

# SK MARINE AND ENERGY CONSULTANTS (SKMEC)

## Naval Architects & Engineers

### Innovative Designs & Engineering Solutions

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# SK MARINE AND ENERGY CONSULTANTS

SKMEC (SK Marine and Energy Consultants) is a leading consultant in ship design, offshore and engineering, we deliver our best within the committed timeline to our clients.

## WE ARE STRONG AT

- **NEW DESIGNS**
- **CONVERSION ENGINEERING**
- **OFFSHORE ENGINEERING**
- **PROJECT MANAGEMENT**
- **ENGINEERING SOLUTIONS**
- **SITE SUPERVISION**

## WHAT WE CAN DELIVER

- **CONCEPT DESIGN**
- **BASIC DESIGN**
- **DETAIL DESIGN**
- **SEAFASTENING DESIGN**
- **LIFTING ANALYSIS**
- **TRANSPORTATION ANALYSIS**
- **MOTION ANALYSIS**
- **SEAKEEPING ANALYSIS**
- **MOORING ANALYSIS**
- **FINITE ELEMENT ANALYSIS**
- **FATIGUE ANALYSIS**
- **BUCKLING ANALYSIS**
- **TOW PLAN AND TOW MANUAL PREPARATION**
- **PROJECT MANAGEMENT**
- **OWNER REPRESENTATION**
- **ONSITE SERVICE**

# SK MARINE AND ENERGY CONSULTANTS

Ship designs and Naval architect support for many vessels, below are few of them:

- => Missile cum ammunition barges (8 No's)
- => Catamaran Passenger Ferry for 150 pax capacity
- => Berthing pontoons (2 No's)
- => Security pontoons (3 No's)
- => 230 Class Flat Top Barge
- => 280 Class Flat Top Barge
- => FRP Speed boats
- => Steel boats
- => Catamaran FRP ferry for 120 pax capacity
- => Modular jack up barge & modular spud barge
- => Spud barge for construction works
- => Utility Boats
- => 10 MT Bollard Pull tug
- => 3000 DWT Ice class vessel

## Missile cum ammunition barges (8 No's)

Designed 8 number Missile cum ammunition barges for Indian Navy. We delivered full design for the barges with approval of Indian Register of Shipping and Navy. We have delivered all the Naval architect support, drawings related to general, structural, mechanical and statutory for the design of barges.



## Catamaran Steel Passenger Ferry for 150 pax capacity

Designed Catamaran Passenger ferry which can have a seating capacity of 150 passengers. Naval Architecture calculations and drawings related to general, structural, mechanical and statutory for the design of catamaran steel ferry.



# SK MARINE AND ENERGY CONSULTANTS

## Berthing pontoons (2 No's)

We have successfully completed of full design with fabrication inspection of the 2 No's Berthing pontoons for Indian Navy. Full design for both pontoons with the approval of Indian Register of shipping.



## Security pontoons (3 No's)

Successfully designed 3 No's Security Pontoons for Indian Navy. Delivered full design for the pontoons with approval of Indian Register of Shipping.



## FRP Speed boat

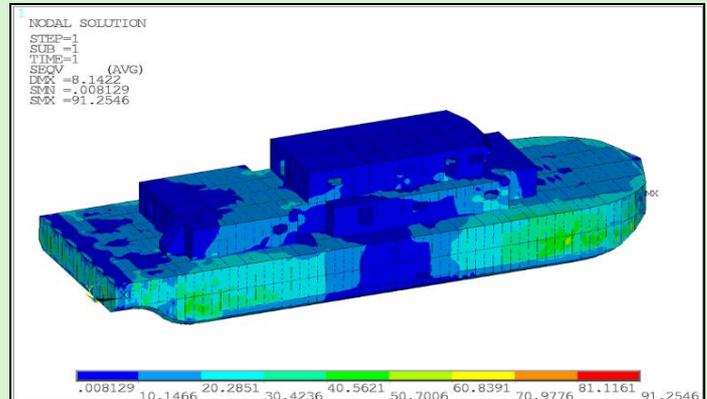
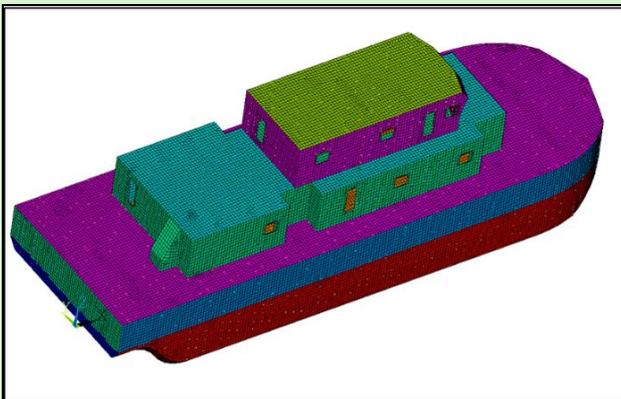
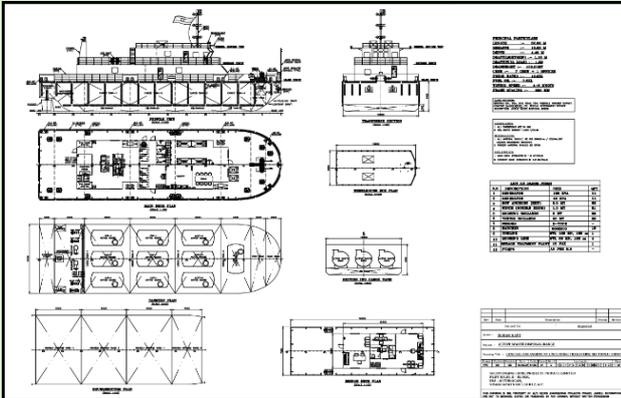
Delivered the design of many boats and 18 m FRP Speed boat is one of them which we delivered to the client in the appropriate timeline, and the design is approved the RINA class. We have delivered all the Naval architect related calculations.



