Magneto-inductive testing of wire ropes (ACMI)

Do you wish to have optimum testing of your wire ropes? In that case, in addition to a visual inspection, you may also opt for magneto-inductive testing by Vinçotte.

Your tailor-made solution

Vinçotte conducts visual inspections on a variety of wire ropes: lifting wire ropes, supporting wire ropes, guy wires, etc.

In certain cases, it is however crucially important to be able to assess the internal condition of the wire ropes. On the one hand, from the point of view of safety, and on the other, in view of economic considerations. Magneto-inductive testing does not suffer from the limitations that are characteristic of visual inspection, since the latter technique can assess the loss of the metal cross-section of the entire wire rope with an accuracy of up to 0.2%.

History

The technique has its origins in the mining industry, where safety and continuity of lifts were a priority. Today, the technique is largely used in machines to which the same priorities apply. For example, wire rope cars, off-shore applications, guy wires for flare(s) and production machines.

Working principle

By locally magnetising the wire rope to saturation point with powerful permanent magnets, each local internal or external defect shall generate the same effect as an open magnet with a certain leakage flux. Special coils measure the leakage flux when the wire rope is passed through the measuring device, or alternatively, the device is passed over the wire rope. These will generate an electrical signal as per Lenz’s law. This signal is recorded and evaluated by our experts.

Your result

When experts use this technique, it is often possible to continue to use a wire rope in certain cases, although in case of a visual inspection, there would have been a demand to replace the wire rope. This technique can also be used for wire ropes that are otherwise not accessible for a conventional visual inspection: for example, cableways, guy wires of masts, etc.

Please note

Norms and Standards

EN 12927-8
ISO 4309:2010

In which situation?

This service is primarily intended for industry and for small and medium-sized companies that possess equipments such as guy wires for chimneys, footbridges and bridges, wire rope cars and chair lifts, skips, large lifting equipment, boat lifts, sloping surfaces, etc.