

The Best Solution for the Best Plant

Company Introduction

 CANDO CO., LTD.

Contents

- 01 CEO Message
- 02 History
- 03 Sustainability
- 04 Role And Responsibility
- 05 Design Software
- 06 Organization
- 07 Technical Manpower
- 08 Certificate
- 09 Major Experience

1. CEO Message



The best technology and quality solutions for customer satisfaction.

Since its establishment in 2001 with fully experienced engineers, CANDO has been making an effort to provide the best quality and outstanding technology with project management, engineering, and procurement etc. in various fields such as oil refinery, petrochemicals, power generation and industrial plant as a full range of engineering company.

With the outstanding engineers and top technology in the domestic and overseas projects, we are making sustainable growth through the innovative technology and quality improvement devoted on human resources, experiences and technologies to create superior products and services, thereby contributing to the customer satisfaction.

CANDO will continually step forward to make an excellent business partner with more professional and valuable engineering management, and will provide our best engineering service to ensure customer satisfaction and a bright future to employees.

We appreciate all customers for their support and promise to deliver best solutions for customer's values.

Thank you.

2. History

2001~ NOW

2023.

- **Nov** Selection of Seoul-type small and medium-sized enterprises
- **Feb** Headquarter office in Yeoksam-dong

2022.

- **Apr** The best partner of Lotte E&C

2021.

- **Apr** The best partner of Lotte E&C

2020.

- **May** An outstanding partner of Lotte E&C

2019.

- **Sep** An outstanding partner to celebrate the 60th anniversary of Lotte E&C
- **Apr** An outstanding partner of Lotte E&C

2018.

- **May** An outstanding partner of Lotte E&C

2017.

- **Oct** Headquarter moved to Sangil-dong
- **Apr** Achievement award prize from Samsung Engineering
An outstanding partner of Lotte E&C

2016

- **Apr** An outstanding partner of Lotte E&C

2011.

- **Apr** Achievement award prize from Samsung Engineering

2010.

- **Nov** Acquisition of ISO9001 Certificate
- **Apr** An outstanding partner of Lotte E&C

2008.

- **Jul** Special achievement award prize from Samsung Engineering

2005.

- **Mar** Headquarter office in Gasan-dong
- **Jan** Registered at The Korea Engineering and Consulting Association

2012.

- **Dec** Acquisition of trade business number

2001.

- **Nov** Acquisition of a business license for mechanical facility construction
- **Feb** Founded as CANDO

3. Sustainability

■ Quality Management

Our quality management system has been established to satisfy all requirements of ISO9001, and all executives and staff are fully aware of the quality management system and quality policy and fulfill their responsibilities to realize it.

The management establishes, implements, and maintains a quality system to achieve the quality policy and goals, and all our executives and employees comply with the regulations of the quality management system in all activities in accordance with business performance and realize customer satisfaction through continuous improvement.

3. Sustainability

■ Goal

- Ensuring customer satisfaction by meeting quality standards and project schedule
- Achieve excellent grade in performance evaluation and annual comprehensive assessment

■ Achievements

2022. Selected as The best partner of Lotte E&C

2021. Selected as The best partner of Lotte E&C

2020. Selected as an outstanding partner of Lotte E&C

2019. Selected as an outstanding partner to celebrate the 60th anniversary of Lotte E&C

Selected as an outstanding partner of Lotte E&C

2018. Selected as an outstanding partner of Lotte E&C

2017. Awarded achievement award from Samsung Engineering

Selected as an outstanding partner of Lotte E&C

2016. Selected as an outstanding partner of Lotte E&C

2011. Awarded achievement award from Samsung Engineering

2010. Selected as an outstanding partner of Lotte E&C

2008. Awarded special achievement award from Samsung Engineering

3. Sustainability

■ Customer Satisfaction

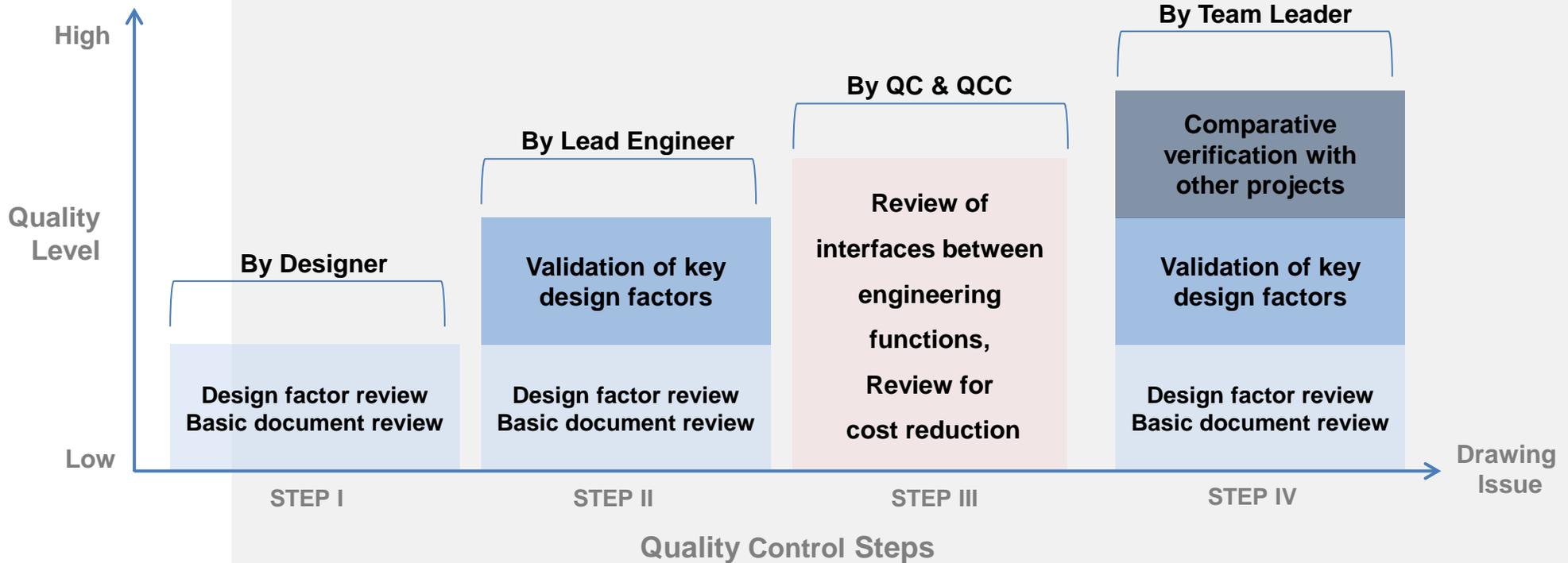
CANDO operates a customer satisfaction survey and service complaint handling process to improve our services provided to customers.