# SK MARINE AND ENERGY CONSULTANTS

## ACTIVE WASTE DISPOSAL BARGE

We have delivered full design of AWDB (Active Waste Disposal Barge) for Indian Navy under Indian Register of Shipping (IRS) class approval. We have delivered all the Naval Architect calculations, engineering, structural and mechanical drawings.



## INDIAN NAVY IMMEDIATE SUPPORT VESSELS

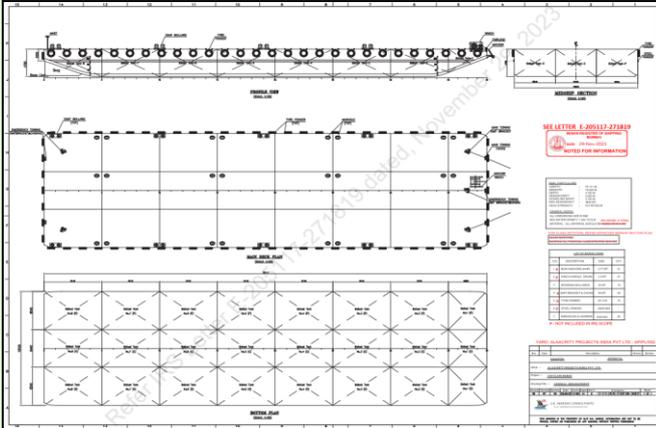
We have delivered draft survey and stability reports for ISV (Immediate Support Vessel) for Indian Navy. Our naval architects attended, carried out the inclining and draft survey for total 15 no of boats and delivered the required documentation during the survey for the subject class approval. All 15 ISVs are subjected under Indian Register of Shipping (IRS) class.



# SK MARINE AND ENERGY CONSULTANTS

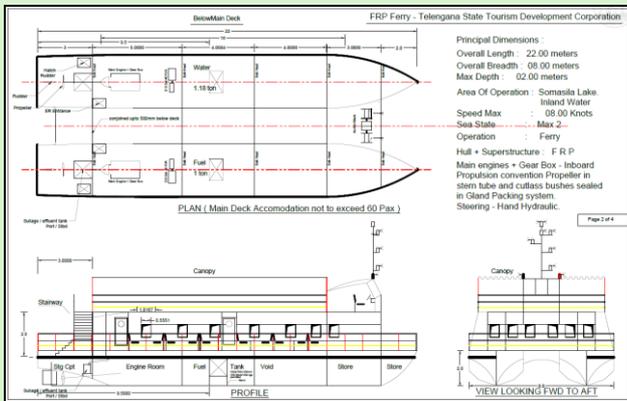
## 230 & 280 Class Flat Top Barges:

We have successfully completed full design with fabrication and inspection of the 1 No's 230 & 280 class Flat Top Barge with deck strength of 15 MT/Sq.m. We have delivered full design of barge with the approval of Indian Register of shipping.



## Catamaran FRP ferry for 120 pax capacity

Delivered the inclining and stability calculations for the catamaran FRP ferry for 120 pax capacity with IRS approval.



## Modular jack up barge & modular spud barges

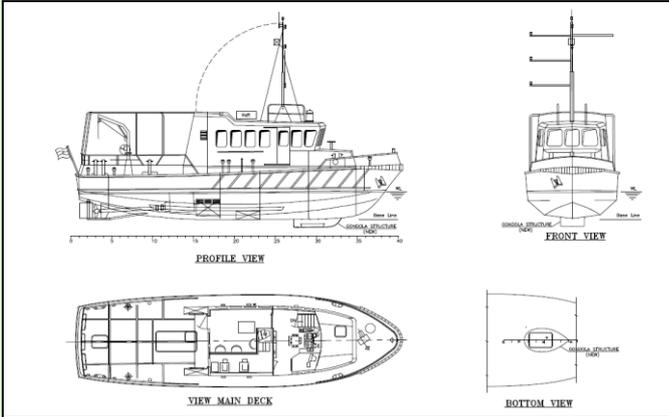
We have delivered the design for jack up barge and spud barges for construction of bridge activities at coastal areas, we have delivered full design for both barges.



