Monitoring

Ship Performance Efficiency Analysing Tool

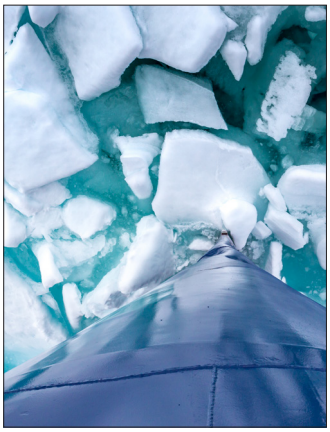
LEMAG®

SPEAT

The LEMAG SPEAT system is a cost-efficient solution for ship performance monitoring and optimization.









Application areas

- 2-stroke and 4-stroke engines

Key benefits

- Measures, records and monitors performance and navigational data efficiency
- Constant KPI visualisation to inform about energy efficiency
- Helps to reduce fuel consumption and emissions
- Data download and transfer function
- Analogue outputs: 4-20 mA signals for shaft power output, torque and speed (RPM)
- Digital outputs: shaft power warning, shaft power alarm and system error
- NMEA output: shaft power output, torque and speed (RPM) and fuel consumption data
- MODBUS RTU output: shaft power output, torque and speed (RPM) and fuel consumption data
- Supports ISO 19030-2 ships and marine technology - measurement of changes in hull and propeller performance
- 10.4" high resolution colour bridge display with touch screen and USB interface
- SPEAT Viewer for onshore management comparison and follow-up (optional)

For CII Monitoring & Optimization, see our Trust-Ocean Solution

LEMAG SPEAT is upgraded to give the ship operator instantaneous status of the vessel's operational performance and CII rating. Collected data from LEMAG shaftpower, fuel flowmeters and navigational instruments are analyzed and compared in real-time against a pre-defined CII value. Hence, enabling the master or the officer of the watch to assess, evaluate and optimize the operation of the vessel.

The key element of the system is a state-of-the-art maritime computer which records data from various sources:

- Shaft output power, RPM and torque
- Ship's speed through water (STW)
- Ship's speed over ground (SOG)
- Wind speed and direction, water depth, ship heading, rudder angle and ship draught
- Fuel oil consumption of M/E, A/E and auxiliary boilers
- Power output from shaft generators

The LEMAG SPEAT software calculates and clearly represents the following KPIs:

- Main engine specific fuel oil consumption (SFOC)
- Propulsion plant efficiency (fuel consumed on M/E vs. distance travelled)
- Propulsion efficiency (power used vs. distance travelled)
- Propeller slip (percent)
- Total efficiency (fuel consumed vs. distance travelled)

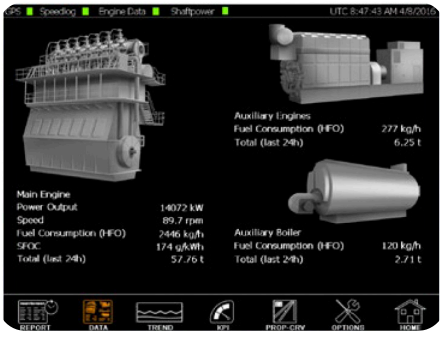


LEMAG Shaftpower

The LEMAG Shaftpower measuring unit, designed to measure the main engine shaft power, torque and RPM, is automatically included with LEMAG SPEAT.

LEMAG SPEAT

Saves collected data for a trend visualization where the key parameters are shown graphically. The data will be stored in the system which allows easy data transfer for further performance analysis on shore. The system can additionally be equipped with an optional remote display which is dimmable and fully approved for bridge installation.



Data

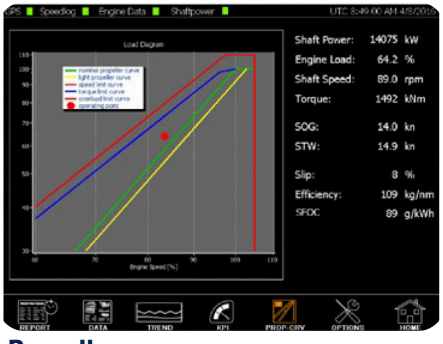
Noon-to-noon report



Trend



KPI



Propeller curve

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