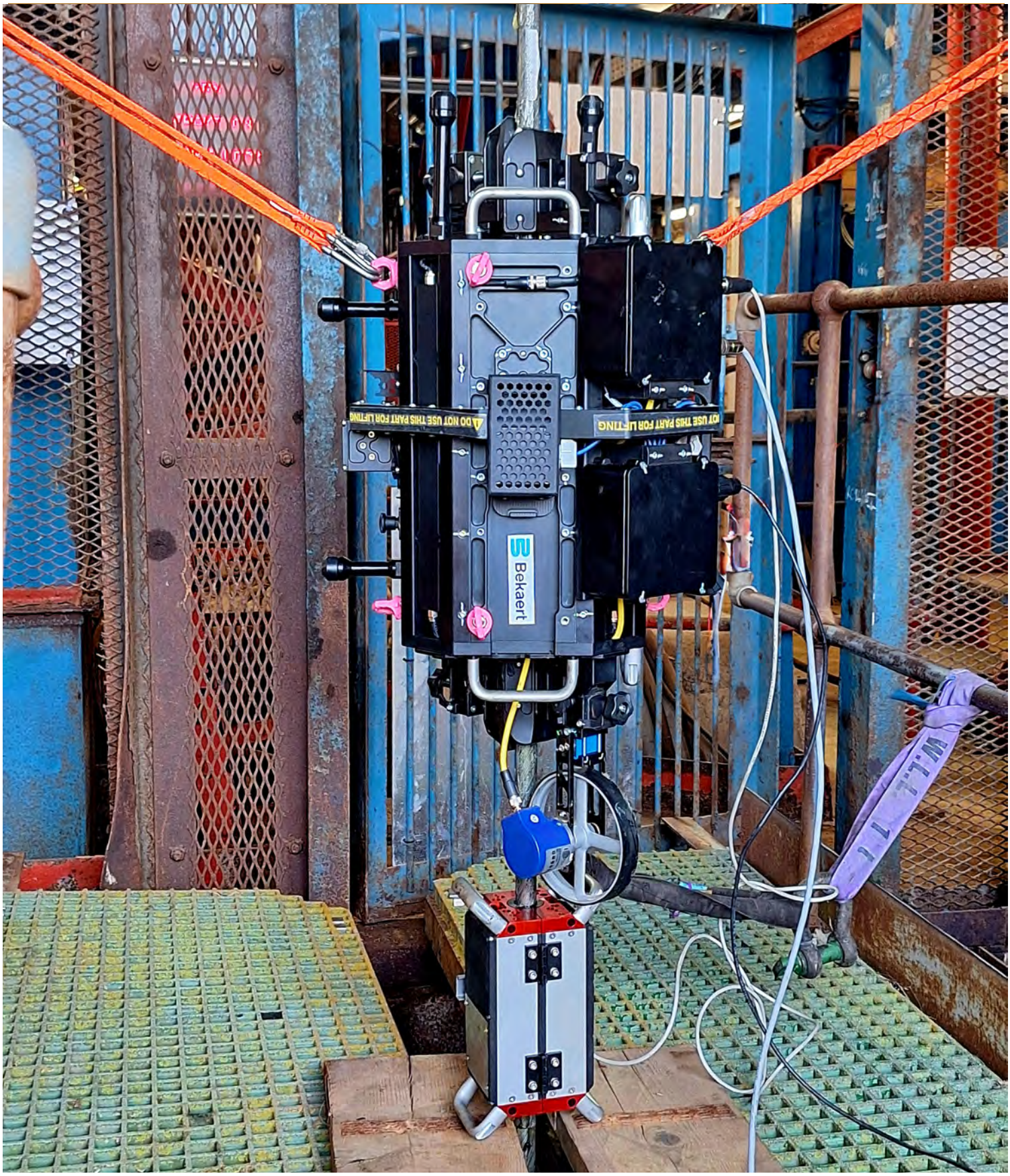
Bekaert

Ropes 360®

We know the ropes.

Rope inspection | Rope maintenance | Training | Installation

Ropes 360 Services



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GROSS 22000 KGS
ACE 4392

Rope Installation services

Our experienced technicians deliver professional rope installation across a wide range of applications—including cranes, offshore platforms, deep-water mooring systems, bridges, and synthetic rope systems. We follow industry best practices to ensure correct setup, maximum performance, and long-term safety. We support every stage of the installation process and tailor our services to meet specific customer requirements.

