COMPANY INTRODUCTION
(SAMBO E&C)

2017

SAMBO E&C
ENGINEERING & CONSTRUCTION

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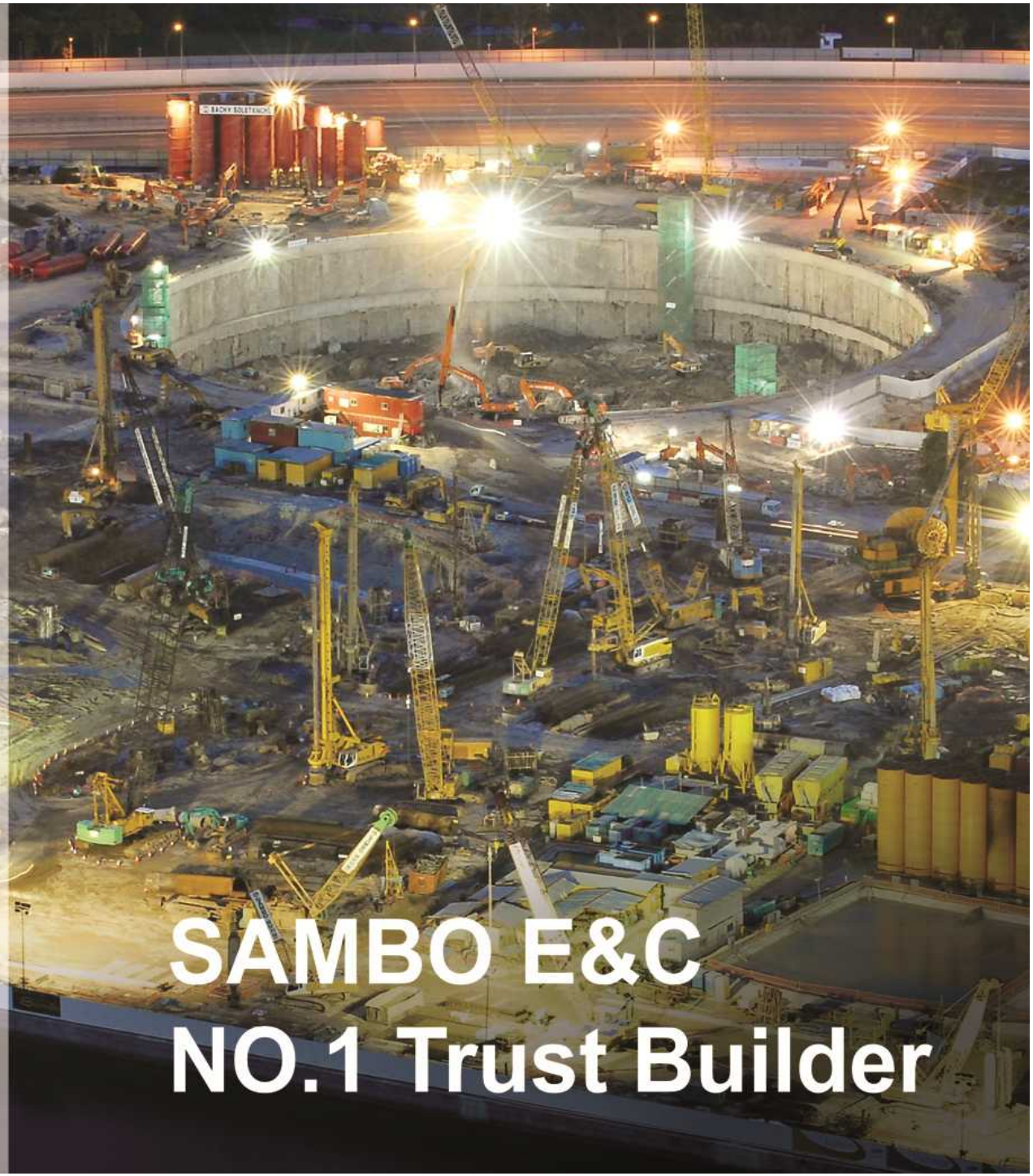

SAMBO E&C
NO.1 Trust Builder

Chapter1.
Company Overview

1. Company Profile
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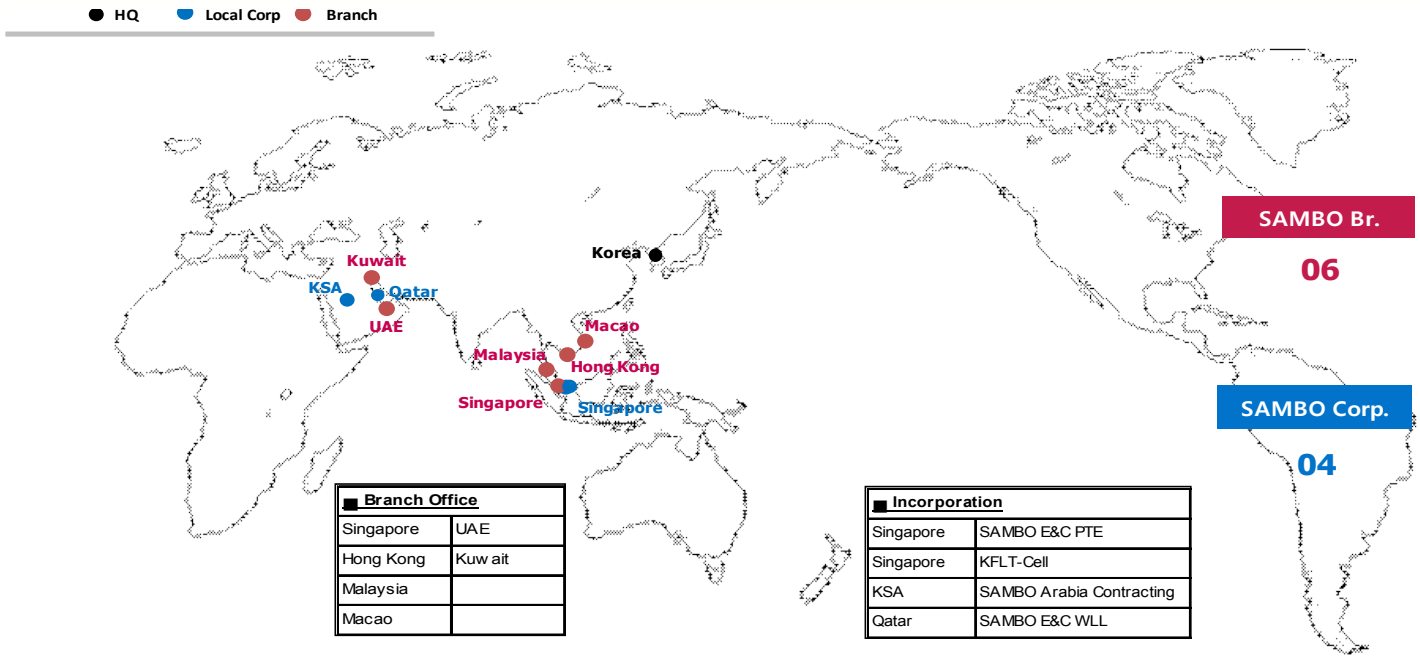
1. Company Profiles

▣ Company Profiles

Company Name	SAMBO E & C CO., LTD.	Korean Staff	476
C.E.O	Jang Tae Il	Main Business	Foundation, Marine, Civil, Plant and Building Works
Capital	USD 195.7 Mil	Home Page	www.samboenc.co.kr
Incorporation Date	30. Dec. 1976	Registration No	617-81-08420

▣ Global Networks



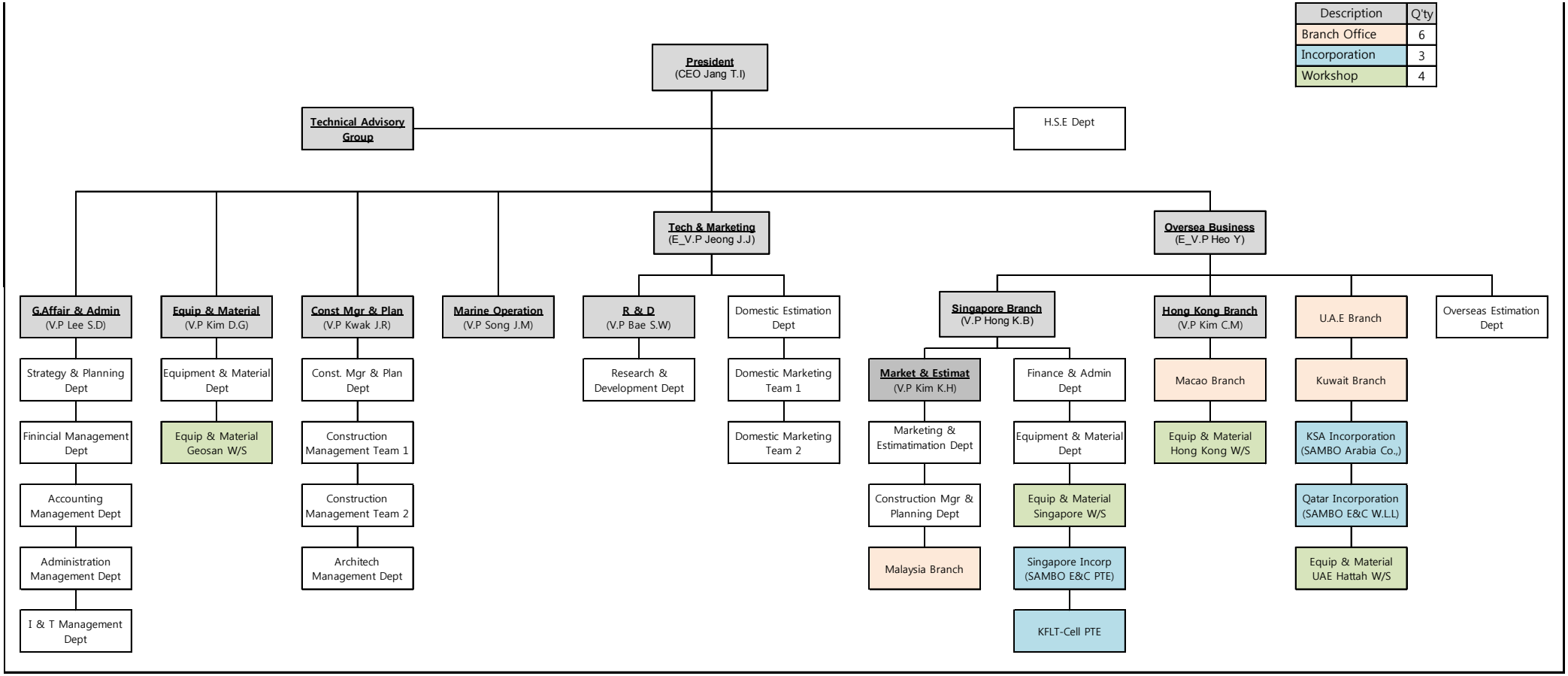
Branch Office	
Singapore	UAE
Hong Kong	Kuw ait
Malaysia	
Macao	

Incorporation	
Singapore	SAMBO E&C PTE
Singapore	KFLT-Cell
KSA	SAMBO Arabia Contracting
Qatar	SAMBO E&C WLL

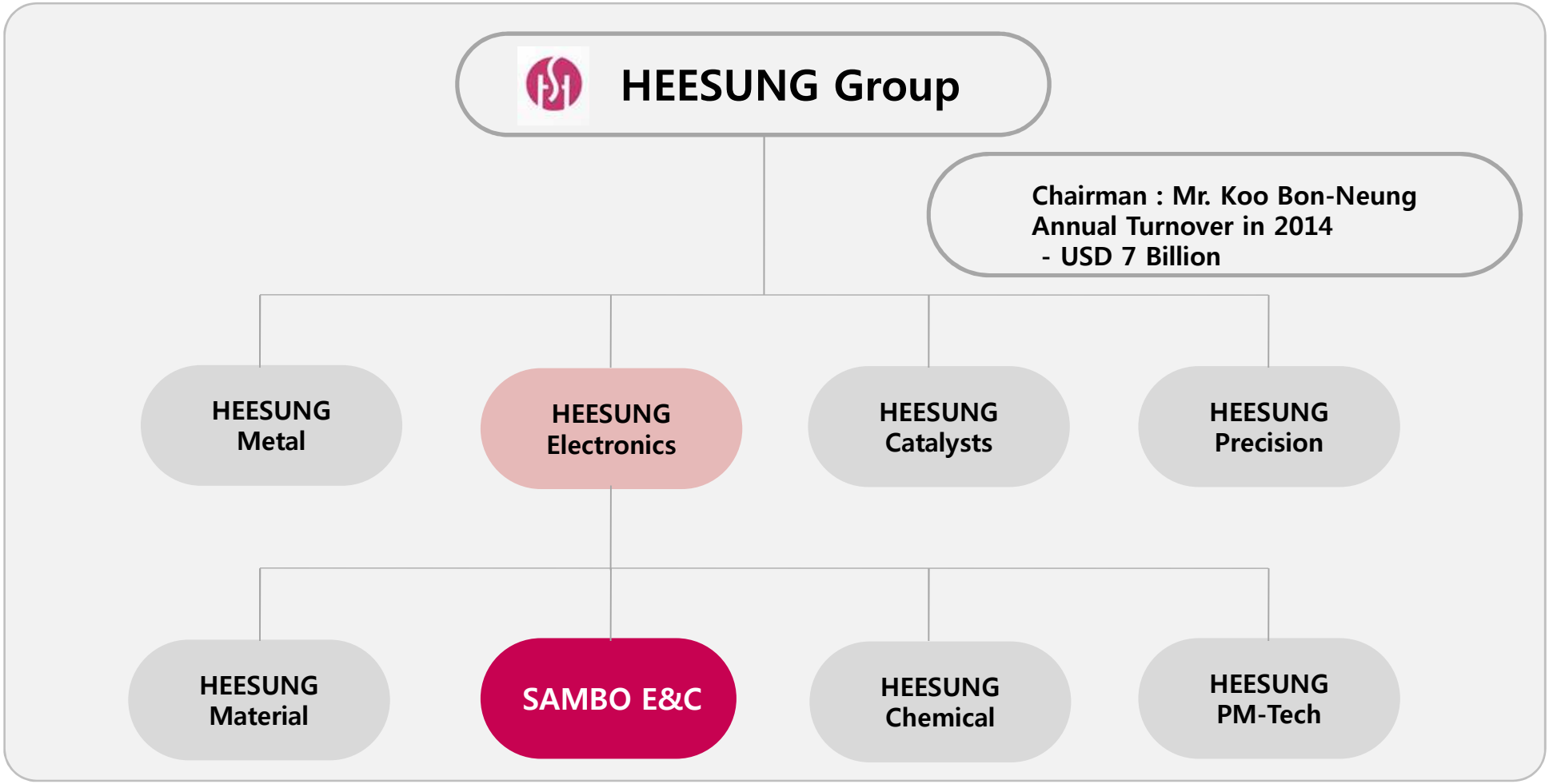
1. Company Profiles

▣ SAMBO E&C Organization

Description	Q'ty
Branch Office	6
Incorporation	3
Workshop	4



2. Group Information



- We strive to satisfy our customers, employees and society through people and technology

