

results

Metso Outotec's magazine for mining & aggregates customers >> Issue 1, 2021

Metso:Outotec

Partner for
positive change

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tec



Dear Customers,

I hope you and your families are safe and business is also in growth trajectory.

Difficult times call for different and sharper approach. We understand that our customers need support even during these uncertain times. To facilitate this, we at Metso Outotec, have ensured that our operations continue to deliver despite current challenges, in a safe and sustainable manner.

Post Metso-Outotec merger, we are in a unique position to offer end-to-end solutions right from Ore to Metals, as a part of our enhanced portfolio.

We have developed sustainable solutions which help save energy & water, reduce emissions and promote circular economy. To bring these solutions to you, we have launched comprehensive Tailing Management Solutions which include Thickening, Filtering and Dry material handling process. This would equip & enable mining industry to meet a major challenge on tailings.

In addition to this, we have come up with energy efficient grinding solutions and to handle slurry, our mill discharge pumps helps increase uptime and productivity in your operations. We understand the need to enhance production, hence to get more from the existing assets, all we need to do is to look in for improvements. From identifying upgrade options to implementation, we have the capabilities to support your business.

I wish you good health and look forward to supporting your growth endeavours with sustainable technologies & services.

Kamal Pahuja
President,
Middle East & India,
Metso Outotec



Metso Outotec in brief

Metso Outotec is a frontrunner in sustainable technologies, end-to-end solutions and services for the aggregates, minerals processing and metals refining industries globally. By improving our customers' energy and water efficiency, increasing their productivity, and reducing environmental risks with our product and process expertise, we are the partner for positive change.

Metso Outotec is committed to limiting global warming to 1.5°C with Science Based Targets. We ranked 8th on the 2021 Global 100 list of the world's most sustainable companies.



15,000+
employees



90+
nationalities



EUR 3.9
billion sales in 2020



50+
countries



150
years of expertise in
mining and metals

Partner
for positive
change
group.com



Our businesses

Mining

Equipment and full plant solutions for minerals processing



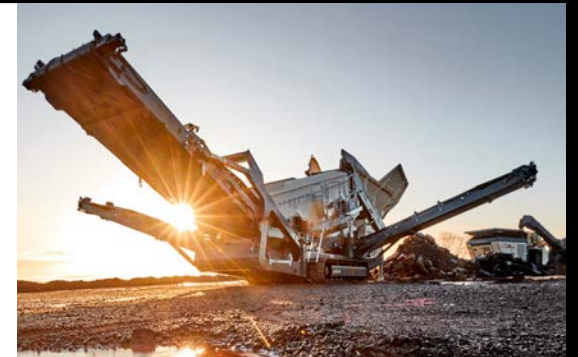
Metals refining

Processing solutions and equipment for metals refining and chemical processing



Aggregates

Crushing and screening equipment for the production of aggregates



Services

Spare parts, refurbishments and professional services for mining, metals and aggregates customers



Consumables











Comprehensive offering of wear parts for mining and aggregates processes



Our offerings:








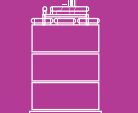


Mining

 Crushing & Screening	 Grinding
 Separation	 Dewatering
 Beneficiation	 Slurry handling
 Material Handling	 Tailings Management
 Aftermarket & Services	 Automation Solutions

[Know more about our Mining offerings](#)



Metals refining

 Iron-ore Agglomeration	 Chemical Processing
 Alumina Processing	 Roasting
 Smelting	 Hydrometallurgy
 Aftermarket & Services	 Automation Solutions

[Know more about our Metals refining offerings](#)



Aggregates

Aggregates solutions with our Distributors network (managed by the Distribution Management Organisation)



