System for monitoring of fuel consumption and/or bunkering onboard ships

- Monitoring and reporting of fuel consumption measured for main engine and other consumers onboard
- Monitoring and reporting of bunker quantities received, measured in bunkering line
# Technical data

### EcoMATE® System

- Type approved Windows computer with 22” monitor and printer
- Automatic data acquisition from OPTIMASS Coriolis flowmeters
- Internal calculation of key data
- Online monitoring
- Database storage of historical data

### Inputs

The system can receive various input data via the computer’s communication port(s) according to the Modbus RTU protocol.

NMEA 0183 protocol (calc. of performance indicators). Currently, the following input data are supported:
- VTG – Track Made Good and Ground Speed
- VHW – Water Speed and Heading
- VLW – Distance Travelled through Water
- VBW – Dual Ground / Water Speed

### Data distribution

- Optional data distribution to external systems via Modbus
- Reports can be distributed via e-mail

### Remote access

Full remote access from shore via IP-protocol

### Alarms

Alarm (red) or warning (yellow) for statuses

### Fuel type definitions

- Set of standard fuel types
- User configurable fuel types available

### Fuel consumption module

#### Functions

- Momentary fuel consumption
- Momentary fuel consumption pr. distance, longitudinal water speed
- Momentary CO2, SOx emissions
- Accumulated total fuel consumption and emissions for current voyage

#### Calculation of emissions

- CO2
- SOx

### Bunkering module

#### Functions

- Verification of total amount and density of bunker received through the bunker line
- Trend for mass flow, density and temperature
- Density deviation alarm

### Reporting module

#### Report types

A set of user configurable reports:
- Fuel Consumption Report
- Bunkering Report

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### System screenshots

The users can monitor key data in various formats like live values, meters, bar graphs and trends. A graphical view of the actual system layout is shown in the System tab:

Further details can be viewed in pop-up windows by clicking relevant symbols:

Reports of selected data are generated by selecting report type and relevant time period:

Users with sufficient access level can modify selected parameters and settings.

### Type approved bridge panel (optional)

The optional type approved bridge panel includes a compact and more limited version of the software, typically installed on the bridge/wheelhouse for momentary consumption indication.

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