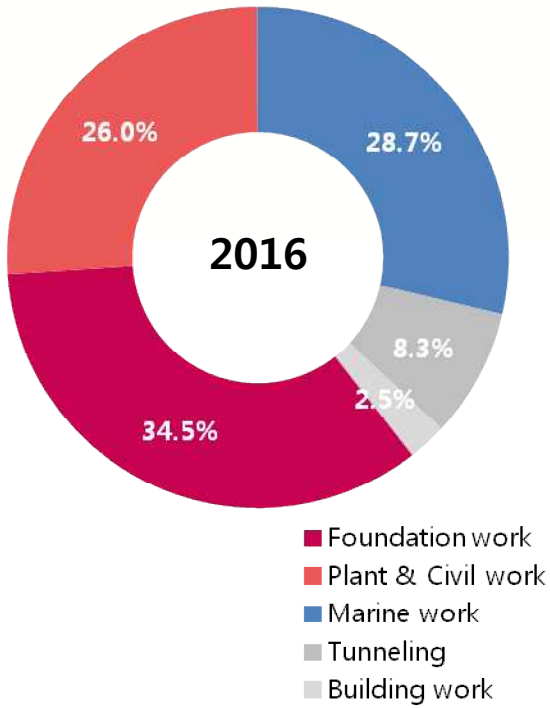
3. Turnover Status

▣ Turnover Status

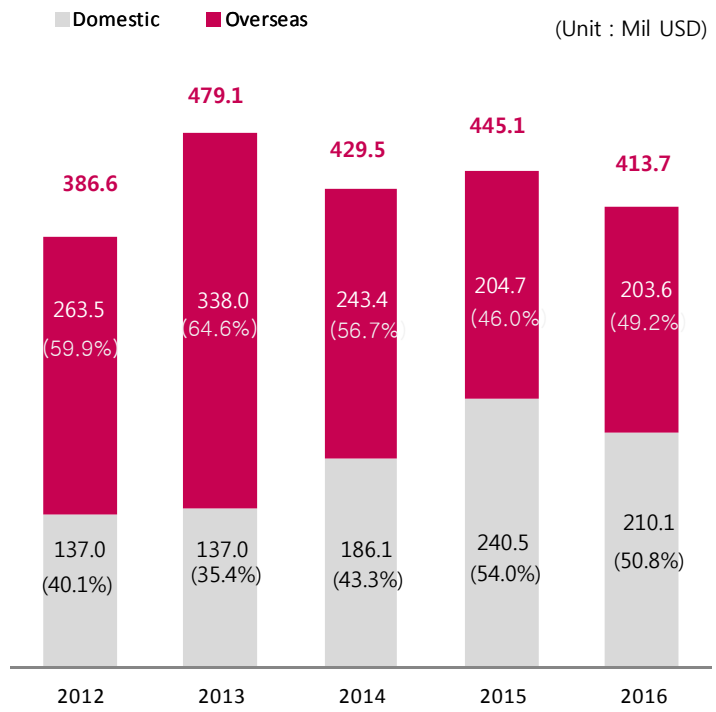
(Unit : Mil USD)

Year	2011	2012	2013	2014	2015	2016	Remarks
Revenue	439.6	386.6	479.1	429.5	445.1	413.7	
Net Income	18.5	15.7	17.9	20.1	19.2	36.0	(After Tax)

Proportion of Turnover



Recent 5 Years



4. Business Fields

FOUNDATION

- Off & On Shore Piling Works
- Temp Shoring Works
  - Diaphragm Wall & CB Wall
  - Barrette Pile
  - Secant Pile Wall
- Soil Improvement

CIVIL

- Underground Expressway
- Tunnel Works (TBM, NATM)
- Shafts Construction
- General Earth Works
- Underground Structure Works
- Bridge Structures

Petro-Chemical & Refinery Industrial Plant

- Petro-Chemical & Refinery
- Thermal Power Plant
- Nuclear Power Plant
- Tidal Power Plant
- Desalination Plant
- Wastewater Treatment Plant

MARINE

- Oil / Gas Importing & Export Facilities (Jetty & Terminal)
- Gas Injection Facilities
- Sea Shafts Construction
- Break Water
- Shore Protection

ARCHITECTURE

- Industrial Factories
- Ski Resort
- Golf Club
- Resort Town
- University
- Residential Buildings

OTHERS

- Dam Embankment
- Dam Core Grouting
- Underground Rock Cavern
- Underground LNG Storage Tank
- Etc

5. Regional Clients – Asia Regions

Nation	Client	Experiences	Year
Singapore	**P.S.A Singapore** (Singapore - Port Authority)	Container Stock Yard of PSA 1B	1998
	C.P.G Corp (Former P.W.D – Public Works Department)	Cantonment Complex and others	1996
	L.T.A (Land Transport Authority)	MRT Contract 706 & other many projects	1998
	M.E.W (Ministry of Environment and Water Resources)	Deep Tunnel Sewerage System Contract T-04	2000
	P.U.B (Public Utility Board)	Changi Water Reclamation Plant Contract C1A	2001
	SP Power (Singapore Power Asset Limited	Transmission Cable Tunnel	2001
	C.D.L (City Development Limited)	City Square Residential Development Project	2005
	URA (Urban Redevelopment Authority)	Common Service Tunnel Phase 1B	2006
	JTC (Jurong Town Corporation)	Jurong Rock Cavern	2007
	BCA (Building & Construction Authority)	Industrial Park Road & Bridge (C.O.W)	2006
	Marina Bay Sand Pte Ltd	Integrated Resort (I.R) Project	2008
	MS Residential Pte Ltd	Marina South Parcel Project	2012
Hong Kong	**HKIA** (HongKong International Airport Authority)	HKIA Three Runway Project 3203, 3204 & 3205	2016
	CEDD (Civil Engineering and Development Department)	Wan Chai Bypass C001 & 0002	2011
	Highway Department (The Government of Hong Kong Special Administrative Region)	Wan Chai Bypass C019 Hong Kong Link Road C09	2011
	MRTC (Metro Rail Transit Corporation)	Shatin to Central Link C1109	2012
	HKIA (HongKong International Airport Authority)	The 3rd Runway DCM 3203, 3204 & CSM 3205	2016
Malaysia	**City Town SDN BHD**	KLCC Package 1&2 Project	2013
Taiwan	**THSR** (Taiwan High Speed Rail Corporation)	Taiwan High Speed Railway Project C240	2000
Vietnam	**PMU** (Project Management Units)	Ho Chi Minh City No.8 Pumping Station	2004

5. Regional Clients – MENA Regions

Nation	Client		Experiences	Year
U.A.E	ADNOC (Abu Dhabi National Oil Company)	TAKREER (Abu Dhabi Oil Refining Company)	Ruwais Refinery Expansion Plant #1,2,3 & 7	2010
		ADGAS (Abu Dhabi Gas Liquefaction Company)	IGD Das Island Gas Plant Stage 1,2 & 3	2010
		GASCO (Abu Dhabi Gas Industries Limited)		2010
		FERTIL (Ruwais Fertilizer Industries)	Fertil 2 Plant	2010
		BOROUGE (Abu Dhabi Polymer Company Ltd)	Borouge 3 XLPE	2011
		ADMA OPCO (Abu Dhabi Marine Operating Company)	Umm Shaif Gas Injection Plant	2008
		ZADCO (Zakum Development Company)	IGD Das Development - Gas Expansion Projects	2012
	ADWEA (Abu Dhabi Electricity & Water Authority)		Al Shuweihat S2 IWPP Plant	2009
	ADSSC (Abu Dhabi Sewerage Service Company)		Deep Tunnel Sewer Contact T-01	2011
	DMA (Department of Municipal Affair of Abu Dhabi)		Upgrading Al Salam Street Contract-1	2008
	ENEC (Emirate Nuclear Energy Corporation)		Braka Nuclear Power Plant	2011
	DEWA (Dubai Electricity & Water Authority)		Jebel Ali 'M' Power & Desalination Plant	2007
	RTA (Roads and Transport Authority)		Dubai LRT Red & Green Line Project	2007
Kuwait	KNPC (Kuwait National Petroleum Co.) – Under Clarification		New Oil Pier at Maa Refinery Plant	2005
	PTB (Partnership Technical Bureau)		Az-Zour North IWPP	2013
	MPW (Ministry of Public Works)		Sheikh Jaber Al-Ahmed Al-Sabah Causeway	2013
K.S.A	SEC (Saudi Electricity Company)		Jeddah South Thermal Power Plant	2015
	ARAMCO (Saudi Arabian Oil Company)		Petro Rabigh Ⅱ, UO-1 Civil & SWI	2013
	SWCC (Saline Water Conversion Company)		Yanbu 3 Desalination Plant SWI Pkg-3	2013
Qatar	Q-Rail (Qatar Railway Company)		Doha Metro - Red Line North Stations	2013
Oman	AOL (Aromatics Oman LLC.)		Oman Sohar Aromatics Plant	2006

Chapter2.
Company Strength

1. Owned Resources
2. Intellectual Properties
3. QA/QC System & Management
4. H.S.E System & Management
5. Risk Assessment & Mitigation

1. Owned Resources

▣ Owned Equipment

- ◆ The Largest Diameter R.C.D - Self-Developed (Max Diameter 7.5m)
- ◆ The Deepest Rotary Drill (BG 46 & other 4sets – Dia 3.0m, Max Depth=71m, Currently operating in Kuwait Causeway)
  Max 106m at Singapore Marina South Parcels A1 to A4 Project.
- ◆ The Biggest Trench Cutter Rig (BC 50 - 3sets – Maximum 100m Depth)

▪ Bored Pile / RCD & Drill

➢ BG 40

MODEL
R.C.D
Rotary Drill
Pile Diver
Vibro-Hammer
Hydro-Hammer

▪ Marine

➢ JACK-UP BARGE

MODEL
Jack-up Barge
Guide Frame
Flat Barge

▪ Diaphragm Wall

➢ BC 40

MODEL
Trench Cutter
Short Cutter
Mechanical Grab
Hydraulic Grab
Desander/Decanter

▪ Tunnel & Other Equipments

➢ ROAD HEADER

MODEL
Road Header & ITC
Jumbo Drill (2&3 Boom)
C. Crane (Max 450T)
Comp (Max 1,017 cfm)
Generator (~1,000 KWh)
General Civil Equips

2. Intellectual Properties

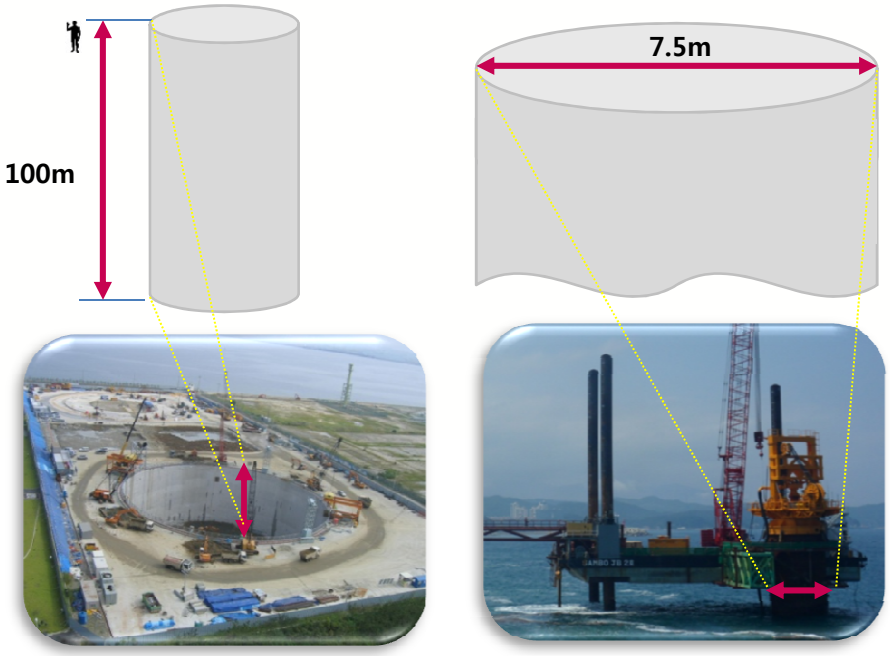
▣ High Level Technique

Diaphragm Wall

(Max 100m depth)

Piling

(Diameter 7.5m, R.C.D)



Incheon LNG Storage Tank **Sin Uljin Nuclear Power**

▣ Main Technology / Patent Licenses

27 New Technology and Patent Licenses

Type	Description	Number	
Patent	Tunnel	1	22
	Diaphragm wall	4	
	Marine	11	
	Piling	6	
Utility Model	Marine	3	5
	Piling	2	

3. QA / QC System & Management

A. Certificate Copies (ISO & OHSAS)

KOREA

- **ISO 9001** : Acquired Certification for Korea Productivity Centre Quality Management System

