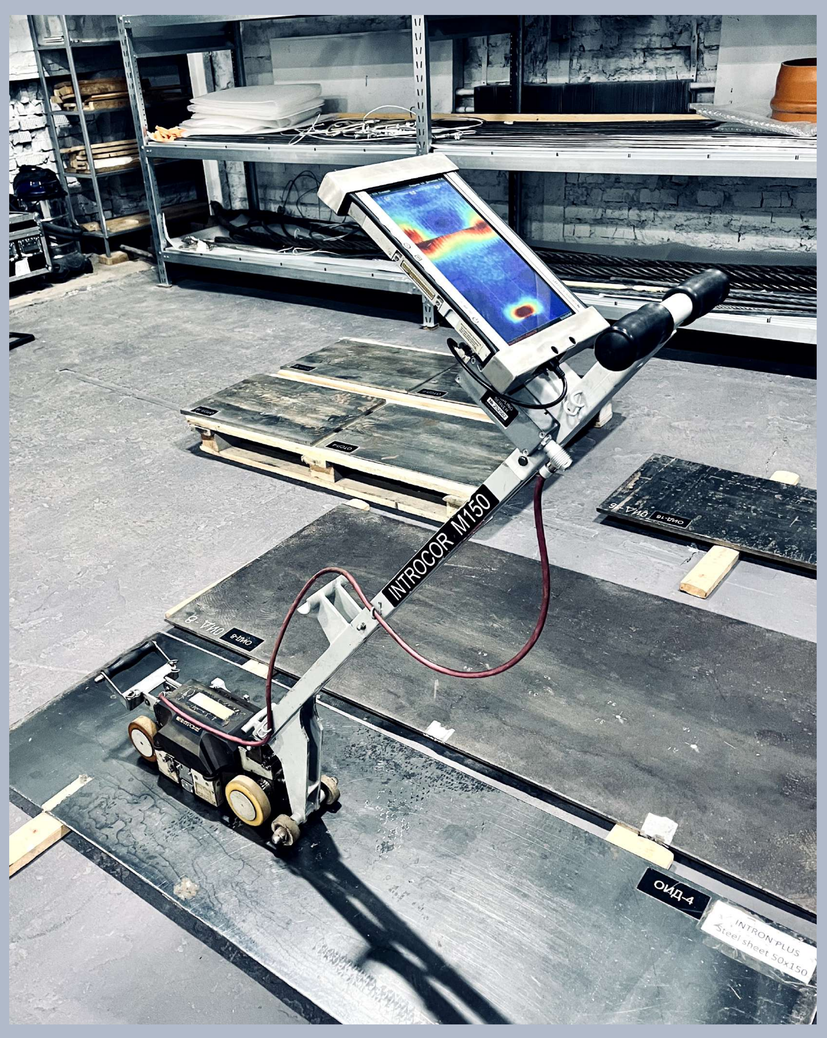
INTRON

INTRON PLUS

NON-DESTRUCTIVE TESTING EQUIPMENT & SERVICES



ABOUT US

INTRON PLUS is a global leader in development and manufacturing non-destructive testing (NDT) equipment for steel wire ropes, steel-cord conveyor belts and storage tanks.

The technology is patented in several countries and the products are registered and certified by a ranges of international bodies.

INTRON PLUS has representatives in more than 30 countries and 7 authorised service centres providing immediate high-level aftersale support to our customers.

- Development and production of magnetic and eddy current flaw detectors
- Non-destructive testing services, training of specialists
- Customised R&D according to your requests
- Aftersales support: repair, maintenance, upgrades

