

MULTI INFLUENCE SENSOR

Evaluating Ship Signatures for Susceptibility to Underwater Threats

MIS uses sensors and electronic systems mounted in a fibreglass sensor frame on the seabed to collect data and transfer it for real time viewing of a vessel's signature and post ranging analysis.

MIS is a portable system that uses 3-axis of magnetic, 3-axis of electric field, omni-directional acoustic and pressure sensors mounted in a tetrahedral fiberglass shape.

MIS comprises three main modules:

- Sensor Frame - a frame that sits on the seabed and contains the sensors and computer
- Surface Buoy - a floating shape containing the system power supply, surface/sub-surface interface and communication system
- Surface Vessel Components - the system display and monitoring computer and communication system

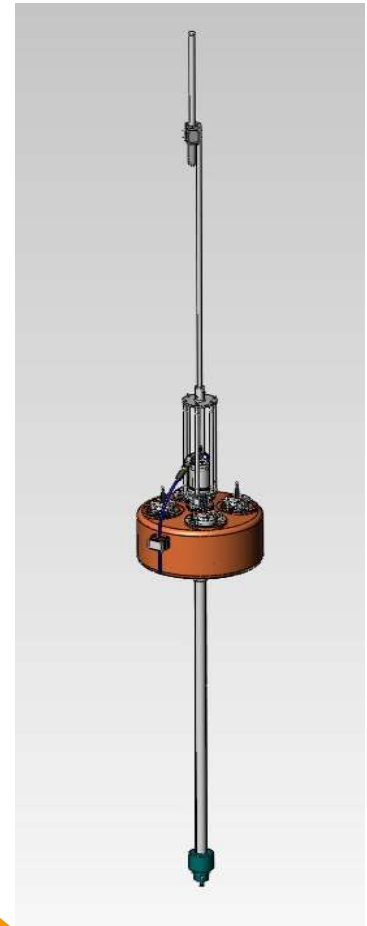
System control, monitoring and recording is done by software on a Toughbook. Ranging data is collected and recorded on the sensor frame seabed computer and can be viewed or uploaded to the laptop in real time.

Operation

The sensor frame is lowered onto the seabed and connected to the surface buoy by a 200-metre cable. A telemetry link between the Surface Buoy and ship is used to transfer the data. The position of the Sensor Frame on the seabed is accurately determined using an acoustic transducer which is remotely activated from the deployment vessel.

Ship positioning data is obtained using the ship's fitted systems and ranging is then conducted by the vessel passing over the Sensor Frame at predetermined speeds and on pre-determined tracks.

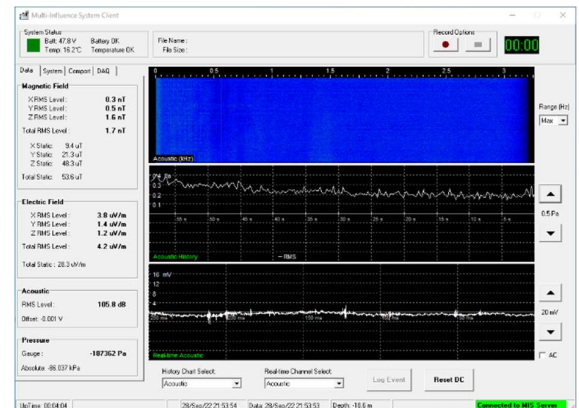
The control laptop will display the real-time sensor data which is also recorded for post ranging analysis. The system on-board battery capacity allows it to operate for a minimum of 8 hours and fresh battery pods can be swapped over without having to recover the system.



Surface Buoy

Benefits

- Risk Reduction - enables ship signatures to be measured, evaluated, and verified either in theatre or before operational deployment.
- Portable and compact - small and portable enough to be deployed and recovered by only a few people.
- Ease of Use - can be deployed and be operational in only a couple of hours.
- Flexibility - capable of operating in depths down to 50m in a water temperature range of 2-35°C and for mission lengths of at least 8 hours.



Software