



Non-Destructive Inspection of Guy Ropes of Flare Stacks and Masts

- Inspection at installation in and out of service
- The only way to reliably inspect guy ropes
- High inspection accuracy and sensitivity
- Robust equipment

Guy ropes are used at flare stacks and masts for better stability of their construction. These ropes are in constant motion and under constantly varying loads; they are exposed to the hostile environment. Non-destructive inspection of guy ropes is essential mean to ensure their safe operation and reasonably extend service life.

MFL principle instrument INTROS® measures the loss of metallic area (LMA) and reveals localized flaws (LF) of wire rope in service. The free-running battery powered instrument scans the rope along its working length, identifying inner and outer external defects. Broken and missing wires, corrosion, abrasion and other anomalies are detected immediately. The data logger is fixed on the magnetic head, and stores data in the built-in memory chip during motion. After inspection data are downloaded to a PC for analysis and issuing test report.

If flare stack or mast is out of service, the INTROS® may scan the rope by means of slings, moving over the pulley, fixed on the top of construction, manually or with a winch.

Pulleys are usually not allowed if flare stack is in operation. In such case the instrument scans the rope with climber. The climber may carry the instrument to inspect ropes up to 64 mm in diameter. It is controlled from ground by radio channel or with the cable, and moves at speed up to 0.18 m/s.

Batteries provide continuous operating time of climber up to 4 hours. The climber is equipped with safety sling, that can be used in emergency.

Defects revealed in the guy rope, summarized in a field test report. Assessment of residual safety factor and measuring of rope tension is provided under request.



Motion of instrument with slings



Accommodation of climber and instrument



Motion of instrument with climber

INTRON PLUS also produces equipment and provides services for non-destructive inspection of steel plates and steel cord conveyor belts.