OUR PRODUCTS

WIRE ROPE INSPECTION

INTROS-AUTO

Condition monitoring system for steel wire ropes

INTROS

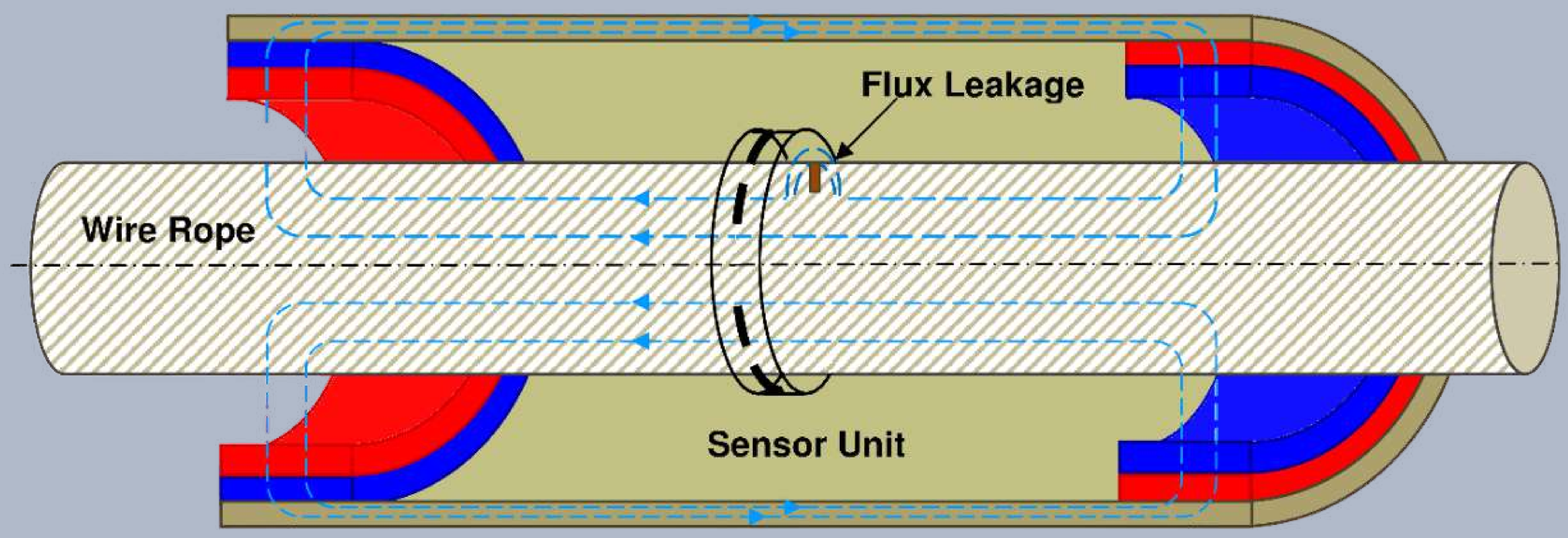
MFL flaw detector for steel wire ropes

CLIMBER UNIT

Remote device for actuating INTROS along inclined rope

PRINCIPLE OF OPERATION

Instrument operation is based on Magnetic Flux Leakage (MFL) method that detects anomalies in normal flux patterns created by discontinuities in ferrous material, saturated by a magnetic field. This inspection method is commonly known as Magnetic Rope Testing (MRT).

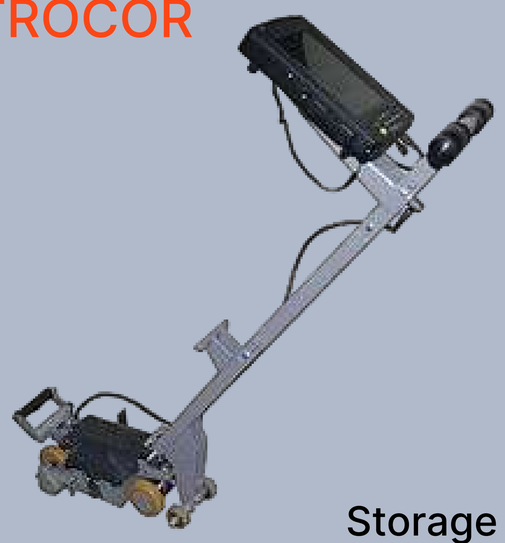


ADDITIONAL PRODUCTS

INTROCON

Eddy current scanner for steel cord conveyor belts

INTROCOR



Storage tank floor & wall MFL scanner

INTROMET ITM-525

PCB copper thickness gauge

INTROS

The INTROS magnetic rope testing instrument measures the loss of metallic cross-sectional area (LMA) and detects outer and inner local flaws (LF), such as broken wires, strands, pitting corrosion.

INTROS conforms to international standards ASTM E1571, ISO 4309, EN 12927, IMCA LR 004, which specify MRT as an important asset to wire rope integrity and safety.

The INTROS kit consists of a Magnetic Head, Basic Unit and Wintros software.

