

# ESOS & EFCM

Ship Efficiency Optimisation System



## ENERGY EFFICIENCY

- ☐ Easy reporting.
- ☐ Ship - shore connection.
- ☐ Robust engine monitoring.
- ☐ Fuel consumption monitoring.

**ESOS** – system designed to assist ship-owners and crew who want to implement the **Ship Energy Efficiency Management Plan (SEEMP)**. System calculates EEOI (Energy Efficiency Operational Indicator) and allow user to prepare easy report based on external data: GPS, Fuel Monitoring System, ETNP-10 (i.e. Shaft Power Meter), Load Calculator, Trim Optimisation System, and other parameters.

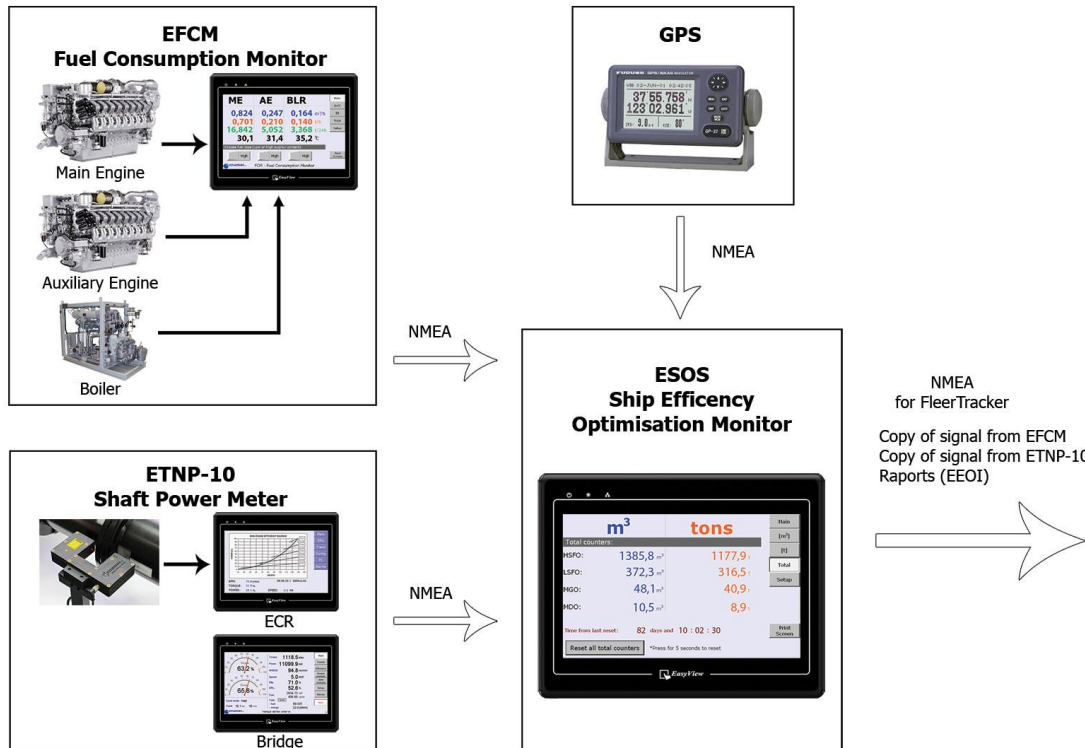
Reports can be send to ship-owner office via satellite terminal or printed out and attached to logbook.

**EFCM** – special tool for monitoring of M/E (Main Engine), A/E (Auxiliary Engine) and Boiler fuel consumption on ships equipped with a pulse flowmeters. Monitored volumetric and mass fuel consumption together with data from ETNP-10 gives Chief Engineer overview about ergonomic of engine exploitation.

Data are also frequently send to ESOS to calculate EEOI.

ME	AE	BLR	
0,824	0,247	0,164 m <sup>3</sup> /h	Main
0,701	0,210	0,140 t/h	[m <sup>3</sup> ]
16,842	5,052	3,368 t/24h	[t]
30,1	31,4	35,2 °C	Total
Choose fuel type (Low or High sulphur content):			Setup
High	High	High	Print Screen
enamor			FCM - Fuel Consumption Monitor

	m <sup>3</sup>	tons	
Total counters:			Main
HSFO:	1385,8 m <sup>3</sup>	1177,9 t	[m <sup>3</sup> ]
LSFO:	372,3 m <sup>3</sup>	316,5 t	[t]
MGO:	48,1 m <sup>3</sup>	40,9 t	Total
MDO:	10,5 m <sup>3</sup>	8,9 t	Setup
Time from last reset: 82 days and 10 : 02 : 30			Print Screen
Reset all total counters			*Press for 5 seconds to reset



## Description of the system.

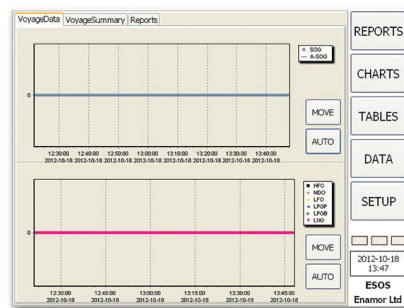
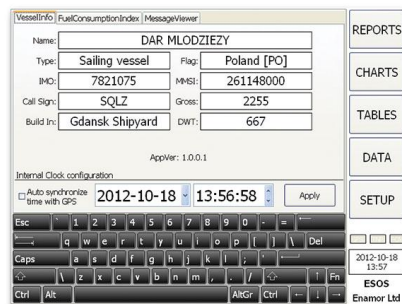
**Ship Efficiency Optimisation System ESOS** is based on the modern control panel with touch screen (Weintek MT610XH) and ESOS 1.0 application, which was designed by qualified engineers from PBP Enamor and is designated to work on Windows XP Embedded.

The application allows the operator to observe the chart or table of data stored in the database, performing EEOI reports, corrections of data or saving the report to the database.

Signals in NMEA0183 standard are transmitted by the ETNP-10 (data from the ETNP10 system are retransmitted), EFCM and GPS to the operator through the converter RS / USB (i-7561). After being processed, the signals are saved to the internal database.

## Technical parameters of the system.

Power supply: 24 VDC  
Power consumption: 40W  
Data display: LCD Color Touch Panel

VesselInfo | FuelConsumptionIndex | MessageViewer

Name: DAR MŁODZIEZY

Type: Sailing vessel Flag: Poland [PO]

IMO: 7821075 MMSI: 261148000

Call Sign: SQLZ Gross: 2255

Build In: Gdansk Shipyard DWT: 667

AppVer: 1.0.0.1

Internal Clock configuration

Auto synchronize time with GPS: 2012-10-18 13:56:58 Apply

2012-10-18 13:57

ESOS Enamor Ltd