



Laboratory LRM® dr eng. Roman Martyna

Member of O.I.P.E.E.C International Organization for Study of the Endurance of Wire Rope

Laboratory LRM is a leading producer of wire-rope testing instruments with over 40 years of worldwide experience. Laboratory LRM offers a wide range of instruments as well as NDT/NDE inspections of steel wire rope, conveyor belts with steel-cord and of steel tubes.

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Original and modern solutions adopted in the LRM[®] Equipment are based on over 40 years of scientific work and experience on magnetic methods of steel ropes and tubes inspection as well as several Polish and European Patent Applications of Dr Roman Martyna authorship.

The qualifications and experience represented by the LRM[®]XXI System have background in professional activity of Dr. Roman Martyna a leading specialist in magnetic NDT testing who manages the LRM[®] Laboratory.

The LRM[®] Laboratory Dr Roman Martyna is a specialized company for Steel Wire Ropes, Tubes and Conveyor Belts Non Destructive Testing, providing testing equipment and NDT/NDE services world - wide.



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680.58m

636.58m
682.58m

1956.50m
1432.50m

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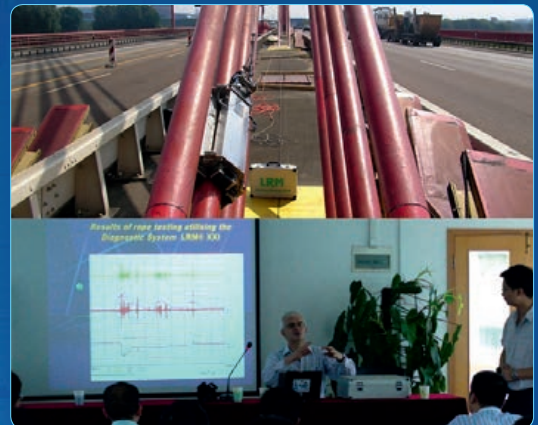
OFFERS:



Manufacturing of NDT Equipment LRM[®]XXI Diagnostic System



NDT Services, Training and Certificate



for NDT Magnetic Flux Leakage (MFL), in all kind of industries where are applied:

- Steel Wire Ropes, within the range of diameters from 3 mm up to 270 mm for round ropes
- Conveyor Belts with steel wire rope cord
- Flat Steel-Rubber Ropes
- Steel Tubes within the range of internal diameters from 8 mm to 300 mm.

Know-how of damage measurement, expressed as a percentage of the rope cross-section.

Training and certificate in the practical application of the magnetic MFL method and the equipment of the LRM[®]XXI Diagnostic System.

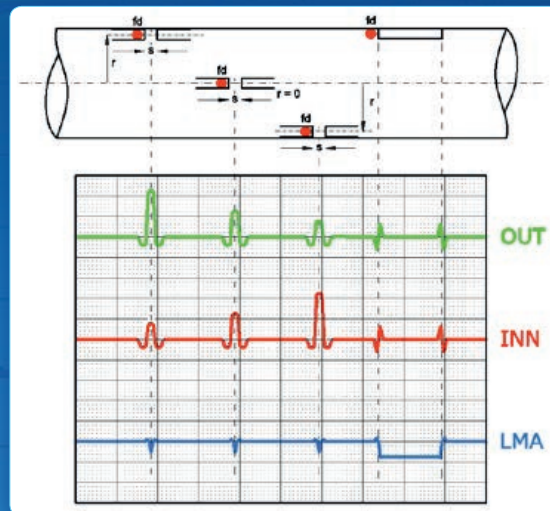
LRM[®]XXI Diagnostic System is well-accepted by the most important specialists in MFL method from countries around the world.

LRM[®] XXI Diagnostic System

System Description:



The LRM[®] XXI Diagnostic System for Wire Ropes, Conveyor Belts and Tubes NDT/NDE is based on the principle of saturation of steel rope section with the use of permanent magnets and obtaining the Loss of Metallic Area (LMA) traces and Local Flaw (LF) traces.



The use of the LMA sensor is essential in this wire rope NDT/NDE testing device for the indication of a rope weakening due to internal and external corrosion, wear and other structural changes occurring on a length of a rope. LF Sensors (**OUT**, **INN**) detect local changes in a rope structure, eg. due to corrosion or broken wires. Flaws are detected in a whole cross section of a rope.

The LRM[®] Equipment can be used in very harsh environmental conditions, low or high temperature, contact with dirt, dust and salt water. Testing can be performed on ropes which have plastic protective coating or are covered with grease.

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LRM[®]XXI Diagnostic System

System Description:



The LRM[®]XXI Diagnostic System provides high quality magnetic Non Destructive Testing of Steel Wire Ropes, Conveyor Belts and Steel Tubes. The System is very helpful in evaluating the technical condition of tested object, can detect weakness from 0,2% loss of metallic area.