Ø 8-24

Ø 6-24

Ø 6-26

Ø 20-40

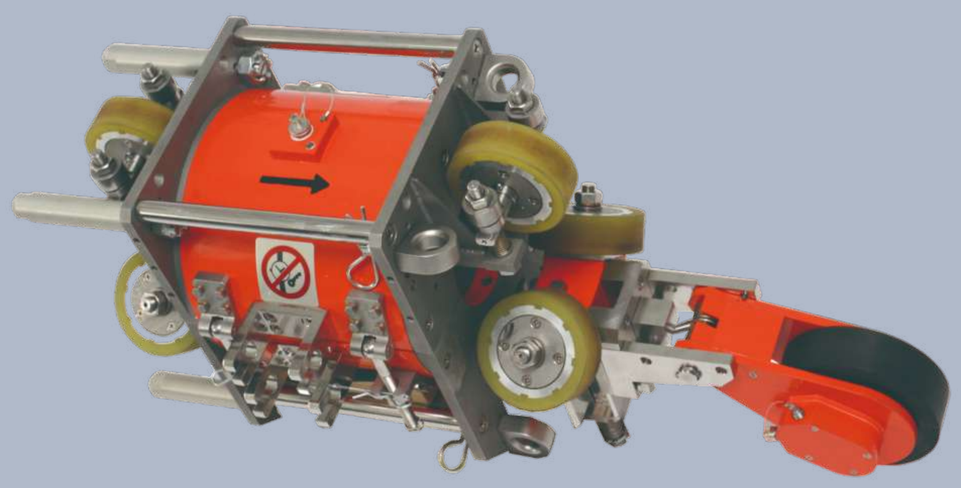
Ø 22-45

Ø 24-64 / Ø 40-64

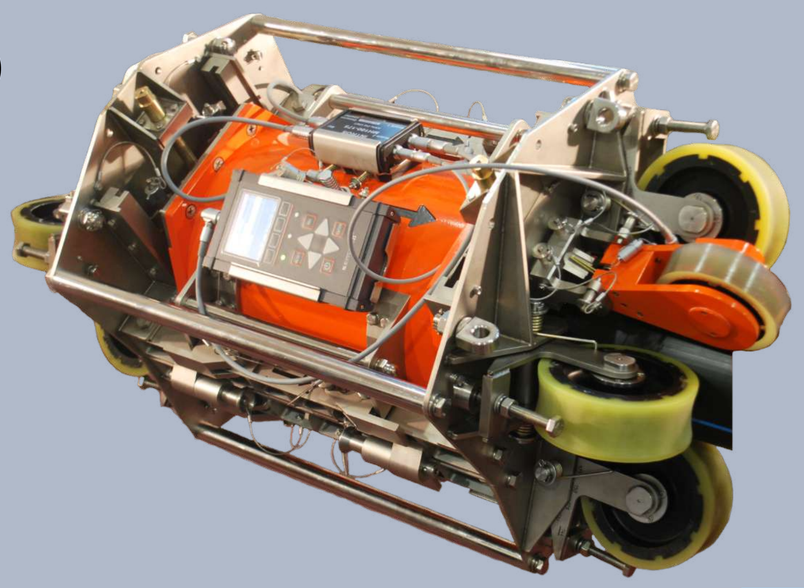
Ø 24-64M5

Ø 40-70

Ø 60-85



Ø 80-120
Ø 100-150
Ø 100-175



WINTROS SOFTWARE

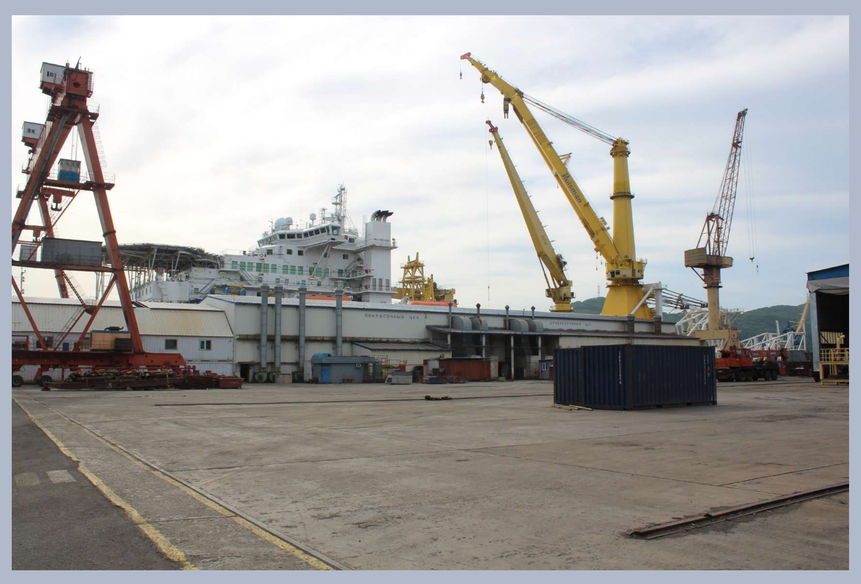
Correct interpretation of testing results is paramount in making an objective conclusion about future operation of the rope. Downloading and further analysis of traces is done via the Wintros software and online trace is possible by using the Wintros-RTV (real time view) package.

Functions of Wintros are re-calibration of the instrument, combining several recorded traces, noise filtering, automatic marking of located defects, quantitative comparison of several results and automatic generation of the final inspection report.

Example of data obtained during inspection of 24 mm diameter wire rope with the local faults

