

# **"ONE BRAND "ONE SOURCE "ONE SYSTEM**















# HEMATITE IRON ORE

# Building the future

Every industry is different, as is every plant. The processing of raw materials, minerals and ores requires plant machinery and equipment to be operating efficiently at all times. REMA TIP TOP Industrial Solutions gives iron ore plant operators a complete range of conveyor belting and components, wear protection and surface protection solutions tailored to the specific needs of your plant.





Coal



Copper



Gold



Iron Ore



Lithium

# **IRON ORE**

In the early 2000s global commodity markets grew dramatically, driven extensively by the urbanisation and industrialisation of emerging economies in Asia and Latin America. This was particularly evident in industries like iron ore. China continues to be one of the largest consumers of base metals, particularly for its steel mills and power generation.

The key challenges ahead for the iron ore industry are the rebalancing of supply and demand, stabilising global iron ore prices; domestic and international government decisions effecting sourcing of raw material; and the continued focus on operating costs for mine operators. REMA TIP TOP's core products in conveying solutions, wear and corrosion protection are tailored to, and proven in the iron ore industry around the world.

Heavy duty wear protection systems feature high abrasion-resistance characteristics that increase the lifecycle and maintenance cycle of your plant and machinery many times over. Our conveyor maintenance products, services, technologies and analytical tools improve the efficiency of your assets, reducing maintenance costs and improving availability, while our Automotive group of products keeps your vehicles' tyres on the road longer and improves their safety outcomes.

#### HEMATITE ORE

The mining, production and export of high-grade hematite ores currently accounts for approximately 50% of global iron ore production.

High-grade hematite is often referred to as "Direct Shipping Ore" or "DSO" because it is mined and beneficiated using a relatively simple crushing and screening process before being exported for use in steel mills.





# YOUR REMATIP TOP PRODUCTS & SERVICES PORTFOLIO



Belting



Pulley Lagging



Impact Bed/Bars



REMA Technology & Monitoring



Wear Rubber Linings



Idlers, Rollers & Trackers



Bearings\*



Pulleys



Skirting Systems



Safety Equipment\*



Belt Cleaning Systems



Ceramics



Adhesives



Heavy Wear Protection



Rubber Steel Plates



Anti-Caking



24/7 Service



Engineering



Tools Repair System



Fluoropolymer Linings



Coatings



Corrosion Rubber Linings



Brick Linings



Combined Linings



Mill Lining



Screening Mats



**Vulcanisation Presses** 

<sup>\*</sup>Please contact your local REMA TIP TOP representative for availability



WEAR PROTECTION CERAMICS

• REMALOX • REMALOX HD

RUBBER LINING • REMALINE • PERFORMANCE LINE

POLYURETHAN

TYRE REPAIR EMERGENCY SEALING
• SEALASTIC

PREVENTIVE SEALING

PERMANENT REPAIR

RADIAL PATCH RAD100
SERIES
CEMENT OTR

WEAR PROTECTION CERAMICS

- REMALOX REMALOX HD

#### RUBBER LINING

- REMALINE PERFORMANCE LINE
- POLYURETHAN

CONVEYING SOLUTIONS PULLEY LAGGING
• REMAGRIP

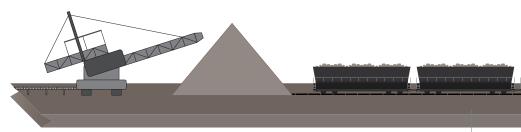
SKIRTING RUBBER

FEEDING SYSTEM

ANTI CAKING

BELTING

- STEEL CORD FABRIC SOLID WOVEN
- IDLERS ROLLERS TRACKERS TECHNOLOGIES
- REMA MCUBE
- BELT THICKNESS MONIT
   SCS STEEL CORD SCANN
   RIP GUARD DETECTION