Crushers



Screens



Feeders



Aftermarket & Services



Digital Solutions

Know more about our Aggregates offerings



Unique strengths for our customers' benefit



Full offerings

Offering from ore to metal to improve customers' profitability



Sustainable technologies

Technologies that reduce emissions and energy, resource and water use



Services

Industry-leading service expertise and comprehensive global network



Innovation and R&D

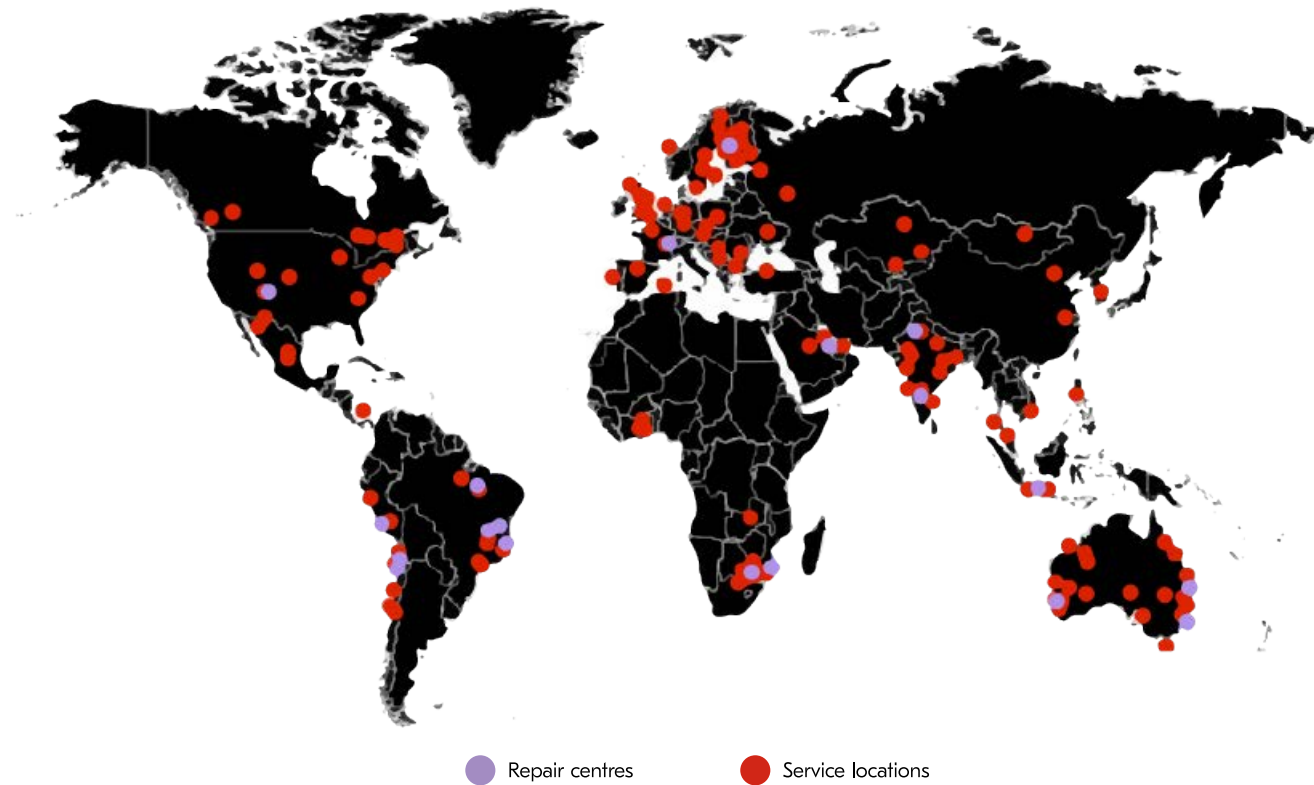
Strong combined innovation and R&D power



Responsible partner

Uncompromising safety in offering and operations

Industry-leading service expertise and global network



3
performance centres

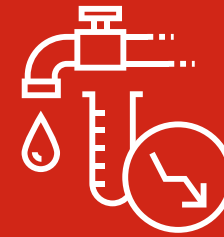


~5,000
service experts



~140
service locations

Services to support a new generation of Sustainable edge technologies



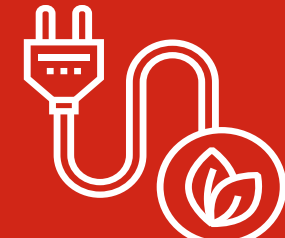
Water efficient solutions, sustainable tailings solutions



Circular solutions, equipments lifecycle solutions



Solutions to eliminate **environmental, health and safety, and societal** risks at customer operations



Energy and emission efficient solutions in comminution, beneficiation

See how we have solved our customers' business challenges #CustomerSuccess

Our customers:
Our references



Cengiz Mazıdağı



Bucim Mine



Boliden Aitik



Boliden Kevista



RTB Bor



Vedanta Limited

Disclaimer

This magazine, including all claims regarding operational performance, is intended for sharing information on successful customer cases. Metso Outotec makes no warranty or representation whatsoever, either express or implied, that similar or any performance levels or improvements are achievable for all sites or for any particular site. Metso Outotec assumes no legal liability for any use of information contained in this presentation. If requested,

Metso Outotec can execute a site specific survey to provide an estimate of performance or performance improvement for a specific site and operation. As each site has a different process and is at a different stage of development, the actual performance can vary significantly.

Metso Outotec was formed on July 1, 2020 when Metso and Outotec merged into one company. This case study has been written prior to the merger under the old company name.



Metso Outotec offers complete solution to recover precious & base metals from Cengiz Mazıdağı

“ This technology was not well known in Turkey, or even globally. Because it is quite new, and their plant was a Greenfield plant, there was a lack of experience there as to if this could really work. This was the main challenge was them and for us as well, but their leap of faith in Metso Outotec gave us even more motivation to complete the task. Any customer, even globally, can contact us if they have similar plans about recovering metals, and we can always refer to the Mazıdağı plant and what we achieved there. We are the first option, every time for Cengiz group, and this is a good reason why.

Taygun Bayram

Site Manager - Metso Outotec



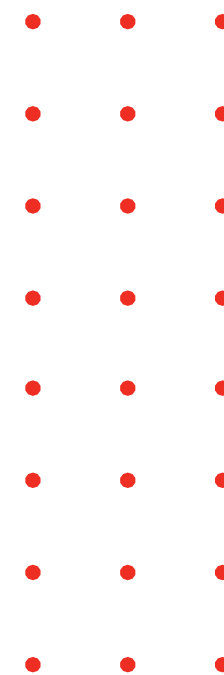
Results

Recover of Metals Cobalt, Zinc, Copper, Gold & Silver from pyrite

Fertilizer production by utilizing phosphate resources

Sulfuric acid production

Phosphate beneficiation in effective ratio & quality prior to Fertilizer production



Provided technology

- Autogenous Mill, Thickeners, Filters, Courier 6i SL and Courier 8 SL online analysers for phosphate beneficiation plant
- Roasting plant for pyrite concentrates, off gas cleaning and complete sulfuric acid plant
- Leaching plant, SX, and EW process islands





Selecting the best pump for the job and reducing total operating costs for Bucim Mine

“ The pumps are the heart of our flotation plant. Without them, the process would stop. You can compare the pump to your heart pumping in your body. If the pump is efficient, the whole process is efficient.

