DESIGN & ENGINEERING FOR THE MARINE INDUSTRY, WORLD-WIDE
With an annual capacity of 700,000 engineering man-hours and a 50-year history, International Contract Engineering (“ICE”) is one of world’s largest independent ship design consultancies. Clients include oil and gas industry contractors, naval shipbuilders and commercial shipyards building or converting a wide range of ships and offshore platforms.

ICE ensures quality and cost-effectiveness through experienced project teams, state-of-the-art software, modern IT technology and advanced project management skills. Most ICE employees have degrees in naval architecture or in engineering disciplines such as structural analysis, mechanical engineering, EIT, HVAC, IT, etc. As owner of one of Europe’s largest ITTC-recognized hydrodynamic test facilities, ICE has a wealth of experience in optimising ships’ hulls and propellers to ensure a high degree of energy efficiency.

We welcome any opportunity to make ICE’s expertise available to former and new clients. We have the capacity and experience to do even very large projects competitively and on time. Our many repeat clients are the best proof of the quality of our services. We deliver Engineering Certainty!
ICE has participated in a number of passenger ship design projects ranging from the world's largest cruise vessels to fast ferries, RoPax ferries and luxury yachts. ICE has been awarded contracts for structural analyses, HVAC design, design of accommodation and public spaces, EIT design, etc., for leading shipyards in France, Germany, Finland and Japan.
ICE has huge experience ranging from conceptual design through basic and Class design to detail design and preparation of production information, for a wide range of ships for Owners and yards world-wide. ICE is familiar with the rules of most IACS Classification societies. ICE’s senior management has hands-on shipyard experience.

32,000 dwt Bulk Carrier

Ice-breaking Container Cargo Vessel

7,500 cu.m LNG / Ethylene / LPG Carrier

84,000 m Fully Refrigerated LPG Carrier
ICE has provided basic and/or detail design for ships for several NATO and other navies and coast guards, including basic design of a missile corvette, detail design for air defence destroyers and aircraft carriers for the UK, OPVs for the Middle East and the Americas and basic design assistance for vessels for the US Navy.
ICE’s experience includes 40+ FSO/FPSO projects (new construction, conversions and various studies), jack-up drilling platforms, drill ships, semi-submersible drilling rigs, self-elevating vessels for wind turbine installation, well intervention vessels, converter platforms, etc. We are familiar with Brazilian, UK and Norwegian (NORSOK and PSA) regulations.
ICE is independent, with no ties to any shipyard, equipment supplier, classification society or EPC contractor. We are therefore ideally suited to give unbiased expert advice and assistance, including for cost-effective retrofit of exhaust gas scrubbers and ballast water treatment (BWT) systems.

In addition to design and engineering assignments on a lump sum or reimbursable basis, we support clients with a broad range of management, supervision and consultancy expertise and resources. These include project management, interface management, document control, technical translation, site supervision, planning, progress monitoring and cost control. We have also provided expert witness services to major international arbitration and litigation cases.

Calling on its substantial experience in managing complex projects, ICE assists clients with bid evaluations, contract negotiations, technical verification, risk analyses, and procurement support.
PROTECTING THE ENVIRONMENT

By designing vessels and platforms for offshore wind farms, optimising hull forms and incorporating fuel saving and low-emission fuel solutions, ICE’s naval architects help its clients reduce pollution and save costs. Cost-effective selection and installation of scrubbers and ballast water treatment (BWT) systems also helps to protect the environment and meet the newest IMO regulations for ECA and worldwide trading.
World-wide Services – Proven Capabilities

ICE has clients in most shipbuilding and offshore oil & gas regions, including in Asia, the Americas, the Middle East and throughout Europe. ICE is a Corporate Partner of the Royal Institution of Naval Architects (RINA) and is qualified under the Achilles register as an approved service provider to the North Sea Offshore Industry, which includes some of the world’s most demanding customers.

ICE’s ISO 9001 Quality Management System is certified by DNV-GL and has been successfully audited by several international oil companies and major EPC contractors.
The scope of our experience

Drill ships
Offshore wind turbine installation vessels
Liftboats
Passenger cruise ships, ROPAX ferries and mega yachts
Oil and chemical tankers
Gas Carriers (LNG and LPG)
FSRUs
Floating Dry Docks
Oceanographic and seismic research vessels
Other commercial vessels ranging from fishing vessels to VLCCs
Frigates, corvettes, OPVs and other Navy and Coast Guard vessels
FPSO, FSO and FPU vessels
Refineries and petrochemical plants
Semi-submersible and jack-up drilling platforms
Offshore production platforms
Scrubber and BWT retrofits

Design and Engineering

Preliminary ship design
Hydrostatic calculations
Hydrodynamic calculations
Layout design
Hull design and 3-D modelling
Structural design
Weight calculations
Mechanical systems design
Stress analysis
HVAC systems design
Power balance and short circuit calculation
Classification drawings
Detailed designs
Material take-off
Bills of materials
Pipe isometrics and sketches
N/C nesting and plate cutting details

Consultancy and Project Management

Conceptual design development
Project management
Cost analysis
Procurement assistance
Production methods advice and analysis
Test and test trials measurement
Development of trim and stability books
Commissioning assistance
Shipyard layout planning
Build strategy development
Expert witness services

Research and Development

Resistance and power prediction
Lines development
Hull optimization
Sea keeping prediction
Manoeuvrability analysis
Cavitation analysis
Vibration analysis
Noise prediction
Sea trials assistance
Commissioning assistance