Our offering includes:

- **Project Management Support** – covering risk assessments and method statements
- **On-Site Supervision** – ensuring compliance with installation plans and maintaining rope integrity
- **On-Site Repairs** – immediate response to any issues during installation
- **Full Installation Capability** – utilising winches, turntables, and all necessary equipment and expertise.

Our goal is to deliver smooth, safe, and efficient rope installations that meet operational demands and maximise rope longevity.

Working safely with ropes

Ropes 360 offer training, supervision and support on rope installation, maintenance and inspection. With sufficient training and knowledge, our customers can make the correct decisions, leading to maximised rope life.

In specific applications, occasional tasks call for a tailored strategy. In such instances, our collaborative approach involves harnessing our expertise and leveraging the deep system knowledge of our clients. Together we can achieve the desired safety and performance every time. That is the advantage of the Ropes 360 model.

Training

Training is essential for understanding ropes and knowing how to maintain them. Bekaert offers a variety of courses across many applications.

- Introduction to wire rope course - learn all the basics of rope manufacturing, inspection, laws, and more.
- Wire rope handling and inspection course inspection training tailored to the application in question.
- Socketing - both theoretical and practical courses.
- Lifting equipment inspection.
- Deep shaft mining inspection and maintenance.

Installation

We offer proven procedures and expert consultancy to ensure the installation of your rope is right first time, every time. Correct installation is vital for ropes to work to their full potential.

- Supervision Services - use our knowledge with your people, creating a great knowledge and training platform.
- Spooling Capabilities (up to 450T weight capacity with associated back tension).
- On site rope connections including splicing, welding and socketing.

Maintenance

Maintenance encompasses a wide range of tasks aimed at extending the product's lifespan. A vital element in ensuring safety and efficiency of your equipment.

- Rope Maintenance
- Relubrication, Reterminating, and rope repairs.
- Monitoring - vibrations, tensions, and rope condition
- Rope Splicing - create a new splice, repair a damaged rope, or alter an existing rope to combat rope stretch
- Ropes 360 also has a range of products to help you maintain the system, including sheave gauges, verniers and lubricators

Technology Centre

The Bekaert Ropes Technology Centre is a world leading centre of excellence for rope technology development, testing, analysis, and verification. We are equipped with unique equipment capable of testing steel/synthetic ropes and wires. With extensive forensic analysis laboratory facilities and specialists capable of conducting detailed forensic evaluation of new, retired or samples of in-service ropes, an integral part of the Ropes 360 programme.

Forensic Services

We can perform detailed forensic examinations on wire ropes returned from the field to support customers with “slip and cut” activities or to provide a post service assessment. Controlled rope disassembly provides qualitative and quantitative information on rope performance including evaluation of lubrication, corrosion, wear, and other degradation mechanisms. Results from the evaluation can be assessed against international (such as ISO4309) or customer standards to provide valuable information on the service life and performance of the rope.

Mechanical Testing

We are is equipped with mechanical testing equipment to determine test data in accordance with international standards. Destruction tests can be conducted to determine the actual breaking load of the rope; modulus tests and load diameter data can also be recorded. Mechanical testing of individual wires (post spin testing) determines the residual properties of the individual elements of the wire rope.

Application and Technology Specialists

The Applications team specialise in understanding how wire ropes integrate onto the end user’s equipment by using information obtained from investigations.

Lubrication

A wire rope or strand is manufactured by twisting wires around a core in a helical pattern. Each individual wire needs to be free to move during rope usage, similar to an engine in a car. Compacted strands, although designed to act as one, also need to be well lubricated to get the best out of the rope.

A rope without lubricant will fail internally due to increased friction and internal abrasion which occurs with steel to steel contact. Externally, rope life can be heavily affected by many factors, including the operating environment. Both internally and externally, lubrication is of paramount importance to rope life.

Lubrication can be split into two categories, build lubricant and service dressing. The build lubricant in the majority of the market is wax based, however different components are combined to give improved characteristics. The mixing of incompatible ingredients can affect factors such as the viscosity of the lubricant, which is why choosing the correct service dressing affects the rope life.

The type of service lubricant and frequency of application varies by the rope construction, the operating conditions, and its functional application. Using the incorrect service lubricant can be significantly detrimental to the assets performance. Bekaert's unequalled experience in the world of wire rope manufacture and many years spent in the development of service lubricants have been used in the formulation of the Brilube product range, and the specialised Metalcoat product. Ropes360 also offer the correct tools for applying the lubricant.

