Wire Rope Inspection and Spooling System (WRISS)

Extend the life of your crane’s wire ropes and ensure equipment integrity with our tensioning and electromagnetic inspection solution.

Investing in new wire ropes can be a costly and time-consuming exercise. Our Wire Rope Inspection and Spooling System (WRISS) provides our customers with a service that allows them to confidently extend the life of their ropes with in-situ condition-based inspection methods.

By using this technique for wire rope inspection, customers gain real information about the condition of their ropes which allows them to make informed decisions about extending the life of their wire ropes, thus reducing the frequency of replacement and therefore cost over an asset’s lifetime.
TENSIONING

Having the right tension when spooling wire ropes is critical to ensure the correct spooling of the rope onto the winch drum.

To meet demand to improve existing practices we have developed a method of using our range of tensioners and a sheave skid system to spool the wire rope. By using the tensioner we can ensure the rope is re-spooled at the required tension ensuring consistent and accurate line tension is maintained during the process.

Data logging of the re-spooling tension provides evidence that the ropes have been re-spoled onto the crane winch drum at the required percentage of rope Minimum Braking Load (MBL).

The system is cost effective and time efficient as the ropes do not have to be fully unspooled and transported to an onshore location.

WHY IS IT DIFFERENT?

- It provides confidence that you have adequate and consistent tension when spooling, compared with traditional spoolers
- Having the right tension during spooling ensures the correct placement of wire rope on winch drums
- Correct tensioning reverses any rope diameter increases that occur when ropes relax during transportation
- Controlled speed and grip reduces the chance of damage to the rope
- In-situ EMAG inspection provides confidence in the rope integrity
- Data collected can allow informed decisions about extending rope life to be made
- It’s cost effective and time efficient as inspection can be carried out on board

WHY USE A TENSIONER?

- Lead in and lead out angles are controlled, variations possible without negative effect of abrasion of capstan flanges
- Polyurethane track pads are less abrasive than the capstan winch metal drum
- Less chance of mistaken capstan orientation in setup
- Can achieve back tension from 3 Te to 36 Te (depending on tensioner used)
- No exit tension required between tensioner and spooler
Electromagnetic (EMAG) inspection provides more confidence in rope condition evaluation because:

- The technique allows us to ‘see’ inside the rope, to detect broken wires and corrosion wherever it occurs.
- It delivers quantitative data as opposed to a subjective visual inspection.
- Wire ropes being tested do not have to be cleaned first, minimising time.
- We inspect the ropes and evaluate the results in accordance with standards accepted throughout the world.
- We are able to provide instantaneous results by connecting with a computer while testing is taking place.

For breaks on the surface, the sensor head will find one broken wire in as many as 250 wires.

For internal breaks, the detector will find fractures when they amount to 1% or more of the total number of wires. For corrosion at any location, the sensor will find 1% or more loss in cross sectional area.

Our inspectors are certified ASNT Level II in Magnetic Flux Leakage as well as qualified visual inspectors for wire ropes and slings.

1. Back deck tension
2. Wire rope spooled after inspection
3. EMAG wire rope inspection
Local knowledge, global network

INTEGRATED SOLUTIONS
• Crane and lifting services management
• Deck operations management
• Reliability centred maintenance
• Mechanical handling
• Equipment upgrade
• Fault finding and repair
• Hydraulic system management

CAPABILITIES / SERVICES
• Multi-discipline engineering / design
• Crane operations
• Rigging / lifting
• Maintenance / servicing / refurbishment
• Inspection / testing / rope access
• Fluid power / hydraulics
• Site surveys
• Training / coaching

EQUIPMENT SALE AND RENTAL
• Cranes
• Crane technology
• Cable / pipe handling systems
• Fluid power / hydraulic systems
• Rigging / lifting equipment
• Mechanical handling equipment
• Spare parts / components
• Access systems

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