

Project Title : REPLACEMENT OF QUAY WALL AT KABIL, BATAM, INDONESIA

Owner : PT SMOE (SUBSIDIARY OF SEMBCORP INDUSTRIES, SPORE)

Engineer : POSFORD HASKONING SDN BHD / ENGINEER 9000

Main Contractor : LOH & LOH CONSTRUCTION (PTE) LTD / PT JUTA ADI USAHA

Contract Sum : S\$ 6,100,000.00

Period : Dec 2005 to Jul 2006

Scope of Works : 211 nos of 1500mm diameter SECANT PILE (lengths between 23 & 43m)
 - secondary pile G40 concrete & primary pile G30/40 concrete
 - over cutting between primary & secondary pile : 200mm

135 nos of 1000mm anchor bored piles (lengths between 18 & 40m)

Rock socket for both secant piles & anchor bored piles up to 3m

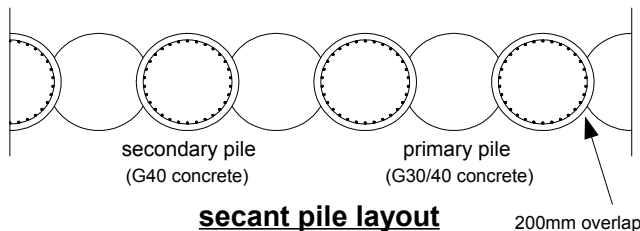
Sub soil condition :

0 to 5m	m dense sandy fill
5 to 10/16m	soft to stiff clayey silt
10/16 to 12/25m	v stiff to hard clayey silt
12/25 to 13/30m	hard clayey silt
> 13/30m	siltstone / sandstone / granite

Stabilization fluid : polymer



guide wall double wall casing
 rotary drive turn table for casing installation



Major equipment deployed :

- Boring Rigs : Bauer BG 28 (secant piles)
- Soilmec R618 (anchor bored piles)
- Crawler Cranes (50, 65 & 70tons)
- Rotary Drive Adaptor
- Oscillator MGB 1500
- FA 417 Vibro
- 1500mm Double Wall (DW) Casing
- 1000mm Casing
- Excavators
- Polymer Plant (silos, tanks, mixers, pumps, etc)

Tools :

- Augers, Boring Buckets, Core Barrels,
- As-Stollen Core Barrels, Rock Roller Bit
- Core Barrels, Chisels, & Cleaning Buckets
- DW casing length (secant pile) : bet 17 & 30m
- Casing length (bored pile) : bet 12 & 16m

Testing : Load test - Osterberg Cell & PDA
 QC – Sonic Logging