RITE GEOSYSTEMS

ENCARDIO RITE METASENSING FOR MEGA STRUCTURES

Project Dossier

PROJECT DOSSIER

JEBEL ALI PORT CONTAINER TERMINAL 4

PROJECT OVERVIEW

The deep-water port, located in Jebel Ali, Dubai, United Arab Emirates, is the world's largest man-made harbour and the largest and busiest port in the Middle East. Under Phase 1, Container Terminal 4 - Topside Package will add 3.1 million TEU (twenty foot equivalent unit cargo capacity) by 2018, taking Jebel Ali Port's total capacity to 22.1 million TEU. The port will be equipped with approximately 110 cranes with a total quay length of around 11,000 m.

Project includes construction of 400 m bridge to the reclaimed island and adjacent causeways as well as a reclaimed 2.2 km quay wall with an alongside depth of 18 m which can accommodate mega container vessels. Construction works included reclamation by dredged sand, vibro-compaction followed by high energy impact compaction, piling for rail mounted gantry beams by means of continuous flight auger piles, excavation followed by cutting the piles till the cut-off level, fixing of rails & its accessories on the rail mounted gantry beam top, backfilling and construction of pavement with cement bound material followed by installing paving blocks.

Project	**Container Terminal 4 Jebel Ali**
Location	Dubai, UAE
Client	DP World
Contractor	Dutco Balfour Beatty LLC
Consultants	CH2M Hill International
Duration	June 2016 till date

Monitoring solution

Geotechnical and geodetic instruments were installed in soil to monitor the settlement of ground for verification of initial design of temporary works supporting the excavation.

Turnkey services

Encardio-rite was awarded the sub-contract for complete monitoring works of the project. Scope of works included:

- Supply and Installation of geotechnical/ geodetic instruments
- Monitoring
- Surveying
- Weekly and monthly reporting with evaluation & interpretations

INSTRUMENT USED

- **Rod settlement gage (deep datum,):** To monitor deformation of sub-surface soil.
- **Magnetic extensometer:** To monitor sub-surface settlement in the reclaimed area.
- **Casagrande piezometer:** To monitor water pressure/drawdown during consolidation.
- **Surface settlement markers:** To monitor soil settlement of stack beams.

Encardio-Rite Electronics Pvt. Ltd. A-7, Industrial Estate, Talkatora Road, Lucknow, UP-226011, India | geotech@encardio.com | T: +91 522 2661039-320