# SK MARINE AND ENERGY CONSULTANTS

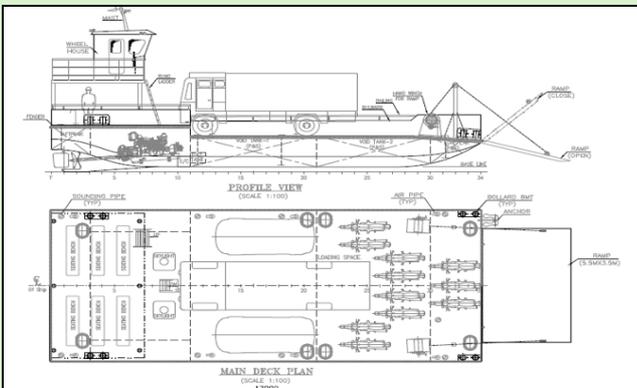
## Survey launch

We have delivered the Naval architect support for the Gandola installation for Nirmal survey launch belongs to Visakhapatnam Port Trust. All engineering was approved by IR Class.



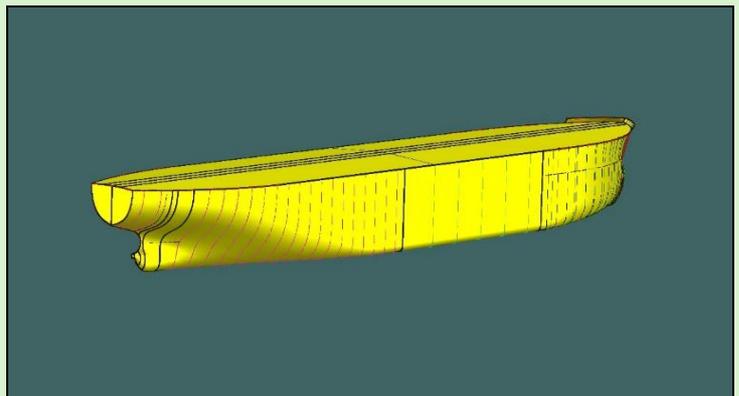
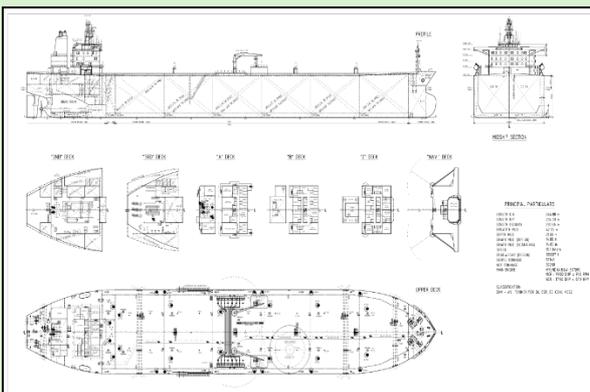
## RO-RO Steel ferry

We have provided the design support for 17 m steel RO-RO ferry. It is designed for wheeled cargo and for 30 pax capacity for river operations.



## 107990 DWT Product Carrier

We have delivered intact & damage stability analysis and booklets of crude/oil product carrier. We have provided both intact and damage stability booklets for the client with class approval.

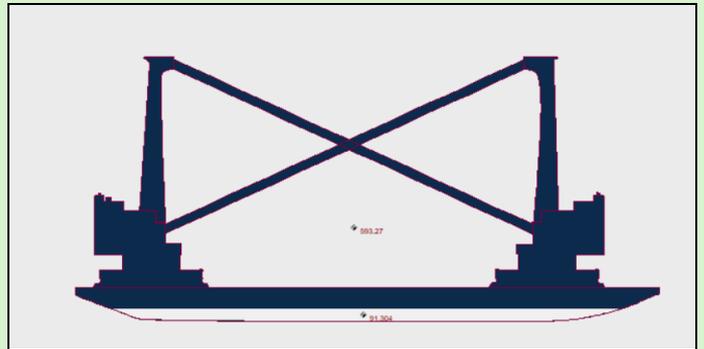
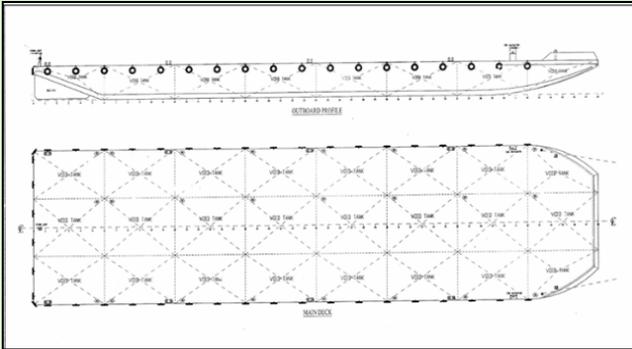




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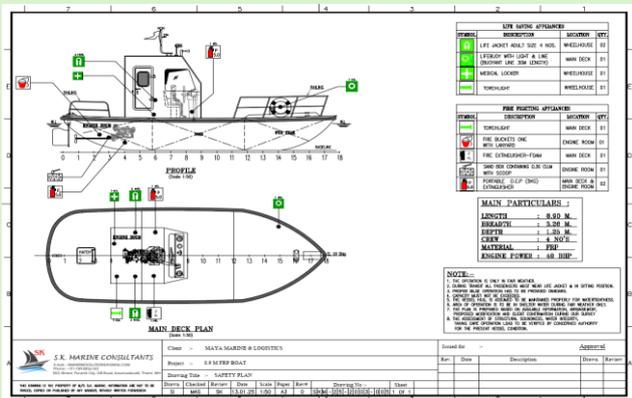
## LOADOUT BALLAST FOR 250 CLASS BARGE

We have provided ballast loadout calculations for vessel “Mutha Emerald” for the stowage of two cranes on the vessel. Stability analysis, Ballast loadout calculations and Tank capacity booklet have been delivered to the client.



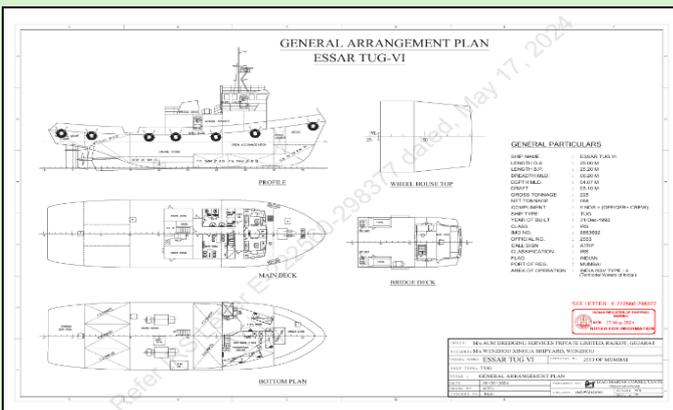
## FRP BOATS

Delivered FRP boat General arrangement plan, Stability booklet, Tonnage plan and Statutory plans.



## ESSAR -VI TUG

We have prepared towing manual for “Essar Tug VI” vessel with Indian Register of Shipping (IRS) class approval. Along with towing manual, docking plan and towing stability booklet with class approval has been delivered to the client.



**ESSAR TUG-VI**  
IR NO. 14300

**TOWING MANUAL**  
SEE LETTER: E-249554-347284

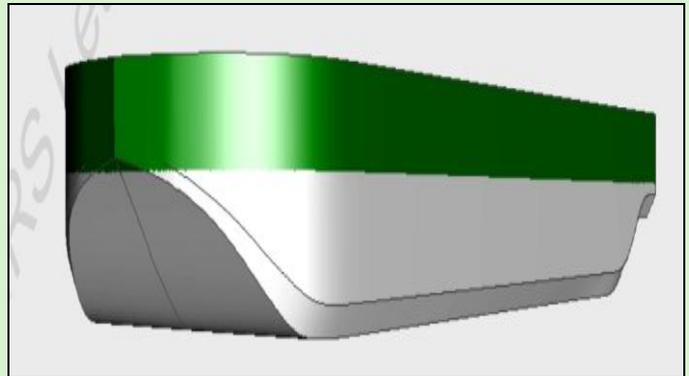
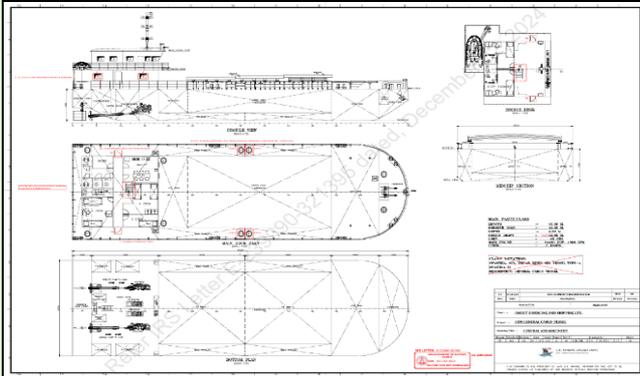
**APPROVED**  
DATE: 22 May 2025  
INDIAN REGISTER OF SHIPPING  
MUMBAI

Rev	Date	Description	Prepared	Checked	Reviewed
2	2-Apr-25	Revised Attachments Incorporated	MAS	SI	YSK
1	18-Mar-25	IRS Comments Incorporated	MAS	SI	YSK
0	24-Jan-25	Issue for approval	MAS	SI	YSK

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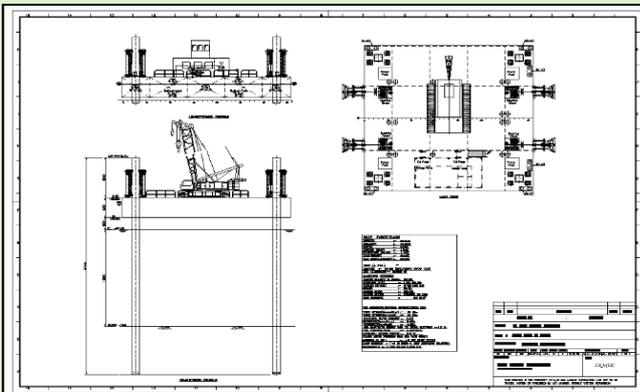
## 35 M GENERAL CARGO VESSEL

We have delivered design of general cargo vessel from initial stage. General plans, Structural drawings, Statutory plans, Stability booklets and Naval architect calculations with Indian Register of Shipping (IRS) class approval have been delivered to the client.



