

MAZGAON DOCK SHIPBUILDERS LIMITED, MUMBAI

Background

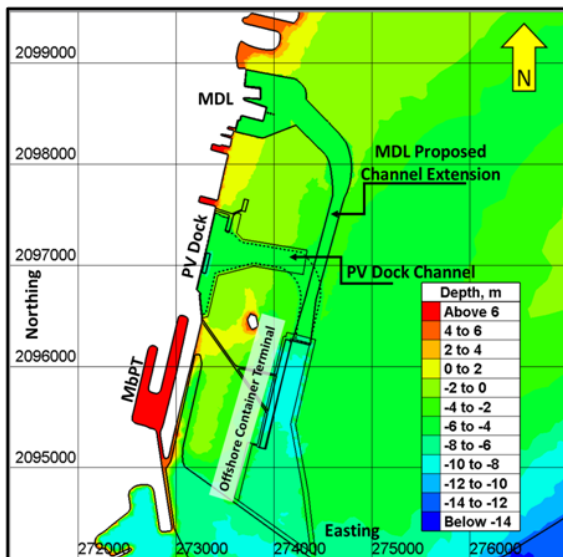
Mazgaon Dock Shipbuilders Limited (MDL), Mumbai is one of the premier shipbuilding yards of India. The yard was established in the 18th century and over last 200 years, it has earned a reputation for quality of work and resourceful services to the shipping world in general and especially for the Indian Navy, ONGC & Coast Guard. After take over by Government of India in 1960, MDL has grown rapidly as a leading warship building yard of the country. The MDL is situated on the leeseide of Salsette/Mumbai Island in the Mumbai harbour area on the west coast of India. MDL presently has various infrastructure facilities viz. wet basins, dry docks, slipways etc. To assess the effect of developments of these facilities on nearby waterfronts as well as smooth movements of ships back and forth from MDL, various hydraulic studies were conducted at CWPRS.

Studies Conducted

- The well-calibrated physical (scales:- 1:400(H), 1:80(V)) and mathematical models of Mumbai harbour available at CWPRS were used (1981-2003) to assess the effect of construction of various wet basins, dry docks, slipways on the hydrodynamics and siltation of nearby waterfront facilities existing at Mumbai Port.
- Recently in 2016, various alignments for extension of navigational channel between existing Kasara channel and Offshore Container Terminal (OCT) of Mumbai Port in shallow waters were studied from hydro-morpho dynamic, wave and navigational considerations by calibrating the mathematical model for prevailing flow conditions/ siltation rates.



Location Plan of Mazgaon Dock in Mumbai Harbour



Recommended Layout of Navigational Channel

- The optimal alignment for extension of navigational channel between existing





Outcome and Benefits

- The physical model studies carried out for various alternatives facilitated MDL to finalise the shape and size of the wet basins/ dry docks / slipways without affecting smooth functioning of nearby waterfront facilities.

