# MELDS

KONGSBERG

## MOBILE EARLY LEAK DETECTION SYSTEM

The Mobile Early Leak Detection System (MELDS) features a combination of highly sensitive in-situ sensors that allow for a quick and reliable detection, localisation and qualification of oil and gas leakages from any moving platform, such as ROV, AUV, ROTV. The highly selective HiSEM $CH_4$ sensor significantly reduces the false-alarm rate and allows for a qualification of the leakage virtually 'on the fly'.

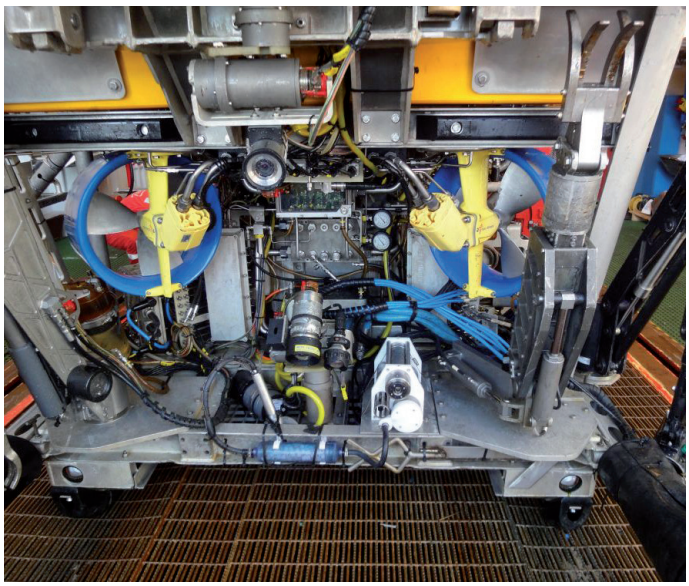
The Mobile Early Leak Detection System is a unique system for the detection, localization and qualification oil and gas leakages at a very early stage. It combines three completely independent methods for direct and indirect detection of hydrocarbons and associated anomalies.

The MELDS consists of:

- A polycyclic aromatic hydrocarbon (PAH) sensor based on the principle of fluorescence for the direct detection of oil in water in real time
- A highly sensitive ($CH_4$) sensor, unambiguously detecting gaseous and dissolved $CH_4$ as well as other hydrocarbons in water
- A conductivity, temperature and pressure (CTD) sensor suite for the measurement of associated anomalies and for establishing an environmental baseline for any further investigations (such as the calculation of $CH_4$ concentrations)

## FEATURES

- Designed for easy ROV/ AUV integration
- Modular system with the ability to add any third party sensor such as $CO_2$, $O_2$, Redox, pH, etc.
- Detects non-visible hydrocarbon leaks at a very early stage
- Integrated flow-through system with submersible pump for manipulator directed measurements (wipe tests on flanges)
- Software with export option for integration into existing data acquisition systems
- Field support through subject matter leak detection experts
- One day on-site training course inclusive
- 24h emergency support hotline



## TECHNICAL SPECIFICATIONS

### MELDS

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| • Measuring range | $CH_4$: 0.01 – 50 µmol/L<br>PAH: 0 – 500 µg/L<br>Temp: -4…+40 °C ± 0.1 °C<br>Cond: 0 – 60 mS/cm ± 0.001 mS/cm<br>Press: 0 – 4000 dbar ± 1 dbar |
| • Operational depth | max. 3000 m |
| • Temperature range | -2°C to 40°C<br>Arctic and other ranges available |
| • Dimensions | 520 x 170 x 200 mm |
| • Weight | 12.3 kg in air/ 9.2 kg in sea water |
| • Power supply | 12 / 24 VDC @ 18W<br>(max. 36 W on start-up) |
| • Connector | Impulse or SUBCONN®<br>MCBH8-M-TI 8-pin |
| • Digital output | EIA-232, |
| • Data output | Data format ASCII NMEA-0183<br>19200 Bd, 8 data bits, no parity, 1 stop bit. no flow control |
| • Software | DETECT™ Software Suite for graphical data visualization |

### DETECT™ SOFTWARE SUITE

- Graphical display and interface to ROV Operator Display for easy location of leaks
- Supports standard oceanographic sensors for full coverage of any kind of anomalies
- Automated detection of any leaks (oil/gas) through graphical display and simplified status flags instead of complex multi graph display
- Allows for easy location of anomalies through trained technicians
- Raw data can be displayed as graphs for further qualification and quantification of anomaly and reporting

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*Specifications subject to change without any further notice.*

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