## 18 M X 18 M JACKUP BARGE

SK Marine and Energy Consultants delivered 18 m x 18 m Jack-up barge design. General arrangement plan, Stability booklet has been delivered to the client regarding this project.



## CONVERSION OF POLLUTION CRAFT TO VIP LAUNCH

SKMEC delivered the design and naval architect support for Visakhapatnam Port Trust for the conversion of pollution craft into a VIP launch. General arrangement plan, Structural drawings, stability booklet and LSA & FFA plans have been delivered to the port.



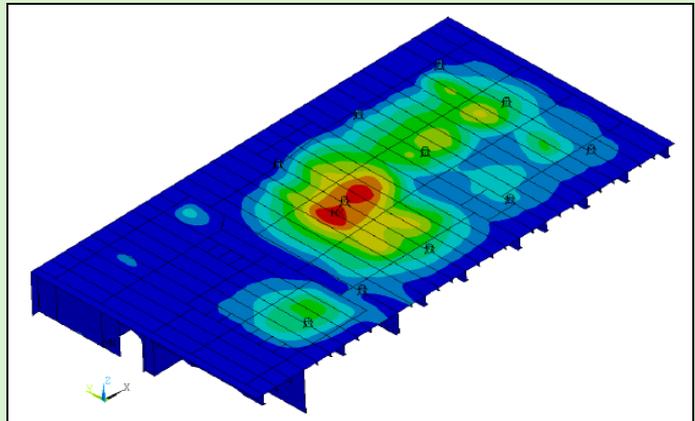
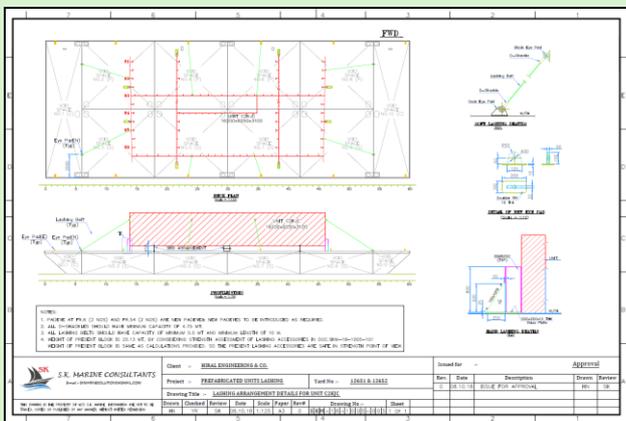


We have delivered many engineering related and offshore projects, below are few of them:

- Offshore engineering
- Transportation analysis & Sea fastening designs
- Mooring analysis
- Offshore container design
- Design of NCD doors
- FEA of doors and hatches
- Design of Steel and Aluminium Gangways

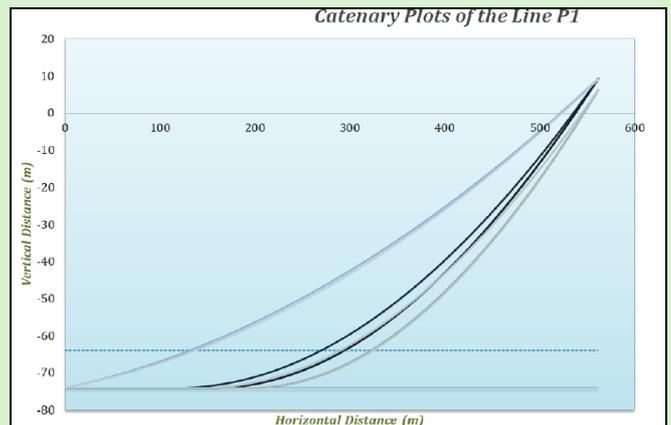
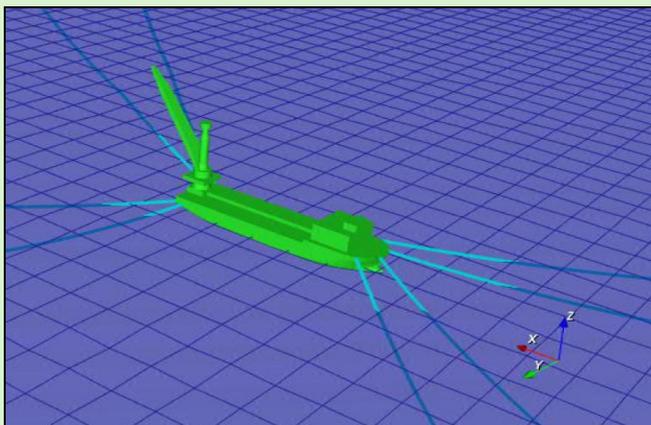
## Transportation analysis & Sea fastening designs

We have provided support for design of sea fastening and sea transportation analysis for ship blocks transportation for Nhava yard to Mazagaon dock shipbuilders yard location. Sea fastening design and transportation analysis approved by Internal Registry of Shipping, we have attended for verification of actual sea fastening arrangement and issued certificate for sail away. We have provided for sea fastening design for pumping equipment installation onboard FOG-10 vessel for shell project. All engineering calculations and drawing reviewed by Shell team.