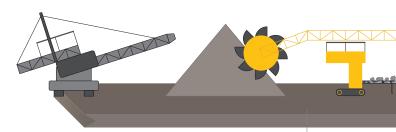
<u>TRAIN</u>

WEAR PROT RUBBER LINI - REMALINE

• PERFORMAI

CERAMICS

- REMALOX





CONVEYOR SYSTEM

**EXCAVATION** 

WEAR PROTECTION CERAMICS
- REMALOX
- REMALOX HD

RUBBER LINING

• REMALINE • PERFORMANCE LINE

POLYURETHAN

# Hematite Iron Ore Process

- **EXCAVATION** PRODUCTS & SOLUTIONS
- CRUSHING PRODUCTS & SOLUTIONS
- MATERIAL HANDLING PRODUCTS & SOLUTIONS

PRODUCTS & SOLUTIONS

PRODUCTS & SOLUTIONS

TRAIN LOADING & TRANSPORT

SCREENING & CLASSIFICATION

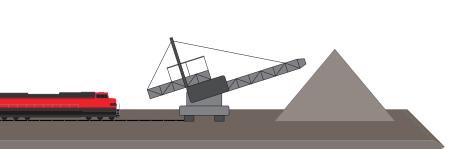
SHIP LOADING PRODUCTS & SOLUTIONS



CLASSIFYING SCREEN

WEAR PROTECTION RUBBER LINING

- REMALINE PERFORMANCE LINE
- CERAMICS
- REMALOX
- REMALOX HD
- SCREENING MATS
- REMASCREEN



ECTION NG

NCE LINE



CONVEYOR 6



CONVEYING SOLUTIONS PULLEY LAGGING
• REMAGRIP

SKIRTING RUBBER

FEEDING SYSTEM

ANTI CAKING

- STEEL CORD FABRIC · SOLID WOVEN
- COMPONENTS

- IDLERS ROLLERS TRACKERS
- TECHNOLOGIES
  REMA MCUBE

  BELT THICKNESS MONITORING
  SCS STEEL CORD SCANNER
  RIP GUARD DETECTION





Coal



Copper



Gold



Iron Ore



Lithium

# **CASE STUDIES**

# **METHODOLOGY**

Reduction in belt change-out times

An iron ore port facility was experiencing inefficiencies as a result of their methodologies and response to conveyor maintenance. At the time replacements were prepared

# **REMA MCUBE**

Monitoring belt condition for efficient change-outs

The REMA scan portable steel cord belt scanning unit is used to monitor a conveyor belt's steel cord condition. As the first of its kind in Australia, a REMA TIP TOP service



Increased production time

 $30_{\text{mins}}$ 

Set up in under 30 minutes

43%

Less downtime operations

10<sub>mins</sub>

Accurate condition reports in under 10 mins



Immediate response to all breakdowns

and executed case-by-case which resulted in long shut-downs and risks with readiness and responsiveness. As a result, REMA TIP TOP implemented new belt and stock management, standardised equipment, upgraded and engineered equipment and introduced a new methodology. This resulted in a 43% reduction in replacement windows with an immediate response to all breakdown scenarios.

team in the Pilbara installed the scan unit to provide more accurate information on the condition of the steel cord belt to help our customer make informed decisions about belt change-outs. The initial trial of the REMA scan unit accurately mapped the number of splices, their location and their condition and cord damage. The site's management was impressed with the speed and ease of the data collection to produce a simple report in under two minutes.





# **BELT TRACKING**

Reducing belt mis-tracking

An iron ore port facility was experiencing a high amount of belt mis-tracking and drift switch trips, which resulted in significant downtime and decreased production.

# SERVICE

Rapid response times

At a Pilbara port facility a steel plate lodged itself in a conveyor transfer chute, tearing 100 metres of wharf belt.



80% reduction in downtime



Increased production

Reduced tracker maintenance costs/repairs



Rapid reponse maintenance team



Insert delivered in just over 2 days



Incidents

REMA TIP TOP conducted an initial survey and adjustment of the idler alignment and proceeded to install effective, custom engineered, fit-for-duty belt tracking units. The installation of these units has resulted in an 80% reduction in tracking related downtime, which has increased production.

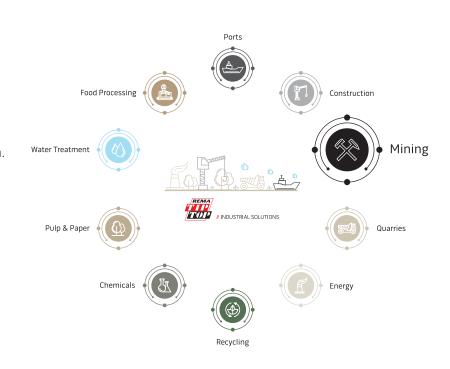
REMA TIP TOP's maintenance team assessed the damage and made the decision to carry out a 100 metre belt insert. The repair was completed in just over two days and the conveyor system was back in operation. The customer was extremely impressed with REMA TIP TOP's rapid response maintenance team being able to restore the port's most critical conveyor belt so quickly and without any incidents.



# **OUR SERVICE PROMISE**

The REMA TIP TOP group of products are specifically designed with your plant and assets in mind. From wear and surface protection to conveyor technology and components, our products paired with out service solutions warranty to dramatically increase the lifecycle or your assets, lower your maintenance costs and improve the availability of your system.

For decades we have been working on-site with our customers and partners in the development of industry best practice installation, maintenance, and upkeep strategies to optimise your site beyond the benchmarks of your competitors. From developing methodologies and undertaking engineering audits, to implementing data collection technologies and tapping into The Internet of Things, we have the knowhow and experience to keep you up and running longer, safer, and more efficiently.





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