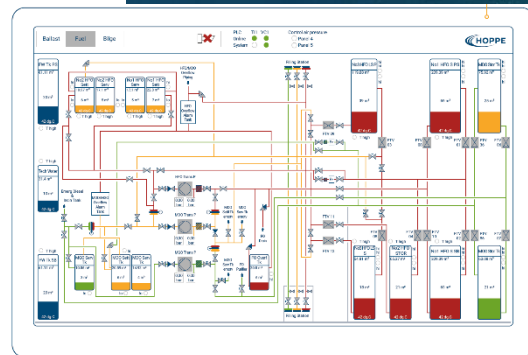
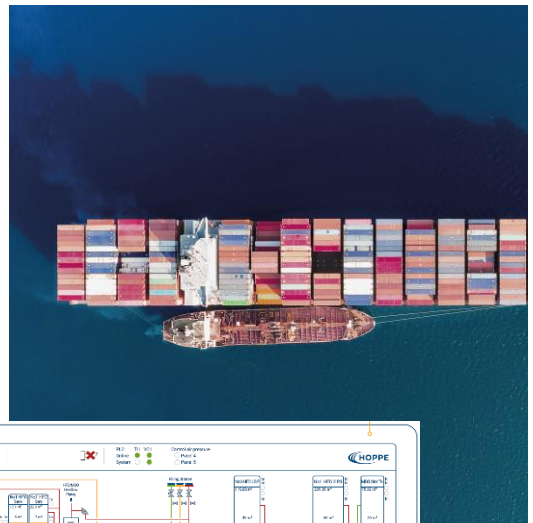


**SYSTEM**

**Hoppe Marine's Bunker Management system** allows a complete monitoring of the bunker system including validation and reporting features. Precise information regarding all bunker and transfer events are available as well as a constant plausibility valuation of the tank system by live measurement of tank contents. It helps with the exact keeping of the Oil Record Book by displaying all bunker and transfer processes and consistently documents the fuel change-over processes between MDO and HFO tanks, e.g. when entering an emission control area (ECA). Even inaccuracies of the tank capacity tables can be detected and corrected by retrospective long-term evaluations. The reports offered by the system are a precise support for bunker claims.



**AVAILABLE REPORTS**

**The Fuel Transfer Report**

- Provides total fuel consumption of a voyage section for selectable time periods
- Evaluates automatically detected transfers and states quality and standard deviation of measurement
- Validates the tank system by comparing discharges and entries of tanks
- Enables ship-specific planning regarding optimal amounts of fuel oil bunker orders by exact consumption statistics on a long-term basis
- Visualizes implausible discharges and consumptions

**The Bunker Event Report**

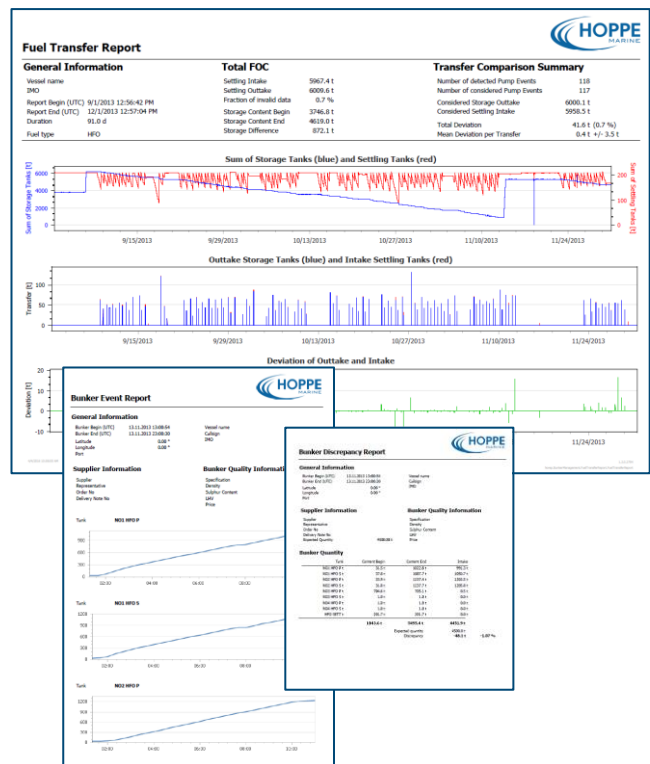
- Allows visualization of complete bunker procedure

**The Bunker Discrepancy Report**

- presentation of all tanks and respective fill levels at beginning and end of the bunker procedure (in MT)

**Bunker Management System User Interface**

- Allows the manual creation of reports for a freely-configurable time period
- Enables in-depth balancing of different fuel types



**TECHNICAL DATA HCG2011-MO4 ANALOG PRESSURE SENSOR 4...20mA**

Measuring range	160mbar – 3200mbar
Output signal	4...20mA, 2-wire
Temperature measuring	via PT100
Housing material	Stainless Steel / Titanium
Degree of protection	IP 68; submersible, up to 10 bar
Application range	-40°C - +120°C



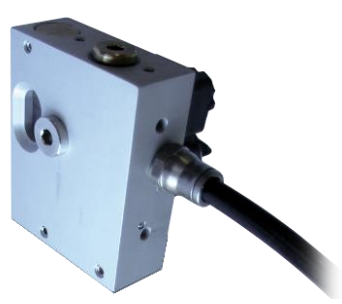
**TECHNICAL DATA HCG4011 DIGITAL BUS SENSOR**

Measuring range	0mbar – 3200mbar
Output signal	bus signal, half-duplex, interface RS485
Temperature measuring	via PT100
Housing material	Stainless Steel / Titanium
Degree of protection	IP 68; submersible, up to 10 bar
Application range	-10°C - +100°C



**TECHNICAL DATA HOBUB AIR BUBBLE TYPE SENSOR**

Measuring range	0mbar – 4000mbar
Supply voltage	24 VDC
Valve type	3/2-way magnetic valves
Max. valve operating pressure	3 bar
Application range	-10°C - +70°C



**TECHNICAL DATA CONTROL UNIT HOMIP 2**

Supply voltage	24 VDC
Power consumption	15 W, approx. (30 W max.)
Interfaces	2x Ethernet RJ 45 3x USB 2.0 (1x Device, 2x Host) 2x RS 422, 6x RS 485 2x CAN 500 kbit 1x SD/MMC-Card (up to 25 MB/s)
Max. operating temperature	+5°C to +55°C