Hong-Kong

- **ISO 9001** : 2008 (Quality Management System)
  - Construction of Barrette Piles and D-Wall
  - Construction of Large Diameter Bored Piles

SINGAPORE

- **ISO 9001** : 2000 (Quality Management System)
- **ISO 14001** : 2004 (Environmental Management System)
- **OHSAS 18001** : 1999 (Occupational Health/Safety Management System)

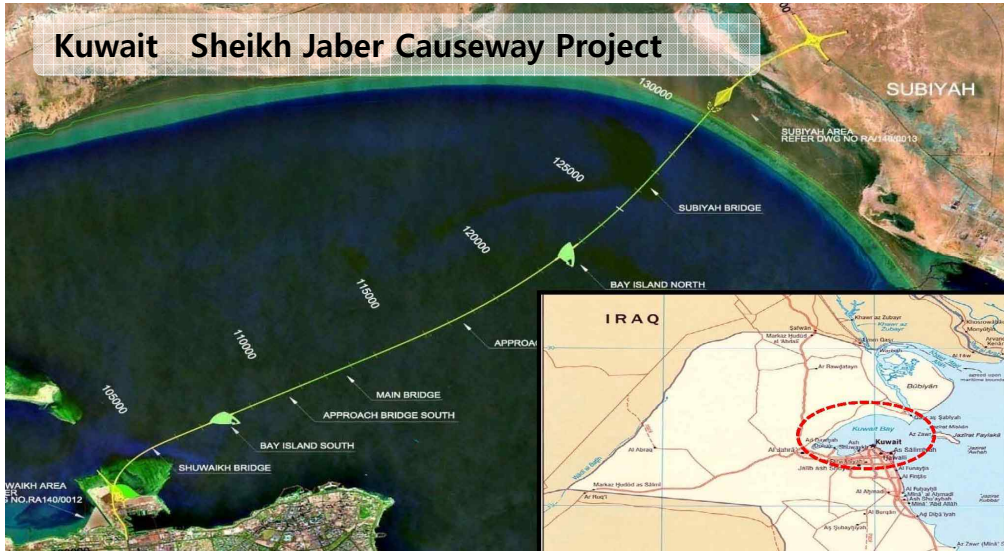
U.A.E

- **ISO 9001** : 2008 (Quality Management System)
- **ISO 14001** : 2004 (Environmental Management System)
- **OHSAS 18001** : 2007 (Occupational Health/Safety Management System)

Chapter3.
Track Records

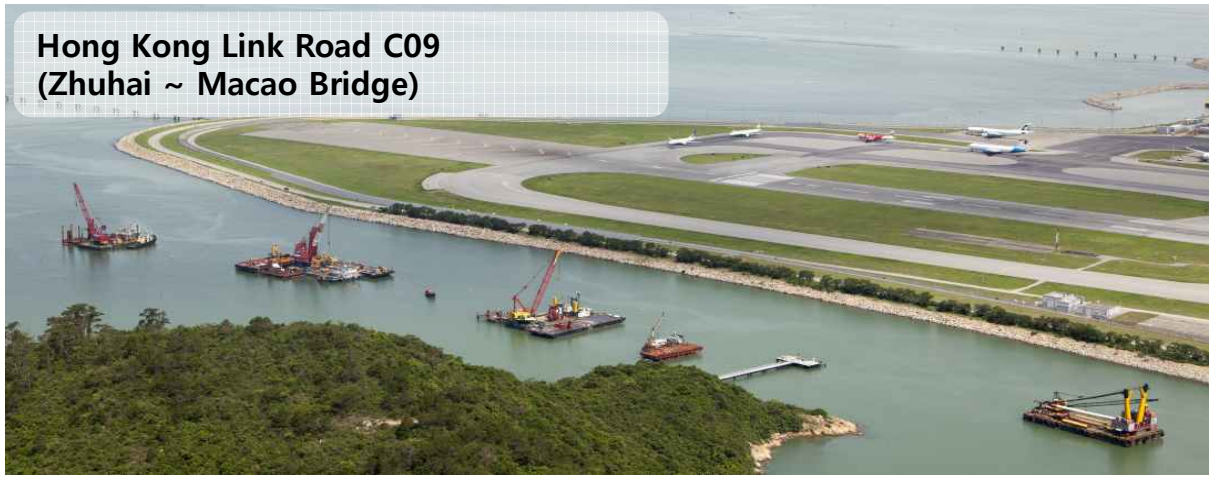
1. Pile & Foundation Works for Bridge
2. Offshore Pile, Foundation & Facilities
3. Temp Shoring, Pile & Foundation at Civil
4. Petro-Chem , Refinery & Industrial Plant

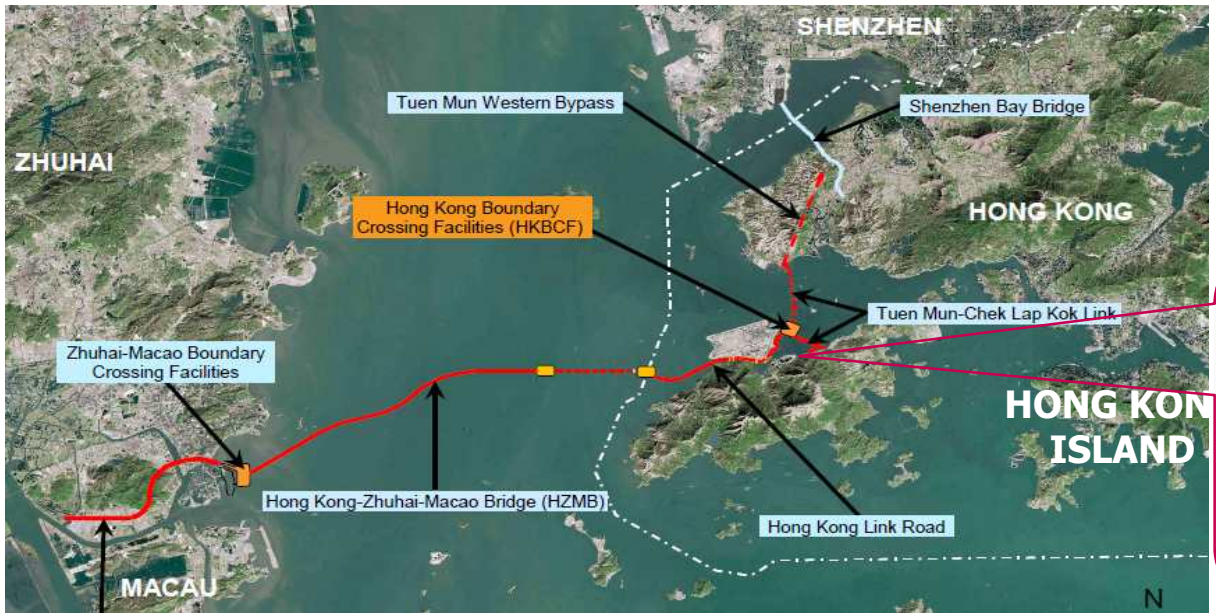
1. Pile & Foundation Works for Bridge



- **Project : Sheikh Jaber Al Ahmed Al-Sahbah Causeway Kuwait (2014/06 ~ 2016.08)**
- **Client : Ministry of Public Works**
- **Contractor : Hyundai Engineering & Construction**
- **Amounts : USD 48,498 K**
- **Work Scope : Marine Bored Pile & Steel Casing Installation**
  - Package B (In-Situ Bored Pile, **Φ 3,000mm**) : 546 Nos
  - Package C (Steel Casing Install, **Φ 3,000mm**) : 776 Nos (Max Depth = -71m)

1. Pile & Foundation Works for Bridge



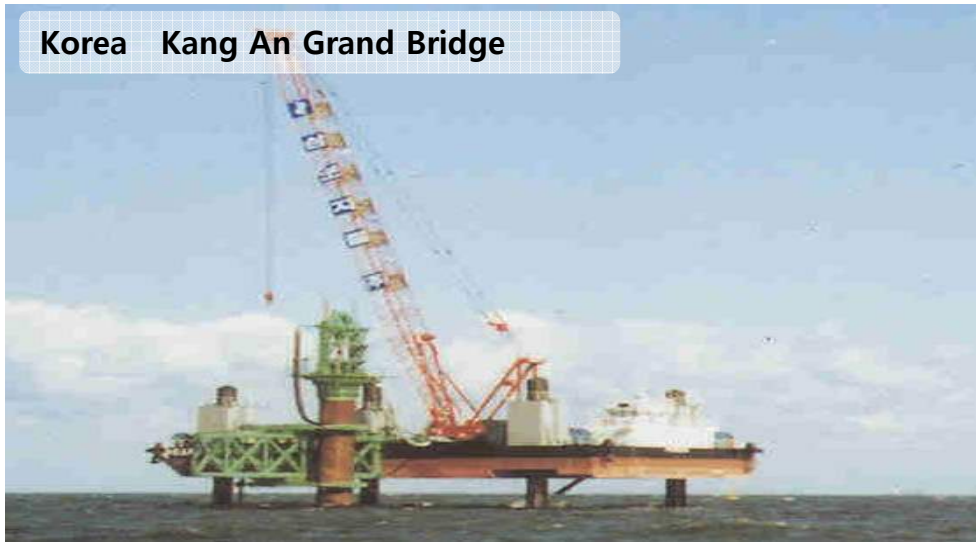


- **Project : Hong Kong Link Road C09**
  Hong Kong (2013.02 ~ 2015.10)
- **Client : Highway Department**
- **Contractor : Hsin Chong JV**
- **Amount : USD 172,638 K**
- **Work Scope : Marine Bored Pile (Total 396 EA)**
  - Φ2.3m : 270 EA
  - Φ2.5m : 58 EA
  - Φ2.8m : 68 EA
  - * Length of Pile : 15m ~ 92m
  - * Total Length of Pile : 18,990m

Total Length : 9.3km / Sambo E&C Work Scope : 3.1km

1. Pile & Foundation Works for Bridge

- **Project : Ma Chang Grand Bridge – Marine Pile Works Korea (2004.09 ~ 2006.02)**
- **Client : Machang Bridge Co. Ltd**
- **Contractor : Hyundai E&C – Bouygues JV**
- **Amounts : USD 10,200 K**
- **Work Scope : Offshore Main Piling Works – R.C.D**
  - Test Pile (Φ 1,500mm) : 2 Nos
  - Main Pile (Φ 2,500mm) : 100 Nos (Max H=44.0m)



- **Project : Kwang An Grand Bridge – Marine Pile Works Korea (1995.05 ~ 2002.12)**
- **Client : Busan City**
- **Contractor : 1st Lotte-Hyundai JV, 2nd Posco-Ultra JV, 3rd Daelim JV**
- **Amounts : USD 24,200 K**
- **Work Scope : Offshore Main Piling Works – R.C.D**
  - Main Pile (Φ 2,500mm) : 414 Nos (Max H=46.0m)

1. Pile & Foundation Works for Bridge

■ **Project : Salyang Island Bridge – Ship Impact Protect Korea (2010.12 ~ 2011.06)**

■ **Client : Tong Yeong City Regional Const Mgr Admin**

■ **Contractor : Korea Development Corp**

■ **Amounts : USD 18,200 K**

■ **Work Scope : PC House Installation & Bored Pile (R.C.D)**

- PC House Installation : 1 Nos (Max W=1,200 t)
- Main Pile (Φ 1,800mm) : 30 Nos (Max H=40.0m)

■ **Project : Mok Po Bridge – Ship Impact Protection Korea (2010.03 ~ 2010.10)**

■ **Client : Iksan Regional Construction Mgr Admin**

■ **Contractor : GS E&C JV**

■ **Amounts : USD 21,040 K**

■ **Work Scope : Ship Impact Protection Cell & Bored Pile (R.C.D)**

- PC House Installation : 6 Nos (Max W=1,500 t)
- Main Pile (Φ 1,800mm) : 22 Nos (Max H=30.0m)
- Capping Beam Con'c

1. Pile & Foundation Works for Bridge

- **Project : Incheon Grand Bridge – Ship Impact Protection Korea (2008.01 ~ 2009.08)**
- **Client : Incheon Grand Bridge JV Ltd**
- **Contractor : Samsung C&T JV**
- **Amounts : USD 24,200 K**
- **Work Scope : Ship Impact Protection Cell – Well Structure**
  - Protection Cell : Φ 25.0 m H=20.0m (44 Nos)

1. Pile & Foundation Works for Bridge

■ Domestic Marine Bridge Works

Project Name	Client	Contractor	Const Period	Major Work Items
Seo Hae Grand Bridge	Korea Expressway Co	GS E&C	94.05 ~ 94.07	R.C.D (D 1500mm), 31 Nos
Kum Kang Grand Bridge	Korea Expressway Co	Hanla E&C	95.02 ~ 97.06	R.C.D (D 1500mm), 266 Nos
Ung Po Grand Bridge	Iksan Province	Nam Kwang E&C	97.07 ~ 98.04	R.C.D (D 1500mm), 91 Nos
345KV Young Heung T/L Sector #1	KEPCO	Hyundai E&C	99.11 ~ 02.02	R.C.D (D 1000 & 1500mm), 188 / 16 Nos
Young Heung Power Plant Access Road	KEPCO	Hyundai E&C	99.03 ~ 01.11	Steel House & Pier Structure
Geo Gum Do Link Bridge	Iksan Province	Hyundai E&C	04.02 ~ 06.02	Marine Bored Pile (D 2500mm, L=50M), 140 Nos
Un Am Grand Bridge	Iksan Province	Ssang Yong E&C	05.03 ~ 09.12	Well Structure & Pier Structure
Geo Ga Grand Bride	GK Marine Road	Daewoo E&C	06.08 ~ 07.12	R.C.D (D 2000mm), 28 Nos
Goha ~ Jukkyo Bridge	Iksan Province	GS E&C	06.09 ~ 09.10	R.C.D (D 1800mm), 36 Nos
Yeo Su Industrial City Section No.2	Iksan Province	GS E&C	08.08 ~ 09.09	R.C.D (D 1800mm), 73Nos
Jinju~Kwanhyang Road Section 5	KORAIL	GS E&C	09.03 ~ 11.12	R.C.D (D 1650mm), 24 Nos R.C.D (D 2150mm), 24 Nos
Haeui Sineui Bridge	Jeon Nam	Hanyang E&C	11.08 ~ 12.06	R.C.D (D 3000mm), 24 Nos / PC House 2 EA