Typical internal or external detected defects:

In wire ropes and conveyor belts testing:

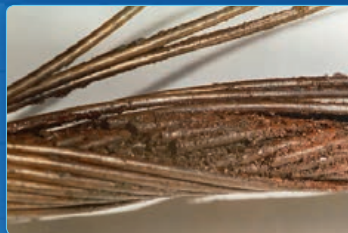
- broken wires
- corrosion
- abrasion

In tube testing:

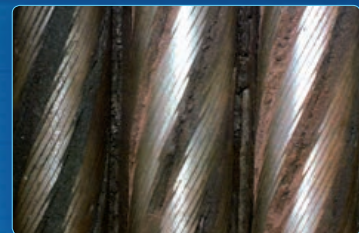
- holes
- thinning of the wall



external broken wire



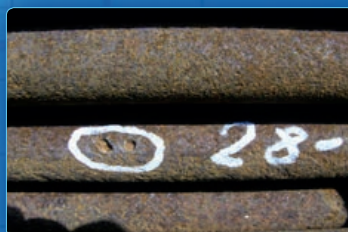
internal corrosion and broken wires



abrasion



external broken wire
In compacted Wire Rope



thinning of the wall



external broken wire

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Measuring Heads LRM®MH - 10/40/60/80

The catalogue shows standard solutions of Measuring Heads. As a manufacturer with over forty years experience in the development of NDT equipment, we can adjust the Measuring Heads construction to any customer requirements.



LRM®MH - 10

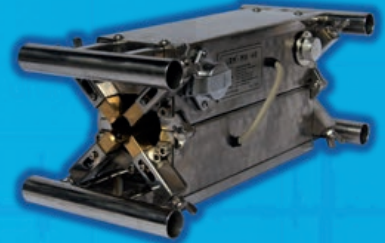
For rope diameter: 2 – 8 mm

Guiding System: Brass inserts

LRM®MH - 40

For rope diameter: 8 - 24 mm

Guiding System: Brass inserts



LRM®MH - 60

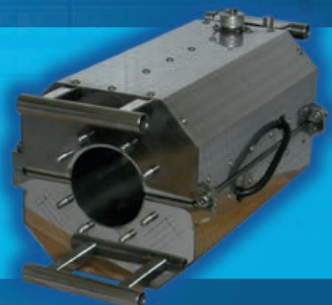
For rope diameter: 20 - 46 mm

Guiding System: Brass inserts or rollers

LRM®MH - 80

For rope diameter: 40 - 66 mm

Guiding System: Brass inserts or rollers

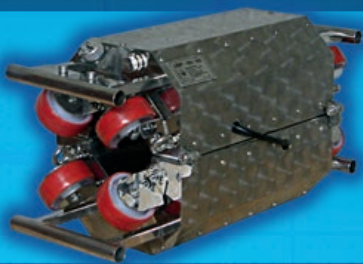


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Measuring Heads LRM®MH - 120/160/200/250

The catalogue shows standard solutions of Measuring Heads. As a manufacturer with over forty years experience in the development of NDT equipment, we can adjust the Measuring Heads construction to any customer requirements.



LRM®MH - 120

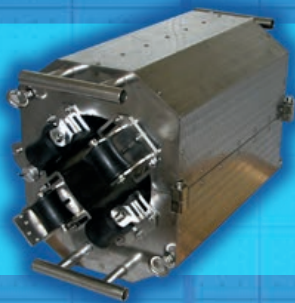
For rope diameter: 60 - 90 mm

Guiding System: Brass inserts or rollers

LRM®MH - 160

For rope diameter: 90 - 130 mm

Guiding System: Brass inserts or rollers



LRM®MH - 200

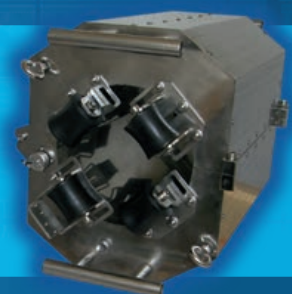
For rope diameter: 130 - 180 mm

Guiding System: Rollers

LRM®MH - 250

For rope diameter: 180 - 220 mm

Guiding System: Rollers

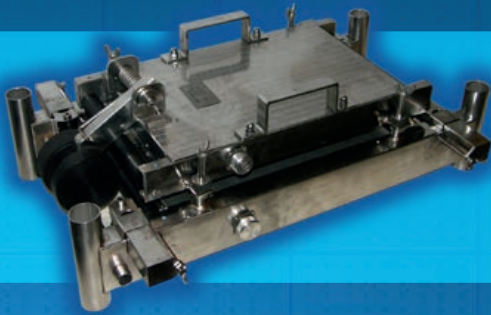


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Measuring Heads LRM[®]MH - SAG2/400/600/Probe

The catalogue shows standard solutions of Measuring Heads. As a manufacturer with over forty years experience in the development of NDT equipment, we can adjust the Measuring Heads construction to any customer requirements.



