



The International Contract Engineering (ICE) Group is one of Europe's largest independent ship design and marine engineering consultancies, with an annual capacity of more than ½ million professional engineering man-hours. Headquartered in the Isle of Man, the Group has been in business almost 50 years. It offers a full range of high caliber, cost-effective engineering and design services, either in its own design offices in Romania and the UK or at clients' sites.

The ICE Group has in recent years been involved in projects for the offshore oil & gas industry and with design of commercial, naval and coast guard ships. ICE undertakes the full design scope from conceptual design through class drawings, detail design and production information and also advises clients on build strategy, project management, procurement, shipyard layout and productivity.

The Group's experience includes design for new construction and conversion of a wide range of vessels including tankers, bulk carriers, passenger cruise vessels, ro-ro ferries, naval patrol vessels, frigates, corvettes, jack-up drilling rigs, LNG and LPG gas carriers, semi-submersible drilling rigs, drill ships, offshore service vessels, FSOs, FPSOs, research vessels and fixed offshore production platforms.

Clients include leading shipyards, ship owners and offshore industry contractors throughout Europe as well as in Brazil, Canada, China, India, Japan, Korea, the Middle East, Singapore and the US.

Meet ICE at Nor-Shipping June 2-5

ICE will this year again have a stand at the Nor-Shipping trade show in Oslo, Norway, during June 2-5. In addition to highlighting ICE's nearly 50 years of design of ships and offshore oil & gas platforms, the emphasis this year will include the Group's experience and capabilities on retrofit design of scrubbers and ballast water treatment (BWT) systems.



We invite all interested parties to visit ICE Engineering (UK) Limited in Hall C, at Stand no. C03-04g, which is part of the British pavilion.

Martin Linge FSO – Steel Cutting

Poland's Remontowa Shipbuilding S.A. recently held a steel cutting ceremony at its Gdansk shipyard to mark the start of conversion of the shuttle tanker "Hanne Knutsen" for Total's Martin Linge field on the Norwegian Continental Shelf (NCS).

ICE is responsible for the conversion design of this vessel for a subsidiary of Knutsen NYK Offshore Tankers of Haugesund, Norway. ICE earlier successfully did the competitive FEED study for this project, and has also experience from several other projects involving demanding Norwegian and/or UK continental shelf regulations.



As this project enters its critical phase, more than 150 ICE naval architects and engineers are involved in the conversion design. In addition, a team of ICE personnel is working as an integral part of the Owner's project team being responsible for planning, procurement and overseeing the design development and conversion in the shipyard.

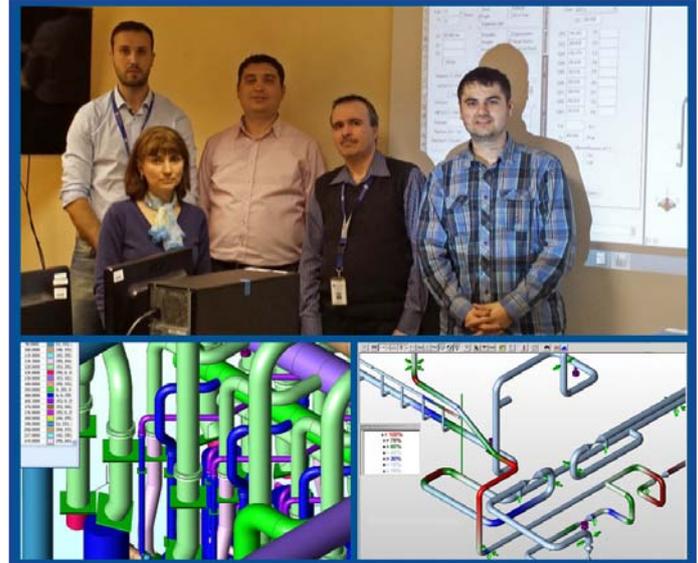
"First steel cutting" ceremony in Gdansk (Photo: Jerzy Uklejewski/Remontowa S.A).

CAESAR II Training

Over the last months, a number of ICE employees have participated in a pipe stress analysis course. ICE uses Intergraph CAESAR II, a comprehensive software for pipe stress analysis and design, which is also used by major corporations and engineering firms worldwide.

Piping system design is a major activity at ICE. The Group undertakes design of marine piping systems ranging from conceptual design and flow analyses to detail design of pipe spools and pipe hangers. Careful selection of pipe routing, elimination of redundant components and the right choice of material can result in major savings in installation costs and through-life maintenance costs, without compromising safety.

A group of trainees pictured here.



The picture shows Emilia Constantinescu, HR Manager of Icepronav Engineering in a group of delegates in front of ICAM (l'Institut Catholique d'Arts et Métiers), which hosted the event in Nantes.

Promoting Integrated Ship Design

ICE recently participated in the 5th meeting of the Strategic Advisory Board (SAB) of EMSHIP (European Master's Course in Integrated Ship Design) in Nantes, France.

The following items were on the agenda:

- Assessment by SAB members of the EMSHIP program and activities
- Presentation of SAB companies and their objectives
- Internships and topics for master's theses
- Job opportunities.

EMSHIP is an advanced Master's program leading to a combined degree in Offshore Structures and Marine Engineering & Ship Design. It involves universities from Belgium (ULG-Liege), France (ICAM and ECN-Nantes), Germany (Rostock), Italy (Genoa), Poland (Szczecin) and Romania (Galati).

ICE is a member of the SAB and made a presentation covering company general capabilities and projects in progress. Job opportunities, internship possibilities and topics for master's theses were also discussed, and further details were provided during individual contacts with students.

From Our Project Portfolio

NCS offshore design project

Scope of Work:

Mechanical design of sliding access bridge with rotating system for the Ekofisk Renewal Project for ConocoPhillips on the Norwegian Continental Shelf (NCS). Software: SolidWorks

Year: 2011;

Client: Jotne E&P AS, Norway;

Owner/Operator: Master Marine ASA / ConocoPhillips.