For customer dissatisfaction that occurs during project execution, the project manager directly listens to customer complaints through the service complaint handling system and seeks solutions.

At the end of the project, customer satisfaction survey is conducted to identify the improvement items of the quality management system and reflect them in the management review to continuously improve the quality management system.

3. Sustainability

Customer Satisfaction

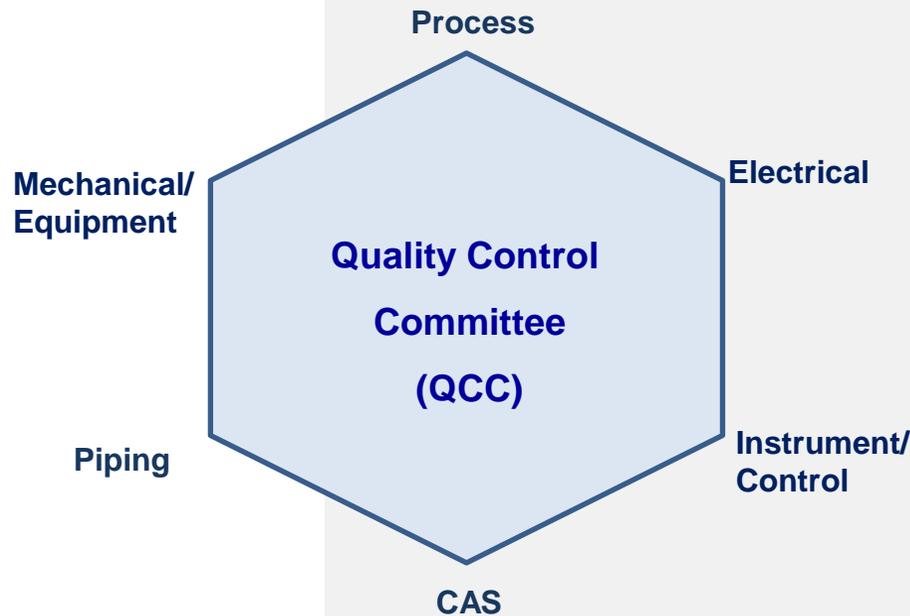


Engineering deliverables are evaluated for engineering quality according to the review items for each document and each reviewer, and the latter reviewer verifies design errors due to the previous reviewer's omissions and engineering capabilities.

The engineer is responsible for the design by reviewing for each item, and the follower reviewer guarantees the engineer's design quality.

3. Sustainability

■ Quality Control Committee



The CEO chairs the committee and appoints people with more than 20 years of engineering experience for each type of engineering as a member to seek ways to improve quality.

The main issues discussed in this Quality Control Committee are as follows.

- ▶ Finding cases of major quality problems per month
- ▶ Identify the causes of quality problems related to multi-functional works to prevent recurrence
- ▶ Monitor corrective action items and action results
- ▶ Design verification through 3D model review

When the monthly meeting is over, major issues are shared with each engineering team leader, and actions taken are given feedback.

3. Sustainability

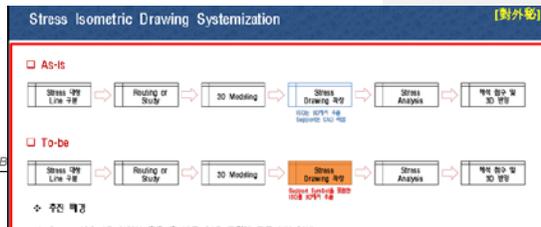
■ Preventive Quality Management

◎ Quality control activities through BP/LL competition

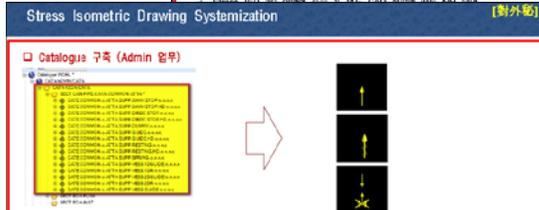
제 4회 BP/LL 경진대회

[4EOA Project]
BP : Stress Isometric Drawing Systemization

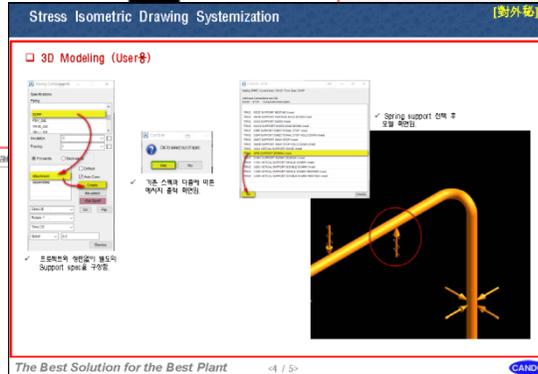
[對外秘]



The Best Solution for the Best Plant



The Best Solution for the Best Plant



The Best Solution for the Best Plant

All CANDO employees record BP(Best Practices) and LL(Lessons Learned) during project execution.

Through sharing the LL recorded by each member, the same type of quality problem is prevented from reoccurring, and this contributes to the improvement of the engineering procedure.

In addition, an annual BP/LL contest is held to encourage recording of BP or LL, creating a forum for sharing best practices.

