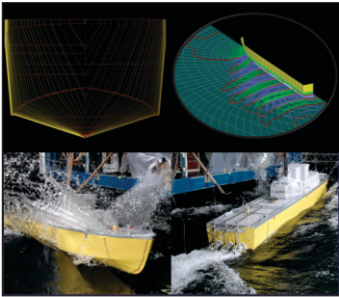


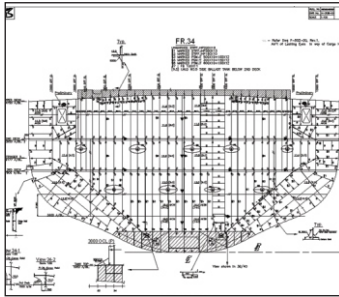
# SMART ENGINEERING & DESIGN SOLUTIONS

An ISO 9001:2008 Company

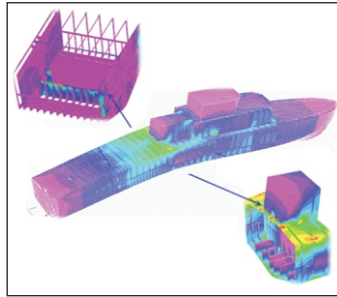
## OUR CAPABILITIES



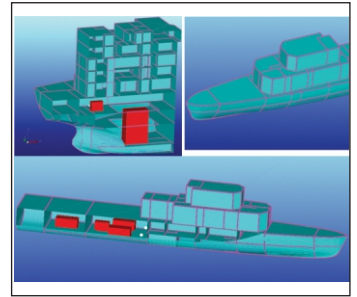
**HULL FORM OPTIMIZATION**



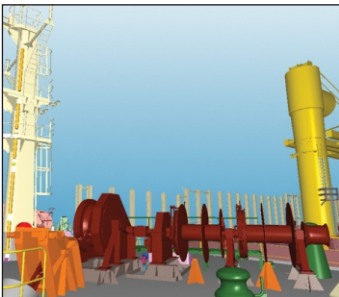
**STRUCTURE DESIGN**



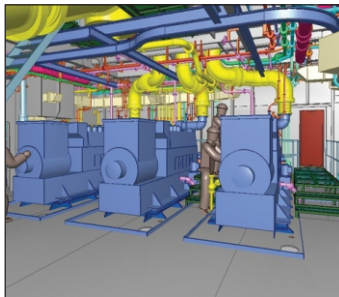
**FINITE ELEMENT ANALYSIS**



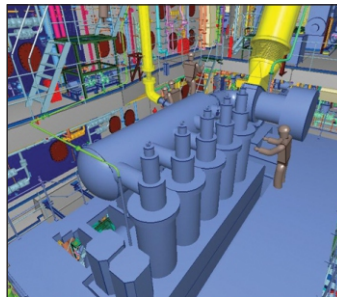
**NOISE PREDICTION**



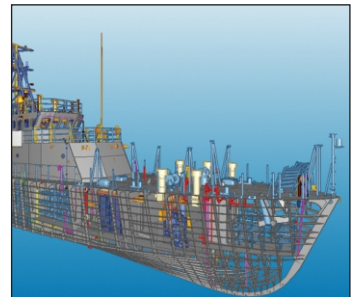
**OUTFIT DESIGN**



**MACHINERY & ELECTRICAL DESIGN**



**DETAILED MODELLING**



**PRODUCTION DESIGN**

## SOFTWARE WE USE

- |                 |                         |                |                  |
|-----------------|-------------------------|----------------|------------------|
| - Napa          | - Prime ship hull (CSR) | - LR ShipRight | - Designer noise |
| - Maxsurf       | - BV MARS               | - Femap        | - Cadmatic       |
| - Navcad        | - Prime Ship DSA        | - Nastran      | - Nestix         |
| - ABS Safehull  | - ABS DLA/SFA           | - Patran       | - Rhino          |
| - CSR Stage I & | - Shaft alignment       | - Nupas        |                  |

## OUR SERVICES

Concept Design | Basic Design | Production Design  
Finite Element Analysis | Repair & Retrofit Design | Preparation of Manuals

**50 M FAST PATROL VESSEL**



Length overall	50	m
Breadth	7.60	m
Depth	4.65	m
Draft	1.70	m
Speed	33	Knots
Cruising speed	12	Knots
Complement	35	
Vessels in operation	18	Nos
Vessels under construction	02	Nos (At CSL)

**ANTI-SUBMARINE WARFARE SHALLOW WATER CRAFT**



Length overall	About 70	m
Breadth	About 10	m
Depth	6	m
Draft	About 3	m
Speed	25	Knots
Cruising speed	14	Knots
Complement	About 60	