	Brilube 30	Brilube 40	Brilube 70	Brilube Ultra 2	Brilube HR	Metalcoat
Composition						
Oil Based	●					
Petroleum Thixotropic			●			
Synthetic		●			●	●
Biodegradable				●		
Properties						
Excellent Penetration	●	●				
Excellent Corrosion Protection	●		●	●	●	●
Stable over wide temperature	●	●	●	●	●	●
Slip resistant		●			●	●
Minimise fling off	●		●	●	●	●
Semi dry thin film	●				●	
Water repellent	●	●	●	●		●
Applications						
Marine / Offshore	●		●	●		
Static ropes			●			●
Fishing ropes	●		●			
Lifts / elevators		●				
Friction driven systems		●				
Drilling lines	●		●			
Cranes	●		●			
Hot work cranes					●	

Bridon® Metalcoat

Corrosion resistance, no matter the weather

Application temperature
0°C to 30°C

Touch dry in 4 hours at
20°C

Operating temperature
-40°C to 50°C

Unmatched corrosion protection for structural cable systems

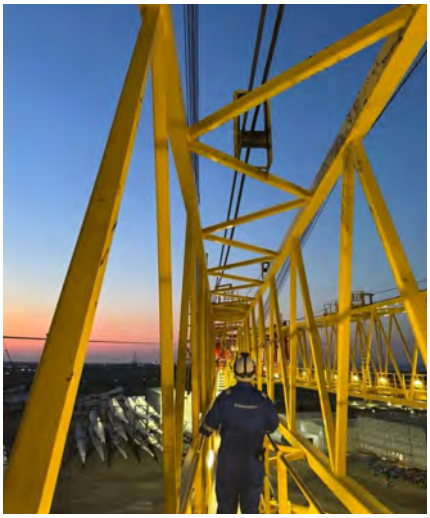
Combine galvanized wire rope with Bridon® Metalcoat for long-lasting durability. The aluminum-pigmented coating penetrates wires for deep protection. Its non-porous resin forms a seamless, continuous shield. Flexible and crack-resistant, it ensures lasting reliability.

Inspection

Inspections are mandated by laws and regulations globally for many applications. In some cases, a simple inspection made visually is enough to judge the condition of the system; and in some cases more advanced methods and technology have been adapted to inspect more accurately.

Inspection is both a preventative measure and a problem identifier aiding in the reduction of issues and improving safety.

Our visual inspections can be complimented with additional aids to help get the correct images in order to make a judgement on condition of the rope.



Visual inspection

Although advanced systems exist to inspect individual components, there is no better way to assess a full system than by having an expert examine it.

- Inspect rope using traditional tools.
- Inspect sheaves and drums using traditional tools.
- Ability to measure system issues such as fleet angles or sockets.
- Ability to reach areas that advanced measurements cannot.

Remote inspection

Remote inspection is a way to bring visual inspection to the customer without bringing the personnel.

- Can be leased out for applications where inductions and certification can often be time consuming.
- Expert opinion without the cost of transporting the expert.

Drone Inspection

Drone inspection allows an accurate observation of ropes and equipment in hard to reach and confined places.

- Ability to check hard to reach places without climbing, or creating access platforms.
- Ideal for boom hoists and structural ropes to make a quick check for rope surface issues or rope slippage.
- Different point of view of the rope.

UT Inspection

Ultrasonic inspection allows us to inspect the inside of sockets for potential wire breaks in areas that are otherwise inaccessible.

- Excellent test results up to 100mm into socket neck
- Mostly used for structures and fixed ropes, but can be used on any termination with larger wired strands/rope

Tension Measuring

Tension Measuring ensures that the ropes are using even tensions. This is of paramount importance in applications where multiple ropes are being used for hoisting.

- Vital inspection for some applications
- Often forgotten after initial installation
- Different sizes available for different ropes

Weld Inspection

Material inspection, including MPI (Magnetic Particle Inspection), is available across all equipment from lifting gear to supporting structures.

- Increased safety of structures and fittings
- Increase the usage and life of lifting appliances

Advanced Inspections

We invest heavily in finding the best inspection methods to suit our customers' needs. The advanced service portfolio is always growing with bespoke solutions. The main methods of advanced rope inspection we offer are Magnetic rope testing and VisionTek, These devices can be offered as one-time inspections, or as permanent continuous testing devices.

