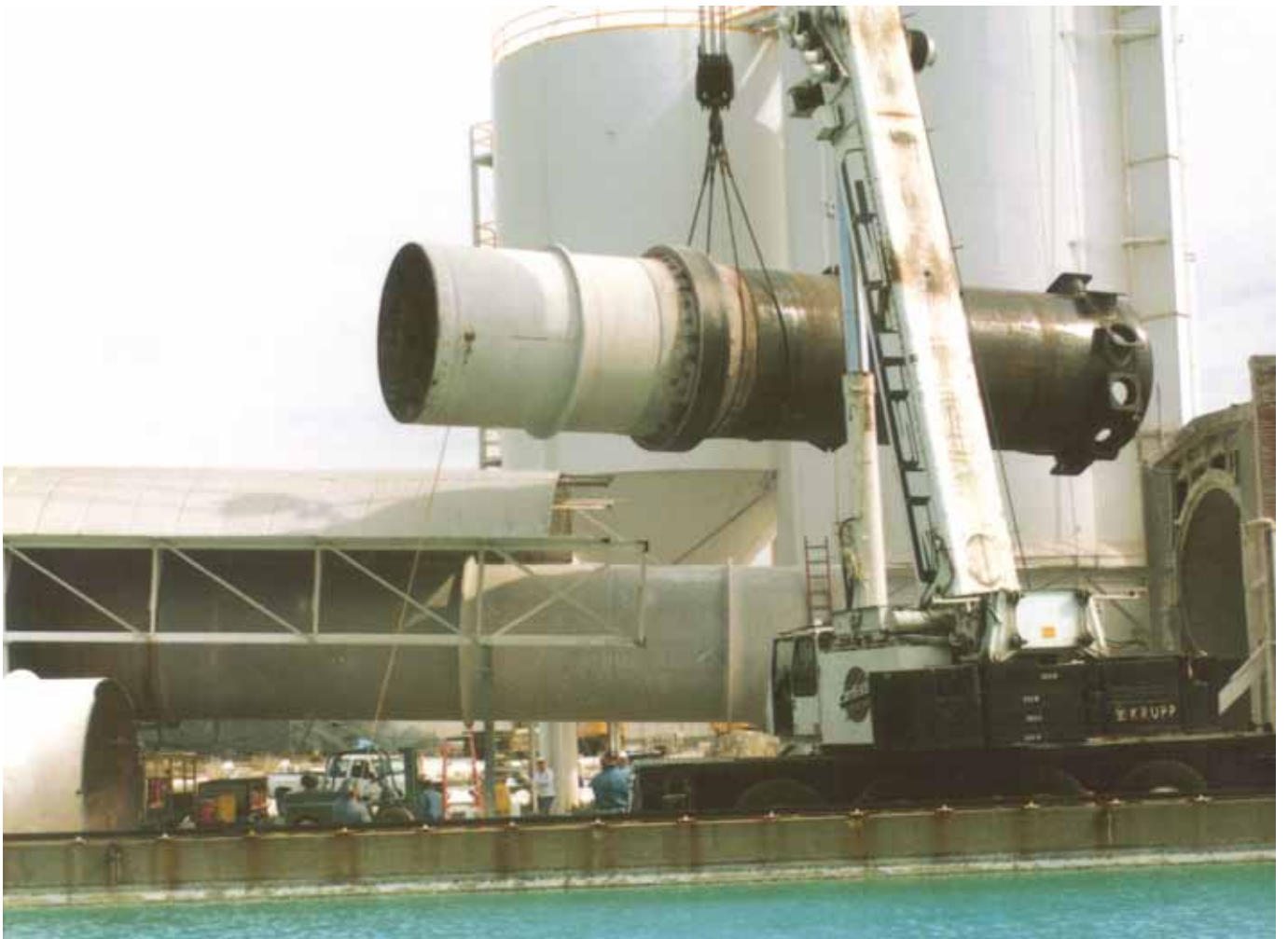


Pyro Processing

After market services





Pyro processing after market services

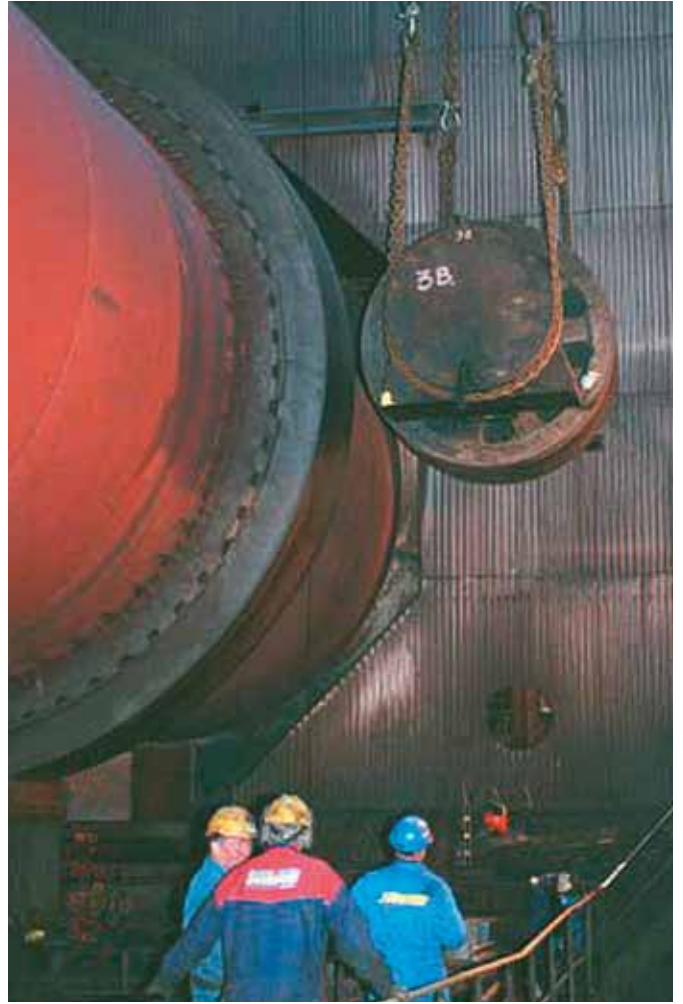
Service you want, experience you need

Our predecessor companies have been serving customers in the pyro-processing industries for over 100 years. Our respected brand names include: Svedala, Kennedy Van Saun (KVS), MPSI, Hardinge, Allis Chalmers, Koppers, Allis Minerals Systems, Boliden Allis, Stansteel, Pyrotherm, Armstrong Holland.

Metso processing's two greatest assets are the experience of our people and our extensive archives of drawings and specifications. Together, they assure accurate technical field services and parts supply for systems and equipment designed, manufactured and supplied by Metso.

Our safety certified field service engineers have specialized experience working on both existing and new pyro-processing equipment and systems. They are trained to search for the cause of problems and to use our knowledge of similar machines and the latest available technology to help you maintain and improve your operation.

Our parts technicians provide a highly specialized service to our customers through our parts supply programs. Original-designed replacement parts are supplied to keep your equipment in productive operation with the right part at the right time.





An expansive array of services

Metso provides you with an expansive range of services to meet your every need:

- Supply and installation of parts
- Emergency repairs
- Equipment alignment
- Riding ring and roller resurfacing
- Kiln shell ovality determination
- Field advisory services
- System and equipment upgrades
- Operations & Maintenance seminars
- Maintenance programs
- Process and mechanical audits
- Annual service contracts
- Hot kiln surveys

"...your people handled themselves in an exemplary, professional manner. A catastrophic failure of this magnitude obviously presents the potential for huge losses. I believe your response in the handling of the entire episode certainly contained our losses as well as they could have been."

Excerpt from letter from a Midwest Pulp Mill Superintendent.



Kiln ovality measurement



Riding ring resurfacing on debarking drum

Field services

Metso's field service engineers, supported by design and process engineers, provide mechanical, electrical, instrumentation and control trouble-shooting expertise and advisory assistance for maintenance or refurbishment programs.

Metso field service engineers utilize state-of-the-art measurement techniques for field measurements. This data is used in kiln analysis studies for ovality, precision alignments and a detailed array of engineering studies.

An experienced staff of engineers, who support the field service personnel, review the data collected on-site, analyze it and report recommendations.

