

## MIRS

# Multi Influence Range System

When operating in the modern naval environment a vessel is subjected to numerous detection threats due to its various influence signatures. The threats to the operation of a vessel close to the shore can be significantly different to those of deep-water operation. Apart from the obvious threat of operating in an environment where movement of the ship is restricted and which is cluttered with radar and sonar images, littoral water operation involves operation in waters that can change various signatures of the ships by a substantial degree from that found in deep water. The signatures of a ship may be electro-magnetic, pressure and acoustic and interactions of these signatures with the seabed and other environmental factors such as changes in the conductivity and temperature of the water can change the threat from mines and other hostile agents. To successfully counter signature related threats a vessel's signature must be measured and analyzed in order to estimate the potential threat from mines.

The SAES Multi Influence Range System provides the capability to assess the threat to any ship from Magnetic, Electric, Pressure and Acoustic influence mines.

The System is based on combining existing equipments already in service integrated to provide the needed requirements of the multi influence range:

- Magnetic, Electric, Acoustic, Pressure and Seismic measurements of surface ships, submarines and influence sweeps.
- Degaussing Coil effect measurement and Degaussing Setting capabilities.
- Wire or RF data transmission to the Control and Analysis Centre (Land or Onboard).
- Data Recording.
- Static and Narrow Band Analysis.
- Modular design and growth capability.
- Real Time monitoring of any of the measured influences from on shore Control and Analysis Centre or from the own measured surface ship.
- Surface Ship DGPS Tracking and course/attitude recording.
- Real Time display of the sensors and ship under measurement position.
- Shelf Test and Calibrated System.

- Historic evolution of individual and family ship signatures.
- Submarine Acoustic Tracking and recording.

The SAES Multi Influence Range System is designed primarily using Commercial off the Shelf (COTS) equipment for maximum reliability at minimum cost. The design uses industry standard components from recognized sources and international standards. This design approach enables the system to be adapted, modified and up-graded in a structured manner and also enables many items (e.g., computer system components, displays, printer etc) to be procured locally.

The SAES Multi Influence Range System consists of Underwater Sensor Units, Underwater Junction Box, Communications Buoy, antennas and cables, and the onboard and land control stations.

