



**Wire Tech AS**

SERVICE CENTRE OF HIGH-PERFORM WIRE

# Rental of MRT

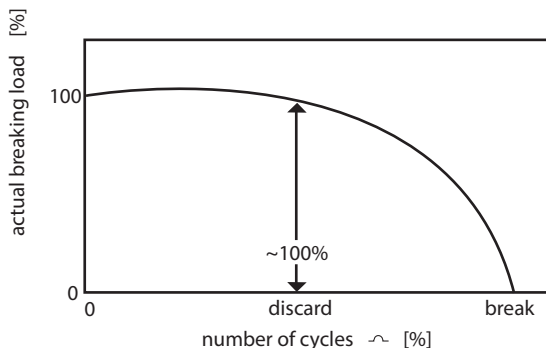
## Why must ropes be inspected and examined with MRT (Magnetic Rope Test)

Wire ropes are consumable items with limited life. During service the physical properties of the wire rope will change. At the commencement of service, the individual wires and strands settle into position and the rope breaking strength increases. After reaching a maximum it decreases rapidly. One of the objectives of inspecting or examining a wire rope is to supervise the normal process of deterioration so that rope can be removed

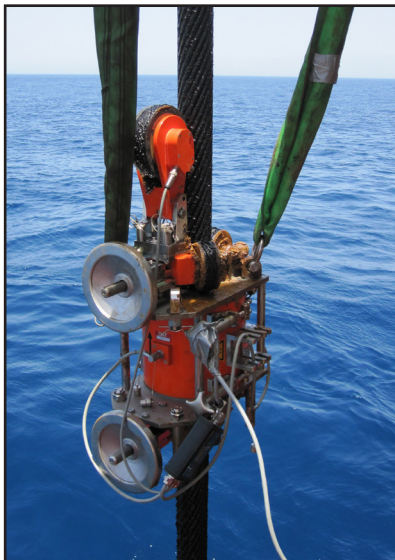
from service before becoming a hazard to safety. Another benefit of the inspection and examination procedures is to detect unexpected damage or corrosion.

### Reduction in diameter

Reduction in diameter can be caused by abrasion, corrosion or local failure of the rope core. According to ISO 4309 2010.



<b>Rotation-resistant rope</b>	Less than 1%	--	0
	1% and over but less than 2%	Slight	20
	2% and over but less than 3%	Medium	40
	3% and over but less than 4%	High	60
	4% and over but less than 5%	Very high	80
	<b>5% and over</b>	<b>Discard</b>	<b>100</b>



### Corrosion and Wear

Corrosion can be external or internal, general or localized. According to ISO 4309 2010, "wire rope should be discarded when the surface of the wire is completely roughened or pitted, or if the wires are slack within the strands due to wastage.

### Broken Wire

A rope must be discarded if the permissible number of wire breaks is reached or exceeded. It must also be replaced when local concentrations of wire breaks occur.

### Non-destructive testing (Ref from 5.6 in ISO 4309-2010)

Non-destructive testing (NDT) by electro-magnetic means may be used as an aid to visual inspection to determine the location of those sections of rope which could be suffering deterioration. If it is the intention to carry out NDT by electro-magnetic means at some point during the life of the rope, it should be subjected to an initial examination as soon as possible/practicable in the lifetime of the rope (which might be at rope manufacture, during installation of the rope or, preferably, after the rope has been installed) to serve as a reference point (sometimes referred to as "rope signature") for future comparison.

