



// ONE BRAND // ONE SOURCE // ONE SYSTEM



// SERVICE // MATERIAL PROCESSING // SURFACE PROTECTION // AUTOMOTIVE

REMA M³ MONITOR // MAINTAIN // MANAGE

State of the art technologies maximizing the
profitability and sustainability of your conveying systems



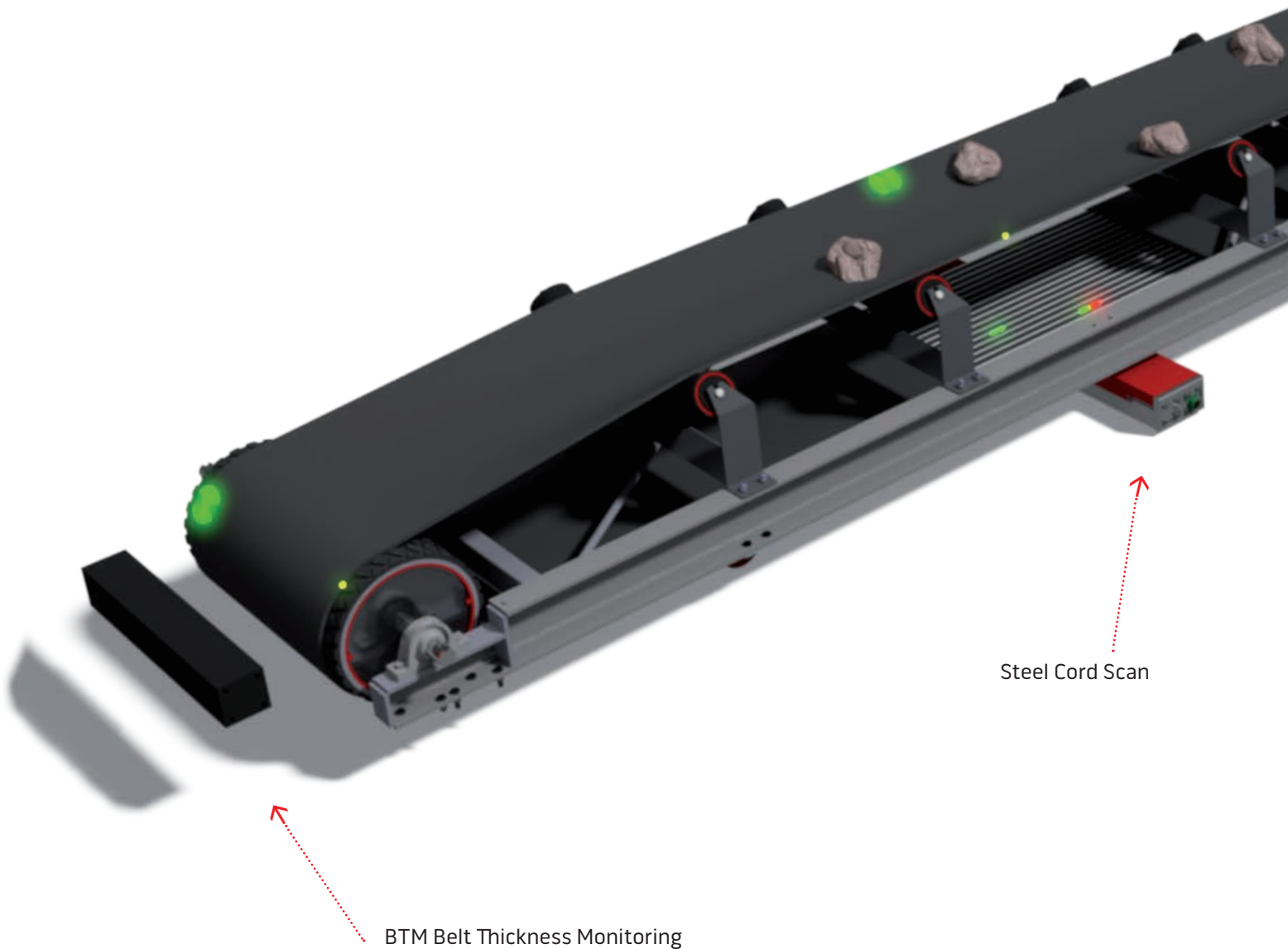
REMA TECHNOLOGIES