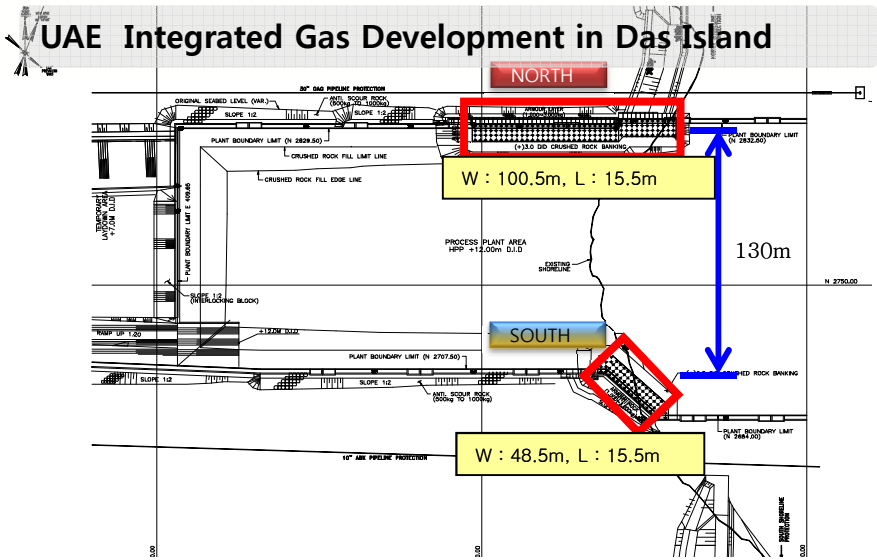
2. Offshore Pile, Foundation & Facilities Works

- Project : New Oil Pier & Associated Topside Facilities at Maa Refinery 1st & 2nd Kuwait (2001.04~2006.05)
- Client : Kuwait National Petroleum Corp. (KNPC)
- Contractor : Hyundai Engineering & Construction
- Amount : 1st USD 3,679 K & 2nd 1,985 K
- Work Scope : Offshore Piling Works
  - Offshore Pile Φ 765 ~ 2,500mm : 2,018 Nos
  - Offshore Pile Φ 914 ~ 2,100mm : 551 Nos

- Project : Ruwais Refinery Expansion Project Package #7 Abu Dhabi, U.A.E (2010.12~2013.04)
- Client : Abu Dhabi Oil Refinering Co (TAKEER)
- Contractor : GS Engineering & Construction
- Amount : USD 60,818 K
- Work Scope : Offshore Piling & Temp Jetty Works
  - Bored Pile Φ1,422~1,628mm : 706 Nos (R.C.D)
  - Driven Pile Φ762~1,219mm : 254 Nos
  - Pile Bent (Bent Thread 165 / Shim Plate 1,556 Nos)
  - Installation of Temporary Jetty

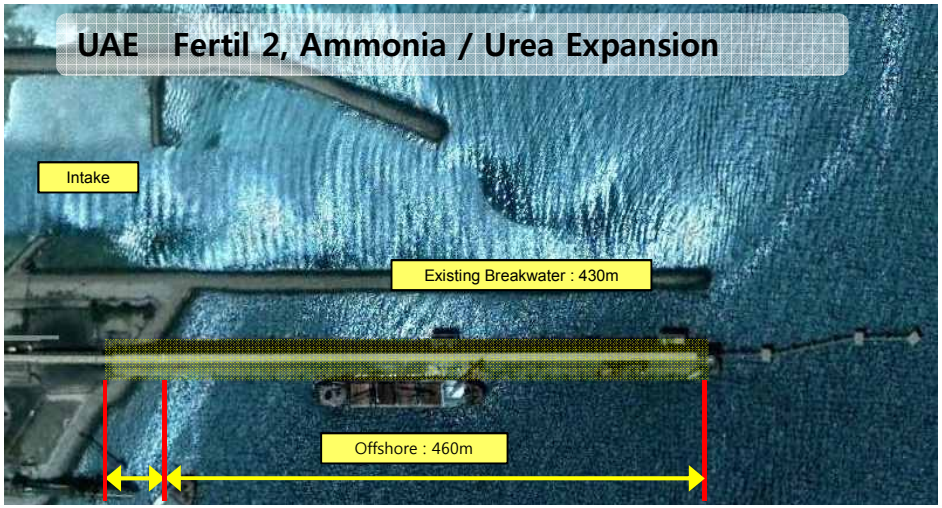
2. Offshore Pile, Foundation & Facilities Works

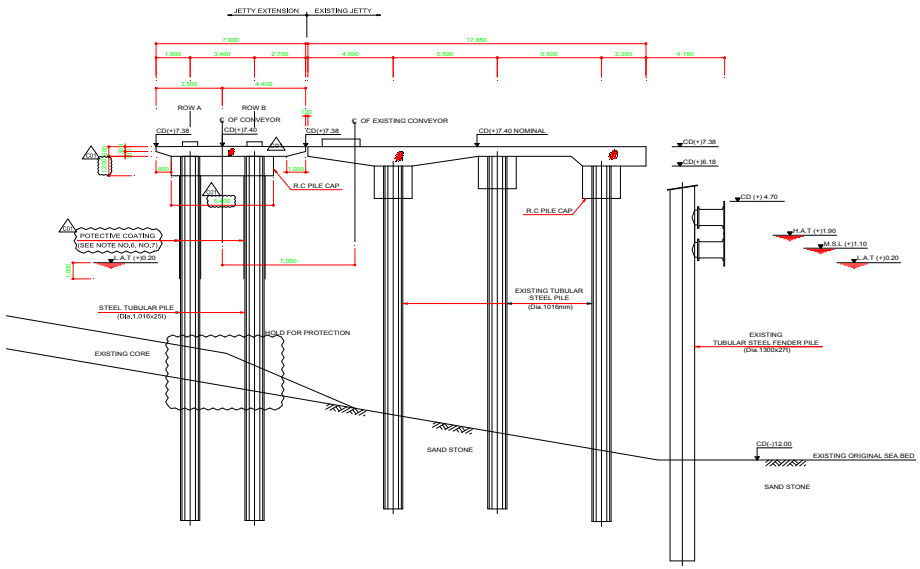
- Project : Umm Shaif Gas Injection Facilities
  Abu Dhabi, UAE (2008.03~2008.11)
- Client : Abu Dhabi Marine Operation Co.,(ADMA-OPCO)
- Contractor : Hyundai Heavy Industries
- Amount : 12,877 K
- Work Scope : Offshore Piling Works (R.C.D) + Jacket & Grouting Works
  - Offshore Pile : Φ 1030 ~ 2090mm, 62 Nos (Max H=32m)
  - Grouting Pile : 3,170 m3



- Project : Integrated Gas Development in Das Island
  Abu Dhabi, U.A.E (2010.10~2012.12)
- Client : Abu Dhabi Gas Company (ADGAS)
- Contractor : Hyundai Heavy Industries
- Amount : 14,512 K
- Work Scope : Offshore Piling & Temp Jetty Works
  - In-situ Bored Pile for Quay Wall & On Shore Pile : Φ 600mm : 601 Nos
  - In-situ Bored Pile for Offshore Φ912~1064mm : 34 Nos
  - Installation of Temporary Jetty

2. Offshore Pile, Foundation & Facilities Works





- **Project : Fertil2, Ammonia / Urea Expansion – Jetty Works**
  UAE, Abu Dhabi (2010.06~2012.11)
- **Client : Ruwais Fertilizer Industries (FERTIL)**
- **Contractor : Samsung Engineering & Construction Ltd**
- **Amount : 22,188 K**
- **Work Scope : Offshore Marine Bored Piling Works & Deck Installation**
  - **Offshore Bored Pile Φ 1016 ~ 1300mm : 70 Nos (H=20m)**
  - **Con'c Deck Slab : L= 520 m, (B=7.9m)**
  - **Other Misc : Fence & Gate**

2. Offshore Pile, Foundation & Facilities Works

- **Project : Singori Nuclear Power Plant #1 & #2, #3 & #4**
  Ulsan, Korea (2006.06 ~ 2012.08)
- **Client : Korea Hydro and Nuclear Power**
- **Contractor : Hyundai Engineering & Construction (#1&#2)**
  Doosan Heavy Industries and Construction (#3&#4)
- **Amount : USD 11,198 K (#1&#2), USD 49,245 K (#3&#4)**
- **Work Scope : Temp Shoring, Sea Shaft Works & Other Misc**
  - Sea Shaft : Φ3650mm (H=35~40m), 18 Nos
  - Manufacture & Installation of Velocity Cap & Diffuser 10 Nos
  - Distribution Tunnel, SWI & Outfall Structure

2. Offshore Pile, Foundation & Facilities Works

■ **Project : Sin Uljin Nuclear Power Plant Intake Sea Shaft**
Uljin, Korea
(2011.06~2013.08)

■ **Client : Korea Hydro and Nuclear Power**

■ **Contractor : Hyundai Engineering & Construction**

■ **Amount : USD 30,140 K**

■ **Work Scope : Temporary Shoring, Sea Shafts & Marine Enabling Works**

[Temp Shoring Works for Sea Shafts]

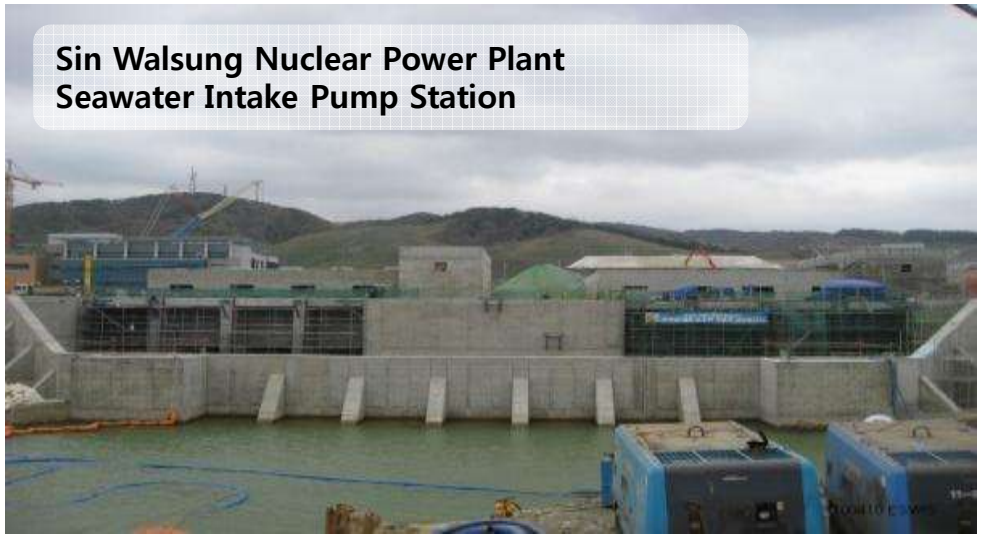
- Sea Shaft : D6500 (H=21.0m), 2 Nos
- Connection Tunnel : D7500 (H=25.5m), 2 Nos

[Marine Enabling Works]

- Underwater Excavation : 41,700 m3
- Underwater Con'c work : 2,000 m3
- Underwater Backfilling : 46,000 m3

★ Sambo E&C carried out Inner Diameter 7.5m Sea Shaft with its Appurtenances which was for the first time in the world.

2. Offshore Pile, Foundation & Facilities Works



- **Project : Sin Walsung Nuclear Power Plant #1 & #2**
  Korea (2007.11~2009.12)
- **Client : Korea Hydro and Nuclear Power**
- **Contractor : GS Engineering & Construction**
- **Amount : 8,140 K**
- **Work Scope : Seawater Intake Structure, Land Enabling Works**
  & Other Structure Works

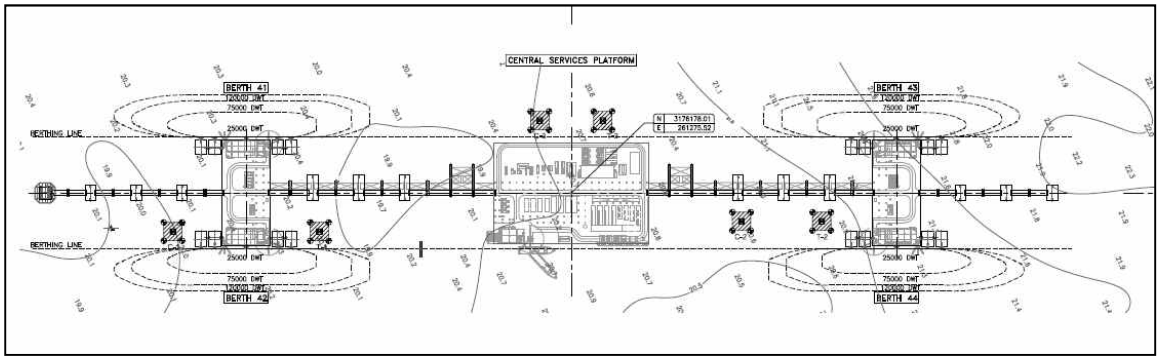
- Seawater Intake Structure, TGB & ESWIS (No 1 & 2)
- Land Enabling Works

2. Offshore Pile, Foundation & Facilities Works

- **Project : Sihwa Lake Tidal Electric Power Plant**
  Ansan, Korea (2005.06~2008.12)
- **Client : Korea Water Resources Corporation**
- **Contractor : Daewoo Engineering & Construction**
- **Amount : 15,229 K**
- **Work Scope : Temp Shoring for Cofferdam**
  - Main Cellular Cofferdam Φ20,000mm (29 Nos)
  - Arc Cellular Cofferdam Φ20,000mm (28 Nos)