**54 M FAST PATROL VESSEL**



Length overall	54	m
Breadth	7.60	m
Depth	4.65	m
Draft	1.77	m
Speed	33	Knots
Cruising speed	12	Knots
Complement	About 40	

**OFFSHORE PATROL VESSEL**



Length overall	105	m
Breadth	14.0	m
Draft	3.85	m
Speed	23	Knots
Cruising speed	13	Knots
Complement	About 130	

**CADET TRAINING VESSEL**



Length overall	110	m
Breadth	17	m
Depth	10.9	m
Draft	4.5	m
Speed	20	Knots
Complement	About 460	

**FLEET SUPPORT SHIP**



Length overall	200	m
Breadth	25	m
Depth	14.5	m
Draft	10	m
Speed	20	Knots
Complement	About 190	



## SEATRANSPORTER (LOG FITTED BULK CARRIER)



Length overall	179.9	m
Breadth	30.4	m
Depth	14.75	m
Draft design	9.7	m
Draft scantling	10.2	m
Speed	14.25	Knots
Dwt @ 9.70m	35,000	t
Dwt a@10.20m	37,500	t
Vessels delivered	02	Nos
02 Vessels constructed at Tsuji Heavy Industries - China		

## SEATRANSPORTER (DUAL FUEL BULK CARRIER)



Length overall	179.9	m
Breadth	30.4	m
Depth	15.4	m
Draft design	9.7	m
Draft scantling	10.4	m
Speed	14.25	Knots
Dwt	38,000	t
LNG capacity	2,400	m <sup>3</sup>

## 1200 PASSENGER CUM 1000T CARGO VESSEL



Length overall	155	m
Breadth	21	m
Draft	5.9	m
Speed	18	Knots
Complement	About 104	
Passengers	1200	

## 500 PASSENGER CUM 150T CARGO VESSEL



Length overall	89.4	m
Breadth	17.5	m
Draft	4.10	m
Speed	16	Knots
Complement	About 66	
Passengers	500	

## CATAMARAN



Length overall	22.5	m
Breadth	7	m
Depth	2.1	m
Draft	0.9	m
Speed	12	Knots
Passengers	About 130	

## CONTAINER SHIP - DUAL FUEL



Length overall	186	m
Breadth	23.7	m
Draft	8.2	m
Speed	20	Knots
Dwt	16,000	t
No. of containers	1,300	TEU
LNG capacity	2,600	m <sup>3</sup>

**LNG CARRIER**



Length overall	155	m
Breadth	24	m
Depth	14.75	m
Draft	7.5	m
Speed	14	Knots
Dwt	9,500	t
LNG capacity	15,000	m <sup>3</sup>

**COASTAL LNG CARRIER / BUNKER BARGE**



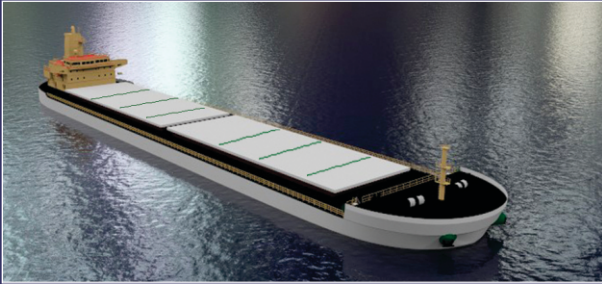
Length overall	90	m
Breadth	16	m
Depth	About 3	m
Draft	1.8	m
Speed	10	Knots
Dwt	About 1,000	t
LNG capacity	2,200	m <sup>3</sup>

**INLAND TRANSPORT BARGE**



Length overall	60	m
Breadth	16	m
Depth	About 3	m
Draft	1.8	m
Speed	10	Knots
Dwt	About 350	t
LNG trucks	10	TEU

**COAL BARGE**



Length overall	94	m
Breadth	16	m
Depth	4.25	m
Draft	2.7	m
Speed	9	Knots
Dwt @ 2.7m	2300	t



Smart Engineering & Design Solutions Ltd.  
 P.O. Box SP 63147, Suite 229 Island Lane,  
 Olde Towne at Sandport, West Bay Street,  
 Nassau, N.P, Bahamas,  
 Tel: +1-242-327-8938, Fax: +1-242-327-7115.

Smart Engineering & Design Solutions(India) Private Limited  
 8C, Noel Focus, Seaport - Airport Road,  
 Kakkanad, Kochi, Kerala - 682 037, India  
 Tel : +91- 484- 2422329  
 E-mail : sedsindia@marinedesigners.in