



JUBAIL SUPPLY BASE

SHEET PILE WALL PROJECT

Project Name	Jubail Supply Base Project
Client	Jubail Commercial Port
Main Subcontractor	Dialog E & C Sdn Bhd
Location	Jubail, Saudi Arabia
Product	H Piles, Sheet Piles & Tie Rods
Total Tonnage	2,078 MT
Delivery Date	2011

INTRODUCTION

The Jubail Supply Base (JSB) is located within the Jubail Commercial Port limits utilizing a shallow water wharf adjacent to the Commercial Port, with a common approach channel. The JSB at 80km north of Damman City and airport, is strategically located within the international air and shipping routes on the Arabian Gulf and in close proximity to major oil/gas fields within the Arabian Gulf and petrochemical complexes onshore.

Dialog E&C Sdn Bhd needed the water depth to be increased from –3.5m CD to –6.0m CD in order to cater for offshore support vessels for the supply base. A new sheet pile wall would need to be installed in front of the old wall to cater for the new depth requirements. They to ESC and we provided a solution that combined shipments from ESC's factories in China and Malaysia. The best solution was an H Pile combination wall with deadman sheet pile and tie rods linking both walls.

ESC SCOPE OF SUPPLY

H PILES, SHEET PILES & TIE RODS

The project tonnage was:

- ▶ ESC H90/40A-1 x 18m Q345B—1160 Tons
- ▶ ESC S9.5 x 18m Q345B—624 Tons (with pile shoes)
- ▶ ESC 22BP x 6m S355— 294 Tons
- ▶ Tie Rods—57.55mm diameter with rolled thread grade St 670/800 x 19m—20m; 1740 kN yield capacity; Fully galvanized.

Waling beam (painted) size 305x305 (total 347 ton) with all necessary stiffener plates cut to size for fast and easy installation on site.

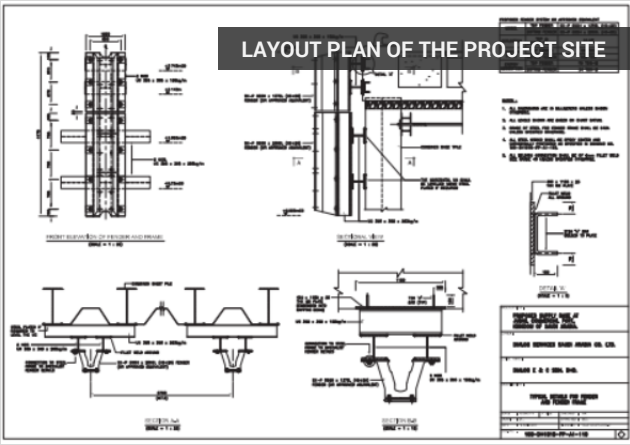
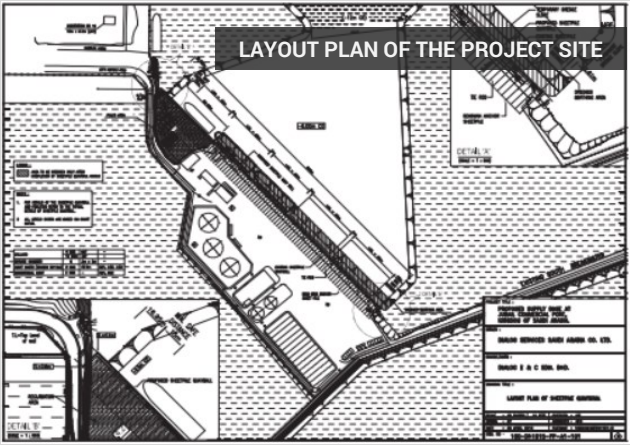
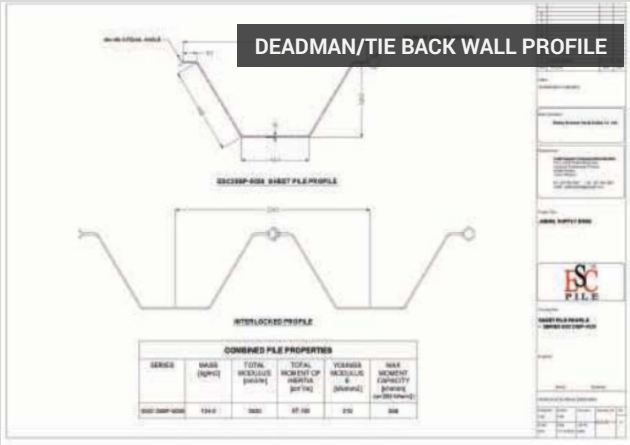
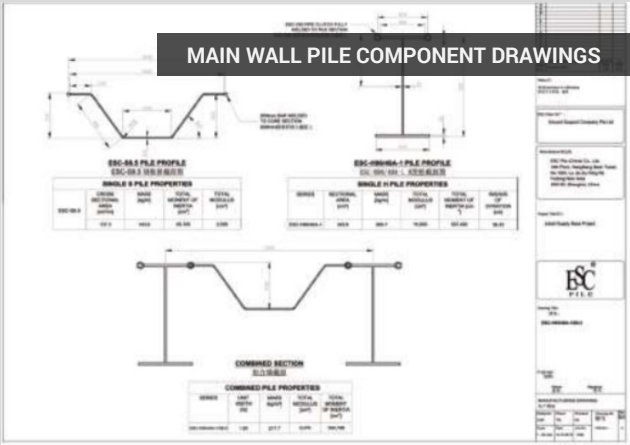
Based on soil investigation results, the wharf basin seabed was overlaid with a layer of very dense sand/cemented sandstone with thickness ranging from 0.5m-2m. Below the caprock, the subsoil staturum comprised of medium dense sand and very stiff

clay.

These soil conditions encouraged ESC to advise the client to carry out predrilling for the King(H) Piles and sheet piles to ensure full penetration and speed of installation. In addition, due to the hand driving conditions at the site ESC attached pile shoes on the infill S9.5 sheet pile.

The painting system and surface preparation of the H Piles and sheet piles including other accessories had to cater for the environment category of C5M as stated in BS EN ISO 12944 and ISO 9223. The coating comprised of two layers of epoxy mastic totalling 400 µm dry film thickness, Jotamastic 87 was used for this task. The surface preparation was sandblasted to SA 2.5 according to ISO 8501-1. All the sheet piles, tie rods, waling beam and other steel items were provided with these protective coatings.

PROJECT DETAILS



PAINTING



SHIP LOADING



ON-SITE INSTALLATION



COMPLETED WALL