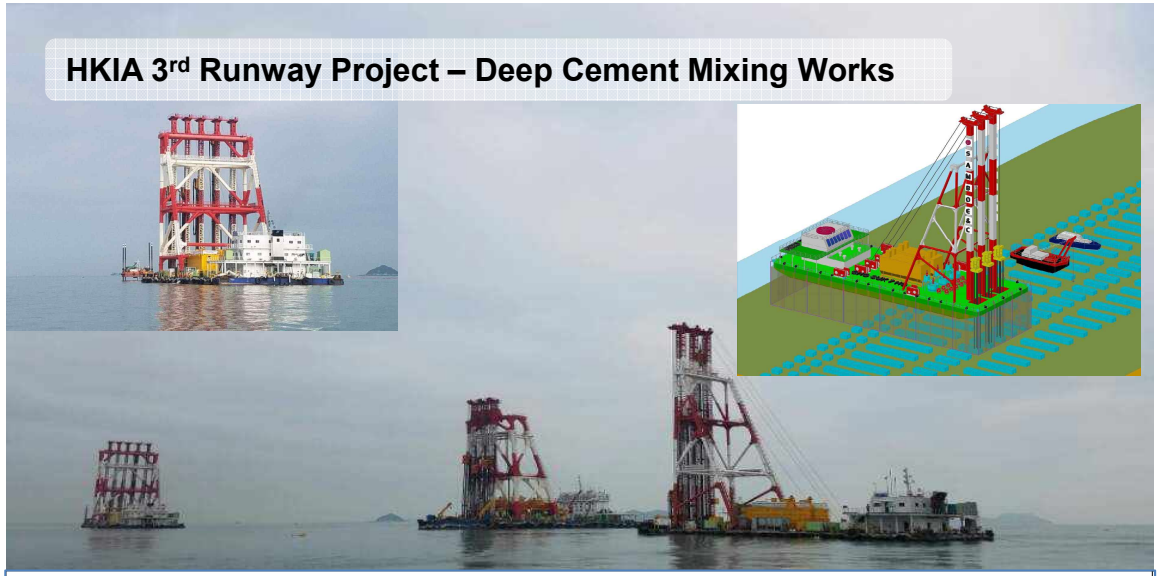
- **Project : Kumgang (River) Rehabilitation Project,**
  Buyeo, Korea (2010.11~2012.07)
- **Client : DaeJeon Regional Construction and Management Administration**
- **Contractor : GS Engineering & Construction**
- **Amount : USD 29,662 K**
- **Work Scope : General Civil & Building**
  - Land Enabling Works : 55,756m3
  - Structure Works L 1 L/s

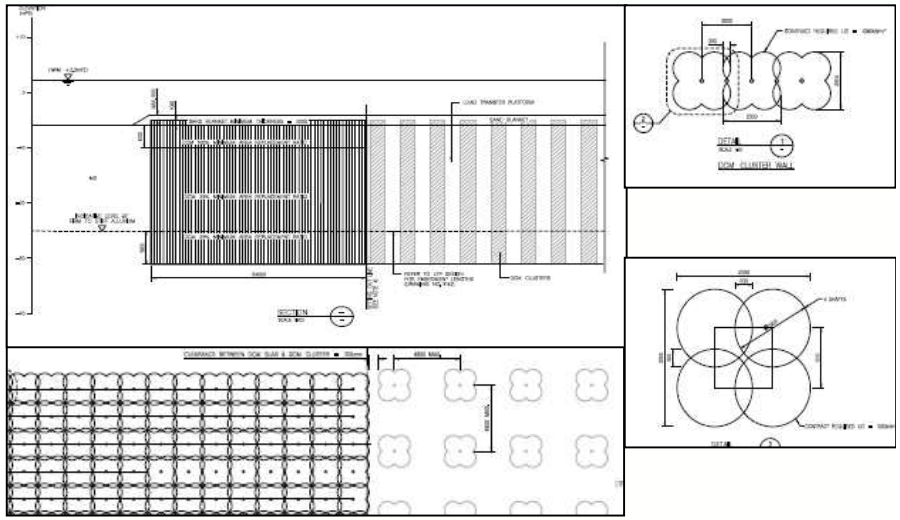
2. Offshore Pile, Foundation & Facilities Works

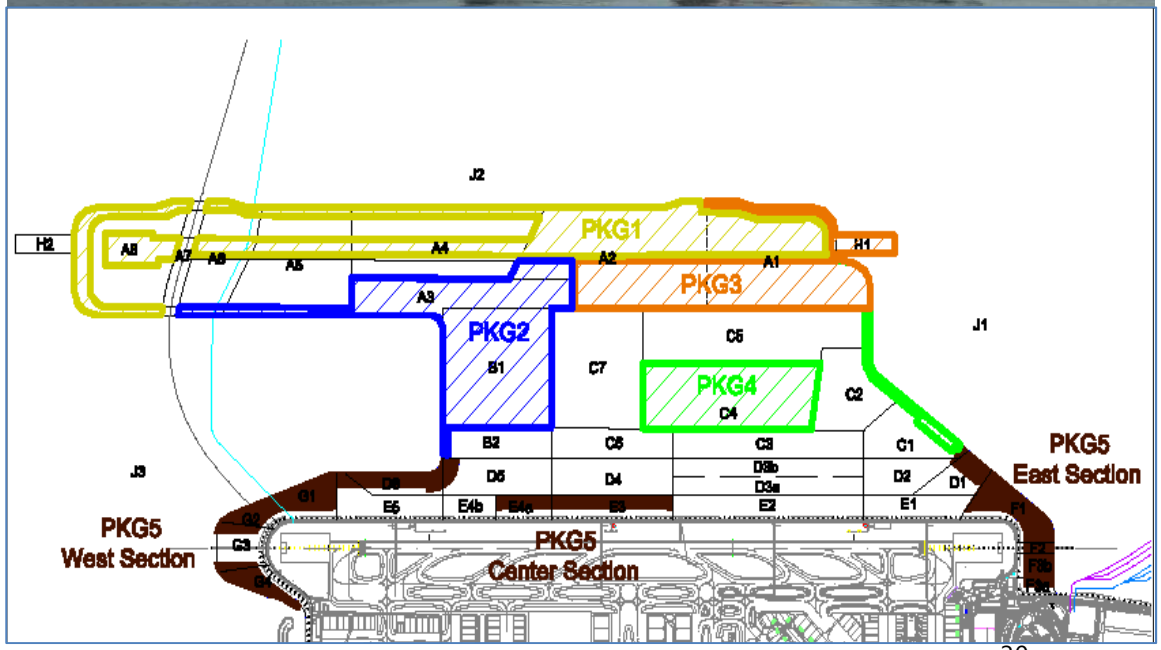


- Project Name : New Refinery Project, Pkg #5, Kuwait (2016.07~2017.11)
- Client : Kuwait National Petroleum Company (KNPC)
- Contractor : HSS JV
- Work Scope : On & Offshore Pile Works & Test Work
  - Off-shore Pile (Φ 813~1,800mm) : 1,661 Nos
  - On-Shore Pie (Φ 813mm) : 131 Nos
  - Pile Test : Compression, Tension & PDA

2. Offshore Pile, Foundation & Facilities Works







- Project Name : HKIA, Three Runway Project, Hong Kong
  DCM 3203, 3204 (2016.08~2018.03)
- Client : Hong Kong Int'l Airport Authority (HKIA)
- Contractor : SAMBO (3203) SRBC-SAMBO JV (3204)
- Work Scope : Deep Cement Mixing Work
  - DCM 3203 (DCM Cluster) : 2,727,835 m3
  - DCM 3204 (DCM Cluster) : 786,844 m3 (Sambo only)
  - CSM 3205 (CSM Panel) : 64,375 Panel

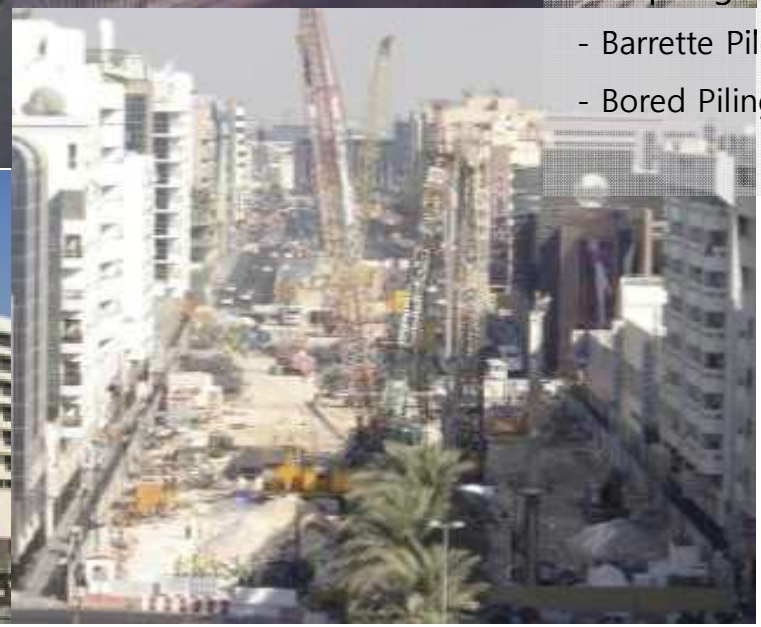
2. Offshore Pile, Foundation & Facilities Works

Other Marine Facilities Experiences

Project Name	Client	Contractor	Const Period	Major Work Items
Uldolmok Tidal Power Plant	Korea Marine Research	Hyundai E&C	06.03 ~ 08.11	RCD Excavation Work & JACKET (13,000 Ton) Install & Removal Work
SAMHO Heavy Industry Dolphin Works	SAMHO Heavy Ind.,	Hyundai E&C	08.11 ~ 09.05	RCD(D 1016mm), 610Nos
Yeosu Jetty No 3 Expansion & Crude Oil Wharf	GS Caltex	GS E&C	09.04 ~ 12.12	JACKET Installation 10 Nos Dolphin & Topside Structure Work Steel Pile Driving Work 126 Nos
Tong Young LNG Receiving Terminal Port Facility	KOGAS	Daewoo E&C	09.09 ~ 11.06	JACKET Installation 17 Nos Dolphin & Topside Structure Work RCD (D 1500 mm) 74Nos
GeoJae Oil Reservation Storage Tank Facility	Korea National Oil Company	Daelim E&C	10.04 ~ 10.12	JACKET Installation Work 12 Nos RCD (D 1,500mm) 60 Nos Super Structure Works : 1 L/S
Yeongsan River Estuary Dyke Structural Reform	Korea Rural Community Corp	Hanyang Corp	11.05 ~ 13.10	Land Enabling Works : Earth Works 421,033 m3 Structure Works : 136,408 m3 Foundation Works - RCD D2000 : 268 Nos, D1500 : 150 Nos
GS Yeosu Caltex Wharf Expansion	GS Caltex	GS Caltex	11.08 ~ 12.06	Marine Enabling Works JETTY(Steel Pile 124 Nos)
STC #2 Wharf	Samsung Total Petrochemical Co., Ltd	Samsung C&T	12.02 ~ 13.08	JACKET Installation : 19 Nos Trestle Pier & C/W Pier : 26 Nos (Dia 914 mm, H=45~48m)
Samchuck Green Power – Marine Enabling Works	KOSPO	Hyundai Development Company	13.02 ~ 15.01	Berth, JACKET Installation : 21 Nos Foundation Work : Steel Pile (D914mm) 160 Nos Deck Frame Instalation

3. Temp. Shoring, Pile & Foundation for Civil & Building

U.A.E Dubai Metro Red & Green Line



■ **Project : Dubai Metro Red & Green Line**
Dubai, U.A.E (2006.01~2008.02)

■ **Client : Dubai Municipality / R.T.A**

■ **Contractor : JT Metro, Obayashi JV**

■ **Amount : 27,380 K**

■ **Work Scope :**

* Union Square Station

- Diaphragm Wall (T=0.6~1.2M) : 186,721 m2
- Barrette Pile (T=1.2M): 3,205m (H=43m)
- Bored Piling (D0.8~1.0M) : 1,230 Nos

3. Temp. Shoring, Pile & Foundation for Civil & Building

■ **Project : Upgrading Al Salam Street and Abu Dhabi City Ring Road Contract No.1 (Salam Street Tunnel) Abu Dhabi, U.A.E (2008.09~2009.12)**

■ **Client : Abu Dhabi Municipality**

■ **Contractor : Samsung C&T - Saif Bin Darwish JV**

■ **Amount : 42,100 K**

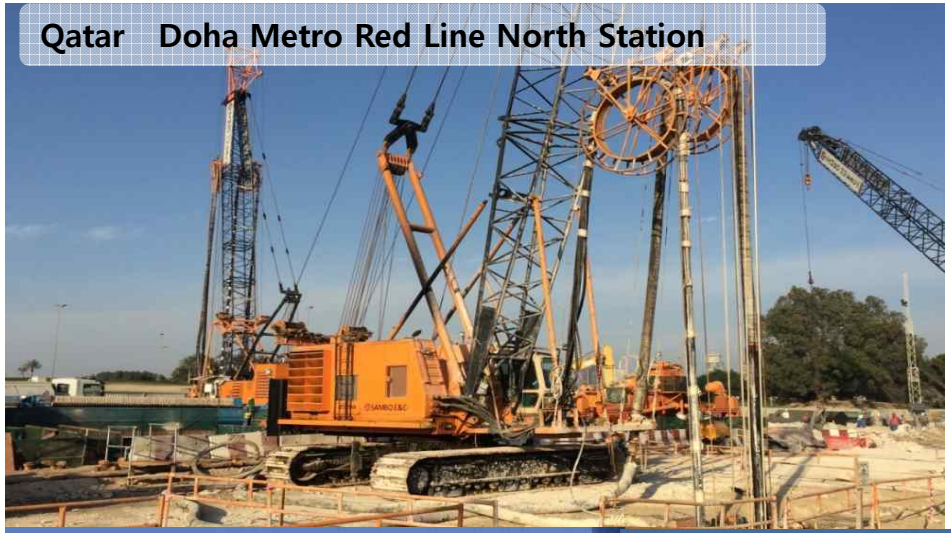
■ **Work Scope : Temp Shoring, Pile & Grouting Works**