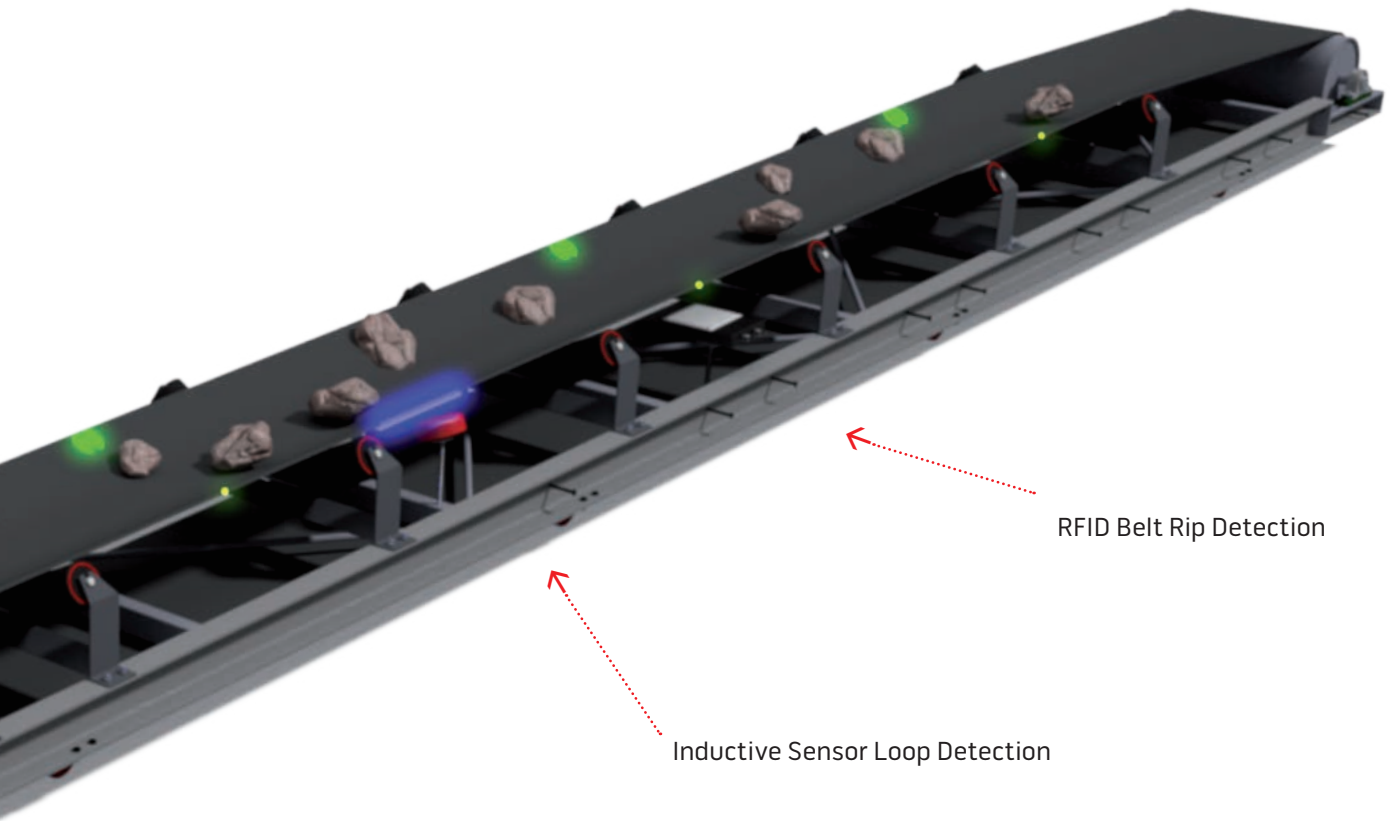
Maximizing the profitability and sustainability of your conveying systems

REMA TIP TOP TECHNOLOGIES focus on optimizing the use of our products and services to remain market leaders. We offer unique solutions for specific operations that focus on profitability and sustainability.

