

## CRUISE VESSELS & RO-PAX FERRIES

### Expedition Polar Cruise Ship "Crystal Endeavor"

Year: 2017 -20

Client / Shipyard: MV Werften,  
Germany

Owner: Crystal Yacht Expedition  
Cruises

Class: DNV-GL

#### **ICE Scope of Work:**

Basic Design Assistance & Detail  
Design

Onsite basic design assistance.



### All-Electric Car Ferries

Year: 2021

Client: Serco Canada Marine

Shipyard: Damen Shipyards Galati

Owner: Ministry of Transportation  
Ontario, Canada

#### **ICE Scope of Work:**

Yard inspection services as Owner's  
representatives covering naval  
architecture, mechanical/ marine and  
electrical. Sea Trial assistance.

### LNG Dual Fuel Ro-Pax Ferry

2020 -24

Client / Shipyard: Ferguson Marine  
(Port Glasgow) Ltd.

Owner: Caledonian Maritime  
Assets Limited (CMAL)

Class: Lloyd's Register

#### **ICE Scope of Work:**

Revision of Basic Design,  
Completion of the Detail Design  
and development of Production  
Information



ICE was retained two years after this ferry was launched, to complete major outstanding detail design, correct significant errors in the basic design done by others, re-planning of production, provide shipyard field engineering and troubleshooting, and assisting with commissioning and sea trials. Separately, the Ferguson shipyard later awarded ICE a contract to introduce further design changes on the sister ship "Glen Rosa" and prepare work packages to help control production for this much delayed vessel.



*Côte Des Flandres (ex SeaFrance Berlioz (2005-2012)). Yard number O32. Class: BV*

### Ro-Ro Passenger Ferry

2003 -04

Client / Shipyard: Chantiers de l'Atlantique, France

Owner: Euro-Transmanche 3 BE (2012-Present); Seafrance (2005-2012)

Operator: DFDS Seaways France

#### ICE Scope of Work:

Detail design:

- hull structure for the entire vessel
- machinery & tanks area.

### Fast Displacement Ro-Ro Passenger Ferry

1999 -02

Client / Shipyard: Hellenic Shipyard, Greece

Owner / Operator: Hellenic Seaways

#### ICE Scope of work:

3-D Model (Tribon);

Detail design (hulls 1701 and 1702): Coordination drawings, workshop drawings and production information for all disciplines;

Full ship FE model.



*Armand Imbeau II. Class: Lloyd's Register*



*Nissos Mykonos. Class: BV*

### LNG-powered Ro-Pax Ferry

2013

Client / Shipyard: Chantier Davie Canada Inc.

Operator: Société des Traversiers du Québec (STQ)

#### ICE Scope of work:

- Concept design review;
- Design planning and scheduling;
- Design risk analysis;
- Initial 3-D modeling (Tribon).



*Oasis of the Seas, the first of the Oasis Class (formerly the Genesis Class). ICE Scope of work: technical assistance - detail design hull outfitting*

**Passenger Cruise Vessel** 2007 -08

Client / Shipyard: STX Europe/  
Chantiers de l'Atlantique

**ICE Scope of work:**

Basic & detail design for hull structure;  
Lifting and turning calculations and reports (including drawings);

Detail design:

- Coordination drawings for piping and outfitting (selected zones);
- Production Information.



Norwegian Epic (Yard number: C33). Class: DNV GL



**Conversion of an UT-755 Platform Supply Vessels (PSV) into a Yacht**

2018

Conceptual Design Study in  
Cooperation with SMC Design,  
London, for an Asian Owner.

**Passenger Cruise Vessel**

2006 -07

**ICE Scope of work:**

Basic & detail design for hull structure;  
Lifting and turning calculations and reports (including drawings);  
Coordination drawings for piping and outfitting (selected zones);  
Production information – plates and profiles specifications, assembling drawings and cutting information;  
Production information – material specifications, penetration lists and isometric sketches;  
Detail design for HVAC.