APPLICATIONS

AERIAL CABLEWAYS



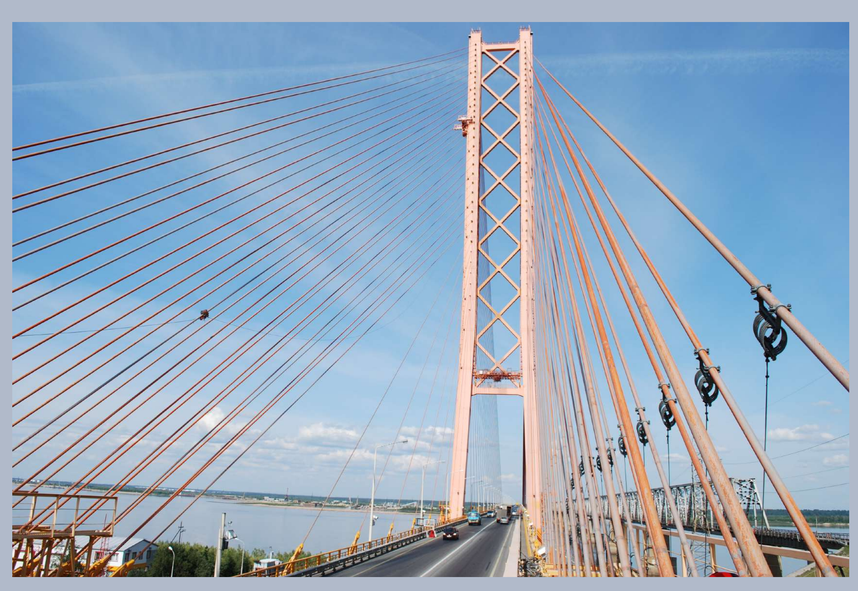
CRANES

OFFSHORE HEAVY LIFTING

ELEVATORS

GUYED STRUCTURES

DRILLING RIGS



CIVIL ENGINEERING

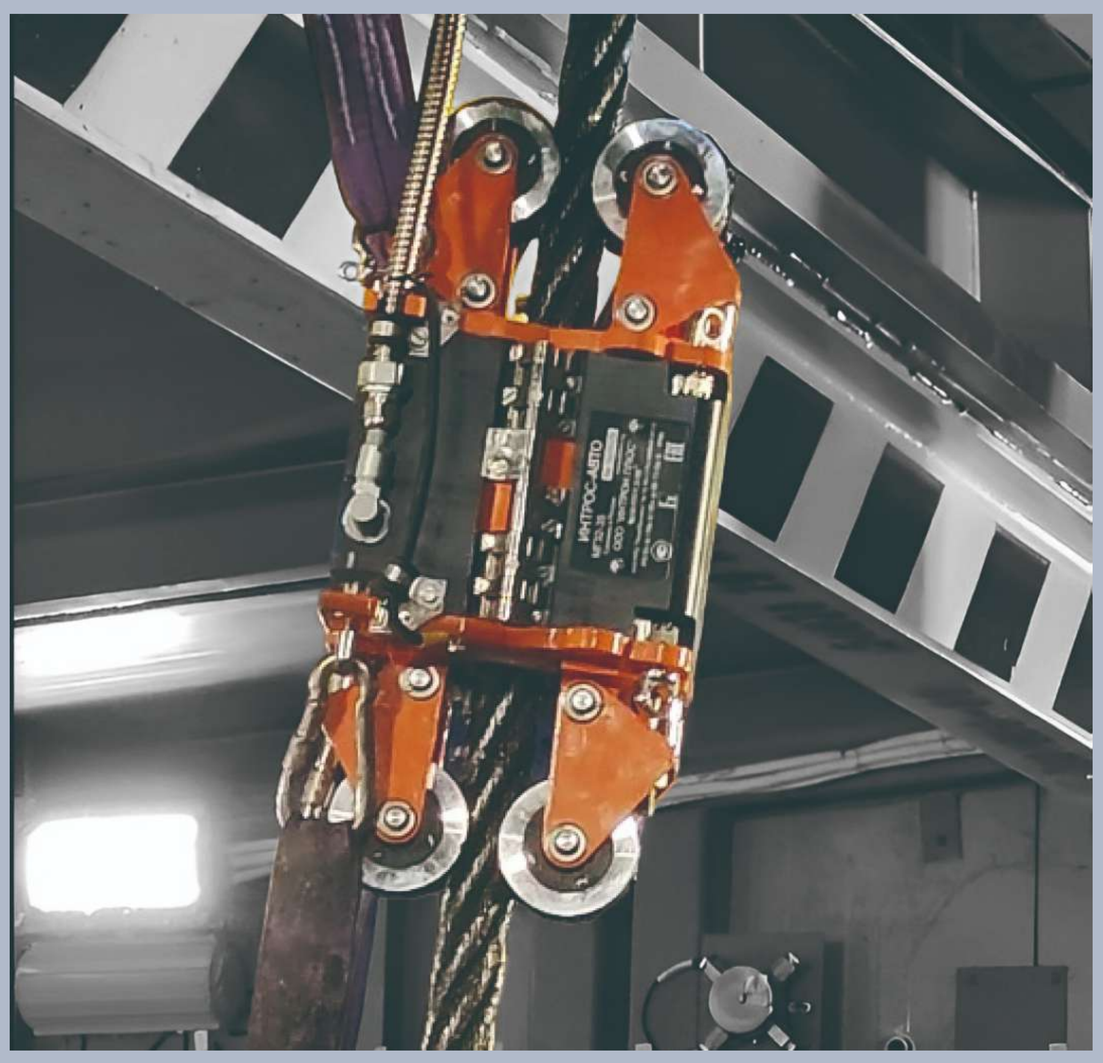
MINING

INTROS-AUTO

The INTROS-AUTO kit consists of Magnetic Head, Control & Display Unit, Wintros-Auto and Intros-Auto Monitor software.

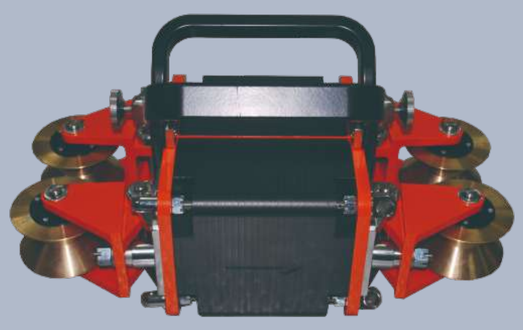
INTROS-AUTO is designed for non-destructive condition monitoring of steel wire ropes with automatic data interpretation. Results of automatic data interpretation are displayed as a «traffic light» indicator.

Condition of monitored rope is assed by number of broken wires within certain rope length, loss of metallic cross section area in percentage and speed of rope degradation.