REMA TIP TOP TECHNOLOGIES constantly develop new systems that will significantly prolong the lifetime of our clients conveyor belts. As conveyor belts are the backbone of any mine and their greatest expense, our new systems can be utilized on all types of conveyor belts whilst in full operation.

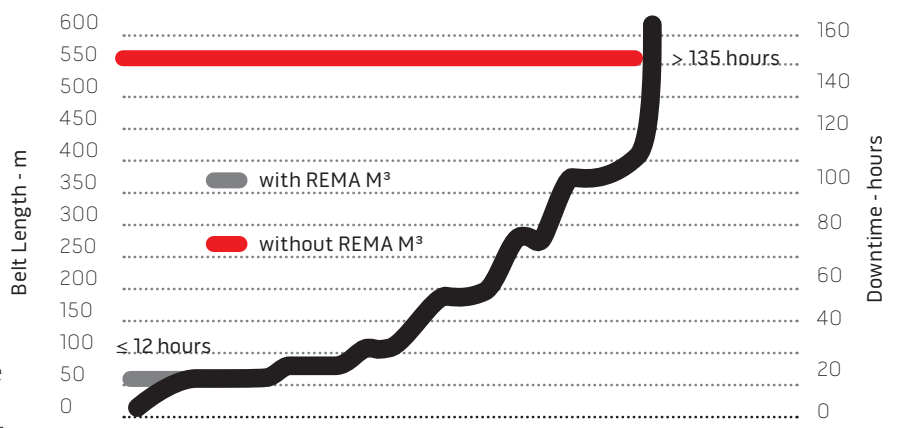
Our systems have been designed to provide our clients with greater insight into the current status of their conveyor belts by providing real time data showing any form of damage, allowing planned maintenance and shortening production downtime.





Inductive Sensor Loop Detection

RFID Belt Rip Detection



Without the use of REMA M³ equipment. The possible loss of the full length of installed conveyor belt with downtime in excess of 135 hours.

Comparison Graph

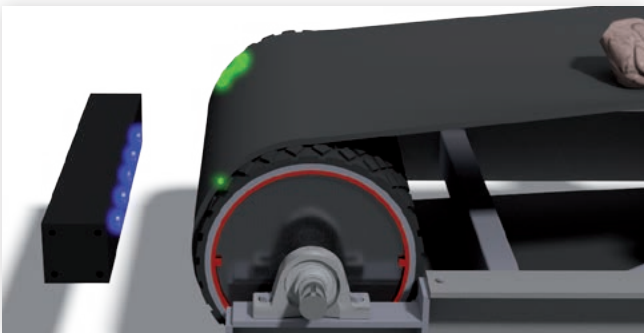
REMA MONITOR

Our Monitoring Services for your Conveying System



RFID Belt Rip Detection

- Unique RFID Antenna ID Code
- Stops the belt when longitudinal rips are detected
- Antennas can be detected at 15m/s
- Antennas installed at shorter intervals to offer greater protection



BTM Belt Thickness Monitoring

- Shows all wear and damage to the conveyor belt
- Accurate reporting of belt wear or damage
- Predicts the remaining lifetime of the belt
- Generates a belt image after the first revolution



Steel Cord Scan

- Available as a modular or fixed installation
- Shows all cord damage to the conveyor belt
- Indicates the health of all splices
- Operates continuously while the belt is in full operation



Inductive Sensor Loop Detection

- Compatible with all inductive antenna sensor loops
- Stops the belt when longitudinal rips are detected
- Generates a belt image of embedded sensor loops after one revolution
- Inductive sensor loops and RFID antennas are monitored simultaneously

REMA MONITOR RFID Belt Rip Detection System

REMA TIP TOP TECHNOLOGIES have designed a Belt Rip Detection System that makes use of the latest RFID technology. By using our new RFID antennas we are able to offer protection to all types of conveyor belts ie. steel-cord, plied belting and PVC belts.