## Mooring analysis

SKMEC delivered mooring and catenary analysis for offshore support vessels and for accommodation work barges for ONGC oil fields. Guidelines followed for mooring analysis are ONGC anchor handling policy and API-RP-2SK code.



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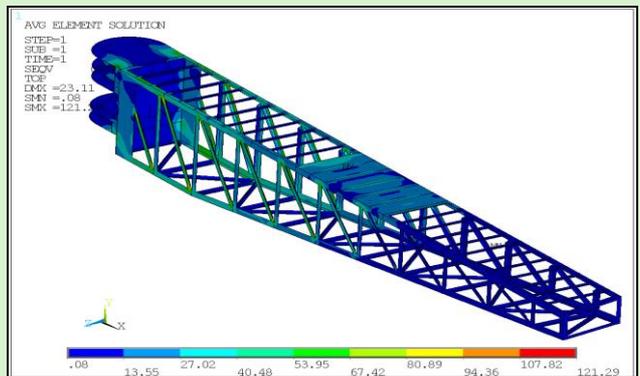
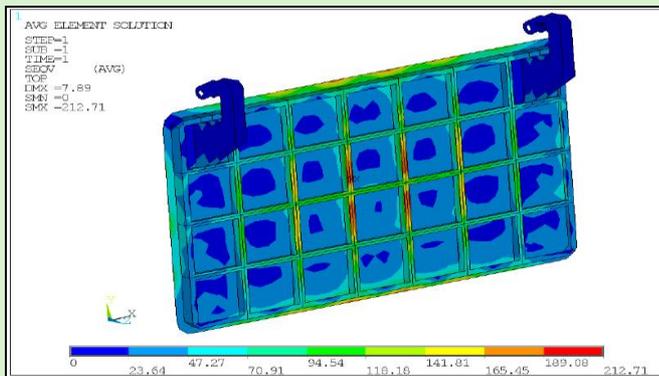
## Offshore container design as per DNV-2.7-1

We have designed offshore containers by using DNV-2.7-1 code for our clients. Container design, lifting set design and preparation of BOM is the scope, design is approved by class DNV.



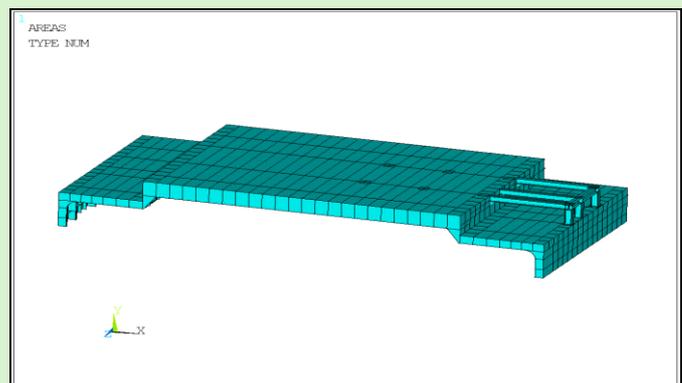
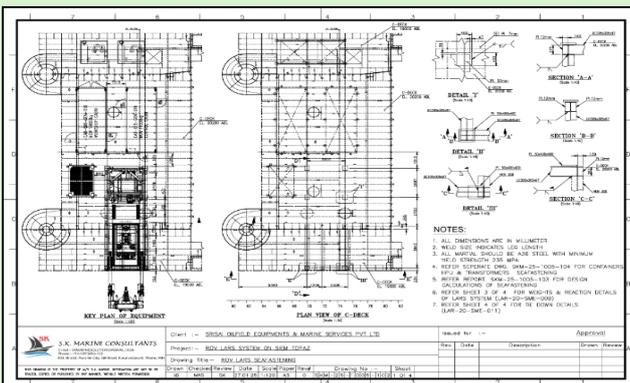
## Design of NCD doors & Offshore Gangways

SK Marine and Energy Consultants provided support for designing of doors and hatches for Navy projects by using NCD specifications. Also designed flying lead Gangways for Navy projects.



## LARS SYSTEM FOUNDATION ON AHT TOPAZ

SKMEC delivered strength assessment for ROV LARS system foundation on siem topaz. Structural drawings, Load calculations and Strength assessment related to LARS system provided to client within timeline with DNV class approval.