Zivko Gocev
Mining Manager, Bucim

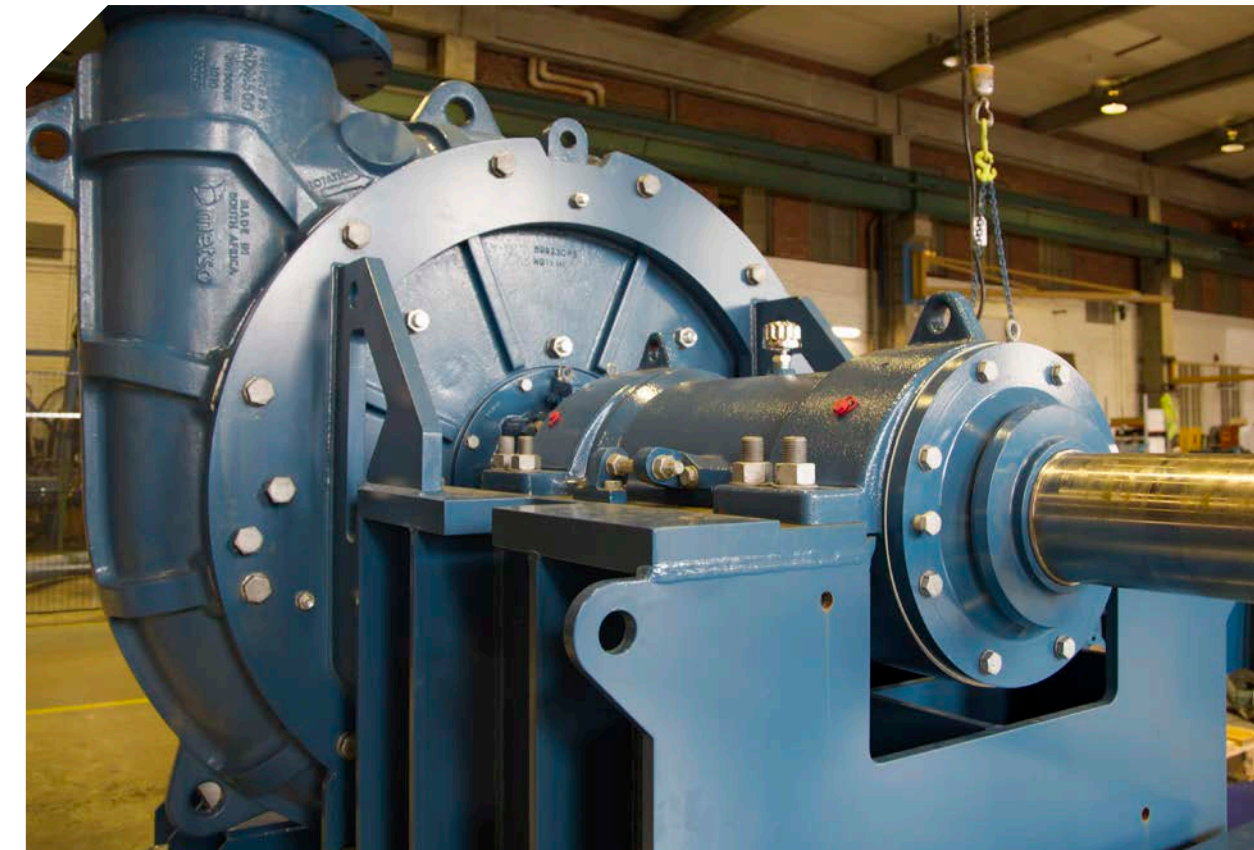
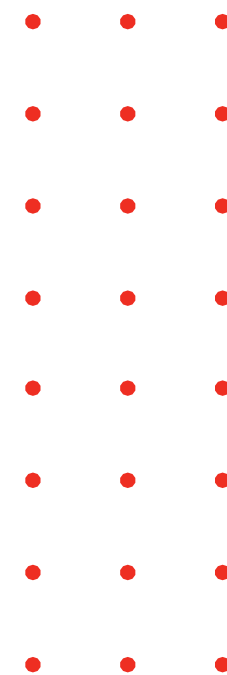
Results

