

# **IMPROVE**

## **DESIGN OF IMPROVED AND** COMPETITIVE PRODUCTS USING AN INTEGRATED DECISION SUPPORT SYSTEM FOR SHIP PRODUCTION AND OPERATION

The IMPROVE project proposes to deliver an integrated decision support system for a methodological assessment of ship designs to provide a rational basis for making decisions pertaining to the design, production and operation of three new ship generations. Such support can be used to make more informed decisions, which in turn will contribute to reducing the lifecycle costs and improving the performance of those ship generations.

### **IMPROVE Project**

IMPROVE is a three-year research project which started on the 1<sup>st</sup> October 2006. The project is supported by the European Commission under the Growth Programme of the 6th Framework Programme. Contract No. FP6 - 031382.

#### Project Partners:

ANAST, University of Liege Belgium (project coordinator)

Akervards shipvard Uljanik shipyard Szczecin New Shipyard Grimaldi Italy Exmar Tankerska Plovidba Zadar Bureau Veritas Design Naval & Transport

Ship Design Group MEC Helsinki University of Technology Finland University of Zagreb Croatia

NAME, Universities of Glasgow & Strathclyde

Center of Maritime Technologies

BALance Technology Consulting GmbH Germany

WEGEMT

France Croatia Poland Belgium Croatia France Belgium Romania Estonia

United Kingdom Germany

**United Kingdom** 

#### The Project Objectives

The main objective of the IMPROVE project is to develop three new ship generations in an integrated multiple criteria decision making environment by using the advanced design synthesis and analysis techniques at the earliest stage of the design process, which innovatively considers structure. production, operational aspects, performance, and safety criteria on a concurrent basis. The product types focused on this project are new generations of LNG gas carriers and chemical tankers, and an innovative concept of a large Ro-Pax vessel.

The specific objectives of the project are to:

- a) Develop improved generic ship designs based upon multiple criteria mathematical models.
- b) Improve and apply rational models for estimation of the design characteristics (capacity, production costs, maintenance costs, availability, safety, reliability and robustness of ship structure) in the early design phase.
- c) Use and reformulate basic models of multiple criteria ship design, and include them into an integrated decision support system for ship production and operation.

#### **Further Information**

More information about the IMPROVE project can be found at the project website http://www.improve-project.eu/

#### Alternatively you can contact:

The project co-ordinator:

Prof. Philippe Rigo at ph.rigo@ulg.ac.be (+32-4-366 9366)

ANAST. University of Liege. Belgium



