

SABAH OIL & GAS TERMINAL

OIL & GAS TERMINAL PROJECT

Project Name	Sabah Oil & Gas Terminal
Client	PETRONAS (Petroliam Nasional Berhad)
Location	Kimanis, Sabah, Malaysia
Product	Sheet Piles
Total Tonnage	1,735 MT
Delivery Date	2010

INTRODUCTION

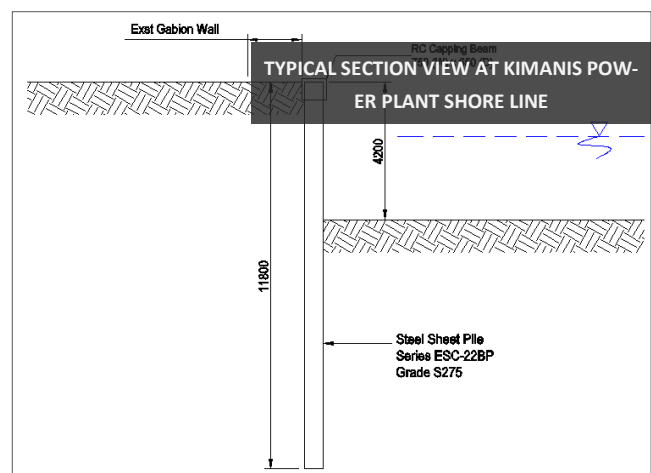
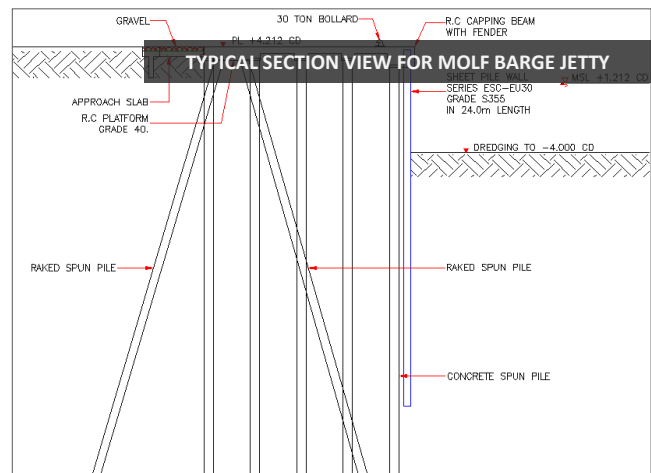
The SOGT in Kimanis is one of the mega petroleum development programmes in East Malaysia under PETRONAS, (short for Petroliam Nasional Berhad), lined up as an onshore oil and gas receiving, storage, processing and export terminal.

ESC SCOPE OF SUPPLY

SHEET PILES, H PILES, TIE RODS

ESC was engaged to provide sheet piling solutions to a few key facilities including engineering design, manufacturing and site assistance for:-

- ▶ A proper berthing structure named Materials Off-Loading Facility (MOLF) for loading / unloading of construction materials, equipments and machineries mainly from a barge during the Terminal construction.
- ▶ Shore line protection to Kimanis Power Plant at the river mouth.
- ▶ Shore line protection to a flare stack structure beside a reserved drain leading to the sea.



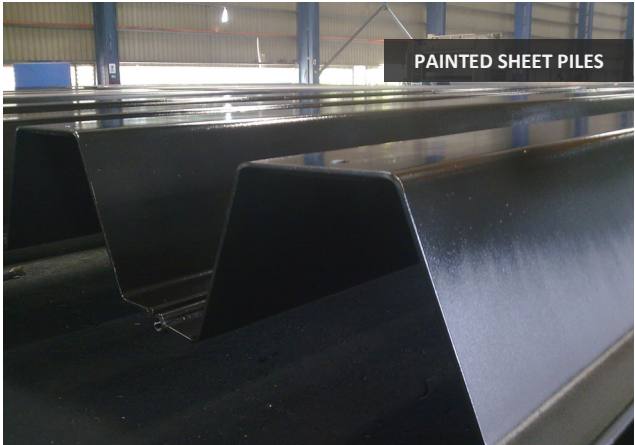
PROJECT DETAILS

SHEET PILE SPECIFICATIONS

MATERIAL OFF LOADING FACILITY					
WALL TYPE	PILE TYPE	PILE LENGTH (m)	STEEL GRADE	SECTION MODULUS (cm ³ /m)	COATING
Main Wall (Barge Jetty)	ESC-EU30	24.0	S355	3,000	SA2.5 + 500 micron coal tar epoxy (black)
Main Wall (Boat Jetty)	ESC-EU28	18.0	S275	2,820	SA2.5 + 500 micron coal tar epoxy
Anchor Wall (Boat Jetty)	ESC-CFW14	6.0	S275	1,460	SA2.5 + 100 micron coal tar epoxy

KIMANIS POWER PLANT SHORE LINE PROTECTION					
WALL TYPE	PILE TYPE	PILE LENGTH (m)	STEEL GRADE	SECTION MODULUS (cm ³ /m)	COATING
Cantilever Wall	ESC-22BP	8.0-11.8	S275	2,200	SA2.5 + 200 micron epoxy paint (grey)

FLARE STACK SHORE LINE PROTECTION					
WALL TYPE	PILE TYPE	PILE LENGTH (m)	STEEL GRADE	SECTION MODULUS (cm ³ /m)	COATING
Cantilever Wall	ESC-EU28	16.0	S275	2,800	SA2.5 + 500 micron coal tar epoxy



ON SITE INSTALLATION



INITIAL MOLF SITE CONDITION



MOLF STAGGERED SHEET PILE INSTALLATION



CONSTRUCTION OF MOLF RC DECK



ESC SHEET PILE PANEL DRIVING METHOD

ON SITE INSTALLATION



BARGE JETTY COMPLETED