LRM[®]MH - SAG2

For testing Steel-rubber balance rope (SAG)

LRM[®]MH - 400

For testing conveyor belts



LRM[®]MH - 600

For testing conveyor belts



LRM[®]MFL Probe

For testing steel tubes with internal diameter from 8 mm



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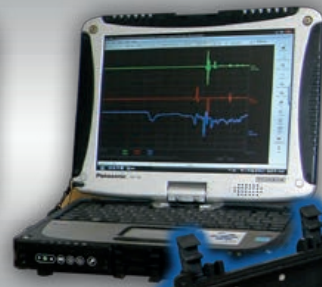
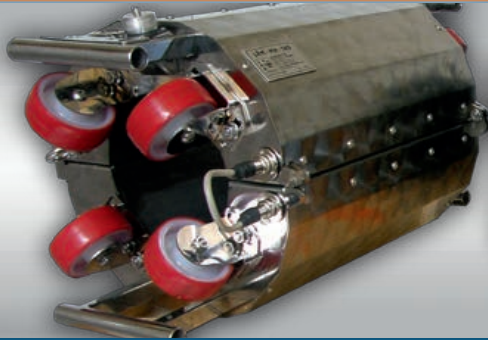
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LRM®XXI Recorder / LRM®XXI Rope

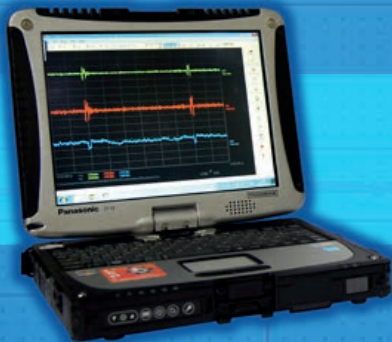
LRM Equipment



LRM®XXI Recorder

The microprocessor diagnostic devices, enabling recording, storage and processing of diagnostic signals from LRM®Measuring Heads. LRM®XXI Recorder is equipped with:

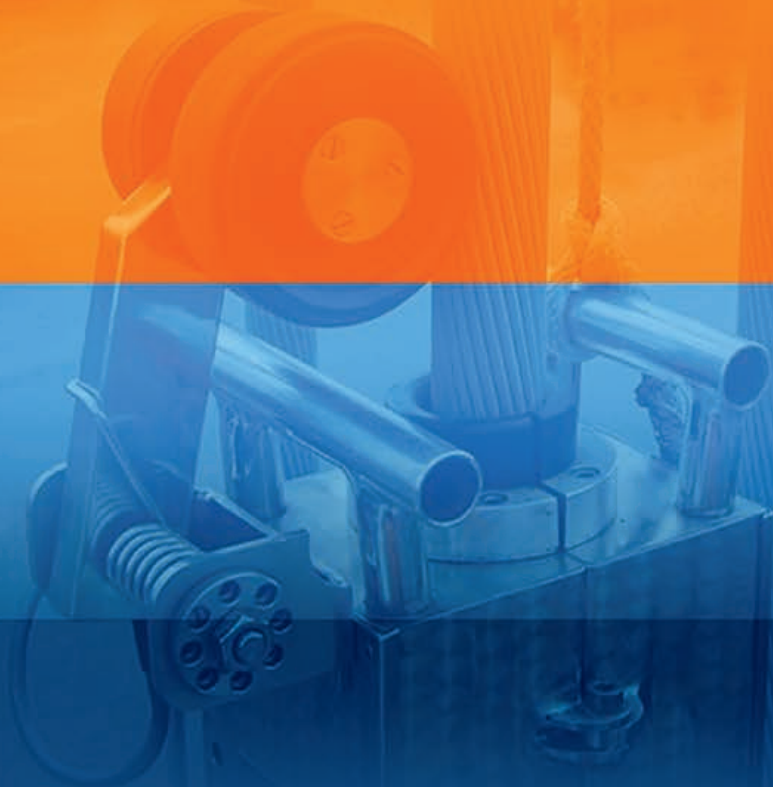
- The LCD display indicating direction, speed and length of testing.
- The keyboard enabling control of testing process.
- Built-in memory for 10 km of testing results in a speed range from 0,1m/s to 5 m/s (optionally from 0.001 m/s).
- A speed compensation system of testing, for reducing the influence of speed on amplitude of signals from LF sensors.
- Connection between LRM®XXI Recorder and LRM®Measuring Heads via LRM®Signal cable (length 1-30 m) equipped with fast detachable connectors.
- Connection to visualization device via RS232 cable or USB Cable (optionally via Wi-Fi connection).
- Built-in battery enabling 12h continuous work. Charging of battery by 12V charger (optionally system of quickly charging - 90% of capacity of battery in 1h).
- Battery level LED indicator.
- Plastic housing, providing high protection against mechanical damage.
- All external elements (housing, sockets, switches) providing IP67 degree of protection.



LRM®XXI Rope Diagnostic Software

Diagnostic computer software for the visualisation in real time of the collected data from LRM®XXI Recorder.

LRM®XXI Rope enabling remote control of LRM®XXI Recorder work parameters. LRM®XXI Rope has lots of functions, facilitating visualisation, evaluation and elaboration of collected data.



Uszkodzenie mechaniczne
po czasie druz

OUT
50mV/div

INN
50mV/div

LMA
10mV/div



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