- Diaphragm Wall (T=0.8M) : 81,039 m3
- Secant Pile Wall (T=0.8M) : 6,318 m3
- Bored Piling (Bell Type) : 2,494 Nos
- Earth Anchor : 48,161 m (2,833 Nos)
- Jet Grouting : 4,560 m3

3. Temp. Shoring, Pile & Foundation for Civil & Building

- **Project : STEP Deep Sewer Tunnel Contract-1**
  Abu Dhabi, U.A.E (2011.03~2012.12)
- **Client : Abu Dhabi Sewer Service Company (ADSSC)**
- **Contractor : Samsung C&T**
- **Amount : 9,724 K**
- **Work Scope : Temp Shoring & Earth Works**
  - Diaphragm Wall for Circular Shaft
  - Main Shaft : 5 Nos
    (I.D 12.0~15.0m, T=1.0~1.2m, Max Depth= 53m)
  - Access Shaft : 4 Nos
    (I.D 8.0m, T=0.8~1.0m, Max Depth=51m)

3. Temp. Shoring, Pile & Foundation for Civil & Building



- Project : Doha Metro Red Line North WBS, WBC Station
  True Golf Course CB-Wall
  Qatar(2014.02~2015.04)
- Client : Qatar Railway Company
- Contractor : Impregilo-SK-Galfar JV
- Amount : USD 1st 7,994 K & 2nd 3,940 K
- Work Scope :
  - Diaphragm Wall (WBS & WBC Station)
    1) Thickness=800 mm & Depth = 36 ~ 52m
    2) Work Volume = 39,307m3
  - Diaphragm Wall (True Golf Course)
    1) Thickness=800 mm & Depth = 36 ~ 42m
    2) Work Volume = 39,307m3

3. Temp. Shoring, Pile & Foundation for Civil & Building

■ **Project : Marina Bay Sands Integrated Resort**
Development Package-2250
Construction Contract for Piling and Diaphragm Walls
Singapore(2007.05~2007.12)

■ **Client : Marina Bay Sands PTE., Ltd**

■ **Amount : 120,695 K**

■ **Work Scope : Diaphragm Wall, Piling, Jet Grouting**

- Diaphragm Wall (T=0.8~1.5m) : 109,180m2 (H=65m)
- Bored Pile (D=1.0~2.2m) : 623 Nos (H=60m)
- Jet Grouting : 61,025m2

■ **Project : Marina South Parcels A1 to A4**
Singapore(2012.01~2013.09)

■ **Client : MS Residential 1,2 PTE., Ltd**

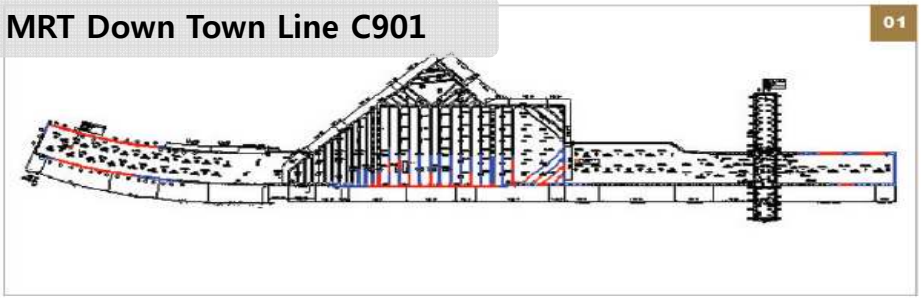
■ **Amount : 169,130 K**

■ **Work Scope : Diaphragm Wall, Barrette Pile(Depth : 87m),**
Bored Pile(Max Depth : 106m)

- Diaphragm Wall (T=0.8~1.5m) : 51,124 m2 (H=54m)
- Barrette Pile (T=1.5m) : 128 Nos (H=87m)
- Bored Pile (D=0.8~1.5m) : 707 Nos

3. Temp. Shoring, Pile & Foundation for Civil & Building

MRT Down Town Line C901



■ **Project : Contract 901 Design, Construction and Completion of Marina Bay Station Stage 1 Singapore (2008.02~2009.09)**

■ **Client : LTA**

■ **Contractor : Samsung C&T**

■ **Amount : 68,857 K**

■ **Work Scope : Diaphragm Wall, Barrette Pile & Bored Pile**

- Diaphragm Wall (T=0.8~1.5m) : 93,623m2 (H=38m)
- Barrette Pile (T=1.2m) : 73 Nos (Max H=55m)
- Bored Pile (D=0.8~1.2m) : 321 Nos

■ **Project : Contract 902 Design, Construction and Completion of Promenade Station And Associated Tunnels for Downtown Line Stage 1 Project. Singapore (2009.01~2010.05)**

■ **Client : LTA(Land Transport Authority)**

■ **Contractor : Shanghai Tunnel Engineering**

■ **Amount : 21,403 K**

■ **Work Scope : Diaphragm Wall**

- Diaphragm Wall (T=0.8~1.5m) : 37,995m2

3. Temp. Shoring, Pile & Foundation for Civil & Building

MRT Down Town Line C921

- **Project : Contract 921 Design, Construction and Completion of Rocher Road Station Stage 1 Singapore (2009.11~2012.12)**
- **Client : LTA**
- **Contractor : Ssang Yong E&C**
- **Amount : 56,525 K**
- **Work Scope : Diaphragm Wall, Cross Wall, Bored Pile**
  - Diaphragm Wall (T=1.2m) : 112,850m2 (H=38~45m)
  - Cross Wall (T=1.0m) : 25,736m3
  - Bored Pile (D=0.8~2.2m) : 426 Nos (H=40~50m)

3. Temp. Shoring, Pile & Foundation for Civil & Building

- **Project : Wan Chai Bypass C001 (2011.07~2014.08)**
- **Client : CEDD**
- **Contractor : Chun Wo-China Railway GL-MBED JV**
- **Amount : 26,414 K**
- **Temporary Shoring & Pile Foundation Works**

[Diaphragm Wall]

- Thicknesses : 1.0 ~ 1.5m (Max Depth=60m),
- Total Volume : 41,972m3.

Barrette Pile (T=1.5m) : 30 Nos (Max Depth=60m)

- **Project : Wan Chai Bypass C002 (2011.02~2015.12)**
- **Client : CEDD**
- **Main Contractor : Chun Wo – China Railway GL JV**
- **Amount : 28,435 K**
- **Temporary Shoring Works**

[Diaphragm Wall]

- Thicknesses : 1.0 ~ 1.2m,
- Total Volume : 48,142m3.

3. Temp. Shoring, Pile & Foundation for Civil & Building

- **Project : Wan Chai Bypass C019 (2011.09~2013.02)**
- **Client : Highway Department**
- **Contractor : Chun Wo - CRGL - MBEG JV**
- **Amount : 42,893 K**
- **Temporary Shoring Works**

Diaphragm Wall and Barrette Pile

- Thicknesses : 1.5m,
- Total Volume : 82,500m3.

- **Project : Shatin to Central Link C1109 (2012.09~2015.08)**
- **Client : MTRC**
- **Contractor : Samsung C&T - Hsin Chong JV**
- **Amount : 70,936 K**
- **Temporary Shoring Works**

Diaphragm Wall and Cross Wall

- Thicknesses : 1.2m (Max Depth 42.2m)
- Total Volume : 68,889m3.

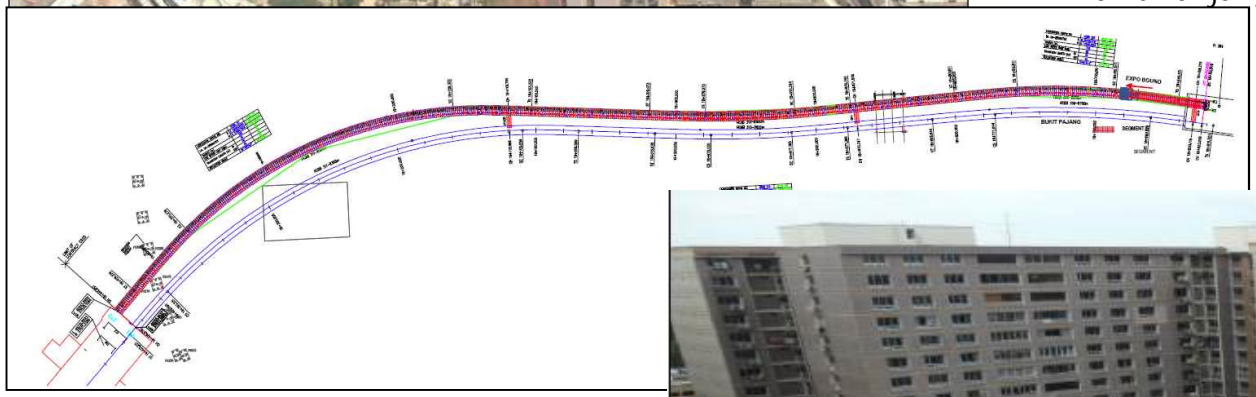
Jet Grouting and Curtain Grouting

3. Temp. Shoring, Pile & Foundation for Civil & Building

- **Project : Downtown Line Section C925 (2013.02~2015.06)**
- **Client : LTA (Land Transport Authority)**
- **Contractor : GS E&C**
- **Amount : 15,602 K**
- **Tunnel Works – Tunnel Boring Machine (D6.5m)**

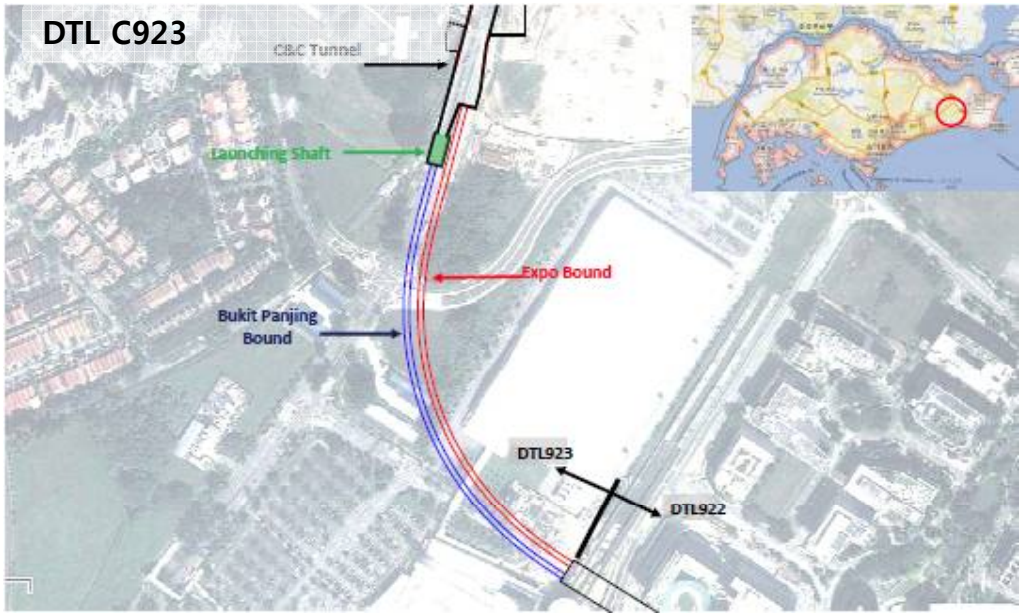
  Tampines Central Station ~ Tampine East Station

  - Expo Bound : 816m,
  - Bukit Panjang Bound : 794m.



SAMBO E&C
ENGINEERING & CONSTRUCTION

3. Temp. Shoring, Pile & Foundation for Civil & Building

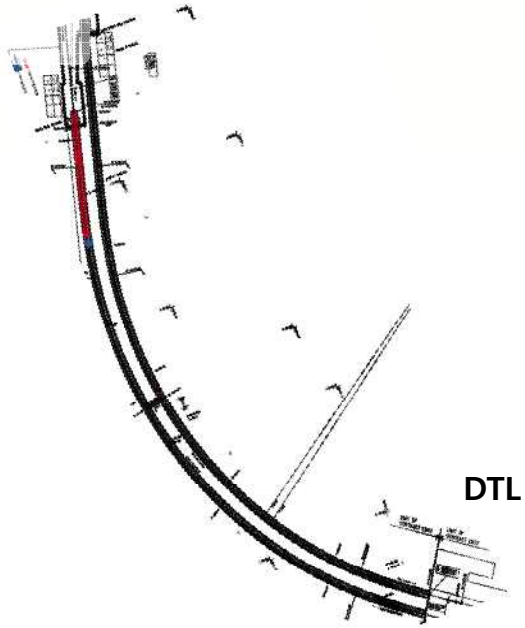


- **Project : Downtown Line Section C923 (2012.06~2015.01)**
- **Client : LTA (Land Transport Authority)**
- **Contractor : Samsung C&T**
- **Amount : 11,518 K**
- **Tunnel Works – Tunnel Boring Machine (D6.5m)**

  C&C Tunnel ~ DTL 922 Boundary

  - Expo Bound : 533m,
  - Bukit Panjang Bound : 488m.

