



Technology  
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**BETTER SOLUTIONS**

**GreenSHIP for SHIP DESIGN**



[www.greenship.in](http://www.greenship.in)

# About GreenSHIP

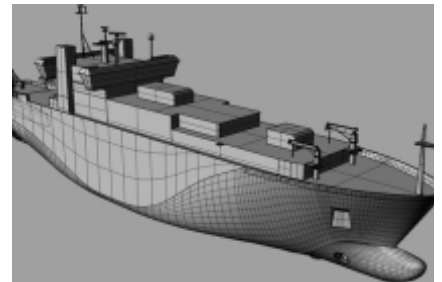
GreenSHIP is the brainchild of Dr. Elangovan Muniyandy, M.E, Dr.Eng, who holds a doctorate in Naval Architecture from Japan. He along with a group of technical expert from different domain (CFD, Modelling, Database, seakeeping, ship operations and software) came together with a single minded devotion to work collectively to indigenously develop Ship Design and operation technology which has hitherto been the sole prerogative of many European and overseas companies.

GreenSHIP objective is to develop technology that takes care of all aspects of ship design and operations. The company is also sensitive to the existing environmental concerns and wishes to do its bit by implementing designs and safe practices that are eco-friendly.

## Ship Designs

### Hull Modelling

The performance and efficiency of a ship is as good as the accuracy and fineness of the hull design. A lot of research has been done in this field to perfect the designing process. To simplify this and to enable designing in the shortest time, Green Ship has designed a software leveraging the expertise and experience of its naval architects that incorporates the latest hull modelling technology and is loaded with tools for hull creation, smoothening the surface, and view in 3D.



### Hull Transformation



Hull modelling is a painstakingly lengthy process. It takes months to get the perfect hull design with the most desirable and ideal performance. And, when the perfect hull design is obtained, the same is transformed by scaling up or down and keeping the hydrodynamic parameters as required to derive new hull designs. Hull Transformation basically negates the need for 'reinventing the wheel' as the parent hull design becomes the prototype for deriving daughter hull designs. The software developed by GreenSHIP reduces Hull Transformation to an easy and simplified process. It has many modules for hull surface modifications in terms of length, breadth and volume.

### Powering

With the engine being the nerve centre of the ship, it becomes critical to accurately estimate the engine power to render a ship efficiency and to optimize it for the desired contract speed at a specified trim, draught and power. The software designed by GreenSHIP allows for importing of Hull Designs and based on analytical and empirical methods can calculate within a matter of few seconds the most ideal engine power.



## Seakeeping

Seakeeping forms an important component of optimizing the Ship Hull form and in determining the behavior of the ship underway and in high sea states which has significant repercussions on the cost. It also determines the ability of the ship to perform efficiently under adverse environmental conditions. Simply stated, Sea keeping is all about Performance and Sea Worthiness.



## Maneuvering



Maneuvering is the ship's ability at turning and keeping its course. Any vessel plying on international waters is required to fulfill or meet certain criteria on maneuverability laid down by either IMO or IACS or its local classification society as manoeuvrability is vital for the ship's safety. While most available software provision for only any one of these, GreenSHIP software is one-of-its kind and provides for the validation of all the three frame-works.

## Stability

The behavior of the ship while at sea in both still and choppy waters determines the stability of the ship. Stability is essentially about striking a fine balance between the important parameters like center of gravity, center of buoyancy and meta-center of the vessel and studying the impact of their interactions with each other.



# Ship Operations

- Route Optimization
- Speed Optimization
- Trim Optimization
- Transport Optimization
- Fuel Optimization
- Ship Performance
- Green Energy Package



# We Provide Quality Ship Design and Ship Operation Solutions



## Our Aim

Deploy a new technology into maritime industry applications and improve the performance of the ships.

## Mission

Shipping transport is the economic and eco friendly for GREENER tomorrow.

## Vision

GreenSHIP leads the maritime world.



## GreenSHIP Research and Technology

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