With the RFID antenna costing a fraction of conventional antenna sensor loops we are able to offer our clients significant savings.

Due to the lower price of the single RFID antenna we are able to install the antennas at shorter intervals offering greater protection to the conveyor belts by minimizing longitudinal rips within the belt. Our Belt Rip Detection System does not only detects our unique RFID antennas, it also detects inductive sensor loops making the system incredibly versatile by monitoring belts with any existing sensor loops installed.

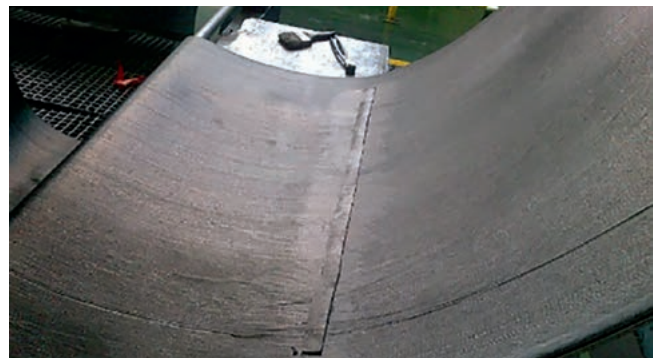
The RFID Belt Rip Detection system consists of 3 components illustrated below



RFID reader



Control unit



Unique RFID antenna being installed into a plied belt

SYSTEM KEY FEATURES

- Our specialised RFID chip can withstand temperatures up to 230 degrees Celsius, therefore having zero effect on the tag during the vulcanization process
- The system can be operated by the control room operator directly from the control room
- Multiple network connectivity like TCP/IP, WIFI and Serial are available
- The RFID reader can detect the unique RFID antenna at a speed of 15 m/s
- Each RFID antenna has a unique identification code
- The software generates a map of the entire belt after only one full revolution

REMA MONITOR BTM Belt Thickness Monitoring System

One of the most important factors for our clients is the increased life expectancy of their conveyor belts. The BTM system continuously measures wear and wear characteristics on conveyor belts by use of ultrasonic soundwaves, these sensors generate over 1.000 readings per second in order to present an accurate graphical representation on the clients belts.

The system makes use of a RFID tag which allows our software to pinpoint any damage on the belt, then it compares the damaged area to historical data and calculates when this damaged area will become critical. In doing so, our clients are able to:

- plan for replacement belts efficiently, as the system can predict the belt life accurately.
- plan for maintenance shutdowns, therefore controlling the downtime.

SCAN IMAGES GENERATED BY THE BTM SYSTEM

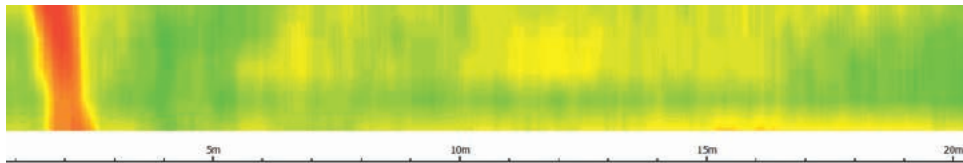


Image 1: Shows a splice at 2 meters with normal wear to the belt, however slight impact damage can be seen at 12 meters, and damage to the side of the belt occurring between 15 to 19 meters.