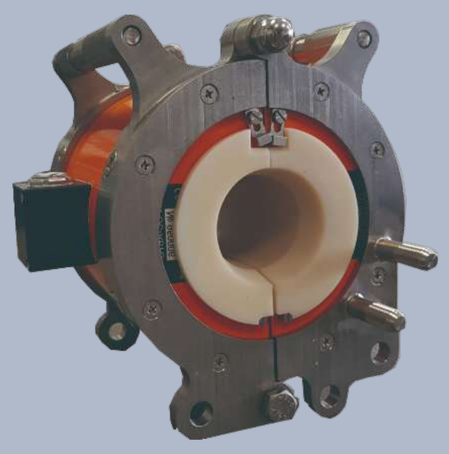


Ø 6-26

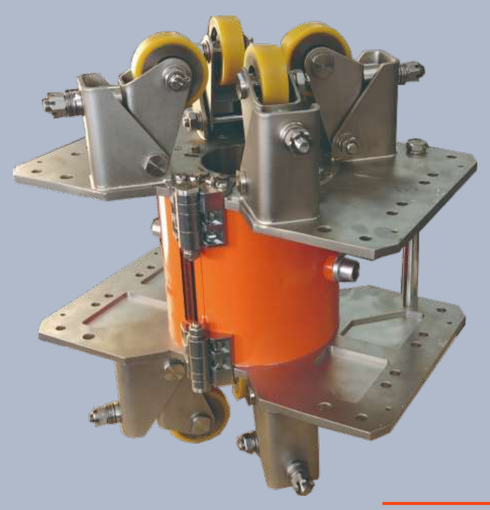
Ø 28-32 / 32-35



Ø 35-42



Ø 42-52 / 52-64



CONTROL & DISPLAY UNIT

Green — rope is in working condition

Amber — rope is approaching discard

Red — rope must be discarded

INTROCON

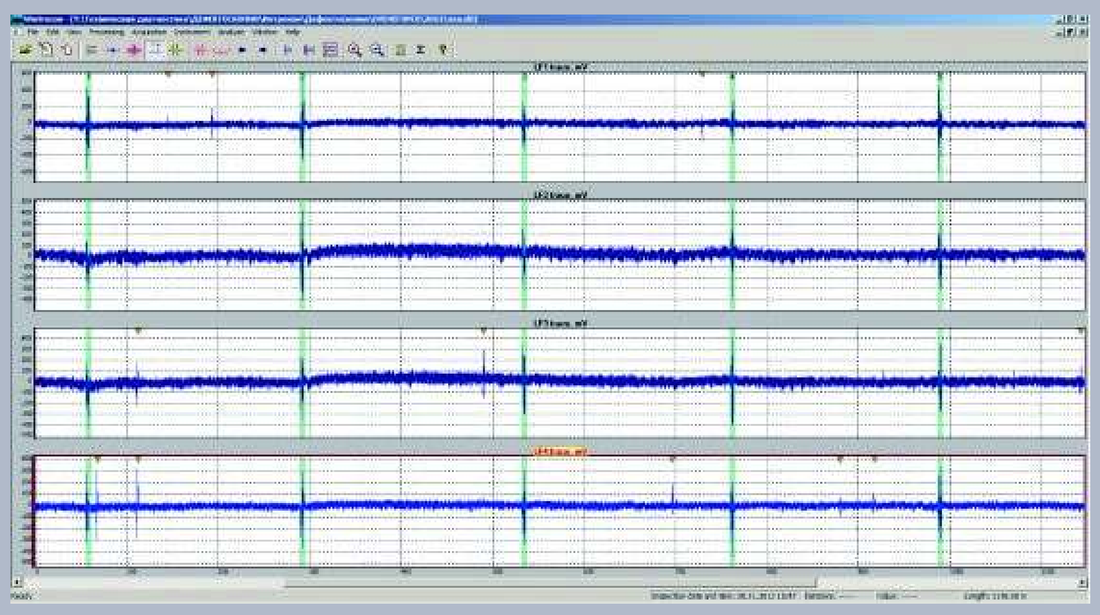
INTROCON conveyor belt scanner is used for non-destructive inspection of steel cords conveyor belts.

