



Guided Wave Analysis LLC

For Magnetostrictive Sensor Technology

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Rental of MsS Guided Wave Testing System for Long-Range Guided Wave Inspection Service

Guided Wave Analysis LLC (GWA) supports pipeline inspection companies with leasing magnetostrictive sensor (MsS) system for long-range guided wave testing of piping, pipeline, vessel, and tank wall. The rental of MsS System is available to any pipeline inspection company that wants to support clients with quality service with long-range guided wave testing.

The guided wave testing is a method for rapidly surveying a pipeline using low-frequency ultrasonic wave generated from a single test location. The corrosion wall loss and cracks in aboveground, buried, and insulated pipe can be detected, and their locations and sizes can be estimated by analyzing the data using user-friendly software.

Guided Wave Analysis LLC supports pipeline inspection companies with full service for long-range guided wave testing as follows:

- 1) Leasing the full system for long-range guided wave service
- 2) Five (5) -day guided wave training for Level I inspectors
- 3) Supplying consumable items for guided-wave inspection or monitoring service
- 4) Writing a detail procedure for field application and continuous consulting
- 5) Supporting with data analysis if clients require.

Procedure for leasing MsS system for a long-range guided wave service are as follows:

- 1) Contact by email at contact@gwanalysis.com or Heui Kim at 1-210-842-5819
- 2) Discuss about your applications with guided wave system and schedule for renting.
- 3) Reserve training schedule for Level I inspectors.
* The training cost is \$10,000 for up to 5 persons for 5-day Level I training course that is performed at San Antonio, Texas USA
- 4) Sign the loan agreement and pay the leasing cost of the first month for shipping the system.

What you can do with the leased equipment?

1. Inspect any pipe size of 0.25-inch to 60-inch outer diameter. Consumable items need to be supplied by the inspection company.
2. Operate any frequency between 8 kHz to 250 kHz. The operation at high-frequency can reduce the dead zone less than 0.5 ft. With encircling probe, MsS system has no near-field length.
3. Inspect and monitor road-crossing pipeline, piping system in oil, gas, petrochemical, and power companies.

EXHIBIT A

MsS EQUIPMENT RENTAL LIST

1. Instrumentation and Cables

- 1 each MsSR3030R™ or MsSRv5R Instrument with instruction manuals --- Figure 1
- 1 each Laptop Computer for data acquisition and reporting; software was installed in computer
- 1 each Battery charging adapter
- 2 each Battery for MsSR3030R

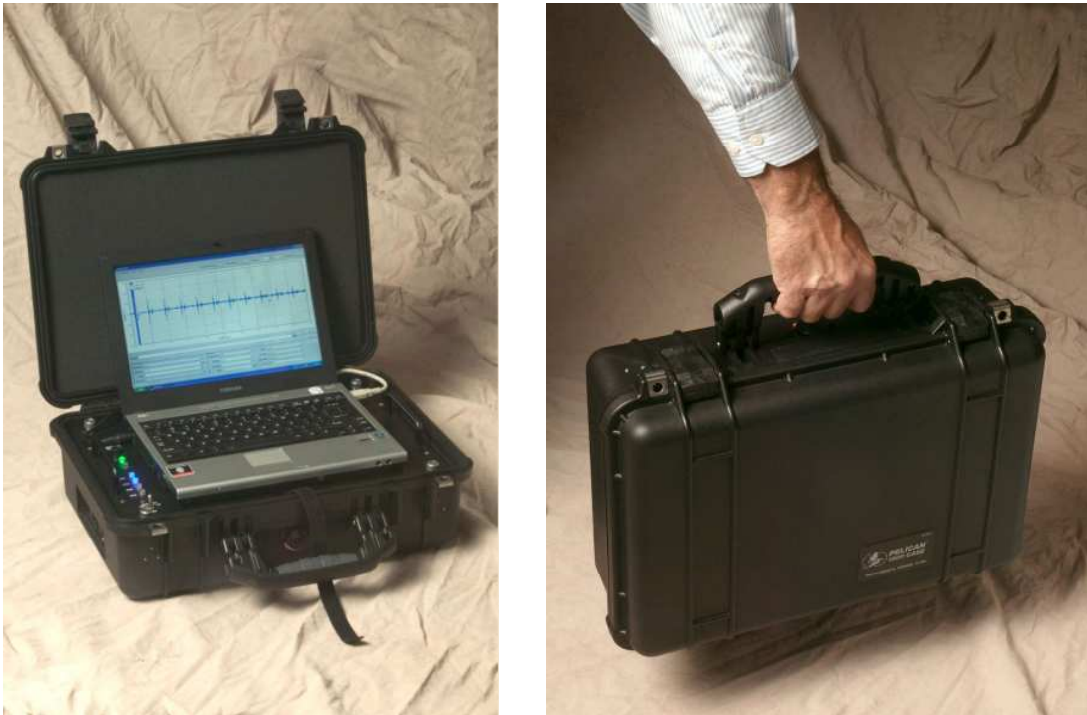


Figure 1. MsSR3030R and Laptop Computer

- 1 each 50-ft (15-m)-long interconnection cable between MsSR3030R™ and MsS Inspection Probes
- 1 each 25-ft (7.5-m)-long interconnection cable between MsSR3030R™ and MsS Inspection Probes

2. MsS Probes and Ribbon Coils*

3 each	Single MsS probe for operating 22 kHz and lower frequency torsional mode
2 each	Dual MsS probe for operating torsional mode of 22 kHz to 45 kHz
1 each	Dual MsS probe for operating torsional mode of 32 kHz to 64 kHz
2 each	Dual MsS probe for operating torsional mode of 45 kHz to 90 kHz
1 each	Dual MsS probe for operating torsional mode of 64 kHz to 130 kHz
1 each	Dual MsS probe for operating torsional mode of 90 kHz to 160 kHz
1 each	Dual MsS probe for operating torsional mode of 140 kHz to 230 kHz
2 each	Y-connector between 4-pin and two 2-pin Lemo connectors
1 set	Matching 40-pin conductor ribbon coils for 4-, 8-, 12-, 16-, 20-, and 24-inch-OD pipe; 1 ribbon coils for each pipe size
1 set	Sector probes of 4-, 6-, 8-, and 10-inch length for inspecting 16-inch-OD and bigger diameter pipe size and inspecting vessel and plate structure
2 each	Conditioner for magnetostrictive (or ferromagnetic) strip

* Detail list of MsS Probes and Ribbon coils will be changed depending on the scope of inspection service job.