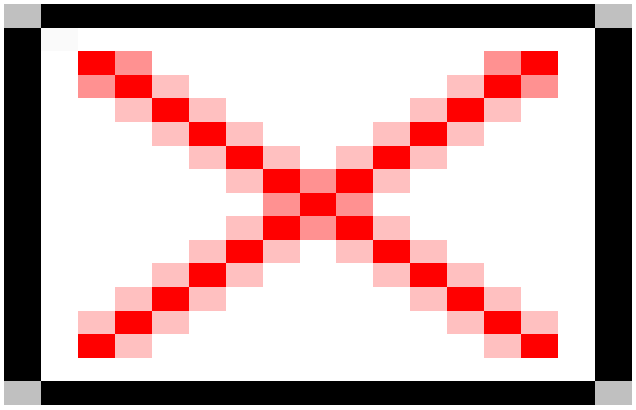
IMDC
Harbour dams
Dredging projects
Tender documents
Location:
Port of Mundra, India
Client:
GSPC LNG Ltd.



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Mundra new LNG-terminal: pre-FEED and FEED-assistance

Tractebel Engineering assisted GSPC LNG Ltd. in both pre-FEED as FEED-phase of their plans to build a new LNG-terminal in the port of Mundra (India). The new terminal was going to be located on a nearshore reclamation area situated at about 3 km offshore from the coast. The plant was connected to land by a causeway.

All activities related to offshore marine civil works and evaluation of site conditions were subcontracted to International Marine and Dredging Consultants NV (IMDC NV), affiliate of Tractebel Engineering.

The following services were supplied by IMDC:

Performing a max water level analysis
A POT-analysis was performed on time series of hourly water level measurements in the harbours of Okha and Kandla. This analysis formed the basis for the determination of the hydraulic design conditions.

Evaluation of workability conditions for the project design LNG-tankers
In order to evaluate the operativeness of the future LNG terminal, the expected workability near the mooring points was evaluated. Therefore the normal wave climate at those specific locations was derived from offshore wind and wave data using the third-generation wave model SWAN. Combining these results with preliminary operational limits for the tankers foreseen to moor at Mundra, the workability was determined.

Determination of all hydraulic design conditions
Based on the performed extreme water level analysis and taking into account the occurrence of severe cyclones, the hydraulic design conditions for the different marine structures were established.

Preliminary design of causeway to and shore protection on the new terminal.
Based on the previously determined extreme water levels and current and wave climate nearshore, a design was made for the causeway and the shore protection, in order to estimate quantities of construction materials needed, to set up a BoQ and to describe the specifications for a FEED.

Evaluation of applicable dredging and reclamation methods.
A dredging study was performed, in order to determine the most suitable machines and methods for the soil

replacement (necessary underneath the causeway and the new site) and for the reclamation of the new terminal.

Cost estimate for causeway, shore protection, soil replacement and reclamation works.
Drawing up of complete tender documents for all marine works, including bill of quantities.
Assistance with contractor selection and contract negotiations.