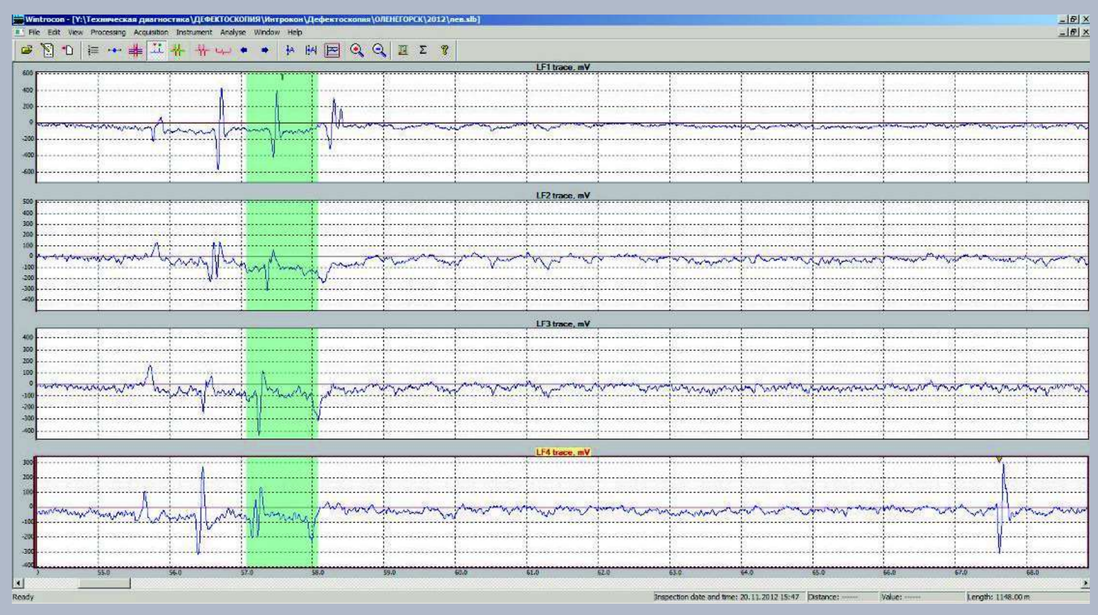
INTROCON detects broken cords and also assesses their corrosion and fatigue. This allows to check and monitor condition of splicing areas by measuring the distance between ends of cords within a splice.

INTROCON uses on eddy current method. It is a modular design whose width can be made to inspect conveyor belts from 600 mm to 3000 mm wide and from 10 to 50 mm thick at speeds up to 7 m/s.

The INTROCON may be set up without any interference to production and inspection can be carried out in real time.

The instrument concept allows it to be upgraded into an automated condition monitoring system.





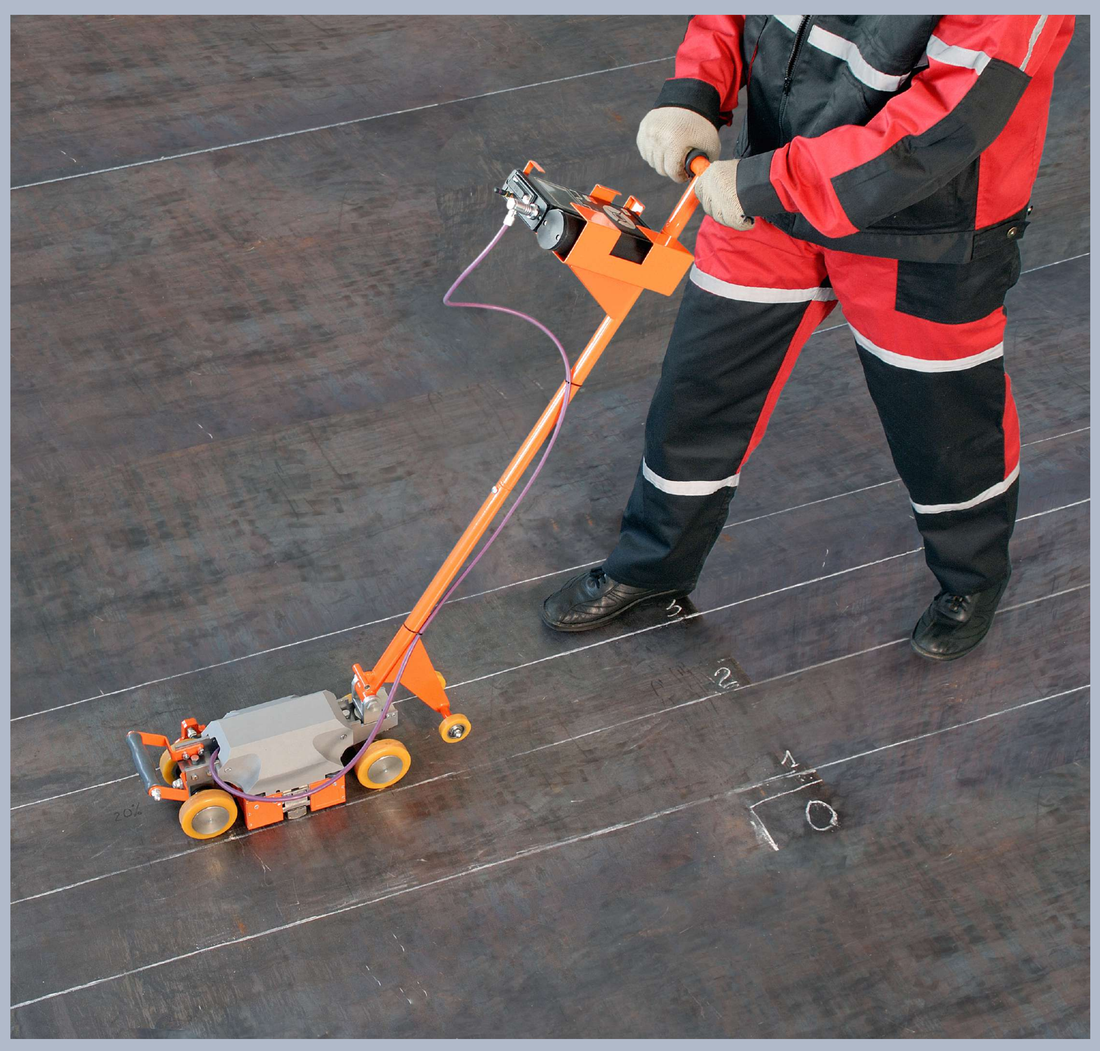
Traces of 1150 m belt length with automatically marked splices (green) and broken cords (triangles).