Cut & Cover Tunnel



DTL C922

3. Temp. Shoring, Pile & Foundation for Civil & Building

- **Project : Banghak-Dobong Electric Power Supply Tunnel**
  Seoul, Republic of Korea (2009.06~2012.09)
- **Client : KEPCO(Korea Electric Power Corporation)**
- **Contractor : GS E&C**
- **Amount : 13,771 K**
- **Tunnel Works – Tunnel Boring Machine (D3.5m)**
  - Length : 2,306m,

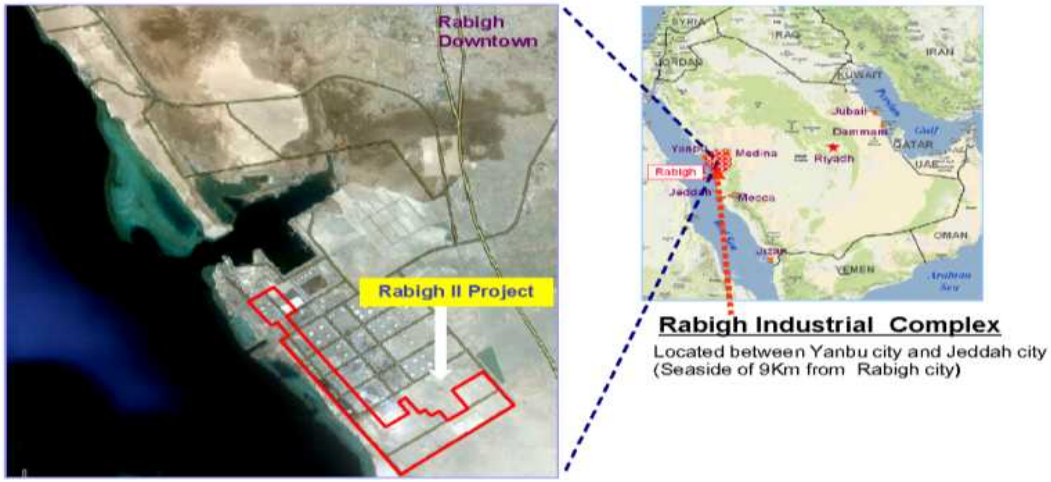
3. Temp. Shoring, Pile & Foundation for Civil & Building

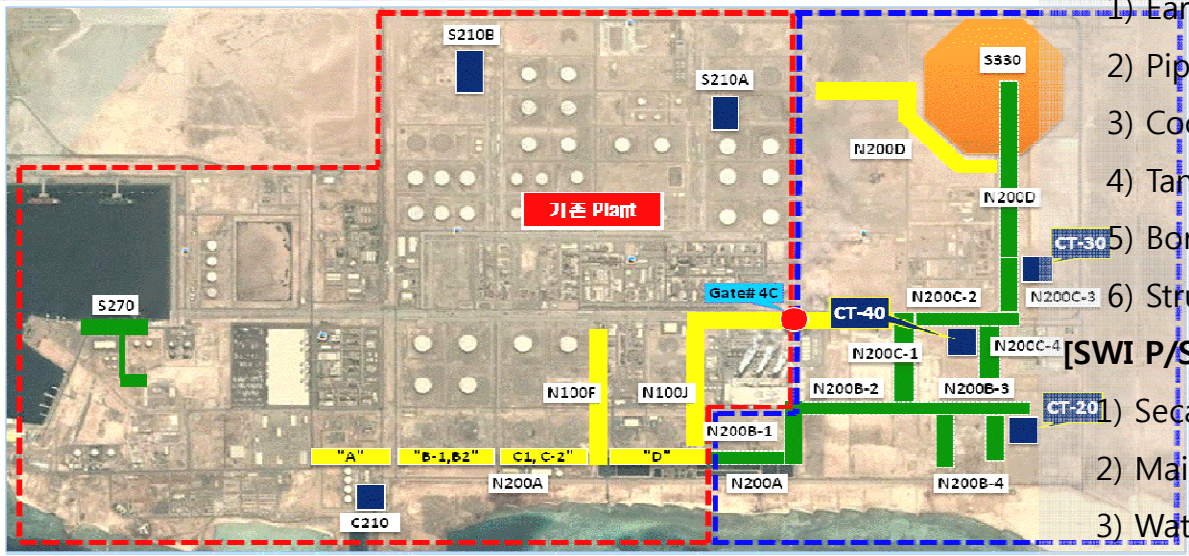
Other Tunnel Work Experiences (NATM & TBM)

Project Name	Client	Contractor	Const Period	Major Work Items
High Speed Railway - Suseo~Pyungtaaek #3-2	Korea Railroad Corporation (KTX)	GS E&C	12.06 ~ 16.12	Tunnel Works (NATM) - Vertical Shaft #7, Working Shaft M5 & M6 - Horizontal Shaft : M5 & M6 - Total Excavation : 440,793 m3
Gangnam Belt Way Section #5 (Shiheung-Woomyeon)	Gangnam Beltway Co., Ltd	Doosan E&C	13.09 ~ 16.06	Tunnel Works (NATM) - I.D = 11.2m, L=2,359 m
Bujeon ~ Masan Double Track Railway	Smart Rail Co., Ltd	SK E&C	15.06 ~ 19.09	Temp Shoring Works - Diaphragm Wall : 21,383 m3 Tunnel Works (Open & NATM) - Main Tunnel : 15,908m (Open Cut 10,567m) - Shaft #3 : 6,627 m
High Speed Railway - Icheon~Chungju #3	Korea Railroad Corporation (KTX)	Hanyang E&C	15.06 ~ 19.09	Tunnel Works (NATM) - I.D = 11.2m, L=2,082 m
Singapore Thomson Line Contract 213	LTA	Samsung C&T	15.10 ~ 17.06	Tunnel Works (NATM) – for Station - I.D = 12.4 & 16.8m, - 2 Arch Tunnel & 3 Arch Tunnel
Korea Highway - Iksan ~ Jangsu #6	Korea Highway Corp	GS E&C	02.10 ~ 06.11	Tunnel Work (TBM) - I.D = 11.2m (4 Lane, Highway) - L = 4,588m
Korea Highway -Doonduk ~ Jusam (Suchun Tunnel)	Korea Highway Corp	Bosung E&C	05.06 ~ 09.01	Tunnel Works (NATM) - I.D = 7.8m, L=1,294 m + 150m - 2 Arch Tunnel

4. Petro-Chem, Refinery, Power & Industrial Plants

K.S.A Petro Rabigh 2 UO1, Civil & SWI Package





■ **Project : Petro Rabigh 2 UO1, Civil & SWI P/S Pkg**
K.S.A (2013.02~2015.06)

■ **Client : Petro Rabigh Company**
(Saudi Aramco & Smitomo JV)

■ **Contractor : GS E&C**

■ **Amount : USD 22,840 K (Civil) + 8,759 K(SWI)**

■ **Work Scope :**

[Civil Pkg]

- Site Enabling Works & Structure Works
  1) Earth Works = 145,503 m3
  2) Pipe Rack & Sleeper = 1,301 & 852 Nos (254 Types)
  3) Cooling Tower : 50x40m 2EA, 75x40m 1EA
  4) Tank Foundation : 6 Nos (Dia 15 ~ 60m)
  5) Bored Pile (D=0.6m) : 244 Nos
  6) Structures : Sump Pit & Others

[SWI P/S Pkg] – Build New SWI into the Existing SWI

1) Secant Pile Wall for SWI P/S (D=0.8m) = 1,596m3
2) Main Structure of Seawater Intake Pump Station
3) Water Tight Frame (256.7 Ton) Install & Removal
4) Shield Curtain & Water Tight Grouting Works

4. Petro-Chem, Refinery, Power & Industrial Plants

■ **Project : Yanbu-3 Desalination Plant Seawater Intake Pkg**
K.S.A (2013.09~2016.03)

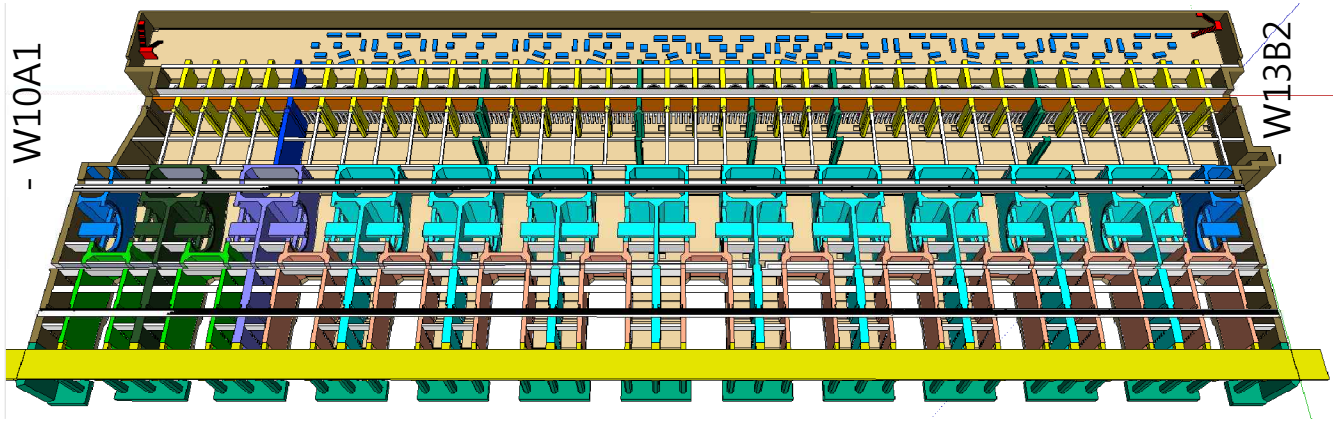
■ **Client : Saline Water Conversion Corporation (SWCC)**

■ **Contractor : Doosan Heavy Industries**

■ **Amount : USD 46,030 K**

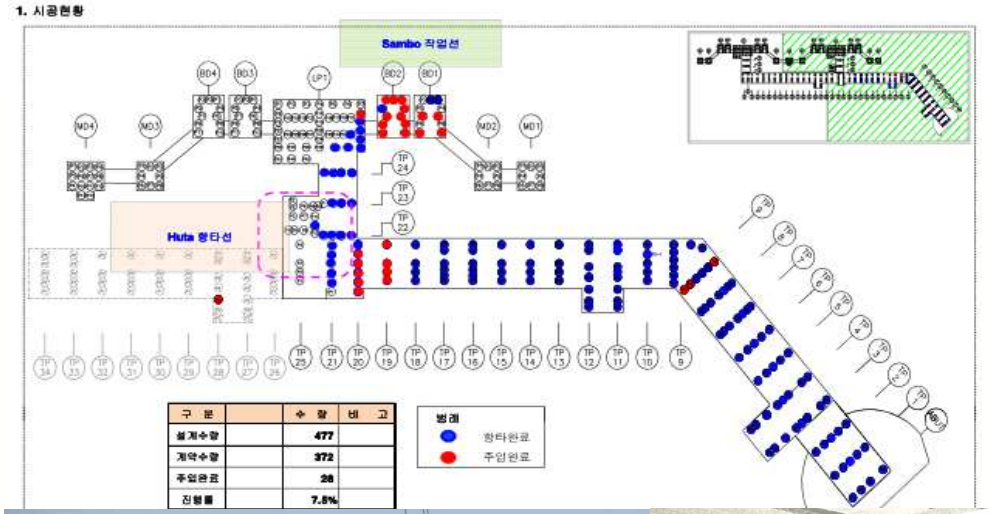
■ **Work Scope :**

- Diaphragm Wall & CB Wall for New Seawater Intake
  1) Thickness=800 & 650mm & Depth = 26~28m
  2) Work Volume = 16,188m3
- Excavation Works = 250,830 m3
- Main Structure of Seawater Intake Pump Station
  = 54,160 m3



4. Petro-Chem, Refinery, Power & Industrial Plants

KSA Jeddah South Thermal Power Plant



■ **Project : Jeddah South Thermal Power Plant**
K.S.A (2015.03~2015.09)

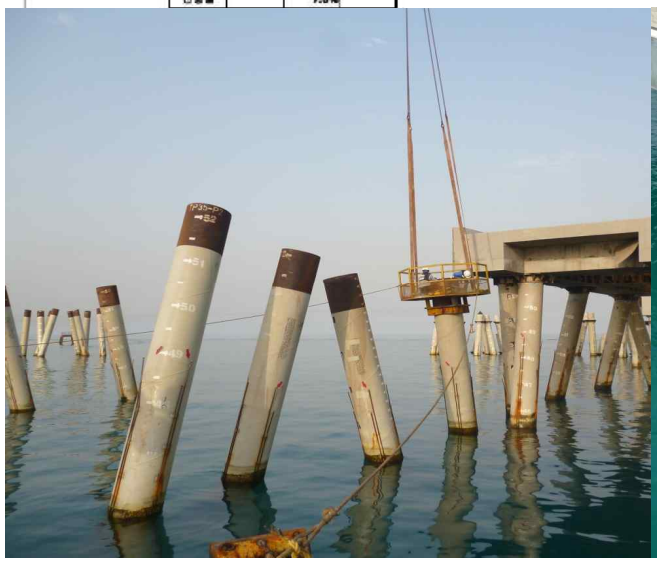
■ **Client : Saudi Electricity Company (S.E.C)**

■ **Contractor : Hyundai Heavy Industries**

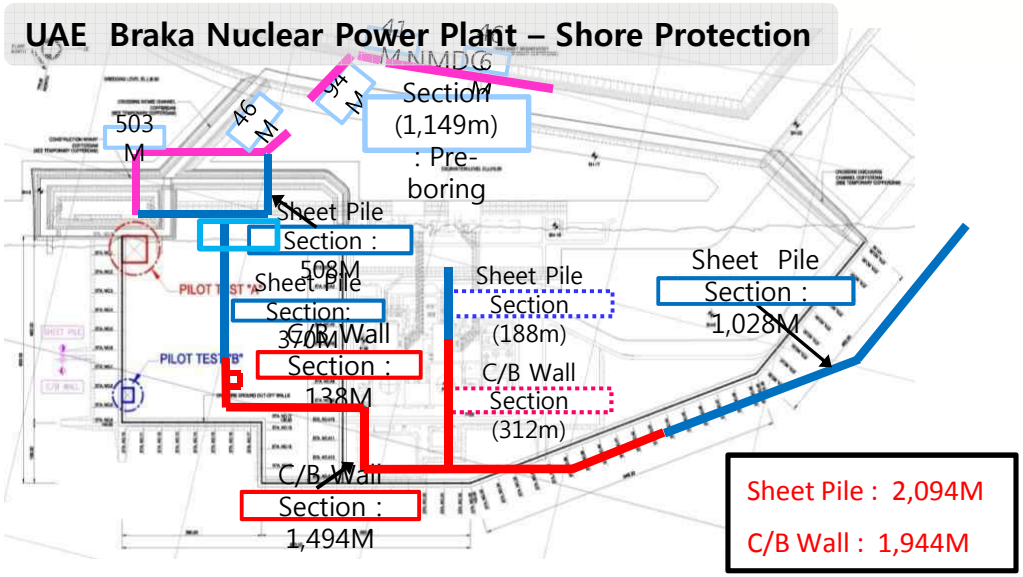
■ **Amount : USD 2,377 K**

■ **Work Scope : Grouting Works for Enforcing Existing Bored Piles**

- Grouting of Pile : 372 Nos + 13 Nos (V/O)
- Additional Grouting Works : L/S



4. Petro-Chem, Refinery, Power & Industrial Plants



■ **Project : Al Suwaihat I.W.P.P S2 SWI P/S Project**

U.A.E (2009.01~2010.05)

