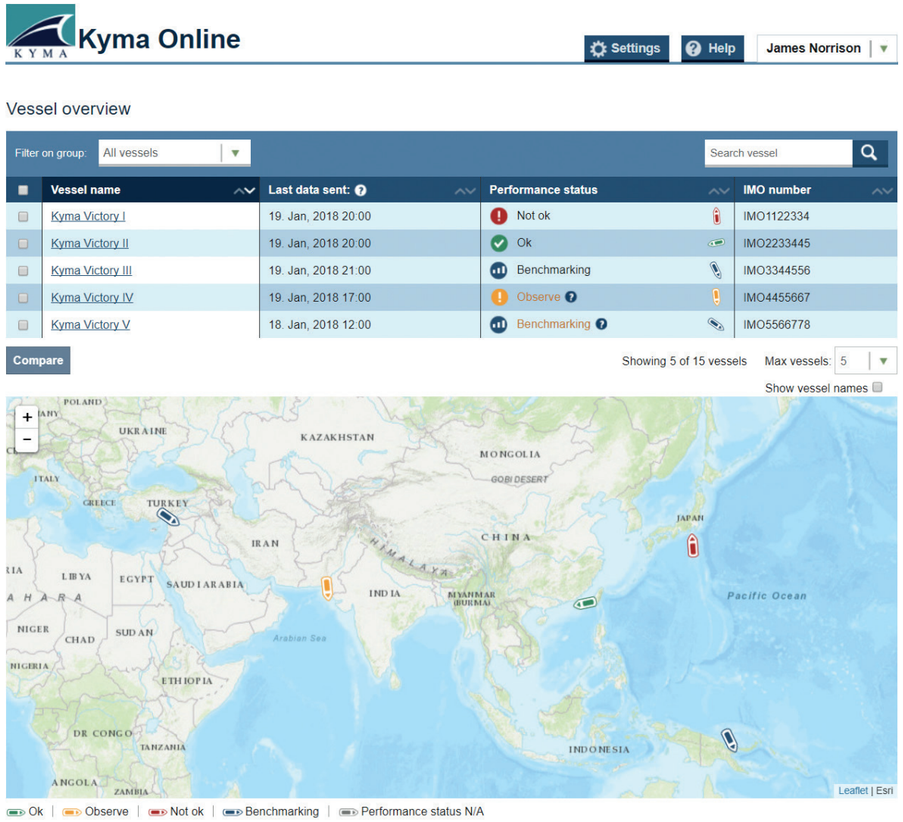
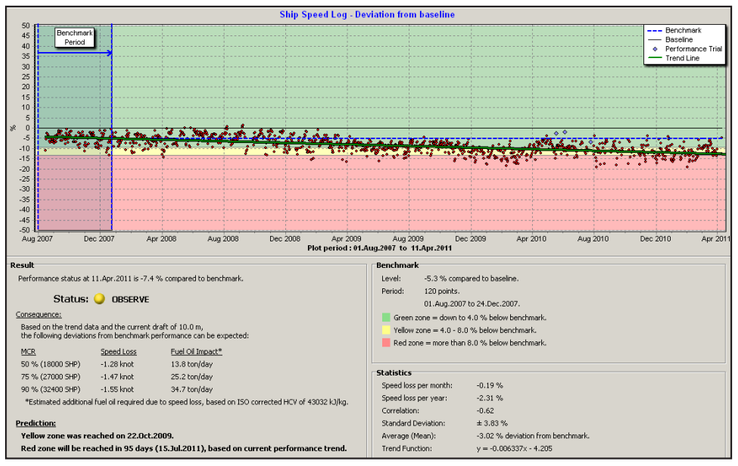
A SEPARATE KYMA OFFICE APPLICATION IS AVAILABLE FOR FLEET PERFORMANCE EVALUATION



Diagnostic Toolbox



The Diagnostic Toolbox is an efficient tool giving the operator and ship owner a clear indication of vessel condition related to hull, machinery or propeller by the use of coloured flags for performance status indication.

