TRAINING FLYER

SHIP DESIGNER CAPABILITY DEVELOPMENT & CERTIFICATION PROGRAM

COURSE OBJECTIVES

- To enable participants to understand modern ship design principles, classification rules and IMO requirements
- To develop competency in ship hull, machinery and electrical ship design concepts and applications
- To familiarize participants with digital ship design tools, environmental compliance and future maritime technologies
- To strengthen capability in applying international standards, sustainability concepts and safety considerations during ship design and construction.

ABOUT THE COURSE

This course offers comprehensive knowledge and familiarization with modern ship design and engineering practices, focusing on classification requirements, digital design methodologies, environmental regulations, future fuels, risk assessment and specialized design streams. Participants will gain insight into practical ship design applications, industry expectations and emerging maritime technologies.

PARTICIPANTS

Naval Architects, Marine Engineers, Electrical Engineers, Ship Designers & Maritime Professionals

DURATION

5 weeks (For Hull & Machinery Designers) / 4 weeks for Electrical Designers

MODE OF TRAINING

Classroom

TOPICS COVERED

- Introduction to Ship Design & Classification Rules
- Hull Structure Design & Stability Concepts
- Marine Machinery & Propulsion Systems
- Marine Electrical Systems & Automation
- Digital Ship Design & CAD Applications
- Environmental Compliance & Future Fuels
- Risk Assessment & Safety Engineering
- Practical Design Case Studies & Workshops

KEY TAKEAWAYS

- Developing the young structural, mechanical & electrical engineers into professional ship designers
- Enhancement of understanding of structural design and skills/ tools to verify using dedicated software
- Improved understanding of integrated Hull, Machinery and Electrical design interfaces in modern shipbuilding projects

- Enhanced capability to interpret and apply Classification Society rules and IMO regulatory requirements during design reviews
- Practical exposure to digital ship design workflows, CAD-based engineering concepts and multidisciplinary coordination
- Better understanding of sustainability initiatives, decarbonization strategies and future marine fuel implications on ship design
- Exposure to real-world maritime case studies and industry best practices applicable to shipyards, consultancies and marine organizations
- Strengthen competency in technical documentation, design verification and engineering compliance processes.

TRAINERS

Mr. U S Kalghatgi:

After sailing with SCI as C/E, Mr Kalghatgi joined IRS wherein he served for 33 years, the last position being Chief Surveyor and Senior Vice President, before becoming Technical Advisor to IRS Chairman.

Academically well qualified having obtained master's degrees in:

a) Extra 1st Class Certificate of Competence – Marine engineering

b) MS in Quality Management System from BITS Pilani, Rajasthan

c) Executive management program from SP Jain Institute of Management and Research, Mumbai

d) A certified trainer from - Dale Carnegie Institute of Training

Mr. S Renganathan:

Joined in the year 1998 as a plan approval engineer, eventually became Head of Plan approval in the year 2016 and superannuated in April 2025.

Vast experience in ship building, ship repair and ship design.

Represented IRS in IACS and represented Government of India in IMO working groups, IRS member of Hull Panel of IACS from January 2016 to October 2024.

Prior to joining IRS, he was thirteen years in Mazgaon Dock Ltd in various divisions.

Mr. R. Srinivas:

An electrical engineer by qualification, Mr Srinivas has a wide experience in the electrical systems pertaining to the maritime domain.

He has been in IRS for around 20 years, and currently as Technical Expert.

Prior to IRS, he was employed at Tebma Shipyard, NSDRC and the Hindustan Shipyard Limited.