20% savings in power

0.5% higher metal recovery rate

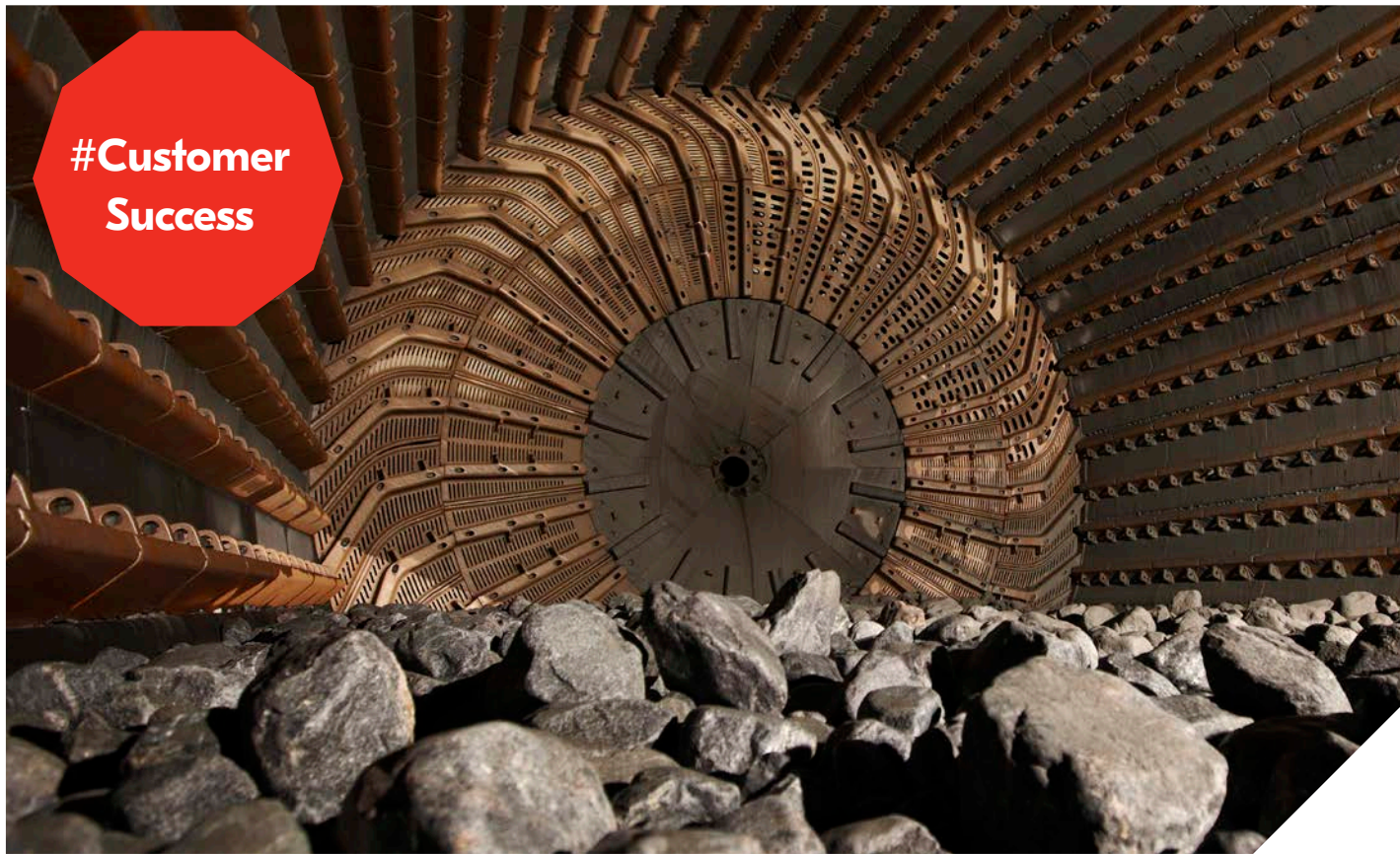
10% longer pump wear life

8000+ hours of operation without incidents



 Read the customer case
 Watch the customer video
 Connect with our experts

 Read the customer case
 Watch the customer video
 Connect with our experts



Boliden keeps improving uptime with new mill lining solutions

“ Our cost-per-tonne agreement for mill linings makes development beneficial both for us and Metso. The agreement strengthens our cooperation, as we challenge and drive the development together. We want the mill to be up and running for as long as possible, and when the liners are worn out, they need to be changed as quickly as possible. Some 6-7 years ago, we used to have six maintenance shutdowns per year. Today we have a balanced wear life and just 2-3 shutdowns per year.

Kjell-Arne

Senior Technical Supervisor Concentrator - Boliden



Read the customer case





Connect with our experts



Results

From **6-7** shutdowns to **2-3** shutdowns per year

Improved uptime

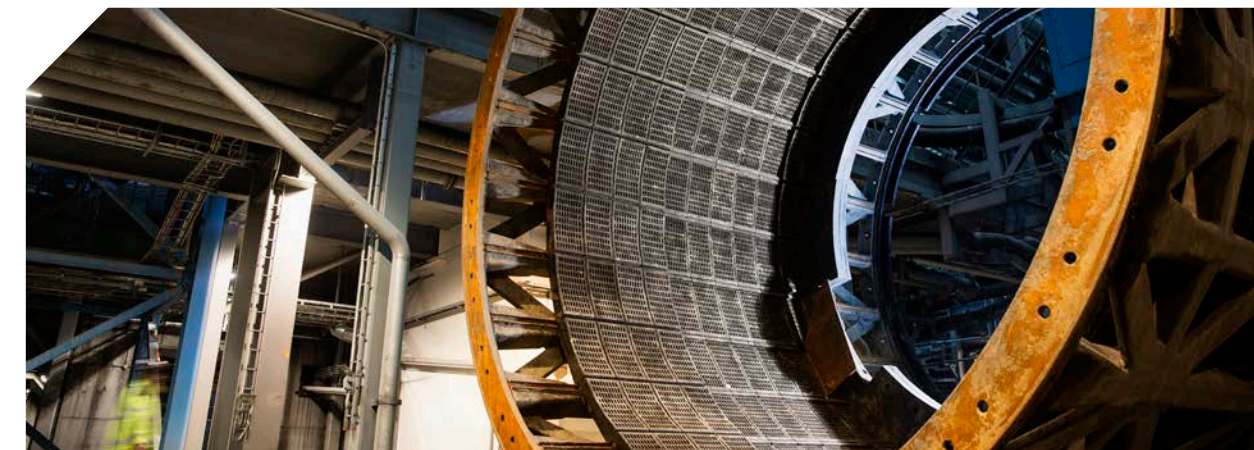
98% mill availability

50% faster reline time with Megaliner

70% reduction in the number of liner components

Up to **30 hours** per reline - estimated time saving

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Read the customer case





Connect with our experts





Boliden Kevitsa collaborating on process plant maintenance

“Metso has helped us a lot in developing our maintenance operations and improve the reliability of the equipment by product design. We have improved the availability of the mills and the crushers and reduced the change times, especially on the mills and crushers. The indication we received from Metso Metrics helped us map out that there were two broken V belts. We were able to cut the downtime to a minimum thanks to the information coming from Metrics.

