

Project Reference P179

Marine Structures



Vale Material Handling Quay

Project

Construction of Material Handling Quay for Vale Malaysia Manufacturing Sdn Bhd at Teluk Rubiah, Lumut, Perak.

Client

Vale Malaysia Manufacturing Sdn Bhd

Contract Sum

RM37,732,572

Contract Period

June 2011 ~ April 2012 (11mths)

Client's Engineer

Murray & Roberts Marine (M) Sdn Bhd

Vale SA, the world's largest iron exporter, engaged SYS to build material handling quay for its maritime terminal in Malaysia. The MHQ can accommodate 250T cranes and its facilities include:

- Access trestle: 150m x 16.2m wide road
- Quay A: 66.8m x 34m wide
- Quay B: 91m x 46.2m wide, with 1,500m² temporary storage area and berthing facility for 180ft barges (2,000 DWT).
- Finger Pier: 2no. x 61.5m x 4.1m wide finger piers spaced 25m apart, for max 150ft barges (1,300 DWT).
- Ro-Ro Ramp: 25m x 17m wide (1v:20h) with 3 no. mooring dolphins for max 250ft Ro-Ro barges (5,000 DWT).
- Small Craft Landing: 16.25m x 1.5m multi-level steel platform for crew vessels max 20m LOA x 5m beam x 2m draft.

Design Parameters

- Design Live Load 50 kN/m²
- Deck level +5m CD
- Max axle load 26.5 MT
- Draft -5m CD

Major Quantities

- Concrete spun piles 311no. 900mm ODx 130wt x 35m
- Steel pipe piles 12no. 1,200mm ODx 22wt x 45m
- Precast concrete 5,040 m³ (1,708 pcs)
- In-situ concrete 4,100 m³
- Reinforcing steel 1,460 MT