BP and LL collected every year are converted into a database for each project and used as educational materials before starting a new project, and are linked to proactive management of quality problems.

4. Role And Responsibility

FIELD OF SERVICE

- Project Feasibility Study
- Project Management
- FEED Work
- Engineering
 - Basic Design
 - Detail Design
 - Procurement Service
 - 3D Modeling
 - Field Engineering
- Procurement Service

APPLICABLE PLANT

- Petrochemical Plant
- Refinery Plant
- Gas Processing Plant
- Chemical, Fertilizer, Fine Chemical Plant
- Food Factory, Paper Mill
- Power Plant
- Industrial Plant
- Semiconductor materials Plant & Advanced materials Plant

4. Role And Responsibility

PROCESS DESIGN

- Process Study
- Evaluation of Process Alternative
- Process Simulation
- Process Flow Diagram(PFD)
- Piping & Instrument Diagram(P & ID)
- Utility Flow Diagram(UFD)
- Hydraulic Calculation
- Process Equipment Data Sheet
- Process Instrument Data Sheet
- Cause & Effect Diagram
- PSV Load Calculation
- Flare system Design
- Operating Manual

MECHANICAL DESIGN

- Preparation of Engineering Specification
- Mechanical Data sheet
- Engineering Drawing
- Mechanical Calculation & Design
- Strength Calculation & Fabrication Drawing
- Preparation of Requisition
- Evaluation of Vendor's Quotation
- Check & Approval of Vendor Prints
- Heat Exchanger Thermal Rating(HTRI)

4. Role And Responsibility

PIPING DESIGN

- Preparation of Engineering Specification
- Plant Layout & Plot Plan
- 3D Modeling (PDS/PDMS/SP3D)
- Piping Arrangement Drawing
- Piping Stress Analysis
- Piping Isometric Drawing
- Line Schedule
- Piping Specialty Data Sheet
- Preparation of Bill of Material & Requisition
- Evaluation of Vendor's Quotation
- Check & Review of Vendor Prints

ELECTRICAL DESIGN

- Preparation of Engineering Specification
- Electrical Single Line Diagram
- Equipment Data Sheet and Specification
- Design for Power, Grounding, Lighting , Fire Alarm and Communication System
- Preparation of Bill of Material & Requisition
- Evaluation of Vendor's Quotation
- Check & Review of Vendor Prints
- 3D Modeling (PDS/PDMS/SP3D)
- Study & Calculation
 - Transformer/UPS/Battery Charger/Generator Capacity
 - Tray / Cable sizing
 - Ground Resistance
 - Intensity of Illumination
 - Load Flow , Voltage Drop, Short Circuit.
 - Current & Harmonic by E-TAP

4. Role And Responsibility

INSTRUMENT DESIGN

- Preparation of Engineering Specification
- Instrument Data sheet
- Instrument Index/Schedule
- Design of Control System(DCS/ESD),
Control valves and Field instrument
- Layout of Cable way, Wiring, Tubing/Piping
- Interlock Logic Diagram
- Loop Diagram / Hook-up Dwg.
- Preparation of Bill of Material &
Requisition Sheet
- Evaluation of Vendor's Quotation
- Check & Review of Vendor Prints
- 3D Modeling (PDS/PDMS/SP3D)

