## SB MARINE, INDIA

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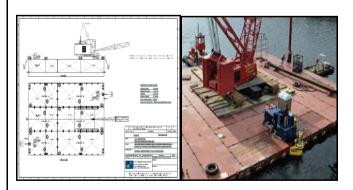
# DESIGN OF EQUIPMENT FOR MARINE CONSTRUCTION

SB Marine leading marine and offshore consultant in India. As a ship building and offshore consultant we are delivering our best quality in low cost and time. SB Marine delivered many ship designs since last ten years. Recently SB Marine has delivered some of special purpose offshore units. They are,

- 1. Modular pontoons for crane operation
- 2. Soil Investigation vessel (Self Elevating Unit)
- 3. Floating Jetty constructions
- 4. Jack up barge & Barges design

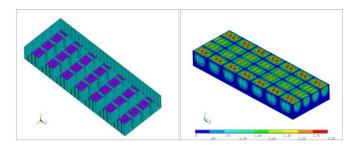
## 1. Modular pontoons for crane operation

SB Marine designed two modular pontoons for L&T Heavy civil construction. These two modular pontoons are specially designed crane operation purpose for offshore bridge construction works. The modular pontoon can also use for load outs. SB Marine has designed two pontoons with different structural arrangement based on client requirement. The pontoons are designed as per IRS standards. Design involves full basic design, stability assessment, and locking arrangement design.



Modular pontoon GA and after construction

The deck of the modular pontoon is checked by using Finite Element Analysis method. Also critical locations at bollards, towing bracets and locking arrangement strength assessment carried out by using Finite Element Analysis method.



FEA model & stress plots for modular pontoon

#### 2. Soil Investigation vessel-Self Elevating Unit

We have successfully completed of full design with fabrication inspection of the soil investigation vessel for DILIP BUILDCON LTD. This vessel is a jack up barge type and comes under self-elevating unit. The vessel fitted with four legs with hydraulic arrangement to elevate the main hull particular location.

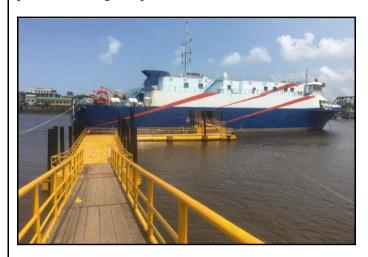


soil investigaton jack up lanching after construction

#### 3. Floating Jetty constructions

SB Marine has designed many floating jetties for various clients. Out of these some of the floating jetties designs are with walkways also. All the floating jetty design are designed by considering site environmental conditions. Some of our designs are got class approvals as well. Recently we have done with full design of floating jetty with guide piles and walkway. Client is SSR Marine

services Pvt. Ltd. The scope involves design of L-type floating jetty from land side to floating restaurant at Daman. The distance between landside to entry of the vessel is about 55.0 m -60.0 m. We have designed 20 m walkway platform and followed by 35 m-40 m floating pontoons with guide piles.



Constructed flaoting jetty at Daman

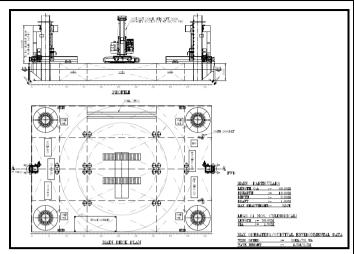
We are also working on boat landing jetty for NSICT (Nhava Sheva International Container Terminal) near by JNPT terminal. The design is for parking of two catamerams for personnel access from jetty to boat.



Concept layout for NSICT boat landing jetty

### 4. Jack up barge & Barges design

We are presently working on full jack up design for ITDC with IRS approval of dimensions 26.0mx18.0m. The jack up non self propelled and for mainly crane oprtaion on it. The jack up is a four leg type vessel. Hydraullic jacking system is provided for leg lowering and lifting operation as per client requirement.



General arrangement plan of jack up barge

SB Marine has delivered construction drawings for suction cutter dredger-4 with RINA approval for client ocean sparkle limited.



OSL suction cutter dredger-4 after construction

SB Marine has designed many barges for various clients in recent years. Our main design are flat top barges, material bargdes, split hoper barges, container pontoons, batching plant barges, modular type barges etc. In barges designs there are self propelled barges also dumb barges. As a naval architect, marine and offshore consultancy we are delivering our best quality with client cost estimation. We are fulfilling clients requirements with our team.



Split hopper barge during construction