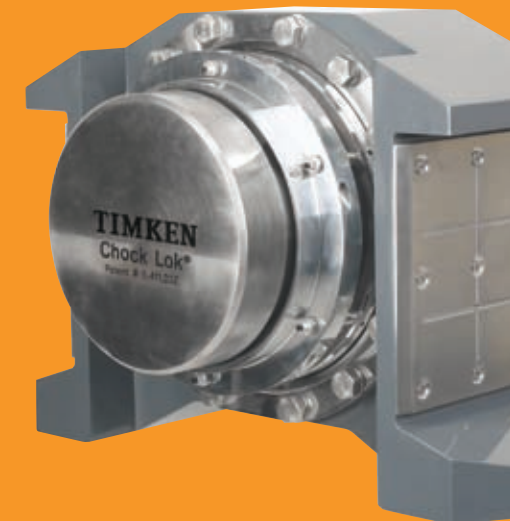
Timken assists OEMs with the initial design of bearings and chocks. We use this application knowledge to improve your equipment's performance, beginning with the complete chock bearing assembly. We disassemble the entire system and clean, inspect and repair all individual components, if necessary. Then we reassemble, lubricate and store the assembly as required by the customer.

- **Service allows maintenance professionals to focus on critical issues**
- **Quick chock assembly turnaround based on customer needs**

Chock/Housing Maintenance and Repair

Our repair process can make a chock stronger than new with our mini- and full-rebuild services. We work on hundreds of chocks per year and have the experience to assess and correct key problem areas that occur in work roll and backup roll chocks. Our full-service chock rebuild and manufacturing capabilities allow us to rework surfaces and return your equipment to like-new condition. We also manufacture new chocks and simplify installation and maintenance procedures with our patented Chock Lok[®] device.

- **Mill Clad alloys make repaired chocks stronger than new, helping to resist corrosion, wear and heavy coining**
- **Minimize problem wear areas with detailed finite element analysis and material enhancements**
- **Save up to 60 percent off the cost of buying new**
- **Upgrade the quality of new chocks with improved base materials**
- **Keep your maintenance program on schedule with short lead times**



Timken's Chock Lok is a patented locking mechanism that easily attaches to a chock to precisely hold a bearing to a shaft during operation.

- **Simplify roll disassembly and assembly**
- **Improve run-time performance**

Roll Repair and Overlays

We have a dedicated facility to remanufacture cast, forged, fabricated and weld-overlayed rolls for steel and aluminum mills. Our services accommodate a wide variety of roll applications and sizes. By using ductile core materials overlaid with Mill Clad alloys, we substantially improve roll life. Our in-house metallurgical analysis provides proprietary weld metal chemistries to optimize performance. Our state-of-the-art application process delivers consistent metal chemistry throughout the thickness of the overlay. We also manufacture new rolls to meet customer specifications.

- **High-quality roll overlays featuring Mill Clad wear and resistant alloys outperform other roll types**
- **Custom cladding helps maximize performance**
- **Proprietary weld chemistries developed by Timken's Technology Center meet unique roll and application requirements**
- **Increase roll life up to five times**
- **Save up to 60 percent off the cost of buying new**
- **Quick turnaround supports customer on-time delivery requirements**