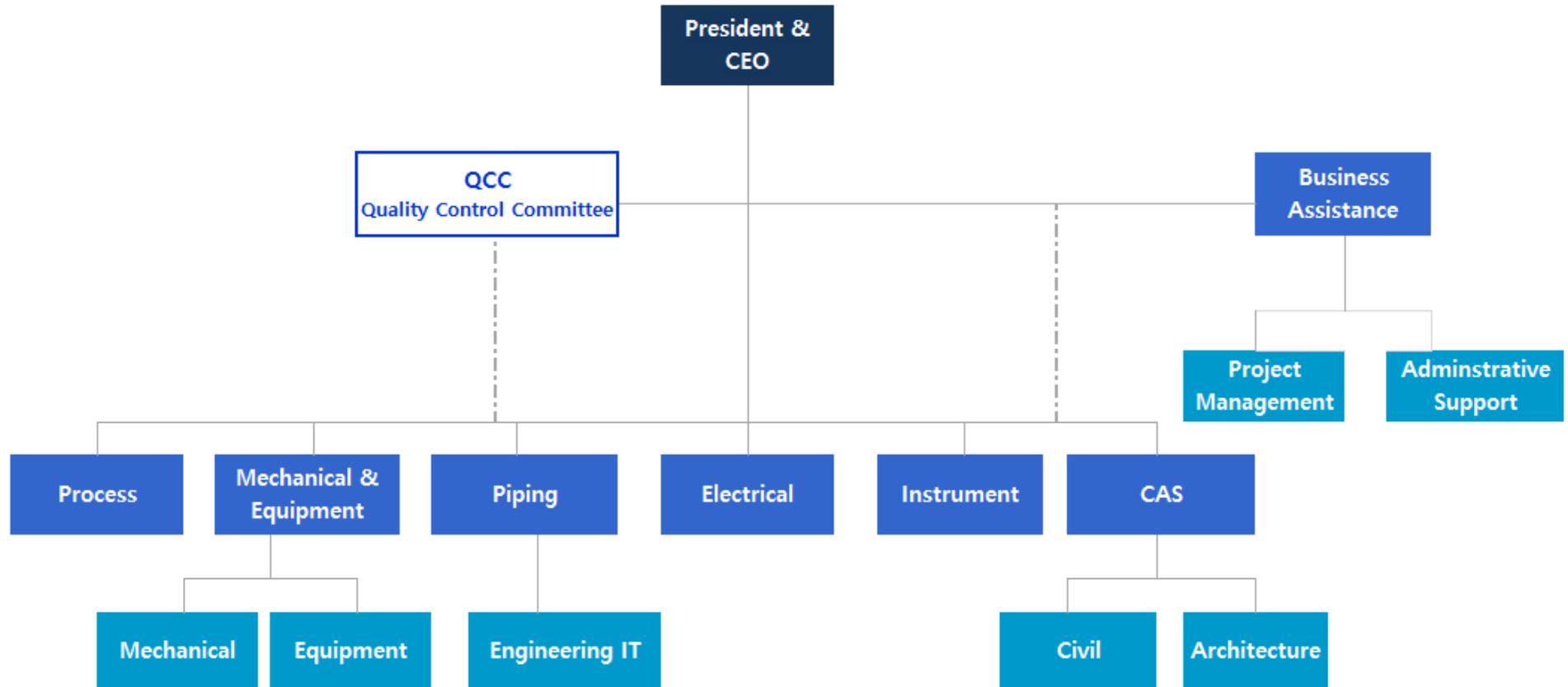
CIVIL / ARCHITECTURE DESIGN

- Preparation of Engineering Specification
- Soil Analysis
- Structural Analysis
- Structure/Building design
- Pile and Foundation Design
- Shop Drawing Check
- Preparation of Bill of Quantity
- Planning for Site Preparation
- Equipment Foundation Design
- Sewerage, Drainage Design
- Road & Paving Design
- Pit/Pond Design
- 3D Modeling (PDS/PDMS/SP3D)

5. Design Software

- Process Simulation
 - ASPEN Plus
- Process Hydraulic Calculation
 - Hydromaster
- Thermal Rating of Heat Exchangers
 - HTRI
- Piping Stress Analysis
 - CAESAR II
- Electrical Power System Analysis
 - E-TAP
- Strength Calculation for Pressure Vessels Heat Exchangers, Towers and Reactors
 - PV Elite
 - Compress
- Strength Calculation for API 650 Tanks :
 - iTank (Cando's In-House Program)
- Structural Analysis
 - MIDAS
- Computer Aided Design & Drafting :
 - PDMS(3D)
 - AutoCAD
 - Solid Works

6. Organization



7. Technical Manpower

(As of 1. 2024)

[MAN POWER]

Discipline	No. of Person
Project Management(EM)*	3
Process	6
Mechanical	8
Equipment	10
Piping	47
Electrical	13
Instrument	9
CAS	12
Administrative Support	2
Total	110

[QUALIFICATION]

Discipline	No. of Person
Professional Engineer Chemical Industry	2
Engineer General Machinery	5
Engineer Electricity (Engineer Electric Work)	4 (4)
Engineer Civil Engineering	3
Engineer Fire Protection (Electrical/Mechanical)	6(4/2)

7. Technical Manpower

[Career Classification of Engineer]

Discipline	Junior	Intermediate (incl. Professional Eng'r)	Senior	Top class	Average Career
Project Management (EM)*	1	1	0	1	12year
Process	1	1	2	2	17year
Mechanical	1	1	1	5	20year
Equipment	1	2	4	3	22year
Piping	8	15	14	8	17year
Electrical	3	6	3	1	15year
Instrument	2	4	2	1	18year
CAS	1	5	4	2	15year
Total	18	37	30	23	17.5year

[Personnel Using 3D CAD]

Class	PDS	SP3D	PDMS
NO.	43	47	45

[Business Assistance]

Description	Person
Project Management(EM)*	3
Administrative Support	2
Total	5

8. Certificate

발급번호 : 20220914-SG-00000104619

엔지니어링사업자 신고증			
명 칭	(주)칸두		
대표자성명	임호만	생년월일	1963.08.29
소재지	서울특별시 강동구 상일로6길 21 6층	전화번호 (FAX,E-Mail)	02-2023-6900 02-2023-6999
엔지니어링업	신고번호	계 E - 07 - 000032 호	
	기술부문	화학 등	4 개 부문
	전문분야	항공 등	5 개 분야
엔지니어링 컨설팅업	신고번호		
	기술부문	등	개 부문
	전문분야	등	개 분야
신고연월일	2005-01-28		
<p>「엔지니어링산업 진흥법」 제21조제1항 및 같은 법 시행규칙 제7조에 따라 위와 같이 신고하였음을 증명합니다.</p> <p style="text-align: center;">2022년 09월 14일</p> <p style="text-align: center;">한국엔지니어링협회장</p> 			

본 확인서는 한국엔지니어링협회(http://www.etas.or.kr)에서 발급된 증명서로 우측상단의 발급번호를 이용하여 문서의 발급여부를 확인 할 수 있으며
권위여부는 웹스토퍼 MaSmartDetector(MarAny, 마크에니) 검증 어플리케이션으로 확인할 수 있습니다.

ZERTIFIKAT ◆ CERTIFICATE ◆ 認證證書 ◆ CERTIFICADO ◆ CERTIFICAT



CERTIFICATE

The Certification Body
of TÜV SÜD Asia Pacific TÜV SÜD Group
certifies that

CANDO Co., Ltd.
6th-Fl. 21, Sangil-ro 6-gil,
Gangdong-gu, Seoul, 05288, Korea

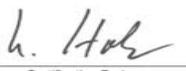
has established and applies
a Quality Management System for

**Project Management, Design and Engineering Service of
Petrochemical, Chemical, Refinery, Gas, Industrial,
power and Environmental Plants**

An audit was performed, Report No. **74955066**.
Proof has been furnished that the requirements according to

ISO 9001:2015

are fulfilled. The certificate is valid from **2020-01-22** until **2022-11-28**
Certificate Registration No.: **TUV100 01 1685**
2020-01-22


 Certification Body
of TÜV SÜD Asia Pacific
TÜV SÜD Group


Accreditation by the Joint Accreditation System
of Australia and New Zealand, Ltd.
www.jas-anz.com/iaf.html

TÜV SÜD Korea Ltd. • 25F, Two IFC, 10 Gukjeongmyung-ro, Yeongdeungpo-gu • Seoul, 07326 • Korea



8. CERTIFICATE

제 2022- 0782호

가족친화인증서

기업명 : 캔두

소재지 : 서울특별시 강동구 상일로6길 21 (상일동) 6층

유효기간 : 2022.12.01~2025.11.30

위 기업은 「가족친화 사회환경의 조성 촉진에 관한 법률」 제15조 제1항에 따라 우수한 가족친화경영 운영체제를 구축하고 가족친화제도를 운영함으로써 근로자의 일·생활 균형을 지원하고 국가경쟁력 향상에 기여하였기에 가족친화기업으로 인증합니다.