Magnetic rope testing

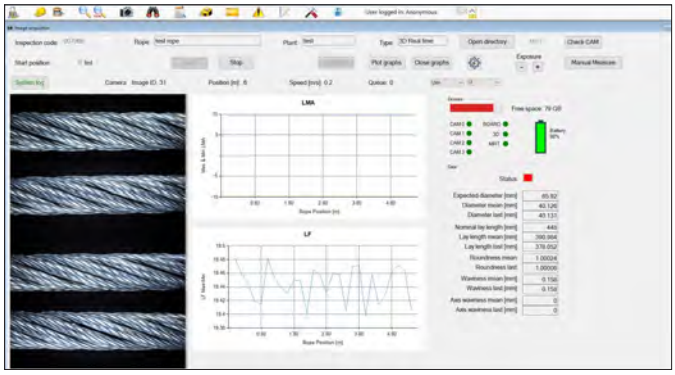
Magnetic rope testing (MRT) is a method of checking for defects and deterioration in steel wire ropes. Many ropes deteriorate from the inside, which means a traditional visual examination is not sufficient. MRT is recognised across many safety critical industries as an appropriate method for aiding the condition assessment of ropes. MRT uses Magnetic Flux Leakage techniques to identify loss of metallic area (LMA) or wire breaks as local faults (LF) in ropes in service.

VisionTek

VisionTek inspects rope parameters and the external surface of the wire rope. The rope passes through a camera system where diameter and lay length are measured. Algorithms are used to detect defects such as lubrication amount, wire breaks, and heavy abrasion. VisionTek has the capability to remove the need for visual inspections with a much more accurate faster solution, creating a safer and more efficient asset.

Combination Inspection

By combining the strengths of MRT (Magnetic Rope Testing) and VisionTek, you achieve a full 360-degree inspection of the rope—both internally and externally. VisionTek's advanced features, including geometry analysis and colour detection, allow for seamless correlation between graphical anomalies and actual rope condition.



Actual UI of combined inspection on one screen.

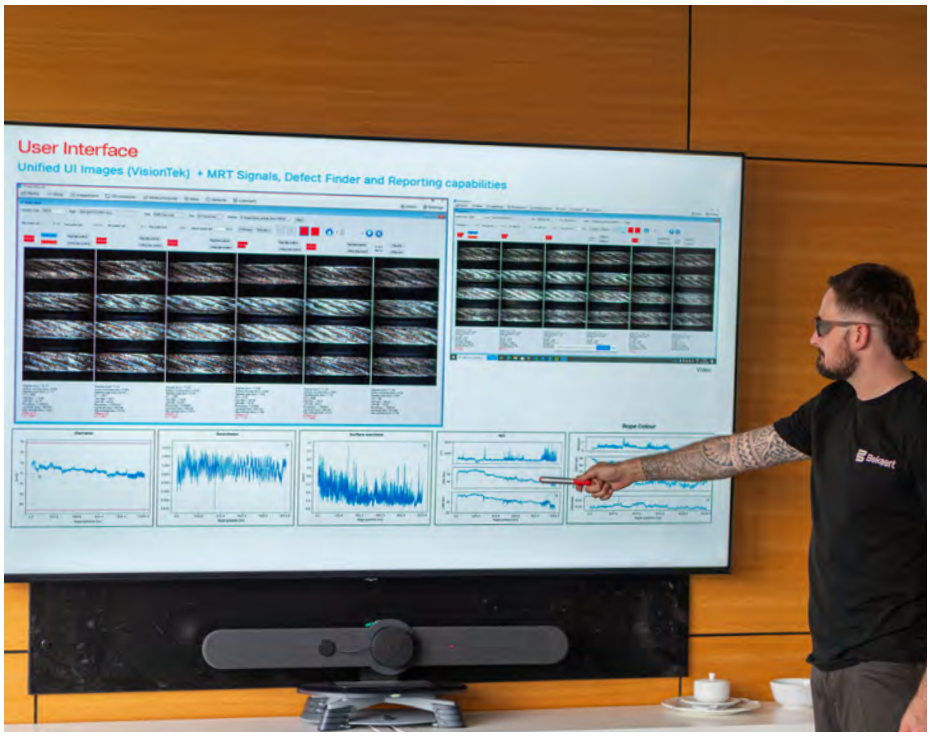
Mid/post life analysis

Although advanced inspections can test the working length of the rope, the best way to fully maintain and recertify a rope is to run it through our mid life recertification. A rope is run onto a winch and can be immediately reinstalled or replaced by a second rope. A report is produced and the rope is recertified for reuse.