With our vast experience in projects of all sizes, Metso Minerals can work with plant personnel to recommend and advise on time and cost-saving installation techniques.

Ensuring optimum performance

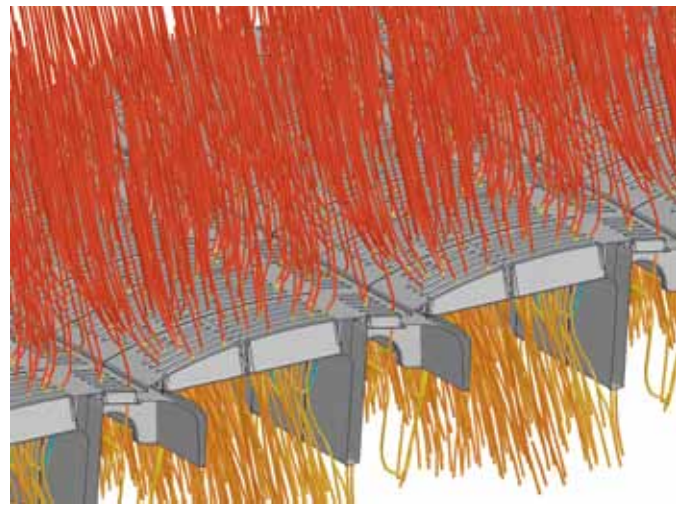
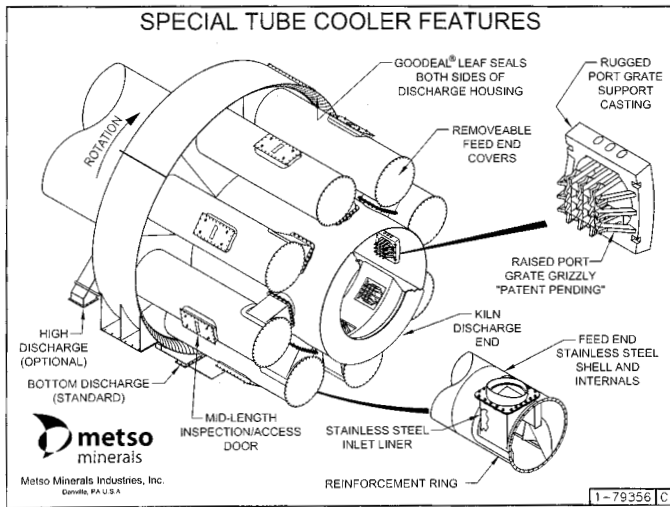
At Metso, we know that periodic riding ring and support roller resurfacing is a necessity to ensure optimum equipment performance. Proper machine alignment and full contact are needed for efficient and cost-effective rotary equipment operation. Metso only uses resurfacing machines that are engineered for this application.

Metso designs and builds the rotary equipment and understands the importance of using the correct procedures to restore the equipment to optimum operating condition. Using our technicians, trained and backed by OEM engineering, will ensure the best field performance.

Future care

The primary focus of the Metso's processing aftermarket services team is the "Future Care" of our existing equipment installations. We offer specialized service to maintain or improve the mechanical and process operation of your facility.

The future care concept will enhance the cooperation between Metso and its customers, and as such will be an integral part of turning our vision into a reality. We will provide our customers with a new and stronger partnership by maintaining and enhancing their business and production process with a life cycle approach. Our aim is to envisage the future beyond your present needs.



A model diagram from a CFD study on the heat transfer between grate plates and gases for iron ore pelletizing.

Replacement parts and plant upgrades

Parts are critical to the successful operation of any processing plant. Metso owns and maintains the drawings, specifications, manuals and design calculations for equipment previously sold under a variety of trade names, including those marketed under the Allis-Chalmers, Allis Mineral Systems, Boliden Allis, Kennedy Van Saun (KVS), Hardinge, Joy Energy Systems, Stansteel and Svedala names.

As a result, Metso can provide repair parts to the original tolerances and specifications and incorporate the latest design improvements. Metso Minerals' expertise also provides the ability to supply repair parts, field services and complete retrofits to similar equipment made by other suppliers.

Our parts technicians provide a highly specialized service to customers through our Parts Supply Programs. Original-designed replacement parts are supplied to keep your equipment in productive operation with the right part at the right time.