## PROJECT TRACK RECORD:

S.No	Scope of Work	Client
1	Seafastening & Transportation Analysis for 17-A Ship Blocks	Hiral Engineering
2	Total 8 Number Four Point mooring analysis	Ship Solutions
3	12 m FRP Boat Structural drawing preparation	Secon Engineering & Projects
4	Total 12 Number Four Point mooring analysis	Ship Solutions
5	Naval Architect Support for 18 m FRP Boat Design	AH Wadia Boat Builders
6	Design of 2 No's Berthing Pontoons for Indian Navy	Secon Engineering & Projects
7	Design of 3 No's Security Pontoons for Indian Navy	Secon Engineering & Projects
8	5 m FRP Boat Structural drawing preparation	Secon Engineering & Projects
9	18 m Modular Pontoon Design	ASR Engineering & Projects
10	Naval Architect Support for 15 m FRP Boat Design	AH Wadia Boat Builders
11	40 m Flattop Pontoon Design	Secon Engineering & Projects
12	18m x 18m Modular Jack UP Barge Design	Kargwal Construction Pvt Ltd
13	17.5 m Modular Falt Top Barge Design	Kargwal Construction Pvt Ltd
14	21 m Modular Flat Top Barge Design	ASR Engineering & Projects
15	8 m Pontoon Design	Kargwal Construction Pvt Ltd
16	Design of 8 No,s Missile Cum Ammunition Barges for Indian Navy	Secon Engineering & Projects
17	Anode calculations for Subsea Pipeline Clump Weight	MEKA Infra Pvt Ltd
18	Gangway Weight Estimation	Kargwal Construction Pvt Ltd
19	13 m Steel Tug Boat Inclining & Stability Booklet	AH Wadia Boat Builders
20	Nirmal Launch Gandola Installation Support	Visakhapatnam Port Thrust
21	10 m Pontoon Design	ASR Engineering & Projects
22	Docking Plan Preperation for Interceptor Boat, C-143	Indian Registry of Shipping
23	Total Two Number Four Point mooring analysis	Ship Solutions
24	Project Management For Stool Design for Jacket Transportation	SB Marine Consulatnts
25	Stability Calculations for SAN-120 Barge	Sri Sai Oil Field Equip. Marine
26	Stability Calculations for 50 m Barge	Sri Sai Oil Field Equip. Marine
27	10 Ft Conatainer Design as per DNV-ST-E2.7-1	Avyum Construction Pvt Ltd
28	150 Pax Catamaran Ferry Design	AH Wadia Boat Builders
29	Line Pipes Transportation Analysis	Sri Sai Oil Field Equip. Marine
30	Traget Barge Basic Design	Secon Engineering & Projects
31	19.3 m Modular Type Crane Barge Design	MEKA Infra Pvt Ltd
32	Deck Strength and Stability for Line Pipes Transportation	Sri Sai Oil Field Equip. Marine
33	Finite Elemnet Analysis for 3 No's Aluminium NCD Doors	AVDA ENTERPRISES
34	Flying Gangway of Floating Drydock Finite Element Analysis	Millennium Aero Dynamics
35	Seafastening & Stability for Line Pipes Transportation	Sri Sai Oil Field Equip. Marine
36	Sounding Table Preperation for Krupa Barge	Libra Ship Management
37	Steel Landing Craft Design	AH Wadia Boat Builders



38	Intact Stability for Excavator Operation on Pontoon	Sri Sai Oil Field Equip. Marine
39	Line Pipes Stowage and Stability Analysis	Sri Sai Oil Field Equip. Marine
40	Mooring Hatch, RAS , Transom Doors & Mooring Platform Design	AMS Marine Services
41	Stability analysis of 50 m barge for crane operation	Sri Sai Oil Field Equip. Marine
42	Seakeeper Foundation Design for SHM Built Boat	Marine Solutions
43	Utility Boat Basic Design	AH Wadia Boat Builders
44	21 m Fishing Boat Stability Analysis	HM Engineering&Contracting
45	Inclining & Stability for 2 No's 17 m Utility Launches	Secon Engineering & Projects
46	20 Ft Container Basket Design as per DNV-ST-2.7-1	Valisons & Co
47	Naval Architect Support for 10 m FRP Boat Design	AH Wadia Boat Builders
48	Finite Element Analysis for 5 No's Steel Doors	Zuari Engineering Services
49	Naval Architect Support for 18 m Pilot Boat Design	AH Wadia Boat Builders
50	230 Class Barge Design	Alaacrity Projects India Pvt Ltd
51	Conversion of Polution Craft to VIP Launch	Visakhapatnam Port Thrust
52	Technical Bidding Support for Sullage & Water Barges	Suryadipta Projects Pvt Ltd
53	Towing Stability Analysis for KB10 Tug	K.B Shipping & Co
54	Seakeeper Foundation Design for ADS Boat	Marine Solutions
55	Finite Elemnet Analysis for 9 No's NCD Doors & Hatches	AVDA ENTERPRISES
56	BD-Alpha Jacket Detailing Engineering	Hiral Engineering
57	BD-Alpha Jacket Fabrication Sequence Engineering	Hiral Engineering
58	10 MT Tug Design	Kandla Ocean Tug Offshore
59	RSS Closures Design Support	Millennium Aero Dynamics
60	Freeboard Calculations for MV Karishma	SSR Marine
61	Lifting Frame Design	PARGAT ENTERPRISES
62	27x20 m Jack Up Barge conversion from IV to IR Class	RKEC Projects Ltd
63	2200 Dwt Cargo Vessel Tonnage, Loadline and Stability	Antilia Seamarg Pvt Ltd
64	Naval Architect Support for 18 m m Pilot Boat	AH Wadia Boat Builders
65	Scantling calculations for 50 m Pontoon	Torth Solutions
66	Trolley Beam Design	Global Marine&Tech. Services
67	22 m Fishing Boat Inclining & Stability	HM Engineering&Contracting
68	Tug KG-6 Intact Stability	K.B Shipping & Co
69	FRP Speed Boat DORADO Drawings	Marine Solutions
70	Car Transport Frame Design	LK Associates
71	BD Alpha Topside Upending & Lifting Anlysis	Hiral Engineering
72	Seakeeper Installation Naval Architect Support for SHB Built Boats	Marine Solutions
73	Maruthi-IX Barge conversion from IV to IR Class	RKEC Projects Ltd
74	24 m Tug Design	Maya Marine and Logistics
75	Sounding & Ullage Table preperation for Tug	Antilia Seamarg Pvt Ltd
76	Modular Accommodation Catamaran Design	YOGAYATAN Group
77	18x18 m Jack Up Barge Design	ALBHAR Marine Services