Post-life analysis is part of our MORE programme, in which a rope is taken off an application slightly early and analysed down to extreme details to find where the deterioration is starting. The next rope can then be modified to increase life. This process can be taken in steps, giving the safest and most reliable way to better rope life.

Condition Monitoring

- Remotely accessible internal and external rope data -putting rope specialist onboard without needed to mobilise
- Wireless cloud functionality
- Matlab / Ai integrated software development to help deliver fast reporting on anomalies .
- Detailed time line on when the rope has reached its discard or when to perform maintenance
- Upcoming features: AI-enhanced reporting and cloud access to ensure global data availability.

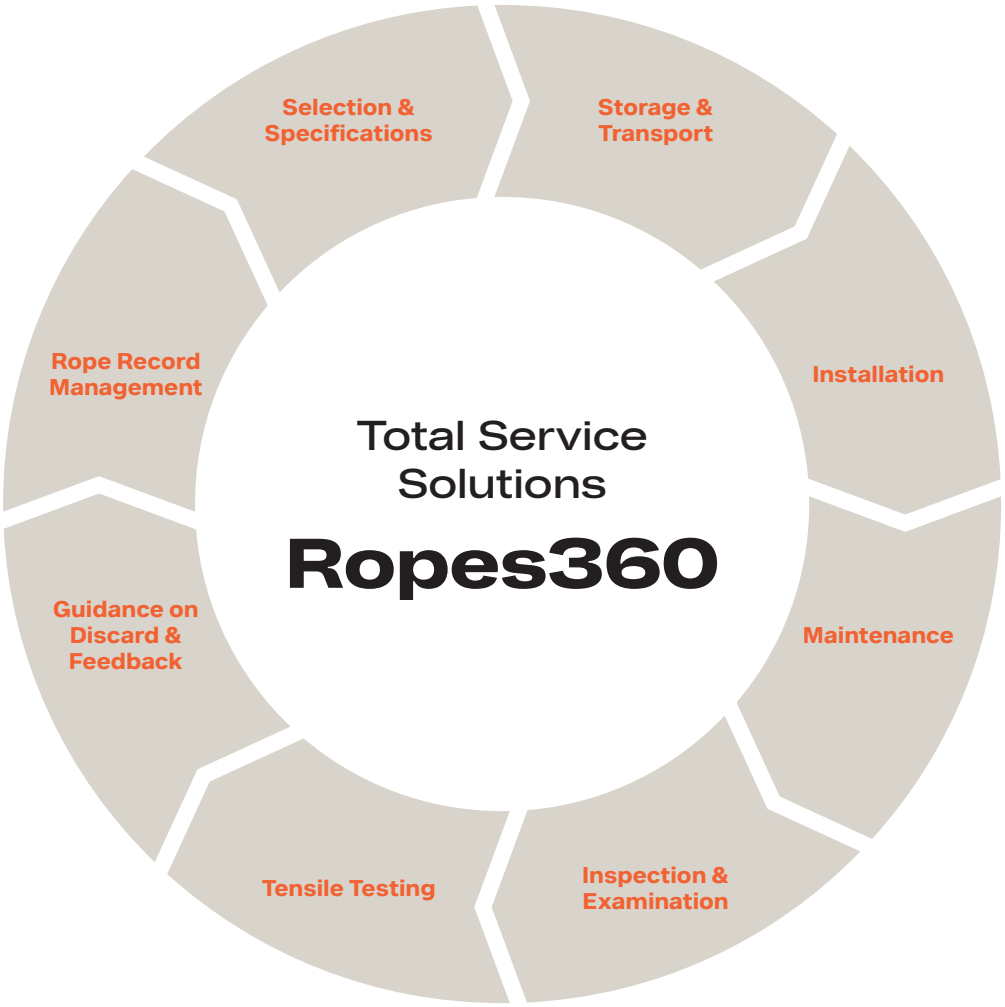


On-Site Training and Expert Data Analysis

Our technicians provide comprehensive on-site training covering both hardware and software usage, ensuring your team is fully equipped to operate the system confidently. Following data collection, we offer a detailed analysis session—delivered either through a structured report or an in-person presentation—scheduled at your convenience. This approach guarantees clear insights and actionable recommendations based on the findings.

Ropes 360 source and stock inspection equipment and parts to make your life easier. Plated verniers, steel and synthetic sheave gauges, and lubricant all in stock. Sourcing of wire rope sheaves, drums, pressure rollers, lubrication devices, anti-snag systems, and terminations all available on request.

Notes



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