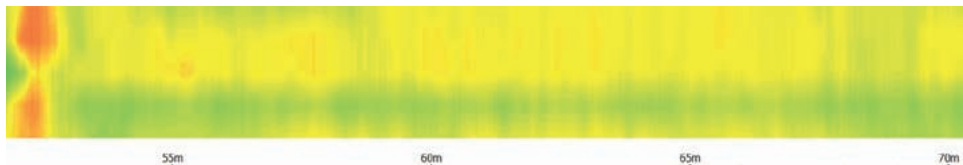


Image 2: Shows a splice at 52 meters with impact damage clearly being displayed between 55 to 70 meters, this image also shows that the wear on the belt is one sided, this is caused by the belt being misaligned at the loading point.

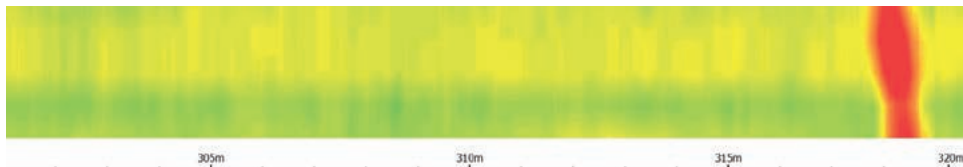


Image 3: Shows normal wear to the belt between 301 and 320 meters, with a splice at 319 meters.

REMA MONITOR

BTM Belt Thickness Monitoring System

The BTM Belt Thickness Monitoring system consists of the 3 components illustrated below:



RFID reader



Ultrasonic sensor array complete with calming idler



Control unit

SYSTEM KEY FEATURES

- The conveyor belt does not have to be stopped in order for the scan to take place
- The system has zero contact with the belt
- Can be installed on new and used belts
- Unlimited belt image history is stored in the system database to compare historical and latest scanned images
- Any damage to the conveyor belt can be identified accurately using the RFID tag and belt length scale provided
- The system instantly generates a belt image after the first revolution

REMA MONITOR Steel Cord Scanning System

Our Steel Cord Scanning System provides the world's most accurate and reliable detection of broken cables, tension breaks and conveyor belt splices in realtime. The system is modular and can scan conveyor belts of any width.



The system does not present raw data to the user, it processes the raw data via specially developed software and then displays the results graphically.