■ **Client : Abu Dhabi Water & Electricity Authority (ADWEA)**

■ **Contractor : SK E&C**

■ **Amount : USD 12,571 K**

■ **Work Scope : Civil Enabling & Structure Works**

[Civil Enabling Works]

- Earth Works : 45,471m3

[Structure Works]

- Con'c & Form Work : 1,725m3 & 4,897 m3
- Small Structures (Duct Bank, Manhole, Sump Pit & Etc)

■ **Project : Braka Nuclear Power Plant Project**

U.A.E (2011.08~2011.12)

■ **Client : Emirate Nuclear Energy Corporation (ENEC)**

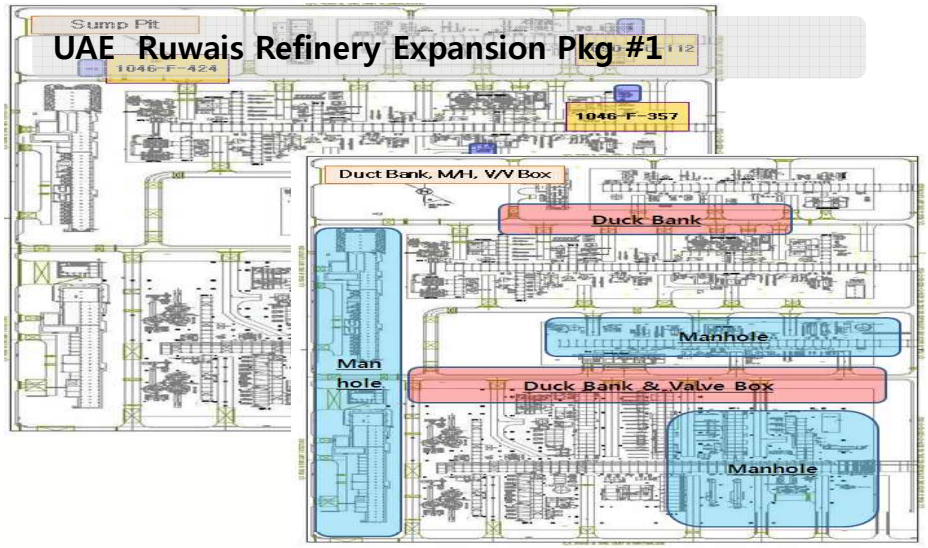
■ **Contractor : Hyundai E&C & Samsung C&T JV**

■ **Amount : USD 11,725 K**

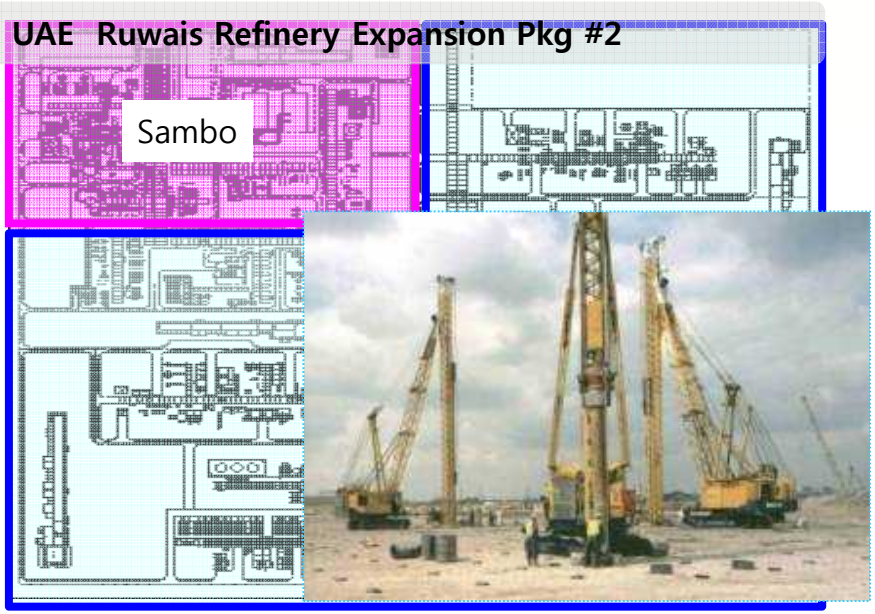
■ **Work Scope : Shore Protection Works**

- Cement Bentonite Wall (T=0.8m) : 30,816 m2 (H=22m)
- Sheet Pile : 2,094 m

4. Petro-Chem, Refinery, Power & Industrial Plants



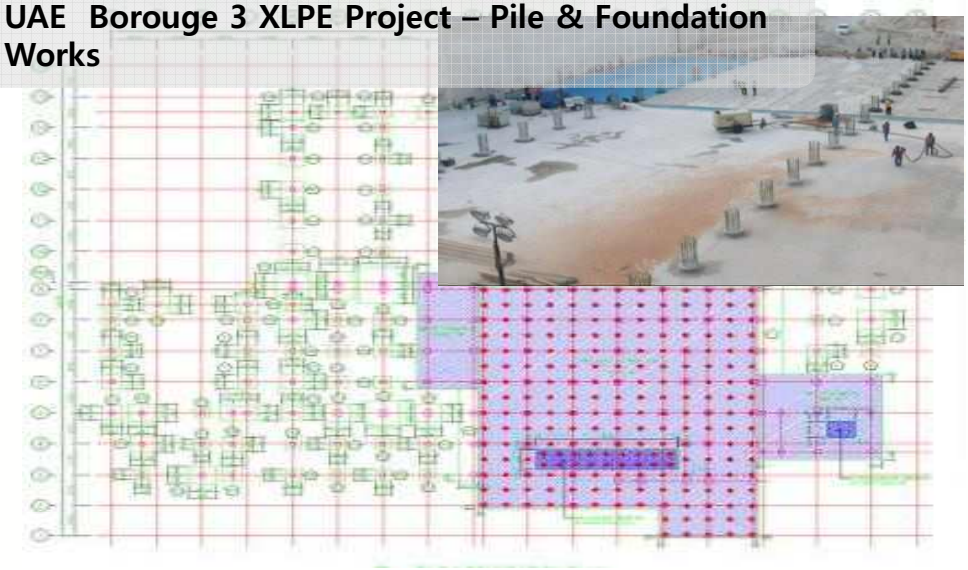
- **Project : Ruwais Refinery Expansion Pkg #1 Project**
  U.A.E (2011.07~2013.08)
- **Client : Abu Dhabi Refinering Company (TAKREER)**
- **Contractor : SK E&C**
- **Amount : USD 8,664 K**
- **Work Scope : Civil Enabling & Structure Works**
  - Earth Works : 45,471m3
  - Con'c & Form Work : 1,725m3 & 4,897 m3
  - Small Structures (Duct Bank, Manhole, Sump Pit & Etc)



- **Project : Ruwais Refinery Expansion Pkg #2 Project**
  U.A.E (2011.07~2013.08)
- **Client : Abu Dhabi Refinering Company (TAKREER)**
- **Contractor : GS E&C**
- **Amount : USD 46,887 K**
- **Work Scope : Bored Piles, Foundation & Civil Enabling Works**
  - Bored Pile (D=0.6m) : 9,345 Nos (H=22m)
  - Secant Pile (D=0.8m): 755 Nos
  - Structural Steel Work: 472 Ton
  - Road & Paving Work: 41,000 m2

4. Petro-Chem, Refinery, Power & Industrial Plants

UAE Borouge 3 XLPE Project – Pile & Foundation Works

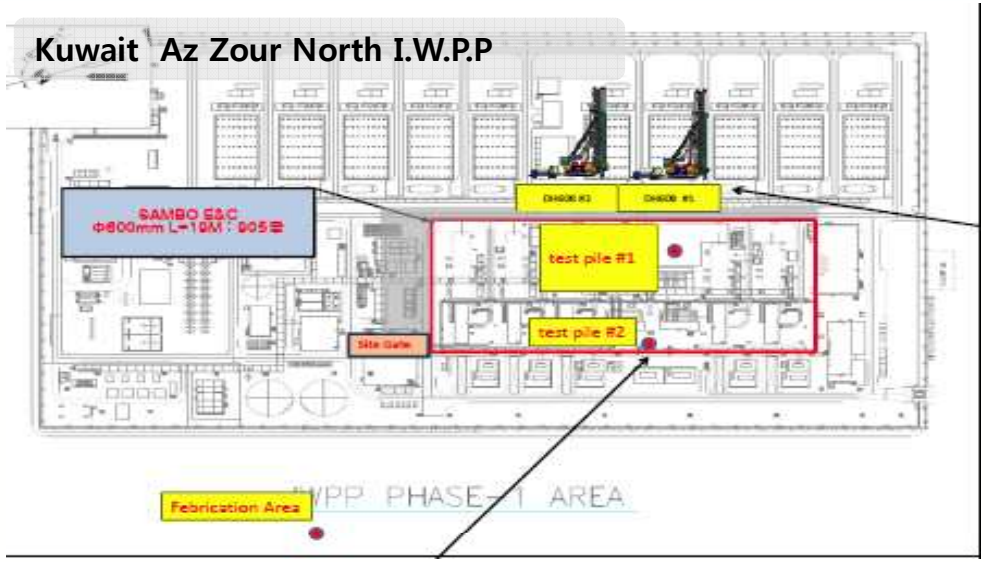


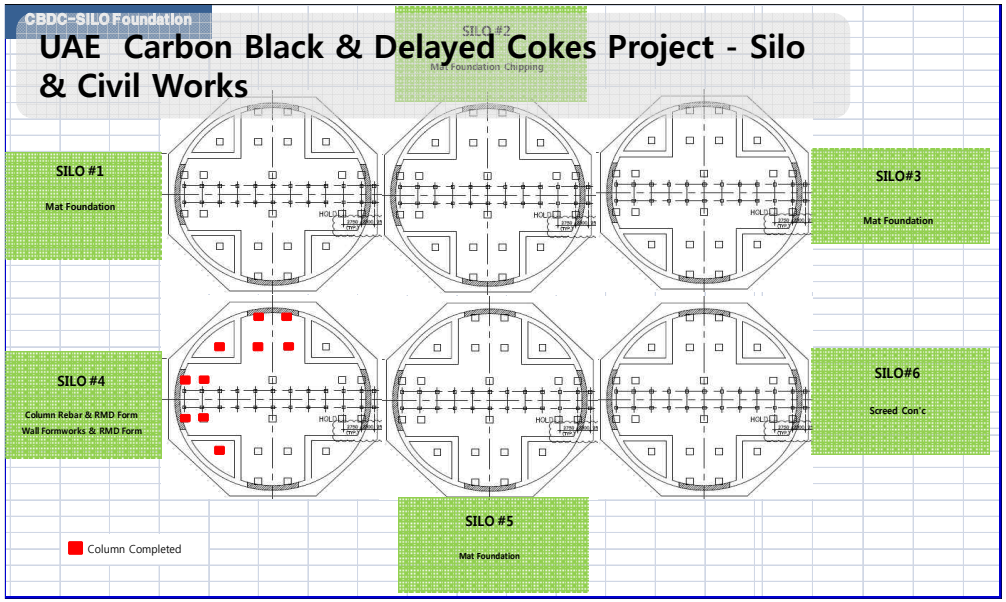
- **Project : Borouge 3 XLPE Project**
  UAE (2011.06~2012.06)
- **Client : Borouge**
  (Abu Dhabi National Oil Company + Borealis JV)
- **Contractor : Hyundai E&C**
- **Amount : USD 5,113 K**
- **Work Scope : Bored Piles & Foundation Works**
  - Bored Pile (D=0.8m) : 304 Nos (H=12m)
  - Earth Work : 29,267 m3
  - Con'c & Form Works : 3,957m3 & 3,32m2

UAE Inter Refinery Pipeline 2 Project

- **Project : Inter Refinery Pipeline Project**
  U.A.E (2012.07~2015.02)
- **Client : Abu Dhabi Refinering Company (TAKREER)**
- **Contractor : GS E&C**
- **Amount : 18,002 K**
- **Work Scope : Foundation & Structure Works**
  - Earth Works : 274,840 m3
  - Con'c & Form Work : 8,831 m3 & 33,588 m2
  - Rebar & Steel Work : 1,194 & 1,218 ton

4. Petro-Chem, Refinery, Power & Industrial Plants





- **Project : Az Zour North Independent Water & Power Plant Project**
  Kuwait (2013.09~2014.04)
- **Client : Partnership Technical Bureau (P.T.B)**
- **Contractor : Hyundai Heavy Industries**
- **Amount : 3,516 K**
- **Work Scope : Bored Piles**
  - Bored Pile (D=0.6m) : 905 Nos (H=14~21m)
  - Test Pile (D=0.8m) : 2 Nos

Corporate Identity

Global Leading Foundation Company

The whole world is our customer
We do our best endeavor for customer's satisfaction

SAMBO E&C Co. Ltd.

Leading of the Market & Construction Technique

Strengthen of the Market Power

The Best Technique Of Civil Engineering

Specialized Equip. & Know-How in Special Work Types

Securing a high level of Consumer Brand Awareness