

Visual Eddy

High Pressure Aluminum Tank Inspection



Special Features

- Detects hairline Sustained Load Cracking (SLC) in 3AL aluminum cylinders
- Improved probe design leads to quicker and better flaw detection
- Proven microprocessor-based design enables operator to quickly become an experienced inspector with minimal training
- Computer interface software capable of retaining data for record keeping and report generation
- Widest selection of inspection probes available
- Visual and audible alarms alert operator to inspection status
- **Approved by Luxfer Gas Cylinder for inspection of 6351 and 6061 alloy aluminum cylinders**
- **No computer necessary for operation**
- Includes power supply, probe, cables, software and operating manual

Applications

The Model Visual Eddy, eddy current test system utilizes the eddy current test technique method which very effectively locates SUSTAINED LOAD CRACKING (SLC) in high pressure aluminum cylinders. These aluminum cylinders are used for SCUBA diving, fire-fighting, carbonating beverages and in the medical field. Some of these cylinders may develop cracks and may be seen during visual inspection. These cracks can cause leaking and ultimately lead to catastrophic failure (explosion).

In sustained load cracking, small radial cracks start at the base of the threaded neck area and propagate toward the shoulder (the cylinder body) and up in to the neck (threaded area) as the cracks grow deeper. Eventually, these cracks can become quite deep and can lead to tank rupture.

Eddy current techniques can detect these cracks in the initial stages of formation long before there is any real hazard.

Operation

The Visual Eddy is very easy to operate. It was designed to be used by people with minimal formal eddy current training. Power on the unit and it will return to the previous setup and set the internal controls to the previous values via the internal microprocessor. It is necessary to verify calibration of the unit by rotating the aluminum test ring over the sensitive area on the probe and note if the pulse that is generated on the graphic display is of the proper size. Next, the probe is threaded completely into the cylinder neck until the probe no longer turns easily. The probe is rotated out of the neck. If the eddy current sensor crosses over a crack, a pulse is displayed on the screen.

The turntable, while not mandatory, is an integral part of the inspection system and serves two purposes. The starting and stopping motion of the probe as it is manually screwed out of the cylinder may lead to false indications. The turntable offers constant and consistent rotational speed. The turntable also eliminates the operator fatigue of turning the probe into the tank thereby increasing productivity.

Ordering Specifications

P/N 230004 Visual Eddy Mark V SCUBA Package

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|---|---------------------------------------|
| Includes: Mark V Visual Eddy Instrument | Visual Eddy Software Disk Ver. 2.1 |
| SCUBA #1 Probe (3/4) - 14 NSPM-2B | Operators Manual |
| Test ring | Nine sheets Visual eddy tank stickers |
| Probe Cable | 50 Informational Pamphlets |
| Computer Interface Cable | Visual Eddy Window sticker |
| Power Supply | Motorized Turntable |

P/N 230002 Visual Eddy Mark II SCUBA Package Same as above **without** turntable

P/N 230005 Visual Eddy Mark V Hydro Package

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|---|---------------------------------------|
| Includes: Mark V Visual Eddy Instrument | Power Supply |
| SCUBA #1 Probe (3/4) - 14 NSPM-2B | Visual Eddy Software Disk Ver.2.1 |
| SCBA #2 Probe (3/4) - 16 UNF | Operators Manual |
| SCBA #3 Probe 1-(1/8) - 12 UNF | Nine sheets Visual Eddy tank stickers |
| SCBA #4 Probe (7/8) - 14 UNF | 50 Informational Pamphlets |
| Four matching test rings | Visual Eddy Window Sticker |
| Probe Cable | Motorized Turntable |
| Computer Interface Cable | |

P/N 230003 Visual Eddy Mark II Hydro Package Same as above **without** turntable