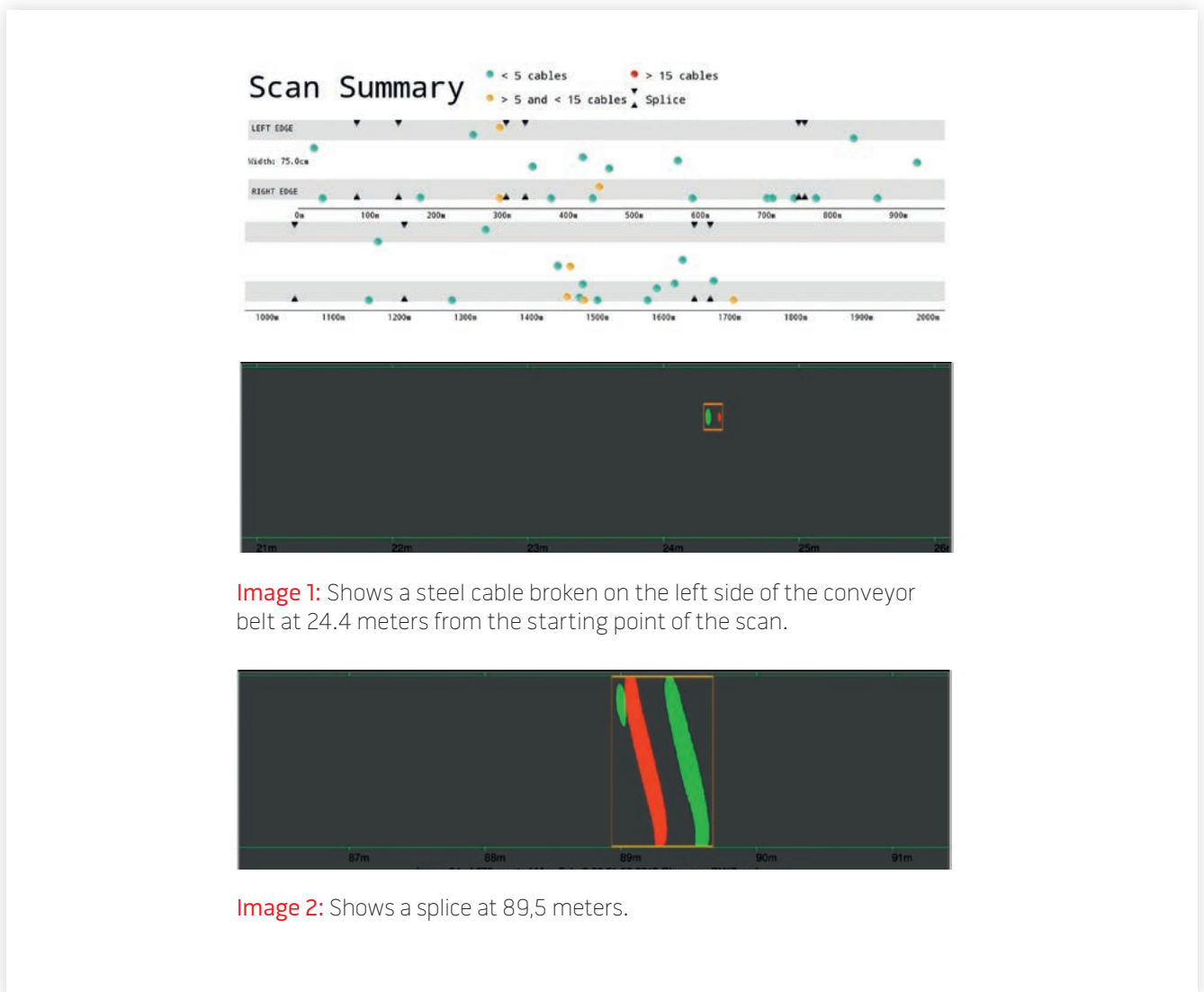


Image 1: Shows a steel cable broken on the left side of the conveyor belt at 24.4 meters from the starting point of the scan.

Image 2: Shows a splice at 89,5 meters.