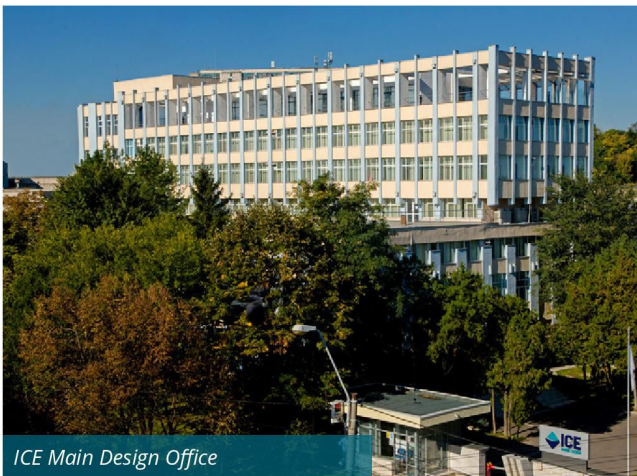
MSC Fantasia (Yard number: A33). Class: BV



AIDAprima cruise ship. Client / Shipyard: Mitsubishi Heavy Industries (MHI). ICE Scope of work: Coordination drawings. Class: DNV GL

# ICE GROUP CAPABILITIES AND RESOURCES

As a leading European ship design company, ICE has over the last decade been involved 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. Clients have been leading shipyards in France, Germany, Finland and Japan, example of ships are shown below.



ICE Main Design Office



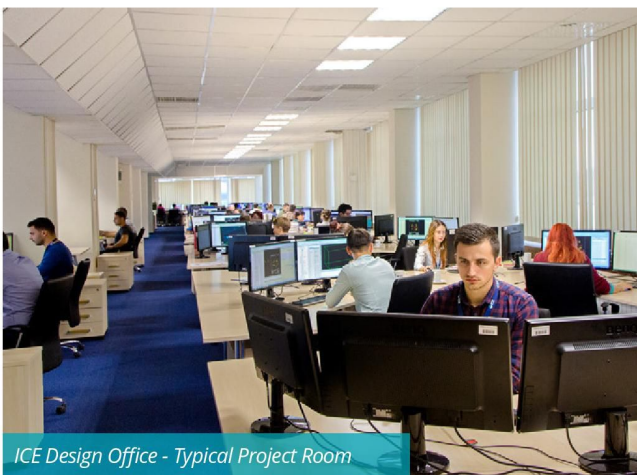
Queen Mary 2 - Ocean Liner



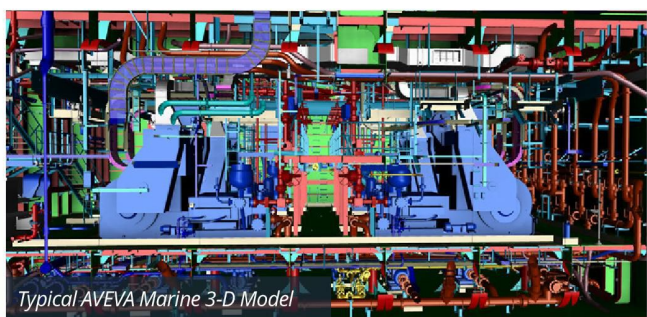
Crystal Serenity



Harmony of the Seas



ICE Design Office - Typical Project Room



Typical AVEVA Marine 3-D Model



## ENGINEERING CERTAINTY

International Contract Engineering Limited, 19-21 Circular Road, Douglas, Isle of Man, IM1 1AF British Isles  
Tel: +44 (0)1624 623 190 | Fax: +44 (0)1624 628 297 | [www.icedesign.info](http://www.icedesign.info)  
ICE Engineering Services UK Limited, UK Registration no. 05981929/2006

With a 55-year track record and an annual output having exceeded 700,000 professional engineering man-hours, the International Contract Engineering (ICE) Group is one of Europe's largest independent ship design consultancies. We provide high-calibre multi-discipline design services to yards and owners in the commercial shipping, defence and offshore energy industries, ranging from conceptual studies and Class drawings to detail design and production information. We cover a full range of naval architecture and marine engineering disciplines such as hydrodynamics, structural, mechanical, piping, electrical, instrumentation, outfit and HVAC. Our experience includes gas carriers, passenger vessels, navy and coast guard ships, chemical tankers, drill ships, FSO/FPSOs and a range of other vessels. We also have available proprietary designs that can be adapted to clients' requirements.

With our head office in the Isle of Man and engineering facilities in Romania and Croatia, we provide high quality design and engineering at very competitive prices.