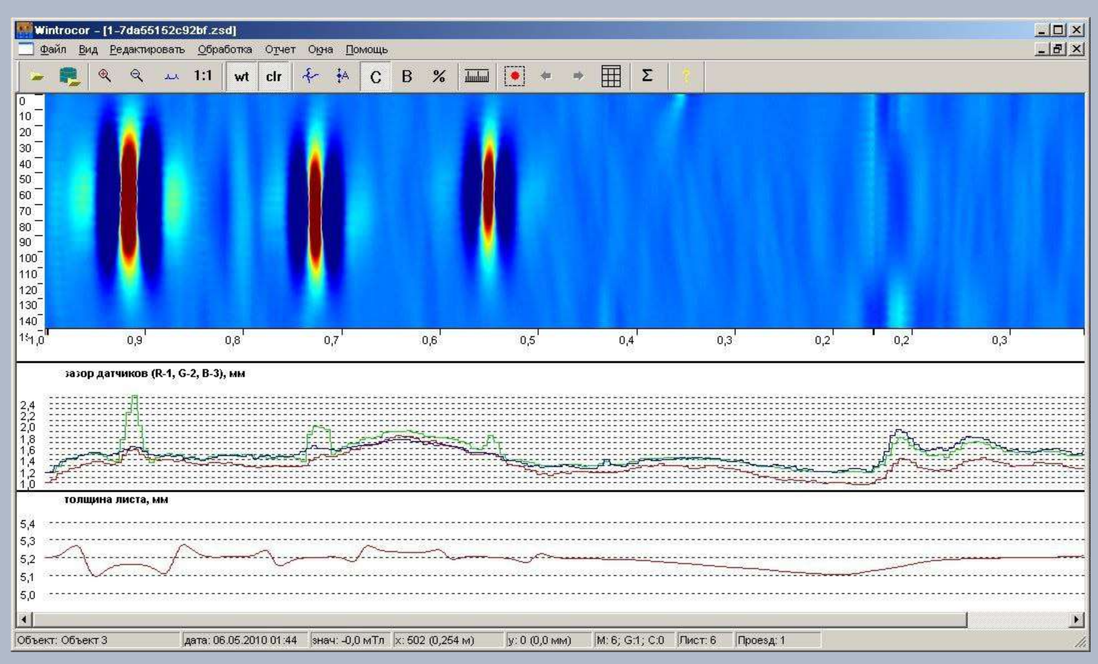
INTROCOR M-150

The INTROCOR M-150 scanner is for non-destructive inspection of plates from ferrous steel used in storage tank floors, walls and roofs. The scanner can reveal and discriminate defects on inner and outer surfaces of the plate and identify the surface where defects are located. Inspection is further possible if plate has protective non-ferrous coating and/or with only one side access.

The instrument utilizes magnetic flux leakage principle of operation and acquires defects such as transverse cracks, pitting, and general corrosion.

- Wide range of applications, including storage tanks
- Inspection under protective coating
- Measurement of remaining thickness of steel and coating
- Quantitative assessment of defect size
- Top side and bottom side differentiation C-scan and floor mapping





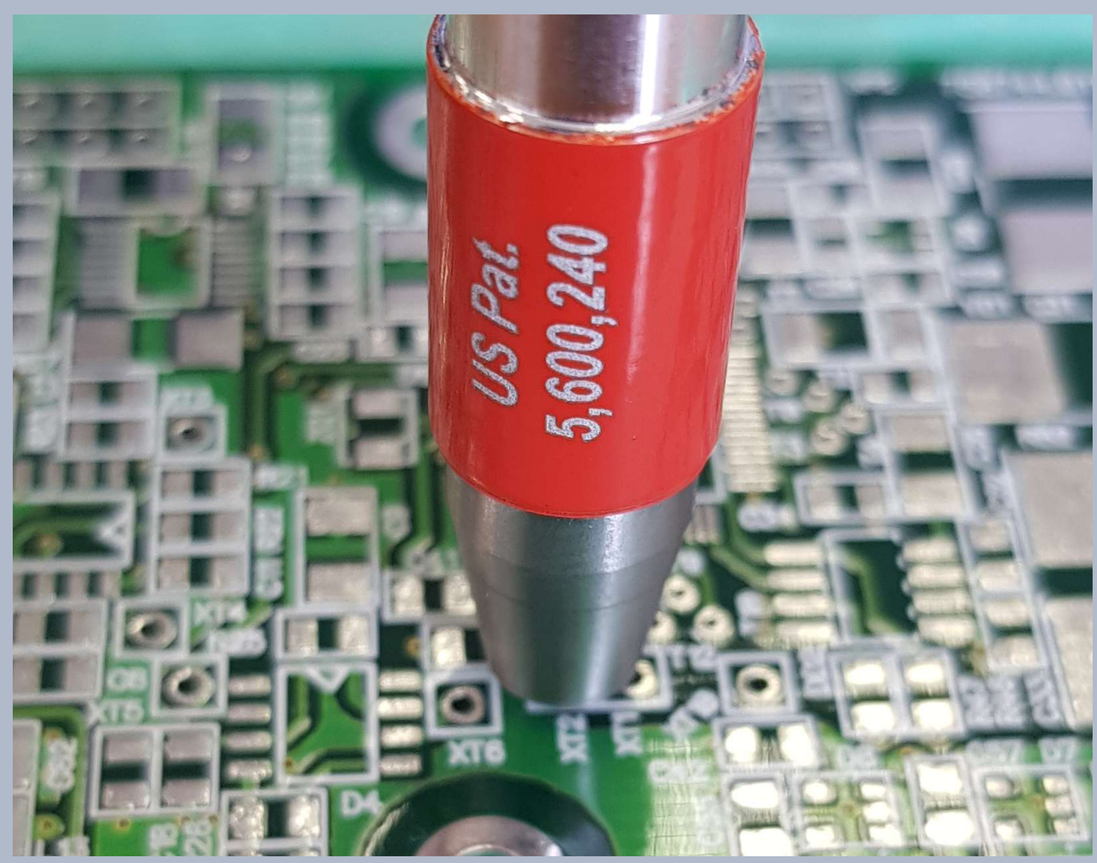
C-scan of the corrosion along the track and trace of plate thickness