Sami Pelkonen

Maintenance and Engineering Manager - Boliden Kevitsa

- Read the customer case
- Watch the customer video
- Connect with our experts

Benefits

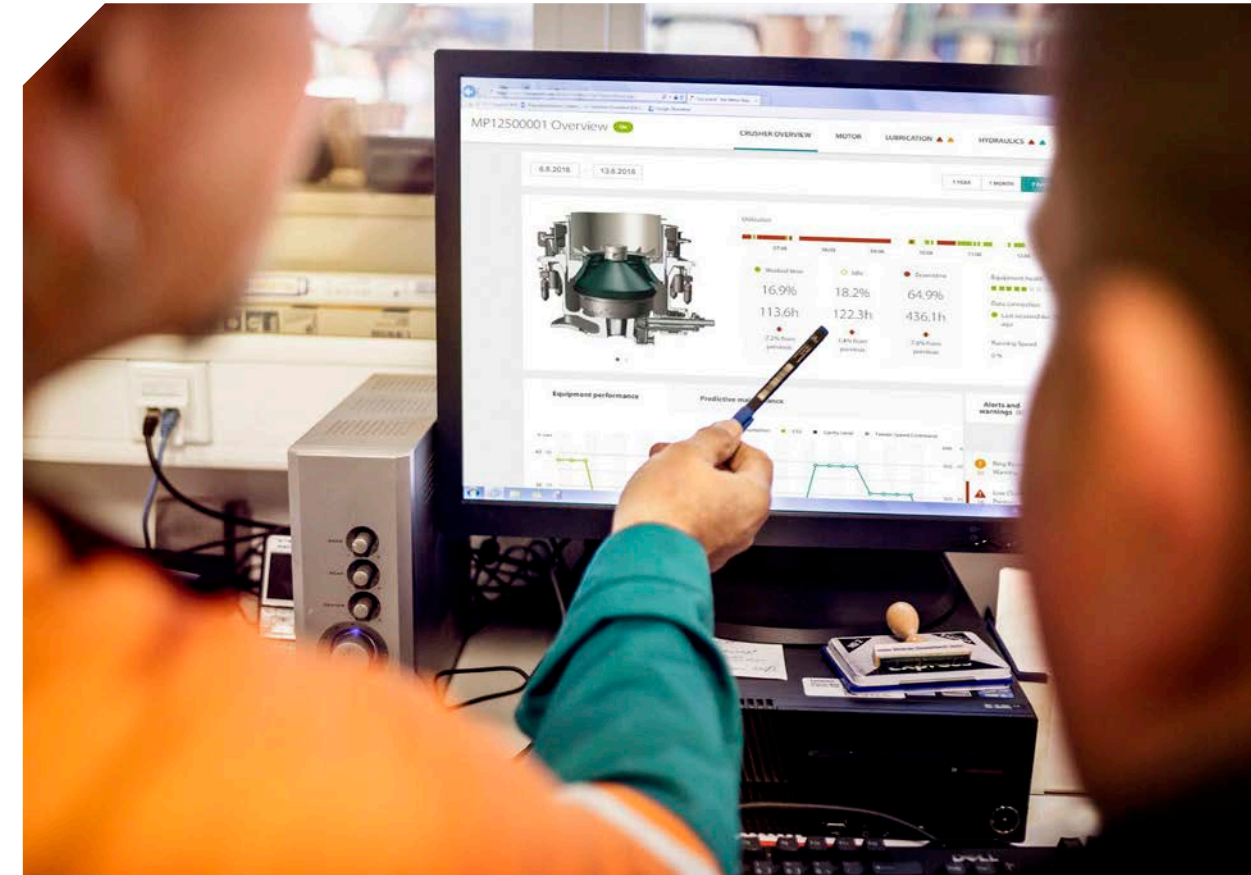
80% prescheduled plant maintenance

93% availability of equipment

Unplanned downtime is reduced

With Metso Metrics, downtime reduced to minimum

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- Read the customer case
- Watch the customer video
- Connect with our experts



Copper ore production up & processing costs down for RTB Bor, Serbia

“ With my long career of more than 40 years of experience in processing and flotation and in opening and operating nine different mine sites, I'm confident in saying that Metso's minerals processing solutions, worldwide know-how, local strong footprint and expertise in process integration make it a reliable long-term partner and a global leader in this segment.