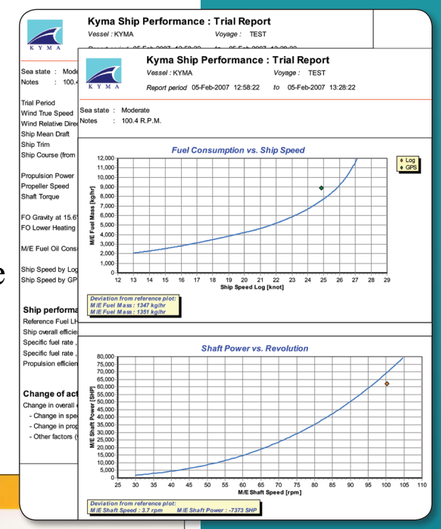
Performance status ok

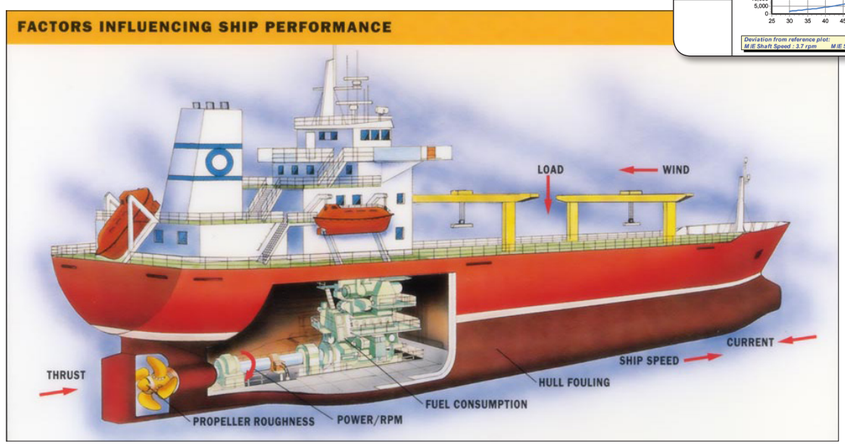
Performance to be observed

Performance not ok

KYMA
SHIP PERFORMANCE

- Instant performance information
- Fuel reporting
- Speed loss and performance analysis
- Sea trial reports
- Daily and voyage reports
- Possibility for automatic export of data, trends and reports to Kyma Online/onshore
- EEOI calculation
- Trim Optimization
- Statistical analysis of historical data





Kyma a.s
Aasamyrane 88 B
N-5116 Ulset
Bergen, Norway
Tel. +47 55530014
sales@kyma.no
www.kyma.no

KYMA a.s HAVE BEEN WORKING WITH SHIP PERFORMANCE SYSTEMS FOR MORE THAN 30 YEARS AND ARE ONE OF THE LEADING SUPPLIERS WITHIN THIS FIELD OF TECHNOLOGY

Propulsion economy is based on fuel efficiency and ship reliability. To achieve an optimum result you need the best balance between fuel consumption, power output and ship speed. This can be obtained from accurate information provided by high quality instrumentation.
Kyma Performance Monitoring provides bridge and engine officers with vital propulsion data for cost-effective operation of the ship.

Reduced fuel consumption
As fuel consumption is a major cost factor, the use of Kyma Performance Monitoring can contribute significantly to an improved bottom line.

Hull fouling and propeller roughness indication
Kyma Performance Monitoring makes it possible to evaluate the economic impact of reduced propeller efficiency and increased hull resistance. It can show the effect of any action taken to improve hull or propeller smoothness.

Overload protection
Early warning signals provide a further benefit for the continuous monitoring of propulsion components. These can indicate the overload stress of components and thus prevent unexpected breakdown.

Performance evaluation
Contracts for new buildings are based on performance estimates from model tank testing.
Kyma Performance Monitoring can confirm precisely to the contract performance parameters or to any specified deviations.

Environmental information
Emission calculation of CO2 and SO2 is included in Ship Performance and EEOI will be continuously calculated. Additional reporting in compliance with EU-MRV is an available feature on the Kyma Online service.

Trim optimization module
KSP Trim is an optional software module that can be integrated with the standard KSP system.
The purpose of the KSP Trim module is to provide the vessel operator with a practical tool for establishing the optimum trim for the vessel at any load and draft condition.

Diagnostic Toolbox
An optional trendanalysis toolbox is available for detailed statisticalanalysis of speed loss and performance information.

Kyma Online
Web based optional management tool for evaluating fleet performance with easy and secure access from any internet connected PC or Tablet.

KYMA SHIP PERFORMANCE - INSTANT VALUES

A wide range of output information is available from the system computer.
All output may be presented in SI or metric units as required.

a) Numerical
All logged and calculated parameters can be output to computer monitor and printer.
Typical updating time is 15 sec.

The following real-time values are available:

• Revolutions	rpm
• Shaft Torque	kNm
• Shaft Thrust	kN
• Shaft Power	kW
• Ship speed by log	knots
• Ship speed by GPS	knots
• M/E specific fuel consumption	g/kWhr
• Propulsion efficiency	m/kWhr
• Ship overall efficiency	kg/nm
• M/E fuel consumption	kg/hr
• G/E's fuel consumption	kg/hr
• Aux. Boiler's fuel consumption	kg/hr
• Type of F.O. in use (HFO or MDO)	-
• Fuel Temperature at flow meters	C °
• HFO density at 15°C	kg/l
• MDO density at 15°C	kg/l

• HFO low calorific value (LCV)	kJ/kg
• MDO low calorific value (LCV)	kJ/kg
• CO2 emissions	ton/ day
• Energy Efficiency Operational Index, EEOI (CO2 Index)	g CO2 /ton, nm
• SO2 emissions	ton/day
• Wind speed, rel.	knots
• Wind speed, true	knots
• Wind direction, rel.	Deg
• GPS position, latitude	Deg.Min.Sec
• GPS position, longitude	Deg.Min.Sec
• GPS, ship course	Deg
• Draft fwd/aft	m
• Draft MS, port /starboard	m
• Trim/List	m

b) Graphic mode
Presentation of performance curves where the actual condition is indicated as a plot in the graph with numerical indication and deviation from the performance curve.

Performance curves are derived from model tank data or sea trial data.
- Shaft Power versus Revolutions
- Shaft Power versus Ship Speed
- Daily Fuel Consumption versus Ship Speed
- Specific Fuel Rate versus Shaft Power

Trend curves:
- Long-term trend capability over the life of the vessel of selected vessel performance data subject to change over time, such as speed loss due to hull fouling and increase of main engine specific fuel rate.

- Short-term trending of any five selectable parameters on a selectable time basis of up to 14 days. Resolution is 1 sample pr 15 sec.