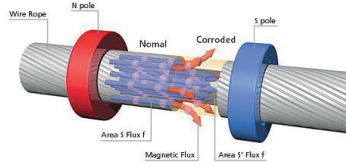


# SPECIALIST SURVEYS – MAGNETIC WIRE ROPE INSPECTION



## The Service

UMC has developed technology that enables the examination of the internal condition of wire ropes, utilizing magnetic flux fields on ropes ranging in diameter from 6mm to 42mm. The service we offer allows us to internally inspect wire ropes including hoisting lines, crane lines, drilling lines and towing lines which can save you, our client, money when changing out ropes periodically. We can examine the rope externally and now internally, assess its condition and advise if it is still fit for service, thereby saving you money on the purchase of new and often unnecessary wire rope reels.

We believe this service is a cost effective option whilst at the same time helps to prevent possible catastrophic scenarios as a result of wire rope failure, thus reducing risk to personnel and company assets.

Wire rope can be the blind point of safety management and is always a concern during hoisting operations. Once wire breakage occurs the result is extremely serious. Visual inspection can only find external flaws of wire rope, while non-visible internal flaws such as wire breakage, corrosion and especially fatigue, are more dangerous.

### Traditional inspection methods have their limitations

There are a number of issues associated with traditional manual/visual inspection methods which are as follows:

- **Unsafe:** Wire breakage related accidents caused by strength loss are always evident in the use of wire ropes. Many in-service wire ropes found in wire rope laboratories and application sites are in an extremely dangerous situation because the damage cannot be seen by the naked eye
- **Expensive:** Regular replacement of wire ropes can be a very costly exercise. Many impulsively replaced wire ropes were later found to have slight defects or little strength loss
- **Inefficient:** Traditional visual inspection methods can be time-consuming, be labour intensive and often prove inefficient
- **Unreliable:** Manual inspection is not reliable and many hidden dangers will remain undetected

- **Catastrophic Consequences:** Serious wire breakage accidents inevitably cause serious damage. Every year wire rope failures happen in different industries all over the world of which our industry is not immune from. Those accidents can result in damage to company assets and loss of life

## Magnetic Wire Rope Inspection – what we offer

- **Accurate inspection results:** capable of quantitatively measuring the percentage loss, caused by internal and/or external broken wires, abrasion, corrosion, fatigue and other defects and thereby evaluate the residual bearing capacity and service life of the inspected wire rope
- **Wide applicability:** applicable to wire rope inspections under complex working conditions without being affected by the inspectors experience or skills, rope speed, noise, water spraying, warped wires, oil dirt and other factors
- **Safety and Portability - small volume and light weight:** the weight of a portable flaw detector is less than 2kg, the instrument is CE certified and has no electromagnetic pollution. Therefore it does not interfere with the normal operation of other electronic and communication equipment in the work vicinity
- Water, dust, oil and moisture proof
- Trigger type self-unlocking device which quickly unlocks the tester from the rope in an emergency situation ensuring the safety of the inspectors and the equipment
- Integrated design of testing instrument and meters, with no need for an external power supply or cable connection, utilizing a high performance rechargeable Lithium Polymer battery unit

Above: Magnetic wire rope inspection kit overview (first). Lightweight & portable magnetic wire rope inspection set (second). Magnetic wire rope inspection (third). Wire rope inspection (fourth).

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Performance assured