Blagoje Spaskovski

General Manager - RTB Bor Group



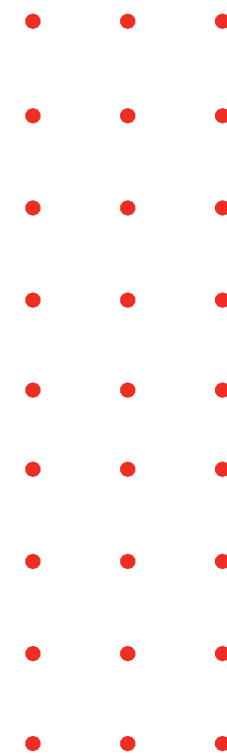
Benefits

Feed size to the grinding circuit reduced from **25mm to 100% minus 16mm** using HP cone crushers

15% decrease in crushing, screening, grinding and flotation costs, per ton copper processed

Vertimill enhances recovery of copper slag having **1.6% to 1.8%** copper

5% increase in copper ore recovery with **20%** reduction in electricity cost





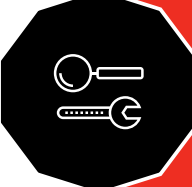
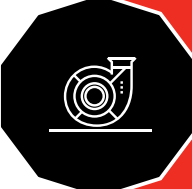


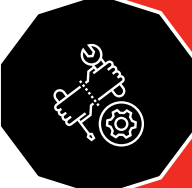
Vedanta relies on Metso pumps, valves & seals for continuous plant operations

“ I would like to commend and compliment the Metso team who work here shoulder to shoulder with my team members, on the excellent safety record they have. I am very satisfied & proud to share that Metso has been a wonderful partner.

Rakesh Mohan
Chief Operating Officer, Vedanta Limited

[Read the customer case](#)
[Watch the customer video](#)
[Connect with our experts](#)

Benefits

- 
90-95% process equipment of Metso
- 
600+ pumps, valves & seals supplied
- 
100% availability of spare pumps
- 
32 skilled technicians stationed on-site
- 
 O&M (Life Cycle Service) contract operational since **2005**



[Read the customer case](#)
[Watch the customer video](#)
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Products / solutions

Our offering consists of products, technologies and services which help our customers improve efficiency, increase productivity and reduce environmental and economic risks.



Vertimill® - stirred milling technology



Tailings management



Metso ES Series™ horizontal screens



MD Series mill discharge pumps



Larox® PF filter



Upgrades and retrofits for mining equipment



Spare parts for mining equipment



Filter Cloth

Vertimill® - stirred milling technology

High-efficient, accurate and consistent screening



Vertimill® is globally recognized as an energy efficient grinding machine. Through a low total cost of ownership, they bring substantial improvement to the profitability of concentrators. During the years, Vertimill® technology has proven to be efficient especially in secondary and tertiary grinding, regrinding, fine grinding, and lime slaking applications.

[Know more about the product](#)

[Connect with our experts](#)



Lower capital cost

50% less footprint compared to ball mill



Lower operating cost

40% higher energy efficiency



Versatile applications

Capable of handling multiple feed sizes up to 6 mm and grinding to products less than 20 microns



Support from experts

Over 3 decades of successful Vertimill® installations

[Know more about the product](#)

[Connect with our experts](#)

Tailings management

Leading the transformation in tailings dewatering, handling and reprocessing



Tailings management in today's perspective is unable to sustain in the future. An effective end of the mine strategy needs a vision that goes beyond environmentally safe practice. At Metso Outotec, our goal is to transform tailings management by changing legacy and risk prone practices with a positive value creation model.

[Know more about the solution](#)



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Metso Outotec Tailings Management solutions' benefits



Up to 90% water recovery by the Metso Outotec Filter solutions



Improved filtration efficiency into fine and coarse streams by Metso Outotec MHC™ Series Hydrocyclone



Up to 50% less floor space increasing safety and lowering CAPEX with the Metso Outotec Inclined Plate Settler (IPS)



50% less chemicals improving water recirculation with the Metso Outotec IPS



[Know more about the solution](#)