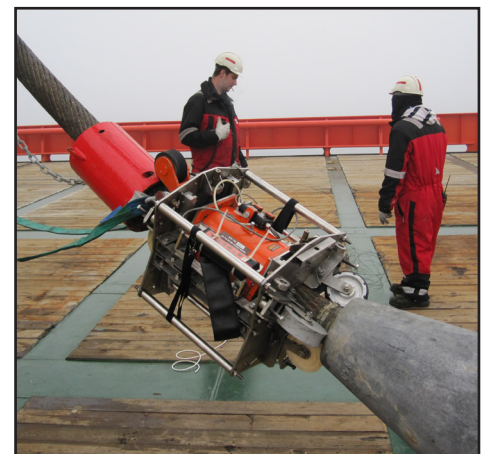
### OUR SERVICES COMPRISE:

**MRT of new ropes:**  
base traces during manufacturing or installation

**MRT of ropes in the field:**  
after specified periods in service or following maintenance

### Report after the test

This testing procedure makes it possible to identify damage in the form of wire breaks, wear and corrosion in ropes up to 150 mm in diameter. The inspection findings are used to determine the condition of the rope in terms of its load bearing capacity. Regular testing helps to compile a damage register and, based on the known real lifting performance, the results can be used to predict the remaining service life and to schedule rope changes.



**Wire Tech AS**

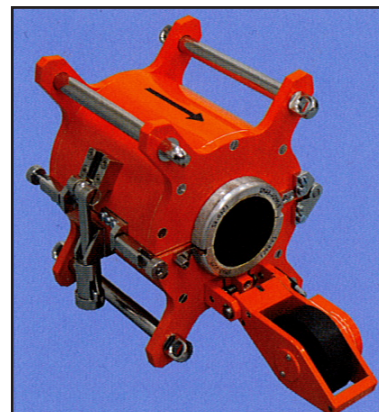
SERVICE CENTRE OF HIGH-PERFORM WIRE

# Rentel of MRT

## Magnetic head MH 24-64M3

Magnetic 24-64M3 is equipped with changeable Hall and coil sensors. The head is delivered with either metal or plastic sleeves. Main feature of MH 24-64M3 is high LF sensitivity.

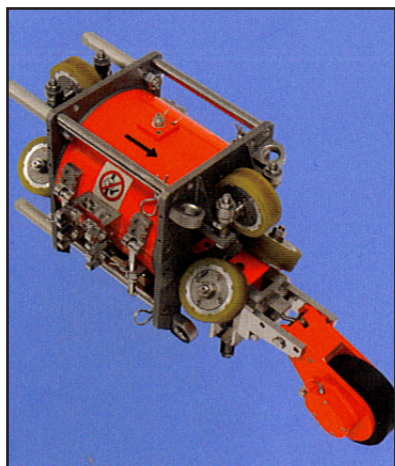
Diameter of inspected ropes	24 to 64 mm
Dimensions	330 x 235 x 190 mm
Weight	16 kg
Inspection speed	0 to 2 m/s
Ambient temperature	-10 to +50 °C
Hall and coil sensors	8 pairs
Metal sleeves	16 pairs
Plastic sleeves	8 pairs



## Magnetic head MH 60-85

This head consists from two separate modules which are connected on the rope with special tools. The head aligns on the rope with adjustable rollers. Hall sensor unit is not detachable. Coil sensors are detachable.

Diameter of inspected ropes	60 to 85 mm
Dimensions	690 x 526 x 288 mm
Weight	60 kg
Inspection speed	0,2 to 1,5 m/s
Ambient temperature	-10 to +50 °C
Coil sensors	5 pairs



## Magnetic head MH 80-120, MH 100-150

These two heads have similar design and differ with dimensions and weight. The head consists from two modules installed on the rope with special roller system and tools delivered together with the head. The head aligns on the rope with adjustable rollers. Hall sensor unit is not detachable. Coil sensors are detachable. Special compartment is provided on the head to attach basic unit.

	MH 80-120	MH 100-150
Diameter of ropes	80 to 120 mm	100 to 150 mm
Dimensions	895x520x440 mm	950x550x490 mm
Weight	80 kg	124 kg
Weight of roller system	80 kg	96 kg
Inspection speed	0,2 to 1,5 m/s	0,2 to 1,5 m/s
Ambient temperature	-10 to +50°C	-10 to +50°C
Coil sensors	8 pairs	10 pairs