One source for all your parts and service needs

Metso's experience in designing and supplying a wide range of Pyro-processing equipment provides a variety of benefits. With us you can:

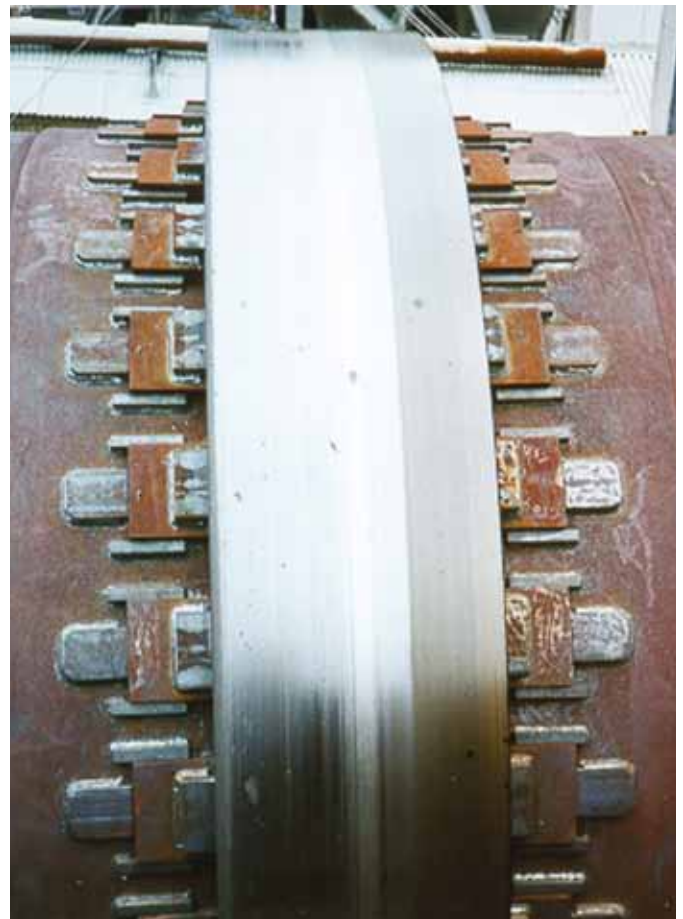
- Rely on one source for all your parts and technical service needs, 24/7.
- Minimize downtime risk.
- Improve productivity.
- Prevent problems.

Metso's trained problem solvers have the capabilities and the experience to help keep your equipment operating efficiently with minimum downtime.

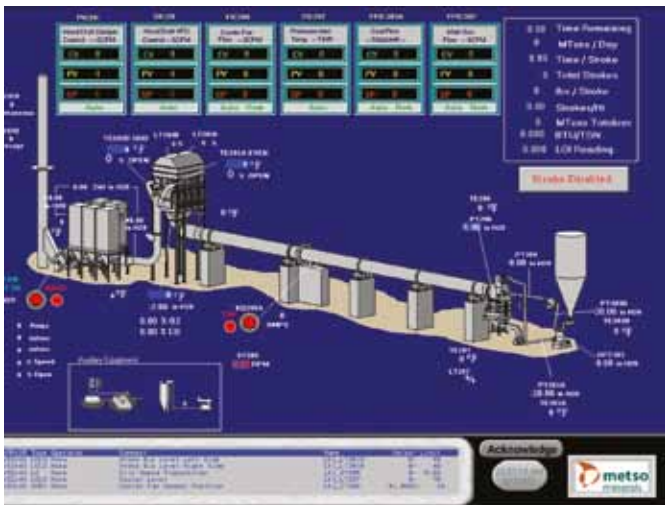
Depend upon Metso for rapid response, on-time delivery, quality control and emergency support.