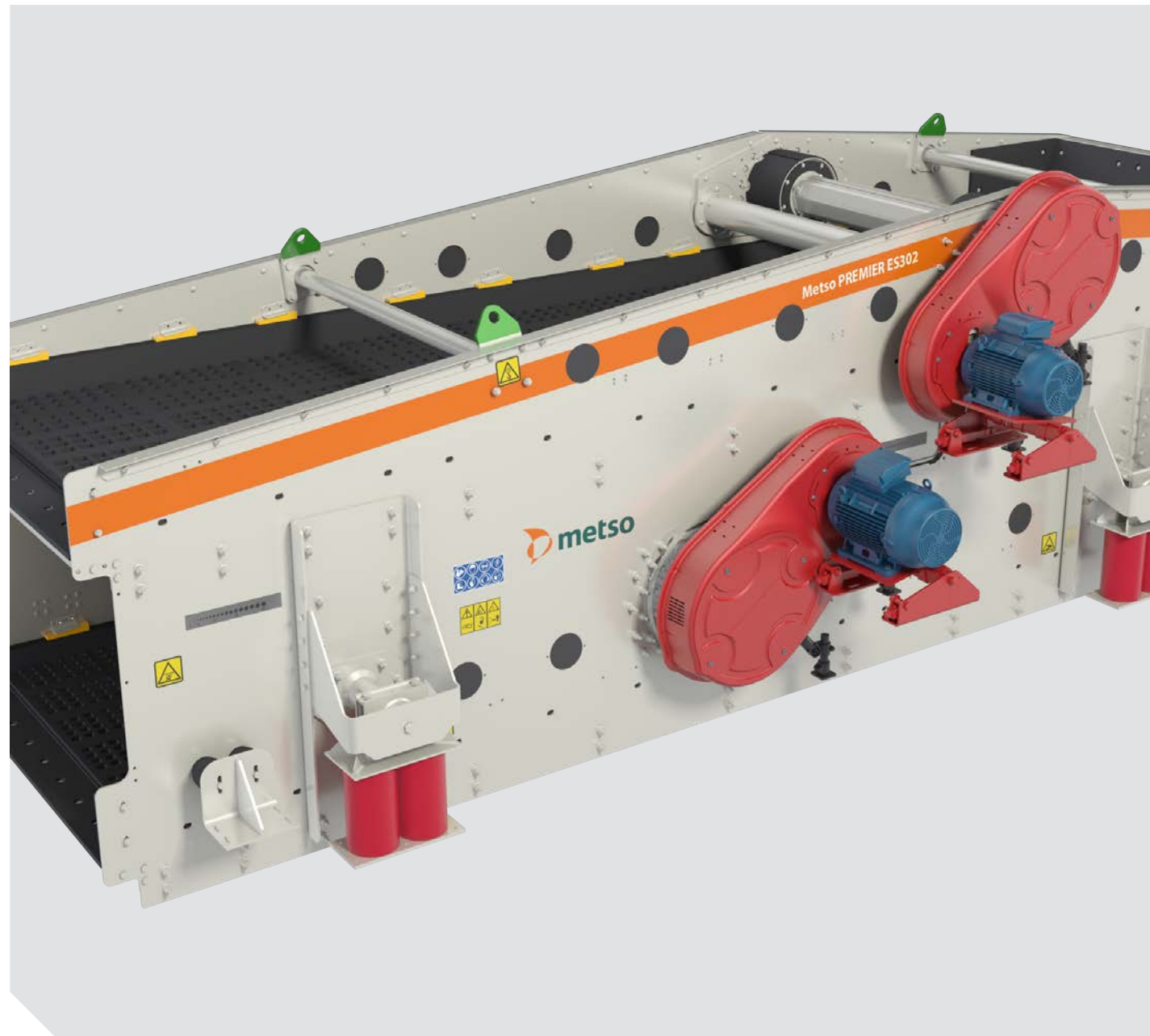


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Metso ES Series™ horizontal screens

High-efficient, accurate and consistent screening



Metso ES Series™ horizontal screens are designed to incorporate any type of screening media for maximum operational flexibility. Applicable for quarries, gravel pits, mines as well as mobile screening, Metso ES Series™ horizontal screens can also handle the most demanding feed materials.

[Know more about the product](#)



[Connect with our experts](#)



Wide range of applications

Quarries, gravel pits, mines, and mobile screening plants



Durable screen design

Side walls and the cross members are weld free to accommodate the fatigue stress



Adjustable to increase capacity and performance

Can be fitted with either tensioned screening panels or modular snap on panels



Easy and safe maintenance

Meet high health and safety standards

[Know more about the product](#)



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MD Series mill discharge pumps

Industry's robust technological solution built for sustained efficiency and uptime



Designed for efficient operation and longest wear life in grinding mill circuits to match the mill's uptime. With excellent resistance to abrasion and erosion, the MD series mill discharge pumps are known for their durability in pumping highly abrasive slurries with the latest in wear reduction technology.



Modular and compact design

Industry's cutting-edge design best suited for highly abrasive slurries in grinding mill circuits



Highest impeller aspect ratio in the industry

Sustained efficiency and performance. Lowest total cost of ownership



Upto 4,000+ hours of service life

Latest in wear technology using high-performance materials with excellent resistance to abrasion & erosion



Global expertise, local support

Pumping and minerals processing professionals in over 60 countries in the world



[Know more about the product](#)



[Connect with our experts](#)



[Know more about the product](#)



[Connect with our experts](#)



Larax® PF filter

Proven, flexible and reliable advanced filtration efficiency for a wide range of applications



1,6 - 168 m²
filtration area



Up to 16 bars
operating pressure



33, 40, 45 and 60mm
chamber depth



Enhanced
automation
system

[Know more about the product](#)



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Benefits



High capacity with proven efficiency and reliability



Low overall operating costs and competitive total cost of ownership



Dry, consistent and homogenous filter cake production



Fully automatic operation, self diagnostics and flexible operation



Reduced floor space requirements



[Know more about the product](#)

