



EONAV

ENERGY CONSUMPTION AND ATMOSPHERIC EMISSIONS - OPTIMISING SHIP OPERATIONS

In the face of changing European and international regulations and shipowners' expectations of optimised operational costs, naval architects and yards are developing solutions to improve vessel efficiency. Officially recognised in 2009, EONAV is aimed at providing ship owners and crews with a decision-making tool designed to reduce real-time energy consumption and atmospheric emissions on board ships.

Spin-offs and future developments

During the project, an energy evaluation of an operating vessel, the Norwegian Epic, provided project partners with the basis for developing an energy simulator and for validating the concept of a global energy model.

A decision-making tool was also validated during the project in the form of a ready-to-embed demonstrator. Operating in real time, this tool cross-refers several series of parameters governing consumption and emissions, some of which are linked to the environment – sea state, current, swell, temperature and wind – and to other operating conditions of the ship – number of passengers, transit speed, maximum speed, etc.

This decision-making tool offers potential savings of 2.5% in fuel and a reduction of 1.5% in polluting emissions (SO₂, NO_x and CO₂). Several R&D stages have yet to be accomplished to move from prototype to finished market-ready product: evaluation at sea, adaptation to ships etc. The decision-making tool developed as part of EONAV is aimed at all types of existing vessels: military ships, cruise liners, cargo vessels and container ships, and ships yet to be designed from the drawing-board stage.

EONAV, which is part of the French 'Ship of the Future' national programme, is helping increase the competitiveness of the shipbuilding industry in France.

- 2 national publications (VeriSTAR News)
- 2 international papers (IRCCyN and LISMA conferences)

The EONAV project is also recognised jointly by the Pôle Mer Méditerranée and Pôle EMC2.

Partners

Companies

Naval Group, Brest, Lorient, Toulon et
Nantes-Indret [Project Developer]
Altep, Brest
Bureau Véritas, Nantes
Sherpa Engineering, Toulon
Sirehna, Nantes
STX France Cruise, Saint-Nazaire

Research centers

Ircyn, Unité mixte de recherche du CNRS
(UMR 6597), Nantes
Lismma, École Supméca, Toulon

Funders

Fonds Unique Interministériel
Région Bretagne
Région Pays de la Loire
Collectivités territoriales PACA
Département Morbihan
Lorient Agglomération

Labelisation

24/04/2009

Overall budget

2 162 K€