78	48 m Seaging Deck Cargo Vessel Design	RKEC Projects Ltd
79	35 m Cargo Vessel RSV-4 Type Design	Amrut Dredging&Shipping Ltd
80	BD-Alpha Jacket Upending Analysis	Hiral Engineering
81	BD-Alpha Jacket Lifting analysis	Hiral Engineering
82	BD-Alpha Topside Lifting analysis	Chowgule & company Pvt Ltd
83	BD-Alpha Topside Landtransport analysis	Chowgule & company Pvt Ltd
84	10 Ft Basket, 10 Ft Container & Cylinder Rackes Design	Valisons & Co
85	15 m Launch Instact Stability & Tonnage	YOGAYATAN Group
86	460 MT Trestel Structure Seafastening Design	Express Global Logistics
87	Mooring analysis for Trestle Installation	Express Global Logistics
88	Anchor handling Winch and A-Frame Design On AHT	Maya Marine and Logistics
89	10 m Aluminium Gangaway Design	Bakshi Chempharma Equip.
90	3000 DWT General Cargo Vessel Naval Archietet Support	Seaprode Alpha Shipping Inc
91	Suitability Inspection of Tugs boats	RKEC Projects Ltd
92	Naval Architect Support for 18 m Patrol Boat Design	AH Wadia Boat Builders
93	Towing plan preparation for Jack Up Barge	Secon Engineering & Projects
94	Sounding Tables for Amrut 63 Vessel	Amrut Dredging&Shipping Ltd
95	Lifting analysis for 18 m Steel Boat	AH Wadia Boat Builders
96	Essar-6 Tug Sounding Table Preperation	Amrut Dredging&Shipping Ltd
97	Additional Forward Bollard Installation Engineering for MAYA 26	Maya Marine and Logistics
98	Alaacrity 666 Barge Deck Strength Increasing Analysis	Alaacrity Projects India Pvt Ltd
99	Towing Manual Preperation for Essar-6 Tug	Amrut Dredging&Shipping Ltd
100	9 m FRP Boat Stability and Structural drawings preperation	Maya Marine and Logistics
101	20 MT Winch Design	Aquamarine lifting
102	Loadout Ballast Calculations for 250 classs barge	LK Associates
103	Stringer Padeye failure routecause analysis	MM Associates
104	FW Tank modifications drawings	Kings Ocean Group
105	Sounding Tables for MT Global Dominance	Kings Ocean Group
106	Mudskip Design as per DNV-ST-2.7-1	Valisons & Co
107	Mooring analysis for Trestle-2 Installation	Express Global Logistics
108	Towing plan for Coastal Acheiver	Amrut Dredging&Shipping Ltd
109	27 m Crew Boat Shaft Support Engineering	SDS Offshore Pvt Ltd
110	Seafastening design for cargo on Leighton Eclipse	MM Associates
111	Draft Survey and Stability for 18 m FRP Boats	AH Wadia Boat Builders
112	107990 DWT Product Carrier Sounding/Ullage Tables	SIRIUS Shipmanagement Ltd
113	Ramp Door design for Indian Navy Vessel	Millennium Aero Dynamics
114	Gap analysis for RSV-1 and RSV-4 boats	AH Wadia Boat Builders
115	Inwater Survey notation for Alaacrity 99 Barge	Alaacrity Projects India Pvt Ltd
116	Amrut 17 Crane installation deck strengthening & Stability	Amrut Dredging&Shipping Ltd
117	Towing plan for BHARATHIAR Tug	Amrut Dredging&Shipping Ltd

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118	Active Waste Disposal Barge Design Support	Secon Engineering & Projects
119	280 Class barge design	Maya Marine and Logistics
120	20 m Utility Boat RSV Type-4	Maya Marine and Logistics
121	LARS Engineering on AHT TOPAZ	Sri Sai Oil Field Equip. Marine
122	Indian Navy Boats Seakeeper Installation Engineering Support	Marine Solutions
123	46 m Spud Barge design	Amrut Dredging&Shipping Ltd
124	107990 DWT Product Carrier Intact & Damage Stability	SIRIUS Shipmanagement Ltd
125	150 Passenger Ferry Design	AH Wadia Boat Builders
126	Seafastening design for GCPL cargo	Express Global Logistics
127	Deck Strength design for GCPL cargo	Express Global Logistics
128	PARI 6 JUB Stability	Afcons Infrastructure Ltd