2022년 12월 01일

여성가족부장관



▪ 2022년 가족친화 인증 및 수여



8. CERTIFICATE



제 2023-184 호

「서울형 강소기업」 확인서

기업명 : ㈜캔두

소재지 : 서울시 강남구 테헤란로8길 21, 4층
(역삼동, 화인강남빌딩)

유효기간 : 2023. 11. 17. ~ 2025. 12. 31.

위 기업은 청년 일자리 창출과 일·생활균형
문화개선에 모범이 되는 중소기업으로서
서울시에서 선정한 '서울형 강소기업'임을
확인합니다.

2023년 11월 17일



서울특별시장 오 세



9. Major Experience

Domestic Project

CLIENT PLANT SITE	PROJECT NAME SERVICE	Scope of Work										PERIOD
		Process	Mechanical	Stationary	Piping	Electrical	Instrument	Civil	Architecture	Etc.		
PI Advanced Materials Jincheon, Korea	PIAM F2 Project Detail Engineering	○	○	○	○	○	○	○	○	○	HVAC Permit	2023.08 ~ 2024.07
Hyundai Engineering Co., Ltd Ulsan, Korea	S-OIL SHAHEEN Project PKG1 U&O Detail Engineering				○							2023.03 ~ 2026.10
Lotte Engineering & Construction Co., Ltd Ulsan, Korea	S-OIL SHAHEEN Project PKG2 U&O Detail Engineering	○	○	○	○	○	○	○	○	○		2023.02 ~ 2026.07
Lotte Engineering & Construction Co., Ltd Daesan, Korea	6BL INFRA-3 Project Detail Engineering					○						2023.01 ~ 2024.12
Lotte Engineering & Construction Co., Ltd Daesan, Korea	ES Plant Storage Tank Project Detail Engineering			○								2022.07 ~ 2023.12
Samsung Engineering Co., Ltd Ulsan, Korea	SECL S-OIL SHAHEEN PKG.#1 Detail Engineering			○								2022.04 ~ 2022.07
Hanwha Solutions Yeosu, Korea	Hydraulic Calculation for TDA Expansion Detail Engineering	○										2022.02 ~ 2022.08
Hanwha Engineering & Construction Co., Ltd Ansan, Korea	Ansan Hydrogen Production Plan Detail Engineering				○							2021.11 ~ 2021.12
Hanwha Engineering & Construction Co., Ltd Daesan, Korea	HTC ACP Plant Detail Engineering					○						2021.08 ~ 2023.08
Lotte Engineering & Construction Co., Ltd Yeosu, Korea	Lotte GS Chemical G1-C3 Project Bidding Design	○	○	○	○	○	○	○	○	○		2021.07 ~ 2021.09
Byucksan Engineering Co., Ltd Ulsan, Korea	Ulsan North Port LNG Terminal No.3 Detail Engineering								○			2021.06 ~ 2021.09
ORISYS Co., Ltd Ulsan, Korea	Samyangsa Ulsan No2 Plant Specialty Process Project Detail Engineering					○						2021.04 ~ 2021.05
Lotte Engineering & Construction Co., Ltd Daesan, Korea	Lotte Chemical D-NC, LPG Flexibility Pre-Study Project Detail Engineering				○							2021.04 ~ 2021.05
Hanwha Solutions Company Yeosu, Korea	Hydraulic Calculation for TDI Expansion Basic Engineering	○										2021.02 ~ 2021.12

9. Major Experience

Domestic Project

CLIENT	PROJECT NAME	Scope of Work										PERIOD
		Process	Mechanical	Stationary	Piping	Electrical	Instrument	Civil	Architecture	Etc.		
PLANT SITE	SERVICE											
Lotte Engineering & Construction Co., Ltd	LTGS G1 Project											
Yeosu, Korea	Detail Engineering	○	○	○	○	○	○	○	○		2020. 07 ~ 2022. 03	
Lotte Engineering & Construction Co., Ltd	HPC #2PPU Project											
Daesan, Korea	Detail Engineering	○	○	○	○	○	○	○	○		2019. 09 ~ 2021. 12	
Hanwha Engineering & Construction Co., Ltd	Hanwhasolution DEHCH Expansion Project											
Ulsan Korea	EM, Detail Engineering, Government Approval	○	○	○	○	○	○	○	○	FF, HVAC	2018. 12 ~ 2020. 09	
Hyundai Engineering Co., Ltd	HPC NCC Unit											
Daesan, Korea	Detail Engineering			○							2019. 10 ~ 2020. 12	
Lotte Engineering & Construction Co., Ltd	Lotte Chemical #4EOA Project											
Yeosu, Korea	Detail Engineering				○						2019. 02 ~ 2020. 12	
Hanwha Engineering & Construction Co., Ltd	HNC YNCC NCC#2 Revamping											
Yeosu, Korea	Detail Engineering			○	○						2019. 02 ~ 2021. 04	
Samsung Engineering Co., Ltd	Samsung Electro-Mechanics P2 Project											
Daesan, Korea	Detail Engineering		○					○			2018. 11 ~ 2019. 12	
Lotte Engineering & Construction Co., Ltd	Lotte Chemical EC/DMC Plant Revamp Project											
Yeosu, Korea	Detail Engineering				○	○	○		○		2018. 02 ~ 2019. 09	
SCT Co., Ltd	WARKER L/7935 Site Extension Ulsan Project											
Ulsan, Korea	Detail Engineering							○	○		2017. 11 ~ 2019. 08	
Lotte Engineering & Construction Co., Ltd	Lotte Chemical POE Project											
Yeosu, Korea	Detail Engineering				○	○					2017. 11 ~ 2018. 12	
Lotte Engineering & Construction Co., Ltd	Lotte Chemical LPEL Tank Project											
Yeosu, Korea	Detail Engineering		○	○							2016. 03 ~ 2017. 01	

9. Major Experience

Domestic Project

CLIENT	PROJECT NAME	Scope of Work										PERIOD
		Process	Mechanical	Stationary	Piping	Electrical	Instrument	Civil	Architecture	Etc.		
PLANT SITE	SERVICE											
Lotte Engineering & Construction Co., Ltd Daesan, Korea	Lotte Chemical DEOA Project Detail Engineering		○									2015. 05 ~ 2016. 09
POSCO E&C Yeosu, Korea	Kumho Petrochemical MDI Project Detail Engineering				○							2015. 09 ~ 2017. 05
Lotte Engineering & Construction Co., Ltd Yeosu, Korea	Lotte Chemical IP(C5) Project Detail Engineering		○	○	○							2014. 12 ~ 2016. 07
DongKwang Chemical MFG Co., Ltd Onsan, Korea	Dongkwang Chemical CO ₂ Plant PM, Detail Engineering, Government Approval, Basic Engineering	○	○	○	○	○	○	○	○	○	FF, HVAC	2014. 04 ~ 2015. 12
Samsung Techwin Co., Ltd	Samsung Techwin Natural Gas Compression Station Basic Engineering	○										2013. 06 ~ 2013. 07
Samsung Engineering Co., Ltd Daesan, Korea	Samsung Total EO Revamp Project Detail Engineering			○								2011. 05 ~ 2012. 05
Samsung Engineering Co., Ltd Daesan, Korea	Samsung Total No2 Aromatic Complex Project Detail Engineering			○	○							2011. 04 ~ 2013. 12
Hansol EME Co., Ltd Ulsan, Korea	Hansol Chemical Hydro-peroxide Plant EM, Detail Engineering, Government Approval	○	○	○	○	○	○	○	○	○	FF, HVAC	2011. 04 ~ 2012. 02
Samsung Engineering Co., Ltd Yeosu, Korea	Cheil Industries No. 2 DPC/PC Plant Detail Engineering				○	○	○	○	○	○		2011. 02 ~ 2012. 07
Samsung Engineering Co., Ltd Yeosu, Korea	Honam Petrochemical NCC Expansion Project Detail Engineering			○	○			○	○			2010. 10 ~ 2012. 03
Lotte Engineering & Construction Co., Ltd Yeosu, Korea	Honam Petrochemical P2(4PP)-Project / P2(INFRA)-Project EM, Detail Engineering, Government Approval	○	○	○	○	○	○					2010. 10 ~ 2012. 03
Samsung Engineering Co., Ltd Onsan, Korea	S-Oil Para-Xylene & Off-site Plant Detail Engineering	○										2009. 05 ~ 2010. 09

9. Major Experience

Domestic Project

CLIENT	PROJECT NAME	Scope of Work									PERIOD
		Process	Mechanical	Stationary	Piping	Electrical	Instrument	Civil	Architecture	Etc.	
PLANT SITE	SERVICE										
Lotte Engineering. & Construction Co., Ltd Yeosu, Korea	Honam Petrochemical B Project (BD Plant & Off-site) EM, Detail Engineering, Government Approval	○	○	○	○	○	○			FF	2009. 05 ~ 2010. 09
Hansol EME Co., Ltd Ulsan, Korea	Ulsan Sewage Sludge Incineration Plant Detail Engineering				○						2009. 02 ~ 2009. 12
Samsung Engineering Co., Ltd Ulsan, Korea	S-Oil Refinery Expansion Plant Detail Engineering			○	○						2008. 07 ~ 2010. 03
Lotte Engineering. & Construction Co., Ltd Ulsan, Korea	KP Chemical OS Tank Terminal Project Detail Engineering							○			2008. 03 ~ 2009. 12
Samsung Engineering Co., Ltd Daesan, Korea	Lotte Daesan Petrochemical PP Plant Detail Engineering			○	○						2006. 10 ~ 2007. 10
Samsung Engineering Co., Ltd Daesan, Korea	Lotte Daesan Petrochemical EO/EG Plant Detail Engineering	○		○				○			2006. 08 ~ 2007. 08
Samsung Engineering Co., Ltd Daesan, Korea	Samsung Total PP Plant Detail Engineering		○	○	○						2006. 01 ~ 2007. 01
Samsung Engineering Co., Ltd Daesan, Korea	Samsung Total NCC/C4/BTX Plant Expansion Detail Engineering	○		○	○						2005. 12 ~ 2007. 06
Samsung Engineering Co., Ltd Daesan, Korea	Samsung Total SM Plant Expansion Detail Engineering			○	○						2005. 10 ~ 2007. 06
LG Daesan Petrochemical Co., Ltd Daesan, Korea	LG Daesan Petrochemical BR/SBR Revamping Project Detail Engineering	○									2005. 11 ~ 2006. 02
Samsung Engineering Co., Ltd Incheon, Korea	Topan Photomask Korea ICE2 Project Detail Engineering	○									2005. 08 ~ 2005. 11
Korea Gas Technology Corp Incheon, Korea	KOGAS DME DEMO Plant Detail Engineering	○	○	○	○	○	○	○	○		2005. 02 ~ 2006. 02
Samsung Engineering Co., Ltd Ulsan, Korea	Samsung Fine Chemical No. 5 HEMC Plant Detail Engineering							○	○		2005. 02 ~ 2005. 09
Korea Gas Corp Incheon, Korea	KOGAS DME Pilot Plant Detail Engineering	○	○	○	○	○	○	○	○		2005. 02 ~ 2005. 08

9. Major Experience

Domestic Project

CLIENT	PROJECT NAME	Scope of Work										PERIOD
		Process	Mechanical	Stationary	Piping	Electrical	Instrument	Civil	Architecture	Etc.		
PLANT SITE	SERVICE											
Samsung Engineering Co., Ltd Daesan, Korea	Samsung Total Aromatic Plant Expansion Detail Engineering		○	○	○						2004. 07 ~ 2005. 03	
Samsung Engineering Co., Ltd Daesan, Korea	Samsung Petrochemical PTA Plant Expansion Detail Engineering		○	○	○				○		2003. 11 ~ 2004. 08	
Samsung Engineering Co., Ltd Cheonan , Korea	Lotte Samkang Oil Refinery Plant Detail Engineering			○	○						2003. 07 ~ 2004. 06	
Samsung Engineering Co., Ltd Daesan, Korea	Samsung Atopina C9 TA Project Detail Engineering			○							2003. 06 ~ 2004. 06	
Samsung Engineering Co., Ltd Ulsan, Korea	Samsung Fine Chemical Electrolysis/MC Plant Detail Engineering										2003. 01 ~ 2003. 07	
Samsung Engineering Co., Ltd Ulsan, Korea	Caprolactam Expansion Plant Detail Engineering		○	○	○						2002. 06 ~ 2003. 08	
Samsung Engineering Co., Ltd Ulsan, Korea	Samsung Fine Chemical No 4 HEMC Plant PM, Detail Engineering, Government Approval								○	○	2002. 09 ~ 2003. 06	
Samsung Engineering Co., Ltd Yeosu, Korea	Honam Petrochemical No.3 Air Separation Plant Detail Engineering		○						○		2002. 07 ~ 2002. 12	
Samsung Engineering Co., Ltd Boryung, Korea	KEPI 100kW MC Fuel Cell Plant PM, Detail Engineering, Government Approval		○								2002. 01 ~ 2002. 09	
Samsung Engineering Co., Ltd Daesan, Korea	Samsung Genneral Chemical Aromatic/NCC Revamping Detail Engineering			○							2002. 01 ~ 2002. 05	
Samsung Engineering Co., Ltd Onsan, Korea	Korea Petroleum Donghae Gas-1 Gas Treatment Plant Detail Engineering		○						○		2001. 06 ~ 2002. 08	
Samsung Engineering Co., Ltd Yeosu, Korea	Air Liquid Kores No. 2 HYCO Gas Plant Detail Engineering			○	○				○		2001. 05 ~ 2002. 12	
Samsung Engineering Co., Ltd Yeosu, Korea	Hanwha Petrochemical Ethylene Dichloride No.3 Plant Detail Engineering			○					○	○	2001. 05 ~ 2002. 09	
Samsung Engineering Co., Ltd Ulsan, Korea	Samsung Fine Chemical BTP Plant Detail Engineering			○							2001. 02 ~ 2001. 09	

9. Major Experience

Overseas Project

CLIENT		PROJECT NAME		Scope of Work								PERIOD	
PLANT SITE		SERVICE		Process	Mechanical	Stationary	Piping	Electrical	Instrument	Civil	Architecture		Etc.
Lotte Engineering & Construction Co., Ltd		LINE WP4 U&O Plant			○								2021. 12 ~ 2023. 04
	Merak, Indonesia	Detail Engineering											
Lotte Engineering & Construction Co., Ltd		LINE WP2 Project				○							2021. 12 ~ 2023. 03
	Merak, Indonesia	Detail Engineering											
Lotte Engineering & Construction Co., Ltd		LINE WP2 Project			○								2021. 12 ~ 2022. 11
	Merak, Indonesia	Detail Engineering											
Lotte Engineering & Construction Co., Ltd		LINE WP3 BD/BTX Plant		○	○	○	○	○	○	○	○		2021. 11 ~ 2024. 12
	Merak, Indonesia	Detail Engineering											
Hyundai Engineering Co., Ltd		Ultra Clean Fuel (UCF) Diesel Euro V Project				○							2021. 08 ~ 2022. 01
	Rayong, Thailand	Detail Engineering											
Hyundai Engineering Co., Ltd		Ultra Clean Fuel (UCF) Diesel Euro V Project					○						2021. 08 ~ 2022. 12
	Rayong, Thailand	Detail Engineering											
Hyundai Engineering Co., Ltd		PKN Olefins Expansion Project				○							2021. 06 ~ 2021. 10
	Poland	Bidding Design											
POSCO E&C Co., Ltd.		Thailand PTT GSP7 Project					○						2021. 06 ~ 2021. 07
	Rayong, Thailand	Bidding Design											
Samsung Engineering Co., Ltd		USA Lotte MEG Debottlenecking					○	○	○	○	○		2021. 05 ~ 2021. 07
	Lousiana, USA	Detail Engineering											

9. Major Experience

Overseas Project

CLIENT	PROJECT NAME	Scope of Work									PERIOD
		Process	Mechanical	Stationary	Piping	Electrical	Instrument	Civil	Architecture	Etc.	
PLANT SITE	SERVICE										
Samsung Engineering Co., Ltd	Optimum Shah Gas Expansion(FEED) Project				○						2020. 11 ~ 2021. 02
UAE	Basic Engineering										
Samsung Engineering Co., Ltd	Malaysia Shell Rosmari & Majoram OGP(Feed)	○									2020. 06 ~ 2020. 12
Sarawak, Malaysia	Basic Engineering										
Samsung Engineering Co., Ltd	SAUDI Aramco HUGRS Project				○						2020. 01 ~ 2021. 08
Saudi Arabia	Detail Engineering										
Lotte Engineering & Construction Co., Ltd	Lotte Chemical LCTM Boiler Project			○	○	○					2019. 01 ~ 2020. 03
Malaysia	Detail Engineering										
Samsung Engineering Co., Ltd	Thai Oil Clean Fuel Project		○								2018. 12 ~ 2019. 12
Sriracha, Thailand	Detail Engineering										
Samsung Engineering Co., Ltd	BAPCO Modernization Program	○									2018. 09 ~ 2019. 06
Bahrain	Detail Engineering										
Samsung Engineering Co., Ltd	ADNOC Refining Crude Flexibility			○							2018. 04 ~ 2019. 12
Ruwais, UAE	Detail Engineering										
Toyo Engineering Korea	Bangkok Synthetic Expansion								○		2018. 12 ~ 2019. 11
Thailand	Detail Engineering										
Samsung Engineering Co., Ltd	JUPC EO/EG Project							○			2018. 08 ~ 2019. 05
Jubail, Saudi Arabia	Detail Engineering										
Samsung Engineering Co., Ltd	PTTGC Olefins Reconfiguration Project				○	○	○	○	○	FF, HVAC	2017. 08 ~ 2019. 07
Thailand	EM, Detail Engineering										

9. Major Experience

Overseas Project

CLIENT	PROJECT NAME	Scope of Work										PERIOD
		Process	Mechanical	Stationary	Piping	Electrical	Instrument	Civil	Architecture	Etc.		
PLANT SITE	SERVICE											
Samsung Engineering Co., Ltd Rayong, Thailand	PTTGC Propylene Oxide Project EM, Detail Engineering		○	○	○	○	○	○	○	○	FF, HVAC	2017. 08 ~ 2019. 03
Samsung Engineering Co., Ltd Johar, Malaysia	PETRONAS RAPID PKG 6A LLDPE Project EM, Detail Engineering		○		○	○	○	○	○			2016. 02 ~ 2017. 06
Samsung Engineering Co., Ltd Louisiana, USA	Lotte Chemical LA MEG-1 Project EM, Detail Engineering				○	○	○	○	○		FF, HVAC	2015. 11 ~ 2017. 05
Lotte Engineering & Construction Co., Ltd Pasir Gudang, Johar Malaysia	Lotte Chemical TPP3 Project Detail Engineering		○	○	○	○	○	○	○			2016. 05 ~ 2018. 02
Samsung Engineering Co., Ltd Iraq	DGS Zubair Oil Field Development Project EM, Detail Engineering				○	○	○	○	○		FF, HVAC	2014. 06 ~ 2016. 05
Samsung Engineering Co., Ltd Azerbaijan	SOCAR Ammonia/Urea Project Detail Engineering				○							2014. 06 ~ 2016. 05
Hyundai Engineering Co., Ltd Qarshi in outhern Uzbekistan	Uzbekistan GTL Gas To Liquid Project Detail Engineering			○								2014. 03 ~ 2019. 04
Hanwha Engineering & Construction Co., Ltd Umm Wu'al, Saudi Arabia	Saudi Arabian Mining Ma'aden PAP Project Detail Engineering	○	○	○	○	○	○	○	○			2014. 02 ~ 2015. 05
POSCO Engineering Co., Ltd Rayong, Thailand	PTT Phenol Train II Project Detail Engineering				○							2013. 07 ~ 2014. 10
Samsug Engineerinf Co., Ltd Yanbu, Saudi Arabia	Saudi Aramco Luberef Yanbu Reifnery Expansion Detail Engineering		○	○								2013. 02. ~ 2014. 03
Daewoo E & C Co., Ltd Akkas, Iraq	Kogas CPF Akkas Gas Field Project Detail Engineering	○										2013. 02 ~ 2014. 02
Samsung Engineering Co., Ltd Altarmira, Mexico	Compression Altamira Natural Gas Compression Station EM, Detail Engineering	○	○	○	○	○	○	○	○		FF, HVAC	2013. 01 ~ 2014. 04
Lotte Chemical Corp Akchalak, Uzbekistan	Lotte Chemical UGCC Polymer PDP Basic Engineering	○			○	○	○					2012. 10 ~ 2013. 10

9. Major Experience

Overseas Project

CLIENT	PROJECT NAME	Scope of Work										PERIOD
		Process	Mechanical	Stationary	Piping	Electrical	Instrument	Civil	Architecture	Etc.		
PLANT SITE	SERVICE											
Samsung Engineering Co., Ltd Ruweis, UAE	UAE Takreer CBDC Project Detail Engineering		○	○	○					○	2012 ~ 2014	
Samsung Engineering Co., Ltd Akchalak, Uzbekistan	UGCC PP Project, Uzbekistan Detail Engineering	○	○	○	○	○	○	○	○		2012. 08 ~ 2013. 12	
Hansol EME Co., Ltd Brazil	Anhoa Paper High Quality Paper Mill Plant Detail Engineering				○						2010. 07 ~ 2012. 10	
Samsung Engineering Co., Ltd Ruweis, UAE	Abu Dhabi Gas Company UTOS for Gas Plant Detail Engineering	○									2010. 06 ~ 2012. 06	
Samsung Engineering Co., Ltd Jubail, Saudi Arabia	Saudi JER#3 Project Detail Engineering			○							2010. 04 ~ 2011. 04	
Samsung Engineering Co., Ltd Yanbu, Saudi Arabia	Ibn Rushd-II PTA DBN Project_FEED Detail Engineering				○		○				2010. 02 ~ 2010. 09	
Samsung Engineering Co., Ltd Skikda, Algeria	Skikda Refinery Project Detail Engineering	○	○	○							2009. 07 ~ 2011. 03	
Samsung Engineering Co., Ltd Ba Ria Vung Tau, Vietnam	PFCC CO ₂ Recovery Project Detail Engineering			○							2009. 01 ~ 2011. 03	
Samsung Engineering Co., Ltd Kayan, Saudi Arabia	Saudi Kayan Amine Plant Detail Engineering			○							2008. 02 ~ 2008. 10	
Hansol EME Co., Ltd Porano, Brazil	Norske Paper Mill Plant Detail Engineering				○						2007. 09 ~ 2008. 04	
Samsung Engineering Co., Ltd Saudi Arabia	Saudi Arabian Mining Ma'aden Ammonia Plant Detail Engineering	○									2007. 08 ~ 2008. 09	
Hansol EME Co., Ltd Hebei, China	Hebei Pan Asia Pater Waste Incineration & Steam Boiler System Detail Engineering				○						2007. 07 ~ 2008. 04	
Samsung Engineering Co., Ltd Vietnam	Phu My Fertilizer Urea Off-Site Plant Detail Engineering	○									2002. 09 ~ 2003. 02	



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