REMA MONITOR

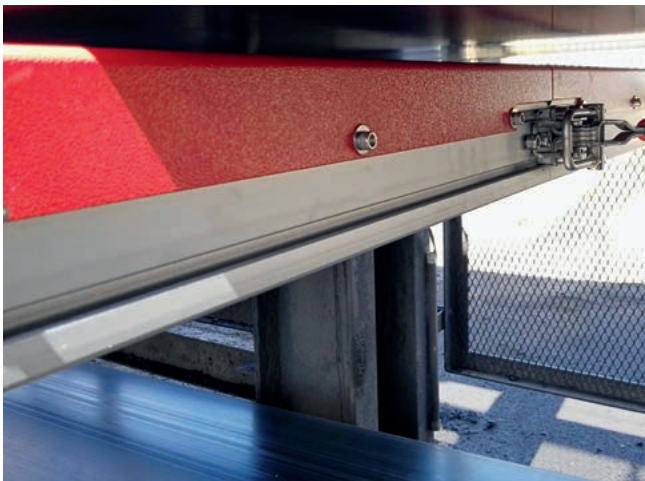
Steel Cord Scanning System

SYSTEM KEY FEATURES

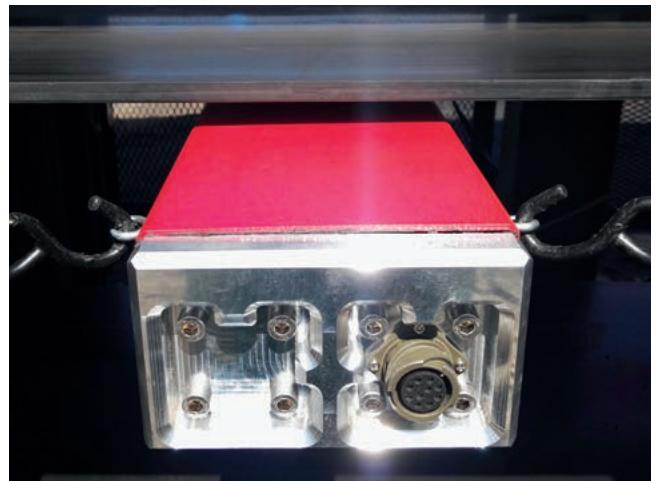
- Runs continuously while the belt is in operational mode, the belt does not have to be stopped
- System is suited for all widths of conveyor belts
- Can be installed on new and used conveyor belts
- Any damage to the conveyor belt can be identified accurately using the belt length scale provided
- Easy to install, little maintenance necessary
- Shows all cord damage on the conveyor belt, offering cost saving to the client



2 x module scanning assembly



Capturing scan data



Mil-spec connector

REMA MAINTAIN

There for you across the globe

Our customers have for decades relied on individual all-in-one care and support by our highly-qualified specialists. REMA TIP TOP teams manage projects internationally as well as locally. This dissemination of product and service know-how across the globe ensures maintenance of high REMA TIP TOP quality – in over 170 countries.

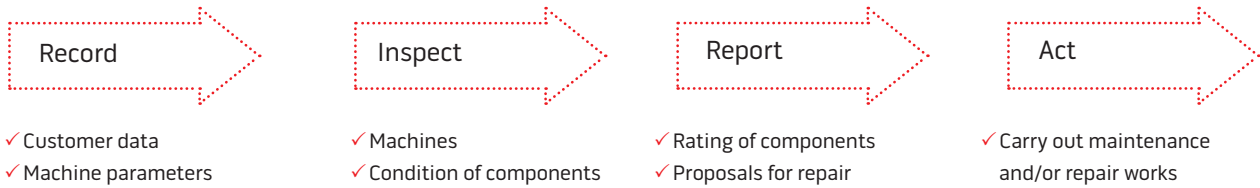
REMA TIP TOP helps you to utilize new maintenance and upkeep methods that focus on plant availability. The goal of this approach is a change from passive to active downtime management, i.e. ensuring successful long-term planning while utilizing resources in an optimal manner. In this respect, upkeep must be regarded as an investment, not as a cost factor.



REMA MANAGE

CMMS Computerized Maintenance Management System

CMMS stands for Computerised Maintenance Management System. It is a reporting system based on inspections undertaken by qualified REMA TIP TOP personnel. REMA CMMS is for customers who want to continuously improve their plant maintenance systems and reduce maintenance costs. It is a secure, cloud-based system that provides an efficient workflow for the maintenance of material processing systems and many others. REMA CMMS enables real-time reporting and maintenance actions, minimizing the risk of unplanned breakdowns.

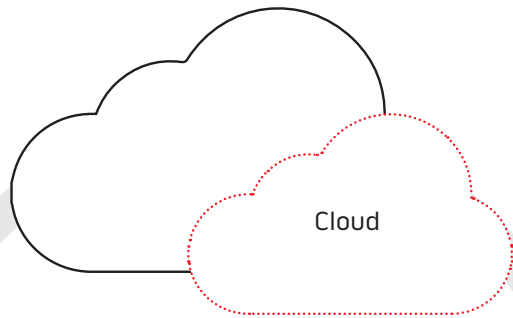


SYSTEM KEY FEATURES

- Better planning and problem identification
- Maintenance costs can be reduced
- Fast and comprehensive reporting
- Only system that works with a local offline client
- Efficient digital data management
- Worldwide 24/7 availability
- Complementary value-add for our customers

SYSTEM STRUCTURE

- Planning
- Control
- Data Collection
- Visualization
- Report



- Data Collection
- Rating
- Work Orders

Desktop Client
Device: Every Computer
Operating System: Windows

Mobile Client
Device: Apple iPad
Operating System: iOS



Your local contact



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5820031 - III.16 Printed in Germany