Keeping a competitive edge

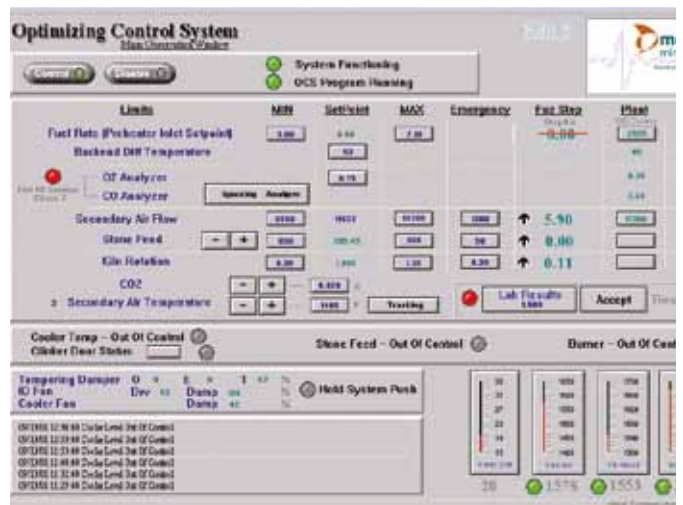
Plant and equipment upgrades make it possible to incorporate the latest designs into existing plants. An upgrade can be for improved thermal efficiency, reduced maintenance, improved product quality, increased safety and/or a reduction in operating costs. Upgrades are custom designed for each plant and process and supported by Metso's vast experience in process evaluation, equipment design and complete installation capability.



Full floating filler bar system.



PLC based control system



Solving problems, saving money

Metso recognizes the growing requirement in the industry to improve the speed and quality of the monitoring and control of process systems. Only with sufficient, reliable data monitoring and responsive control can an operator reach true process optimization and hence optimum operating economy.

Maximum production – minimum cost

Advance control systems providing online measurements, trending and automated control take operators closer to realizing the primary goal: maximum production at minimum cost.

Developed by Metso's highly experienced operations and control engineers, the Metso Optimizing Control System (OCS) is an upper level control application used to stabilize and optimize kiln production.

Extending our knowledge

Knowledge is power! These are the words a modern plant lives by for the most cost-effective operation. Training is key for.....

- Operators to keep the system operation smooth, steady and efficient.
- Maintenance staffs to minimize unscheduled downtime and keep the equipment in reliable condition.
- Everyone to operate and maintain the plant safely.

Metso training services

Metso gives you power with an extensive array of training programs designed for real world operations. We offer training at your facility or our offices. We specialize in hands-on training for operators and maintenance using our field engineers. The same field engineers, who installed, operated and commissioned the equipment.



Off site training seminar class room



A Metso field service engineer discusses key maintenance areas and monitoring techniques in a "hands-on" training session at a customer's plant.



- **Metso Minerals Industries Inc.**
350 Railroad Street, Danville, PA 17821-2046, USA, Phone: +1 570 275 3050, Fax: +1 570 275 6789
- **Metso Minerals Industries, Inc.**
2715 Pleasant Valley Road, York, PA 17402, USA, Phone: +1 717 843 8671
- **Metso Minerals (South Africa) (Pty) Ltd.**
Private Bag X2006, Isando, Johannesburg, 1600, South Africa, Phone: +27 11 961 4000, Fax: +27 11 397 2050
- **Metso Minerals (Australia) Ltd.**
Level 2, 1110 Hay Street, West Perth, WA 6005, Australia, Phone: +61 8 9420 5555, Fax: +61 8 9320 2500
- **Metso Minerals (India) Pvt Ltd**
1th floor, DLF Building No. 10, Tower A, DLF Cyber City, Phase - III, Gurgaon - 122 002, India, Phone: +91 124 235 1541, Fax: +91 124 235 1601
- **Metso Perú S.A.**
Calle 5 Nro. 144, Urb. Industrial Vulcano, Ate, Lima 03, Peru, Phone: +51 1 313 4366, Fax: +51 1 349 0913
- **Metso Minerals (Chile) S.A.**
Av. Los Conquistadores 2758, - Piso 3, Providencia, Santiago, Chile, Phone: +56 2 370 2000, Fax: +56 2 370 2039
- **Metso Brasil Indústria e Comércio Ltda.**
Av. Independência, 2500 Éden, 18087-101 Sorocaba-SP - Brazil, Phone: +55 15 2102 13009
- **Metso Minerals (Sweden) AB**
Norrängsgatan 2, SE-733 38 Sala, Sweden, Phone: +46 224 571 00, Fax: +46 224 169 50



www.metso.com
E-mail: pyro@metso.com