INTROMET ITM-525

Hand-held Intromet ITM-525 is designed for non-destructive, fast and precise measurement of copper thickness in through holes and copper layer on laminate. The gauge can be used for in-process control in order to maintain high-quality PCB. The gauge is battery powered, equipped with built-in charger.

Intromet ITM-525 consists of basic unit and probes. Eddy current probes for through holes ate detachable, consisting of probe holder and replaceable plug-in cartridges EP-25 and EP-30. The probe EP-20 is not detachable. Probe tip is to be inserted into the hole to take reading. Due to special construction of probe tips, cracks in the copper can be detected. Measurements are possible on etched or unetched boards.

Probe SP-100, intended for measuring copper on the surface of laminate, realizes four-point electrical resistance measuring principle.



- Measures smaller through-holes than others
- Measures on single, double and multilayer PCB
- Measures on PCB of unlimited dimensions
- Applicable for wet and unetched PCB
- Measures on SnPb coated PCB
- Factory calibrated with NIST traceable standards
- Instant readings and statistics
- USB connection

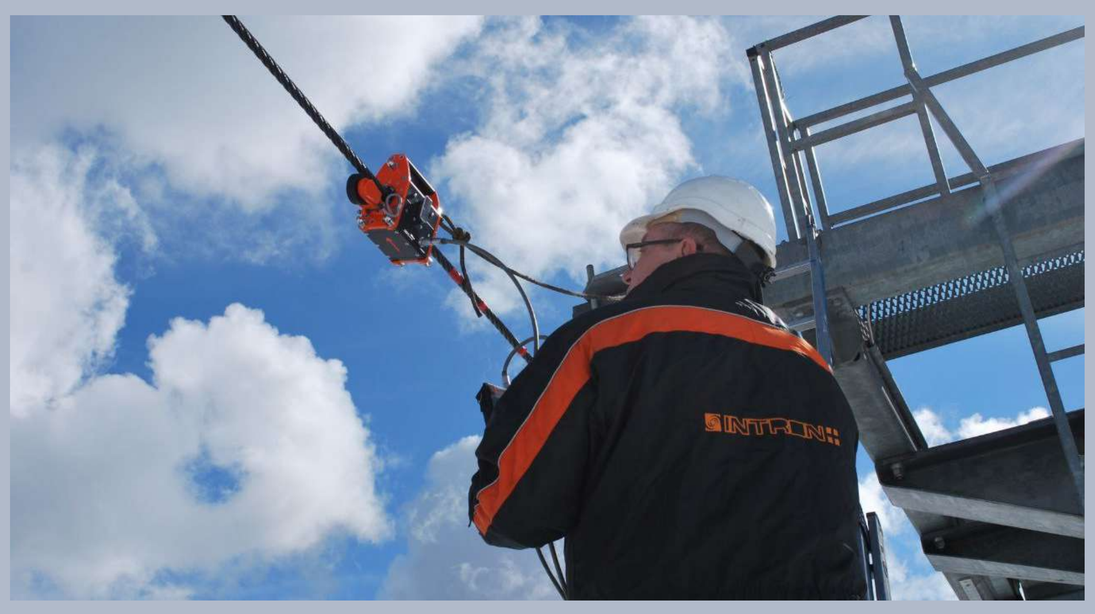
INSPECTION SERVICES

- INTRON's certified Inspection Department carries out works on steel wire ropes, steel cord conveyor belts, floors and walls of above ground storage tanks.
- All inspection works are carried out by qualified specialists in fluent command of Russian, English, Spanish, Portuguese and Polish languages.
- Inspection data can also be used to assess the residual breaking strength of steel wire ropes, appoint date of next inspection and forecast remaining service life.

MRT OF BRIDGE CABLES

MRT OF OFFSHORE LIFTING ROPES

INSPECTION OF CONVEYOR BELTS



MRT AT AERIAL CABLE WAY

INSPECTION OF FLARE STACK GUY ROPES

MRT IN UNDERGROUND MINES

SO 9001