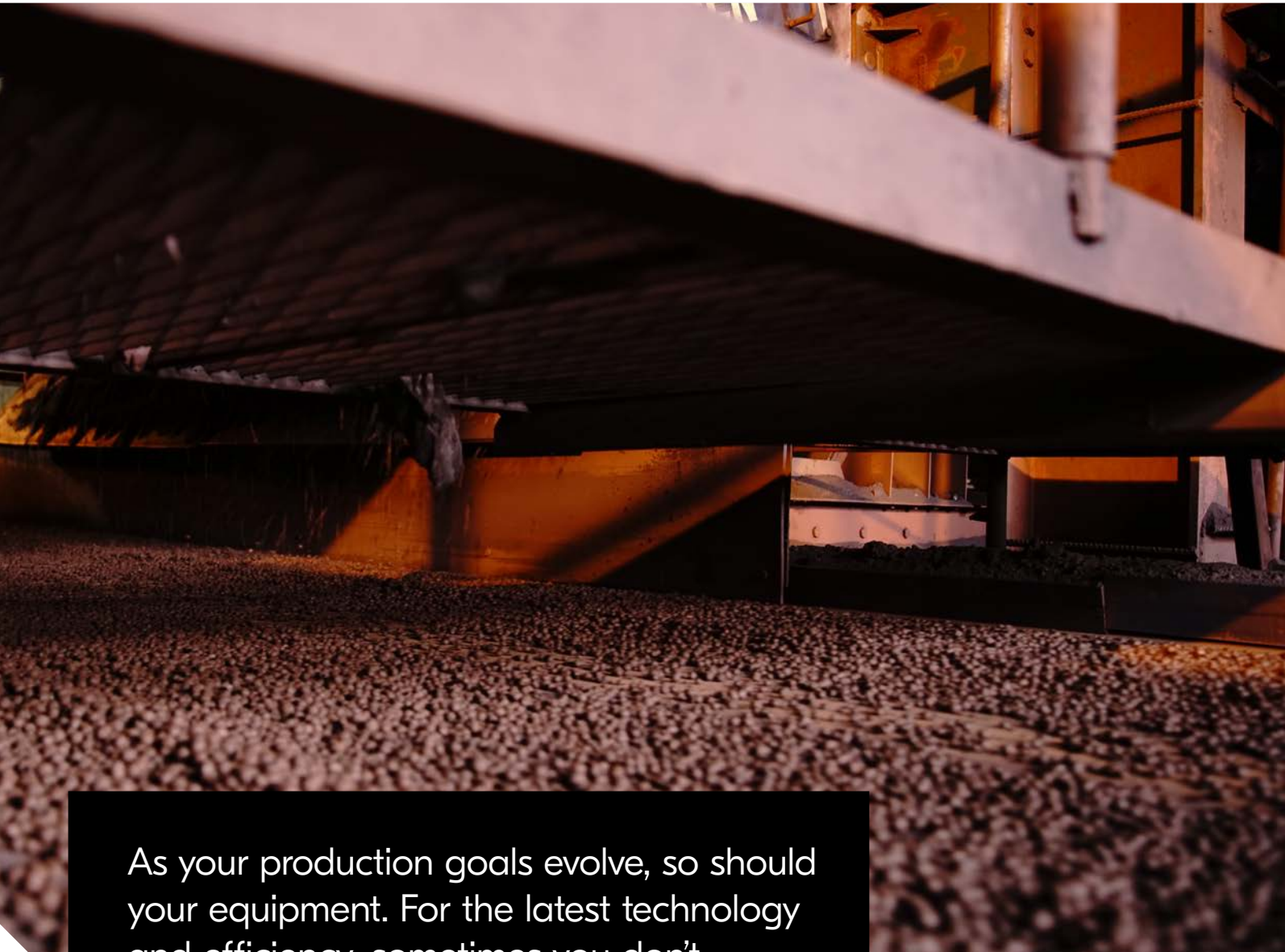


[Connect with our experts](#)



Upgrades and retrofits for mining equipment

Delivering a real and sustainable differences



As your production goals evolve, so should your equipment. For the latest technology and efficiency, sometimes you don't have to look very far. Your existing assets have the potential to take on significant improvements. We are here to support you, from identifying upgrade options to implementation.

[Know more about our service offerings](#)



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Innovation

Over 20 global R&D facilities focused on advancing our solutions



Expertise

Equipment engineering and design knowledge coupled with extensive field experience



OEM quality

Strict standards and tolerances for guaranteed safety and reliability



End-to-end solutions

From planning to design to project management and execution

[Know more about our service offerings](#)



[Connect with our experts](#)



Spare parts for mining equipment

Rely on OEM experts because not all parts are created equal



[Know more about our service offerings](#)



[Connect with our experts](#)



OEM quality

Applying the strictest standards and tolerances for guaranteed safety and reliability



Expertise

Over 100 years of experience designing and supplying hard-working equipment and parts



Availability

With 150 distribution centers world-wide, we supply parts where and when you need them



End-to-end solutions

From original to 3rd party to installation, we can support any equipment type



[Know more about our service offerings](#)



[Connect with our experts](#)



Filter Cloth

Based on decades of experience, Metso Outotec offers customers unsurpassed filter cloth quality, improved availability, and optimized process results for overpressure and vacuum filters; Larox[®] PF, Larox[®] RT/RB, Larox[®] FP, Larox[®] FFP, Larox[®] LSF, Metso VPA, and Metso Tube Press filters.



Reduced cost of ownership and risk of downtime



Prompt service support with Metso Outotec's wide-spread service network



Enhanced availability with Metso Outotec's large network of warehouses



Long-term service contracts with our new offering of Life Cycle Services (AMC & OMC)

[Know more about the solution](#)



[Connect with our experts](#)



[Know more about the solution](#)



[Connect with our experts](#)



News Updates

Metso Outotec ranked 8th on the global 100 list of the world's most sustainable companies!

Corporate Knights, the Toronto-based media and investment the advisory company analyzed 8,080 companies on environmental, social and governance indicators relative to industry peers using publicly available information.



The frontrunner in sustainable technologies, end-to-end solutions and services for the aggregates, minerals processing, metals refining and recycling industries globally.

Committed to limiting global warming to 1.5°C, with targets that are validated by the Science Based Targets initiative.

Next-generation HRCe for superior grinding and energy efficiency



Energy efficient



Lower circulating loads



Increased throughput



The new HRCe comes with a decreased installation CAPEX compared to the HRC. Changes in design allow for maximum productivity with proven technology that leads to superior grinding efficiency.

Keep yourself updated!

Metso:Outotec

Please reach out to the editor for any suggestion/feedback at
mayank.sharma@mogroup.com

Mayank Sharma
Editor

