GENERAL

Rangsan Silom Precious (present name is Royal Charoen Krung) building is located at the corner of Silom and Charoen Krung Roads, Bang Rak, Bangkok. It is a 63-storey tower with six basement levels constructed by using top-down method. Foundation bored piles of 1.5m in diameter founded in sand layer at depths up to 60m, support the building. The piles were base-grouted. A 1.02m thick cast in-situ diaphragm wall (toe depth 36.0m below ground level) was used for basement excavation and construction. The maximum excavation depth was about 20.0m. 95 built-up steel stanchions pre-founded in bored piles were used for supporting the basement slabs and parts of superstructure during simultaneous construction of basements and the super structure. Three basement slabs, B1, B3 and B5 with openings were used as lateral supports to the diaphragm wall to allow excavation reach to the required depths.

WORK UNDERTAKEN

<table>
<thead>
<tr>
<th>TYPE OF WORK</th>
<th>Dia. 1.0mx36.0m</th>
<th>5 nos.</th>
</tr>
</thead>
<tbody>
<tr>
<td>BORED PILES:</td>
<td>Dia. 1.5mx60.0m</td>
<td>529 nos.</td>
</tr>
<tr>
<td>BASE GROUTING:</td>
<td>534 piles</td>
<td></td>
</tr>
<tr>
<td>STEEL STANCHIONS:</td>
<td>Built-up Sections</td>
<td>95 nos.</td>
</tr>
<tr>
<td>DIAPHRAGM WALLS:</td>
<td>13,748 sq.m. (1.02m Thick)</td>
<td></td>
</tr>
<tr>
<td>INSTRUMENTATION:</td>
<td>5 Inclinometer Tubes in the wall and 1 Tube in the soil behind the wall.</td>
<td></td>
</tr>
</tbody>
</table>

WORK UNDERTAKEN

BORED PILES:  Dia. 1.0mx36.0m  5 nos.
BASE GROUTING: Dia. 1.5mx60.0m 529 nos.
STEEL STANCHIONS: Built-up Sections 95 nos.
DIAPHRAGM WALLS: 13,748 sq.m. (1.02m Thick)
INSTRUMENTATION: 5 Inclinometer Tubes in the wall and 1 Tube in the soil behind the wall.

TYPE OF WORK: Foundation Piles and Diaphragm Walls
OWNER: Rangsan Silom Precious Co., Ltd.
SUPERSTRUCTURE CONTRACTOR: Samsung (Thailand) Development Co., Ltd.
DESIGNER: Siam Engineering Consultants Co., Ltd.
PERIOD: 1991-1992

144 Prayasuren Road, Bangchan, Khlong Sam Wah, Bangkok 10510. Tel. (662) 919 0090-7, Fax. (662) 919 0098
Lowering a rebar cage section with box-outs for basement slab connections.

Diaphragm wall panel excavation.

Excavation below the basement slab.

Installing a 24.0m-long built-up steel stanchion in the borehole.

Preparation for connections between basement floor and diaphragm wall.

Subsoil conditions.

Floors and basements constructed

Pile load test results.

References: