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INTRODUCTION

Since its establishment in 2003, GLOTEC Engineering has been delivering comprehensive engineering services, including feasibility studies, basic design, detail engineering, procurement support, and field engineering with supervising works. GLOTEC Engineering provides these services to address client needs of various industries such as Oil and Gas, Energy, Power generation, Semiconductor and Industrial plant business.

Especially we are actively responding to customer needs based on the advanced engineering technology such as Smart 3D Modeling, BIM 4D & 5D design, and Reverse engineering using laser scanner in the virtual spaces. GLOTEC Engineering will continue to step forward and provide excellent engineering solutions that ensure customer satisfaction and trust.



OVERVIEW



- 2023. Sep. Awarded as an outstanding job-creating company Jun. Awarded the Silver Tower Order of Industrial Service
 - Jan. Established GLOTEC USA Inc. in Atlanta, USA
- 2022. Jan. Registered at KEEA for Elec. Power Design License
- 2021. Sep. Certified as a Management Innovation SMEs
- 2020. Jun. Registered at Construction Technical Consultancy License
 - Jun. Registered at Architects of KE&CA
 - Api. Registered at Firefighting Supervision License
- 2019. Jun. Joined to Korea Plant Industries Association (KOPIA)
 - Jun. Certified as a Global Leading Company from KICOX
 - 2018. Sep. Renewal of Registered ISO 9001: 2015 Certification
 - Sep. Moved office to SK V1 Center, Gasan-dong, Seoul
- 2012. Aug. Established the affiliated research institute
- **2011.** Mar. Registered at the International Contractors Association of Korea
- 2009. Dec. Obtained ISO 9001: 2009 Certification
 - **2008.** Dec. Registered at the Korea Engineering & Consulting Association (Comply with Engineering & construction law and regulation)
 - May Moved office to JEI PRAZE Building, Gasan-dong, Seoul
 - Feb. Company name changed to Glotec Engineering Co. Ltd.,
 - 2003. Mar. Founded as Plantech ENG corporation

SINCE







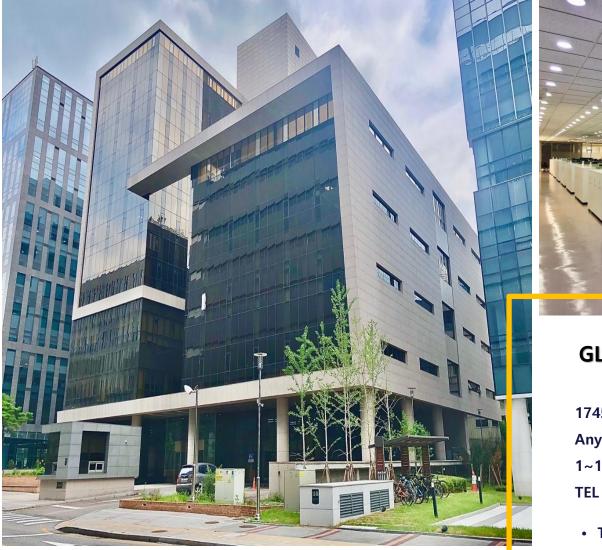
Head Office

12~14th Floor, Gasan SK V1 Center 171, Gasan Digital 1-ro, Geumcheon-gu, Seoul, Korea TEL: 82-2-6345-7000, FAX: 82-2-6345-7020

WEB : <u>www.gteng.co.kr</u>

- EMAIL: <u>gteng@gteng.co.kr</u>
- 8,170 M² (87,940 square feet)
 - 530 Desks, 13 Meeting Rooms
- Number of Employees: 641 Persons (include 24 staffs)







GLOTEC Digital Center

1745-1,Gwanyang-dong Dongan-gu, Anyang-si, Gyeonggi-do, Korea 1~10 Floors, Glotec Digital Center Bldg., TEL: +82-2-6244-8315

• Total Floor Area : 16,060 M2









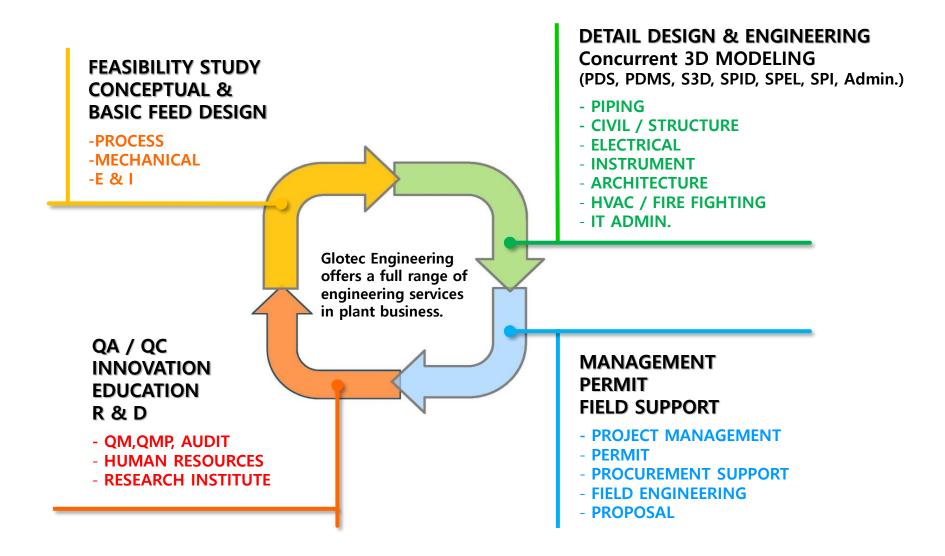
GLOTEC Engineering USA Inc.

1180 Satellite BLVD NW, STE 200, Suwance, Atlanta, Georgia, USA

TEL: 470-915-0188

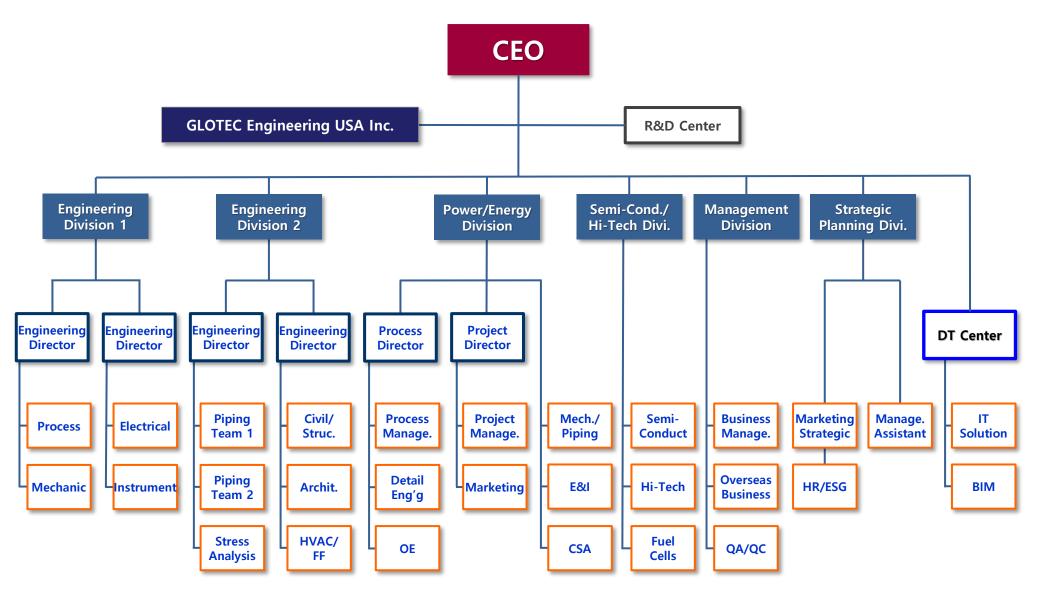


ROLE AND RESPONSIBILITY





ORGANIZATION



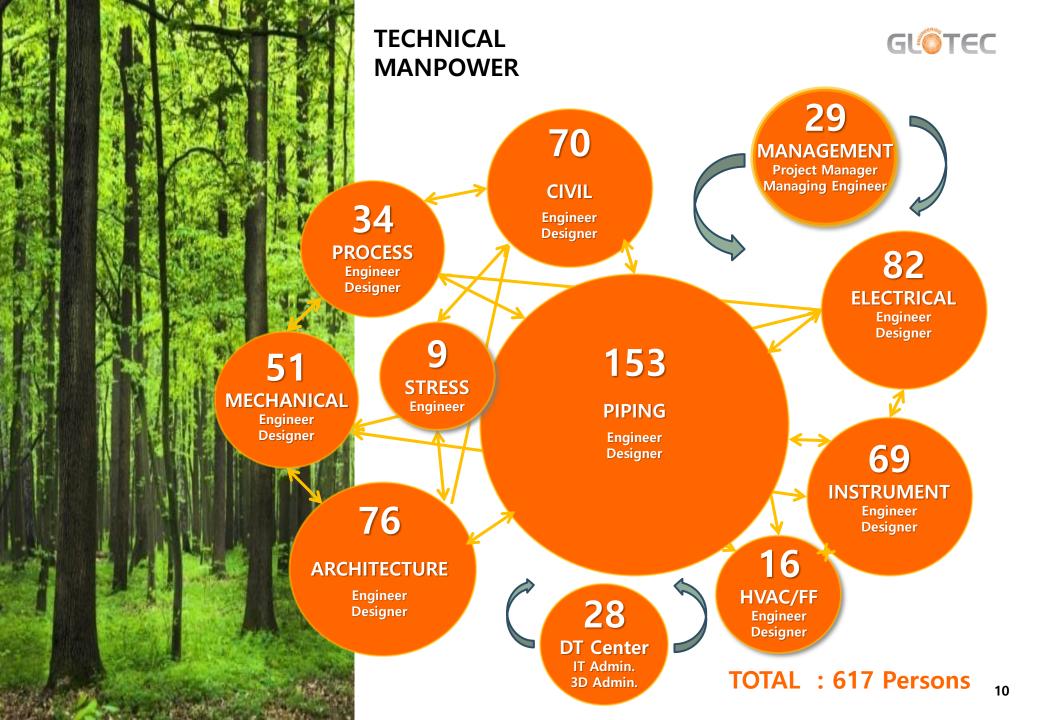


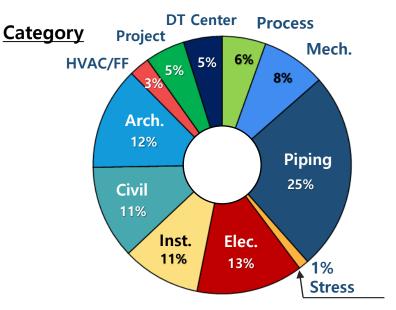


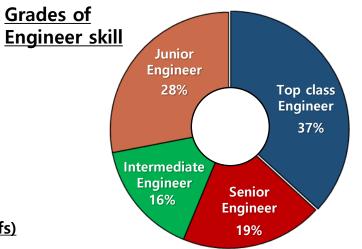
TABLE: TECHNICAL MANPOWER

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THE ACCURATE A STREET AND A STREET	Top class	Senior	Intermediate	Junior	
Category	Engineer	Engineer	Engineer	Engineer	Total (P)
Process	15	4	1	14	34
Mechanical	27	13	3	8	51
Piping	41	37	38	37	153
Stress	3	3	1	2	9
Electrical	25	8	13	36	82
Instrument	25	14	11	19	69
Civil	27	15	14	14	70
Architecture	28	20	7	21	76
HVAC & F/F	5	2		9	16
Project Management	19	1	4	5	29
DT Center	13	2	5	8	28
Total	227	120	97	173	617

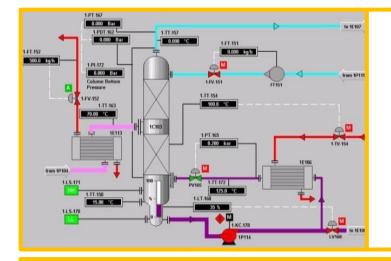
Total 641 (Include 24 Staffs)







ENGINEERING ACTIVITIES



PROCESS

- Feasibility study , Conceptual, Basic & FEED Design and Engineering
- PFD and P&ID for Process and Utility
- Development & Update
 - P&ID, Piping line index, Tie-in list, Vendor data, Piping & Instrument Process Data Sheet (include Mech. etc.,)
 - HAZOP Review and SIL Study
- Provide the intelligent P&ID (SPPID)

MECHANICAL (Static & Rotating)

- Engineering drawings include calculation
- Detail design of Rotating, Stationary & Package Equipment
 - Vessels, Storage Tanks, Heat exchangers and Pumps etc.,
- Procurement services
 - Equipment data sheets
 - Material requisition (RFQ)
 - Technical clarification & Bid evaluation (TBE)
 - Review & approval of Vendor prints
 - Expediting and Schedule control
- Assistance on Fire Fighting & HVAC equipment design

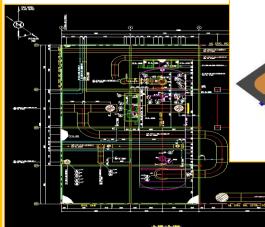




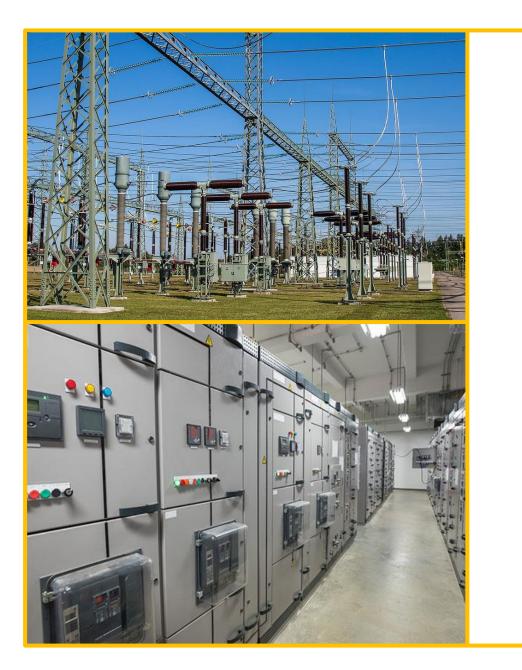


PIPING

- Plot plan
- Equipment location plan with routing study
- Provide the General Arrangement Drawing (GAD)
- Design the Piping plans & elevations
- Procurement service for Piping materials (MR,TBE)
- Piping support drawing and piping material handling
- Piping detail drawing and information for all disciplines
- 3D Modeling with PDS, PDMS, S3D, BIM including all Equipment
- Extract Plot Plan, ELP, GAD & ISO drawing and BM take off
- Perform the Stress analysis
- Field engineering







ELECTRICAL

- General & Specification
 - Engineering supervision & coordination
 - Electrical equipment specification
 - Electrical equipment data sheet
- Procurement service works
 - MR/TBE/PS for electrical items
 - Review and approval vendor print
- System calculation
 - Short circuit calculation
 - Load flow and voltage drop studies
 - Large motor starting study
 - Protective relay coordination
- Design & preparation of electrical drawings
 - Single line & schematic diagrams
 - Hazardous area classification
 - Power lighting, grounding layout
 - Fire alarm & telecommunication layout
 - Load analysis / cable schedule
 - 3D Modeling (PDS, PDMS, S3D, BIM, SPEL etc.,) .,)
- Field Engineering



INSTRUMENT

- General & Specification
 - Engineering supervision & coordination
 - Instrument specification
 - Instrument data sheets
 - Engineering study & review
 - Control system design
- Procurement service works
 - MR/TBE/PS for instrument items
 - Review and approval vendor print
- Provide the instrument detailed designs
 - Instrument index
 - Instrument logic, loop & junction box wiring diagram
 - Instrument signal wiring & cable tray layout
 - 3D Modeling (PDS, PDMS, S3D, BIM, SPI etc.,)
- Field Engineering







CIVIL / STRUCTURE

- Site preparation
- Drainage , Road & Paving
- Pipe Rack Structure design
- Equip. Structure w/ FDN. design
- Dynamic loaded foundation design
- Basin & Pond structure design
- Pile system and Soil retaining structure design
- 3D Modeling (PDS, PDMS, S3D, BIM, Tekla etc.,)
- Equipment foundation design with calculation
- Shop fabrication drawing review
- Field Engineering

ARCHITECTURE

- Engineering for Offices, Warehouses, Control buildings, Substations and Guard houses, etc. in oil & gas plants
- Engineering for FAB, CUB, Warehouses and WWT buildings etc. in semiconductor & industrial plant
- Engineering for Turbine buildings, pump house, etc. in power plant
- Calculation and Analysis for Arch. engineering
- Construction work supervision
- Domestic project permits and reporting
- 3D Modeling (PDS, PDMS, S3D, BIM etc.,)
- Field Engineering





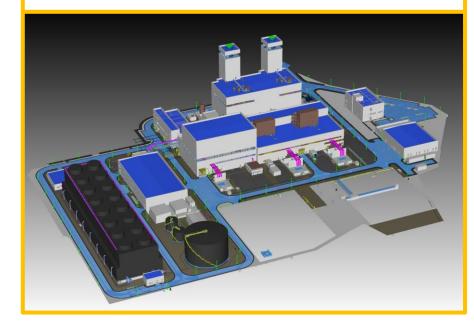


HVAC · Fire Fighting

- Specification & Data Sheet
- HVAC, F/F & Plumbing Equipment schedule
- HVAC, F/F & Plumbing Flow Diagram
- Layout Plan & Piping Design
- HVAC, F/F & Plumbing Control System
- Bill of Materials
- Calculations
- 3D Modeling (PDS, PDMS, S3D, BIM, etc.,)
- Permits for Fire Fighting
- Procurement Support (MR, TBE)

POWER & ENERGY

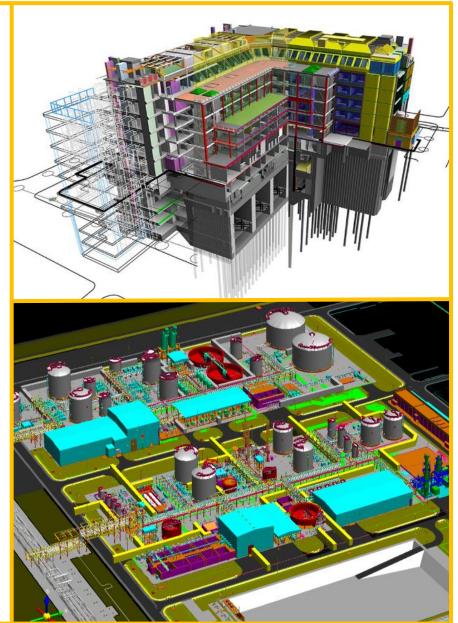
- Proposal, Basic Design & Environment Impact Assessment
- Process & Mechanical Design Criteria , Engineering Detail
 Schedule & PFD (Heat & Water Balance)
- MR, TBE, Technical Specification and Procurement Support
- Engineering & Design for GTG, HRSG, GOV, WT and WWT, Aux. Buildings, Vendor Package etc.,
- Field Engineering & Construction work supervision
- Project permits and reporting
- 3D Modeling (PDS, PDMS, S3D, BIM, etc.,)





DT CENTER

- Assist for Concurrent 3D (PDS,PDMS,S3D,BIM) Operation
 - ✓ Smart Plant Suite (SP3D, SPPID, SPI, SPEL, Admin.)
 - ✓ 2D Extraction Set up (Plot Plan, ELP, GAD etc.,)
 - ✓ Isogen. Set up & Trouble shooting
 - ✓ Clash Report & Data Back up
 - ✓ MTO Extraction Set up
 - ✓ 3D Model Review Set up (SPR, Navisworks)
 - ✓ Tekla program (Steel Structure) Back up
- Software & Hardware System & License Management
- D/B Server Set up
- BIM Admin.
- Drawing Format Set up
- Support for Vendor Package 3D Model Import
- Assistance on As-Built 3D Model Issue

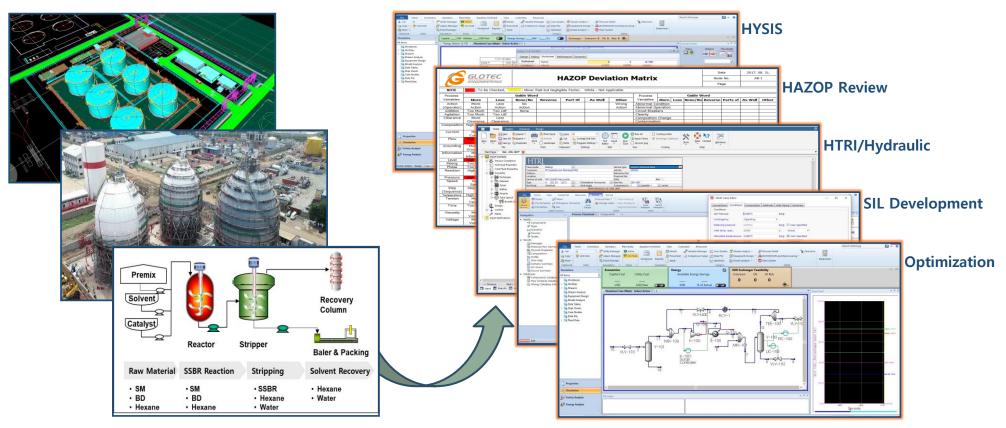




CORE TECHNOLOGY I

Basic Engineering

The expert engineers at GLOTEC Engineering have a diverse range of experience and technical skills in refinery, petrochemical, and fine chemicals. We utilize Steady-Status & Dynamic Simulations to perform design and engineering works, and we offer total engineering solutions to clients, from Basic engineering, Feasibility studies and Front-end engineering design (FEED) to Detail design that prioritizes safety and optimization.

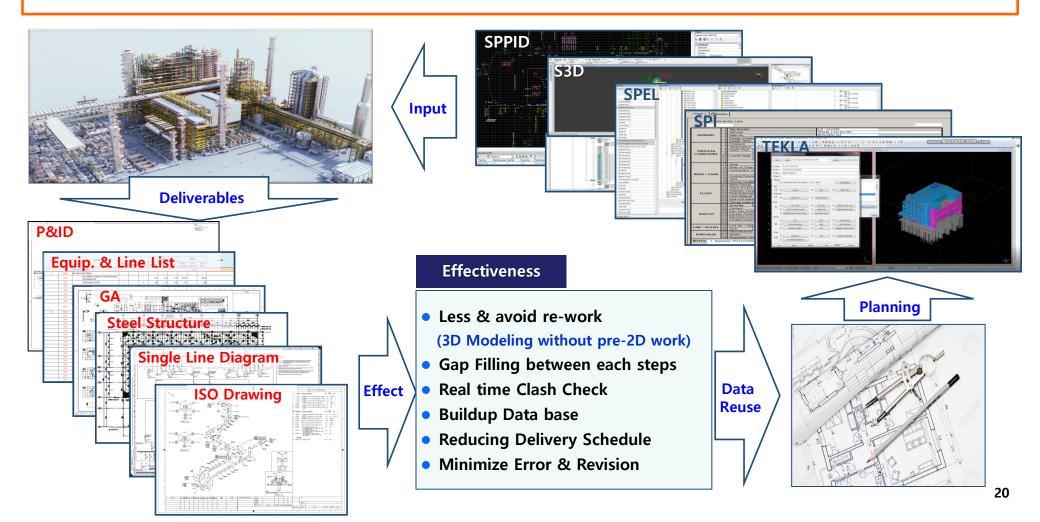




CORE TECHNOLOGY ${\rm I\!I}$

Concurrent 3D Technology

Glotec Engineering performs concurrent 3D design using Smart 3D technology, which goes beyond existing solutions such as PDS and PDMS. To maximize reliability and efficiency, all deliverables are produced using SPPID, S3D, SPEL, SPI and TEKLA, which share data through DT solutions.

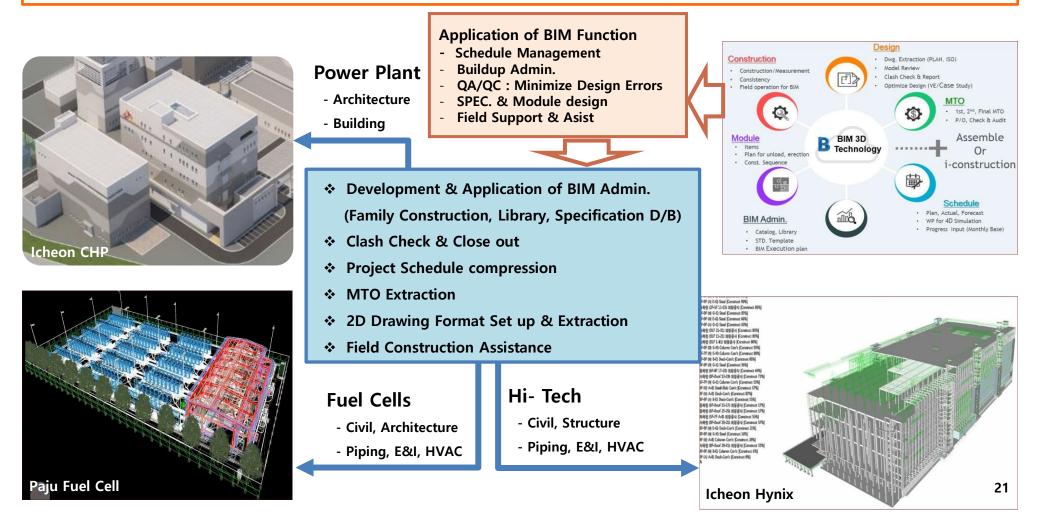




CORE TECHNOLOGY III

BIM – Building Information Modeling Technology

Glotec Engineering specializes in plant design utilizing BIM technology in the high-tech industries such as semi-conductor and fuel cells. With optimized IT administration support, we apply BIM for design, procurement and construction to ensure customer satisfaction.

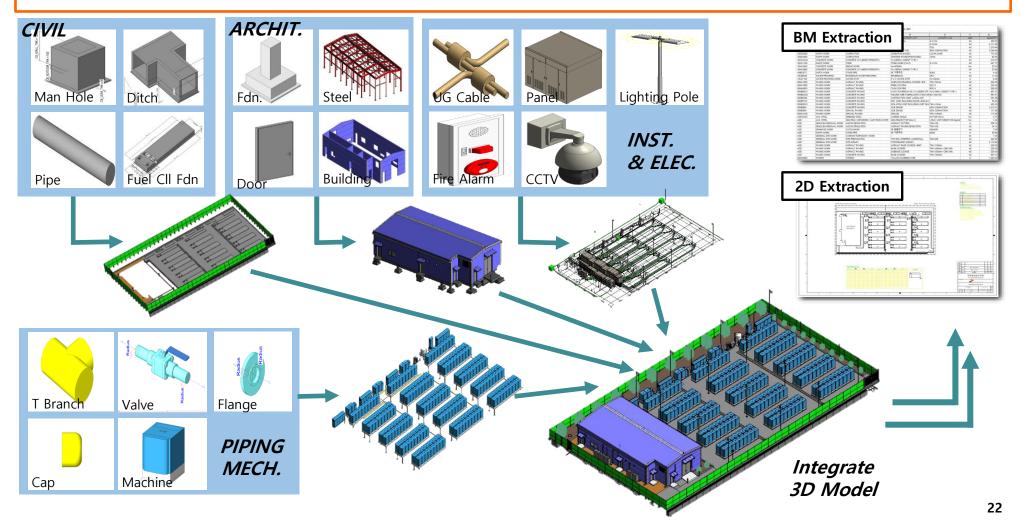




CORE TECHNOLOGY III

BIM – Building Information Modeling Technology

Glotec Engineering has developed an exclusive BIM administration technology. To achieve more efficient design, we apply this technology to 3D modeling for automatic material takeoff and 2D drawing extraction.

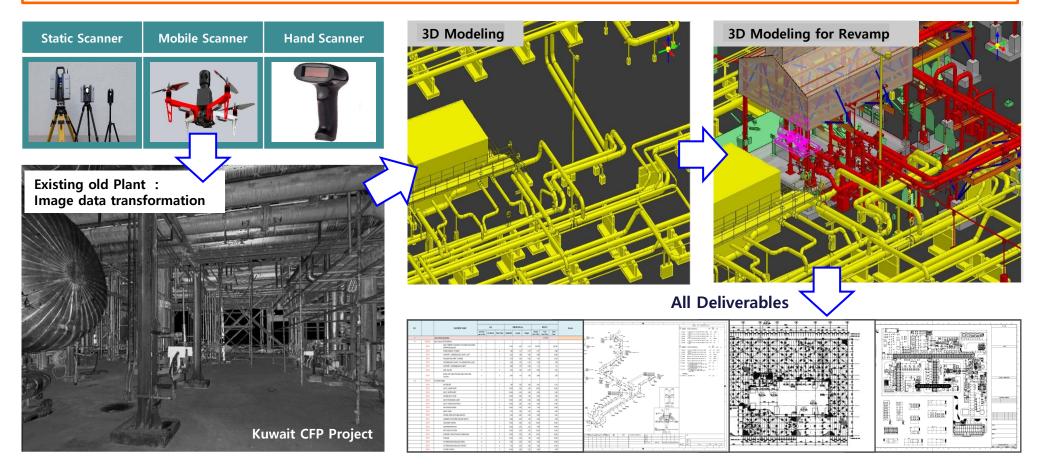




CORE TECHNOLOGY IV

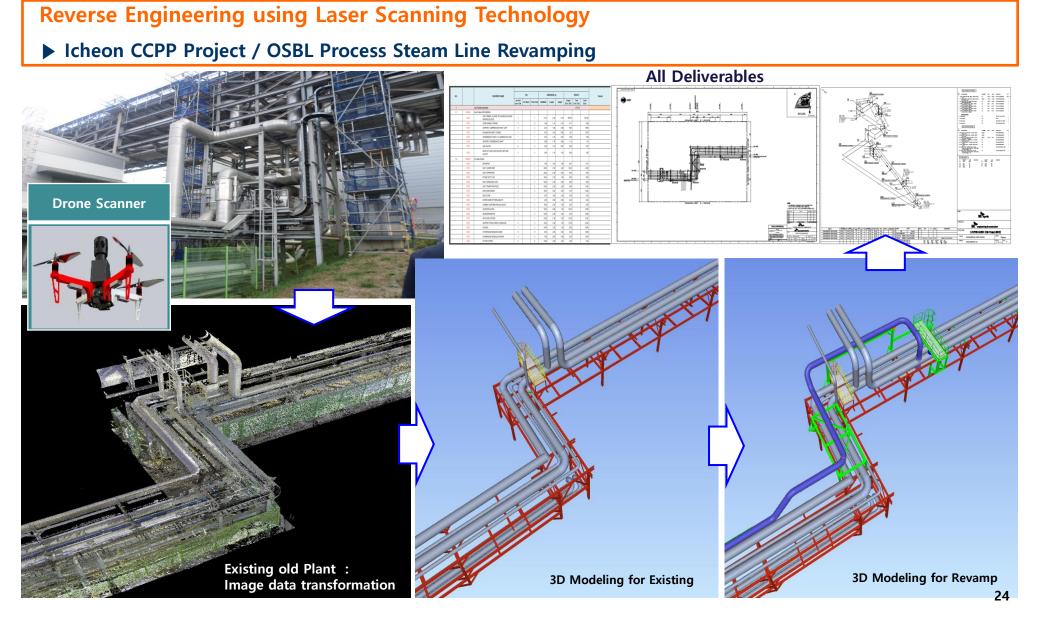
Reverse Engineering using Laser Scanning Technology

The existing old plant has many difficulties with maintenance, repair and extension due to an insufficient document management system that resulted in a lack of relevant drawings and data. Glotec Engineering is now able to address customer demand by offering reverse engineering through image data transformation and 3D modeling, which utilizes laser scanning technology.





CORE TECHNOLOGY IV





CORE TECHNOLOGY V

Modularization Design

Through our 3D modeling ability, we apply modularization design to oil and gas, power, and energy plants. This improves constructability, project schedule, and purchase order(P/O) for long delivery equipment, resulting in cost savings and shared project risk.

				Remarks				
	Fort Hills Suncor Project, Canada (Apr. '14~Nov.'15) INEOS PDH Project, Belgium (Jul. '19~Nov. '20)						Modules (PAU 74, PAR 41)	
Exp. Project							Modules (PAU 12, PAR 32)	
	Lott	te LINE	Project,	Indones	ia(Nov.'2	21~ Fek	o.'24)	Module (PAR 59)
Exp. Experts (Person)		Steel 11	Piping 21	Mech.	દ&ા 13	РМ 4	Total 52	Experts T/F Team in operation
	1. Basic Concept : Module Plan (Sizing)					PAR, PAU		
Design ability	-	Modul SP3D N	esign : e Lay out Modeling Dwg. Extr	(Inc. A		n		All discipline
- Shop Dwg. Extraction 3. Field Installation Support						COG, Inspection, Test, etc.,		



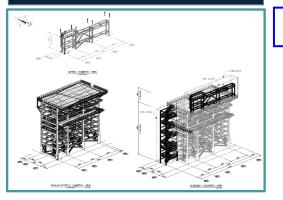
CORE TECHNOLOGY V

Modularization Design

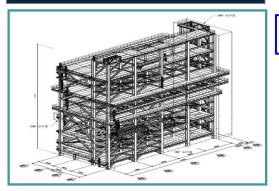
Applicable Modularization

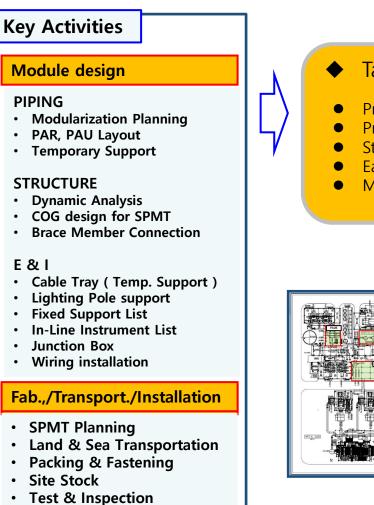
- Process Unit & Package (PAU)
- Main Pipe Rack (PAR)

PAR (Piperack)



PAU (Equipment Structure)



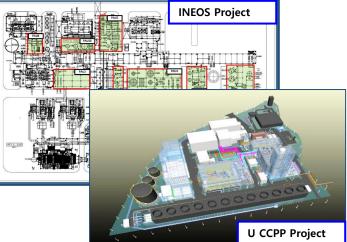


Erection

Target Goal

- Project Cost Saving
- Project Schedule Control
- Standardization (Design, Const.)
- Early P/O for Long Delivery Items
- Minimize Construction Risk



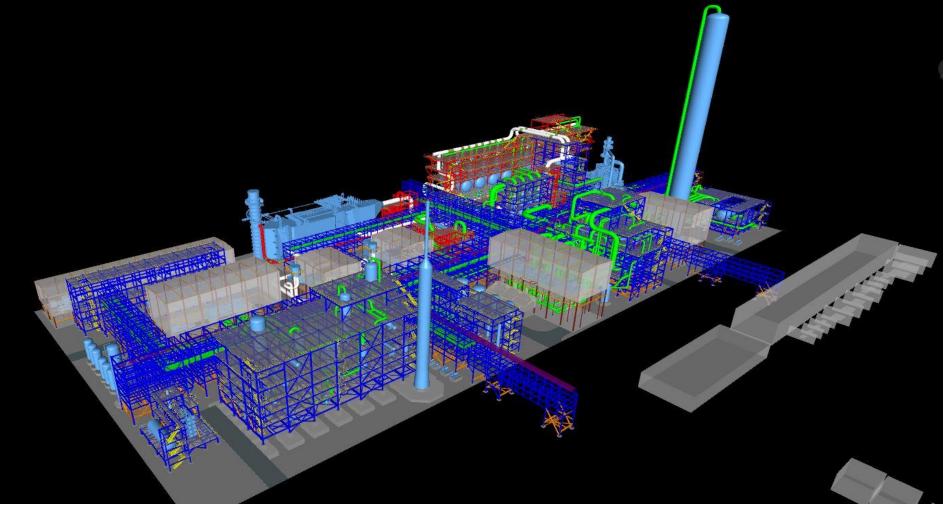


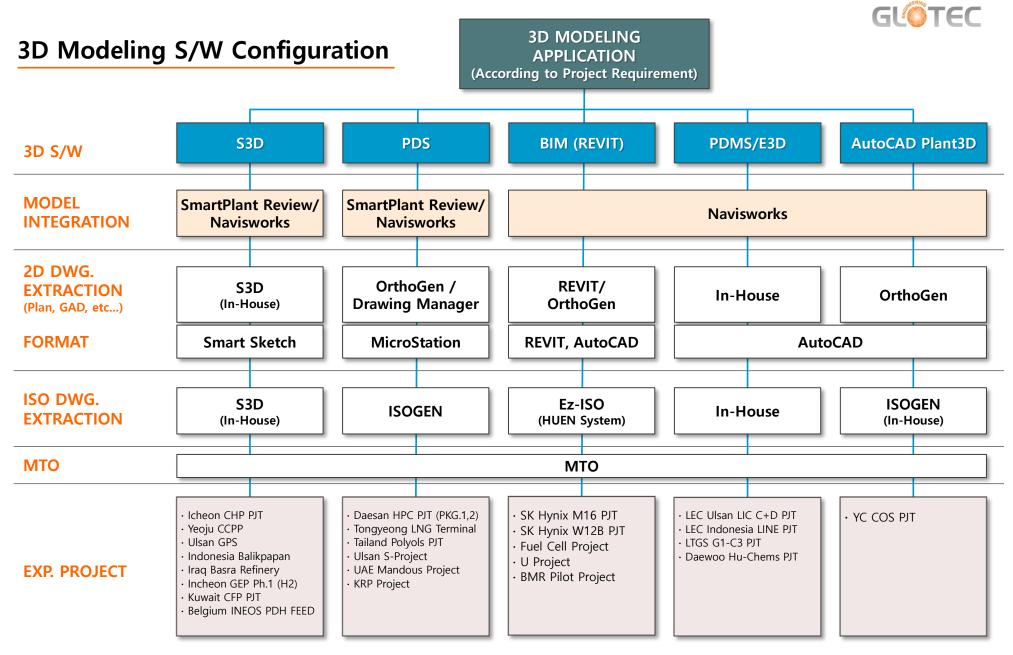


CORE TECHNOLOGY V

Modularization Design

3D Modularization – Belgium INEOS Project







BUSINESS

Extensive precision and technology

Glotec Engineering has established a competitive technology in the oil refining, gas processing, petrochemical and industrial plant engineering. It is also delivering top qualified services to our clients ranging from full basic and detail design to procurement and field engineering support.

Oil and Gas Refineries

Oil and Gas Processing Petrochemicals Liquefied Natural Gas (LNG)

Power Plant Coal-fired Generation Plant Cogeneration Plant Renewable Energy Plant

Industrial Plant Semiconductor Plant Electronic Plant General Industrial Plant

Major Experienced Project Summary



NO	Category	Contractor	Business Sector	Project Name	Location	Client	Period
1	Full Range*	HDEC	Petrochemical	S-Oil Shaheen PKG#1 SCC Project	Korea	ARAMCO (S-Oil)	2023.03 ~ 2026.06
2	Full Range*	Lotte E&C	Petrochemical	Yeosu G1-C3 Project	Korea	롯데GS화학	2022.06 ~ 2024.09
3	Full Range*	DAEWOO E&C	Petrochemical	Yeosu TKG Huchems 6NA/2MNB Project	Korea	TKG Huchems	2022.04 ~ 2024.06
4	Inst./Elec	DL E&C	Petrochemical	Baltic PE, LAO Project	Russia	CNCEC	2022.01 ~ 2025.01
5	Full Range*	SK ecoengineering	Petrochemical	Boryeong GEP2 Hydrogen FEED Project	Korea	SK E&S	2021.12 ~ 2022.06
6	Full Range*	Lotte E&C	Petrochemical	LOTTE LINE Project	Indonesia	Lotte Chemical	2021.11 ~ 2024.02
7	Full Range*	Wonik Material	Petrochemical	YC O-Chang COS Project	Korea	Wonik Material	2021.08 ~ 2021.12
8	Full Range*	SK ecoplant	Power Plant	Daewon Fuel cells Power Plant(19.8MW)	Korea	Daewon Green Energy	2021.02 ~ 2021.12
9	Full Range*	SK ecoplant	Petrochemical (H2)	Incheon GEP 1 H2 Feed / Detail	Korea	IGE	2021.04 ~ 2021.07
10	Full Range*	SK ecoplant	Power Plant	Ulsan GPS CCPP Power (1,200MW)	Korea	Ulsan GPS	2021.03 ~ 2022.08
11	Full Range*	KOGAS_Tech	LNG	Tongyoung LNG Terminal	Korea	TEP/Hanwha	2021.04 ~ 2024.03
12	Full Range*	Lotte E&C	Petrochemical	Lotte BP C+D Project	Korea	Lotte BP Chem.	2021.02 ~ 2022.10
13	Electric	Hyundai E&C	Refinery	Iraq Barsrah Refinery Upgrading	Iraq	South Refineries Company (SRC)	2021.02 ~ 2023.05
14	Full Range*	SK ecoplant	Industrial	BMR Pilot Plant (Battery Recycle)	Korea	SK Innovation	2020.12 ~ 2021.12
15	Full Range*	SK Energy	Petrochemical	Ulsan, IPA (Iso Propyl Alcohol) FEED	Korea	SKGC	2020.12 ~ 2021.04
16	Full Range	Wonil T&I	Petrochemical	Pyeongteak H2 Supply	Korea	KOGAS	2020.09 ~ 2021.12
17	Full Range*	SK materials	Industrial	Sejong P Project	Korea	SK MR	2020.08 ~ 2021.05

* NOTE : Full range of Design and Engineering service in all disciplines such a Process, Mechanical, Piping, E&I, CSA, HVAC and Fire fighting etc.,

Major Experienced Project Summary



NO	Category	Contractor	Business Sector	Project Name	Location	Client	Period
18	Full Range*	SK ecoplant	Petrochemical	Bukhara Refinery Modernization	Uzbekistan	UOC	2020.08 ~ 2021.05
19	Full Range*	SK ecoplant	Industrial	Icheon M16 Ph-2 W12b Project	Korea	SK Hynix	2020.08 ~ 2022.10
20	Full Range*	SK ecoplant	LNG	Icheon SK Hynix UG LNG Supply	Korea	SK Hynix	2020.06 ~ 2022.10
21	Full Range*	SK ecoplant	Petrochemical	AGIC PDH & complex U&O FEED	Saudi	SK ecoplant	2020.04 ~ 2020.07
22	Full Range*	SK ecoplant	Power Plant	Paju Fuel cells Power Plant(8.1MW)	Korea	Paju Ecoenergy	2020.03 ~ 2020.12
23	DT	SK ecoplant	Power Plant	Yeoju LNG Power (1,000MW, CCPP)	Korea	SK Hynix	2020.01 ~ 2022.08
24	Mech.	Samsung Eng'g	Petrochemical	Sarawak Methanol Project	Malaysia	Sarawak, Malay	2019.12 ~ 2020.03
25	Full Range*	SK ecoplant	Combined Heat Power Plant	Icheon Smart Energy (570MW, CHP)	Korea	SK Hynix	2019.11 ~ 2022.08
26	Full Range*	Lotte E&C	Petrochemical	HPC Project / HDPE & Tankage unit	Daesan, Korea	Hyundai Chem.	2019.07 ~ 2021.12
27	Piping	Hyundai Eng'g	Petrochemical	HPC Project / ECU & DFU unit	Daesan, Korea	Hyundai Chem.	2019.07 ~ 2021.12
28	Full Range*	SK ecoplant	Petrochemical	INEOS PDH FEED Project	Belgium	INEOS	2019.07 ~ 2020.11
29	Process Stress	Hyundai E&C	Petrochemical	Marjan Increment PKG 6	Saudi Arabia	ARAMCO	2019.07 ~ 2022.10
30	Full Range*	SKE / HEC	Refinery	RDMP RU-V Balikpapan Project	Indonesia	PT PERTAMINA	2019.04 ~ 2023.07
31	Piping,Elec., Inst. Civil	SK ecoplant	Revamping	MARS Proposal Project	Thai, Rayong	IRPC	2019.02 ~ 2019.04
32	Full Range*	SK ecoplant	Refinery	Ulsan S - Project	Korea	SK Energy	2018.11 ~ 2020.04
33	Full Range*	SK Innovation	Lithium-ion battery Separator	Jiang-su LIBS Ph-1 Project	China	SK Innovation	2018.10 ~ 2020.12
34	Full Range*	SK ecoplant	Crude Oil Cavern & Pipeline	ADNOC-Mandous Project	UAE	ADNOC	2018.07 ~ 2022.01

* NOTE : Full range of Design and Engineering service in all disciplines such a Process, Mechanical, Piping, E&I, CSA, HVAC and Fire fighting etc.,

Major Experienced Project Summary



NO	Category	Contractor	Business Sector	Project Name	Location	Client	Period
35	Full Range*	SK ecoplant	Petrochemical (PP)	PPTGC Polyols Project	Thai, Rayong	Global Chemical	2018.02 ~ 2020.08
36	Full Range*	SK Innovation	Industrial	LIBS #12,13 PROJECT	Korea	SK Innovation	2018.01 ~ 2019.12
37	Full Range*	LG Chemical	Revamping	Daesan ATS BRU Revamping Project	Korea	LG Chemical	2018.07 ~ 2019.07
38	Full Range*	SK ecoplant	Industrial	Wuxi Hynix Project	Wuxi, China	SK Hynix	2017.01 ~ 2019.01
39	Full Range*	SK ecoplant	Industrial	Jungpyeong LIBS #10, 11 Project	Korea	SK Innovation	2016.08 ~ 2017.12
40	Full Range*	Hyundai Oil bank	Refinery	Daesan Hyundai Oil bank Tank Plant	Korea	Hyundai Oil bank	2016.06 ~ 2019.02
41	Elec. & Inst.	Hyundai Heavy Industrial	Refinery	KIPIC AL-ZOR Project	Kuwait	KNPC	2016.01 ~ 2019.06
42	Full Range*	G-TEC	Gas Terminal	Ghana LPG Gas Terminal Project	Ghana, Africa	Ghana Accra	2015.05 ~ 2020.03
43	Full Range*	SK ecoplant	Refinery	CFP Project	Kuwait	KNPC	2014.07 ~ 2020.12
44	Full Range*	SK ecoplant	Refinery including WWT, Power Plant	KARBALA Refinery Project	Iraq	SCOP	2014.06 ~ 2021.12
45	Full Range*	SK ecoplant	Gas Plant	Ulsan P- Project (PDH)	Korea	SK Gas	2014.01 ~ 2017.11
46	Full Range*	SK ecoplant	Refinery Inc. Power Plant	NSRP Complex Project	Vietnam	NSRP	2013.08 ~ 2016.12
47	Full Range*	SK ecoplant	Petrochemical	V Project (Aromatics_ ISBL, OSBL)	Korea	SK Energy	2012.04 ~ 2014.04
48	Full Range*	SK ecoplant	Petrochemical	Ulsan New PX Project (ISBL, OSBL)	Korea	SK Energy	2012.09 ~ 2014.10
49	Full Range*	Daewoo E&C	Gas Plant	HOUT Onshore Gas Project	Saudi Arabia	KJO (Aramco & KNPC)	2012.05 ~ 2014.03

* NOTE : Full range of Design and Engineering service in all disciplines such a Process, Mechanical, Piping, E&I, CSA, HVAC and Fire fighting etc.,



OIL & GAS

Since Glotec Engineering first entered the oil and gas industry in 2003, we have completed more than 100 projects worldwide and have grown into a full-service of engineering company.

Glotec Engineering has achieved success in petrochemical plant engineering by completing various kinds of largescale projects, ranging from basic and detail design to field engineering support.



HPC Project (July. 2019 – Dec. 2021) ECU 800,000 T/Y, HDPE 300,000 T/Y, Tankage, Warehouse / Hyundai Chemical (HEC, LEC)

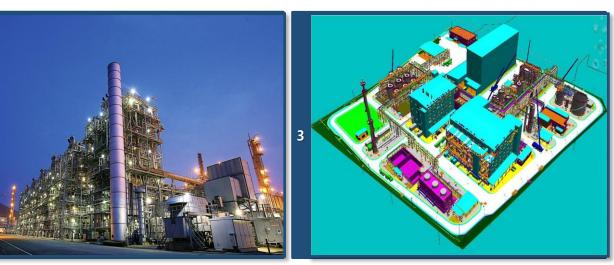
RDMP RU-V Balikpapan Project (Apr. 2019 – Jul. 2023) RFCC 90 kBSD, Indonesia/PT PERTAMINA (SKEC)

ADNOC M-Project (Dec. 2017 – Sep. 2019) Crude oil Cavern, 14,000Mbbl x 3ea, Fujairah, UAE / ADNOC(SKEC)

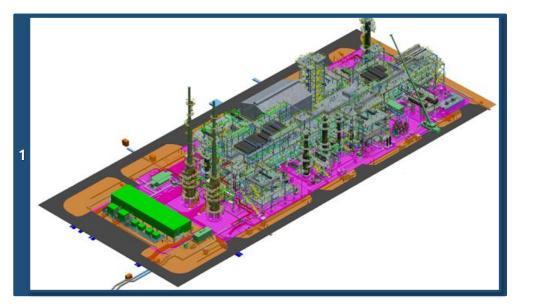
1 S Project (Sep. 2017 – Jun. 2019) VRDS 30,000 B/D, Ulsan, Korea / SKE(SKEC)

ATS Project (Jun. 2018 – Jul. 2019)
 Butadiene Rubber Revamping, Daesan, Korea / LG Chemical

Polyols Project (Oct. 2017 – Apr. 2019)
 PPTGC Petrochemical, 130,000 T/y, Thailand/ PPTGC(SKEC)





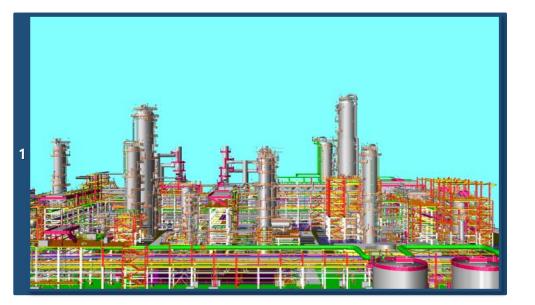






- Al-Zor Refinery Project (Jan. 2016 Jun. 2019) Detail for Electric & Instrument, Kuwait / KNPC(HHI)
- 1 CFP Refinery Project (Jul. 2014 Dec. 2017) Clean Fuels Refining, Kuwait / KNPC (SKEC)
- P (PDH) Project (Jan. 2014 Nov. 2015) Propylene 600,000ton, Ulsan, Korea / SK Gas(SKEC)
- 3 NSRP complex Project (Aug. 2013 Dec. 2016) Aromatics and Utility, Nghi Son Refinery, Vietnam / SKEC & JGCS
 - JZR & TP Project (Jun. 2012 Dec. 2017) J05 Process, J70 P/R, J77 Flare, Saudi Arabia / SKEC & ARAMCO





- IRPC UHV Project (Nov. 2012 Feb. 2014) Tankage and Utilities, Thailand / SKEC & IRPC
- V (V-4) Project (Oct. 2012 Jun. 2014) TAU, ORU, SUL process, Ulsan / POSCO ENG.
- New PX Plant Project (Sep. 2012 Mar. 2014)
 Para-Xylene 1,000Kmta, benzene 600Kmta, WWT, Ulsan / SKEC
- HOUT Onshore Gas Project (May. 2012 Mar. 2015) Gas process, Flare, Utility, Saudi Arabia / DW E&C
- V Project (Apr. 2012 Apr. 2014)
 ISBL, OSBL, Utility for Propane & Butane, Incheon / SK Energy(SKEC)
- WASIT Gas Plant (#1,3,4) Project (Feb. 2011 Mar. 2014)
 Gas Processing, Utility, WWT, Saudi Arabia/ Aramco(SKEC)







- LO Tank Terminal Project (Jan. 2011 Aug. 2012) Lube oil for UCO, LBO, HBO, NBO, Ulsan, Korea / SK Gas
- RRE (Area #1,2,3) Project (Jan. 2010 Apr. 2013) Ruwais refinery expansion, 417,000BPSD, UAE/ Takreer (SKEC)
 - Jubail Export Refinery Project (Oct. 2009 Sep. 2012) Utility facilities, Saudi Arabia / SKEC & ARAMCO
- 2 New FCC Project (Jun. 2006 May. 2008) Refinery 60,000 BPSD, Ulsan, Korea / SK Energy (SKEC)
- 3 RPMAA Project (Jan. 2003 Oct. 2004) Gas gathering & Processing, Mina Al Ahmadi, Kuwait / KNPC(SKEC)

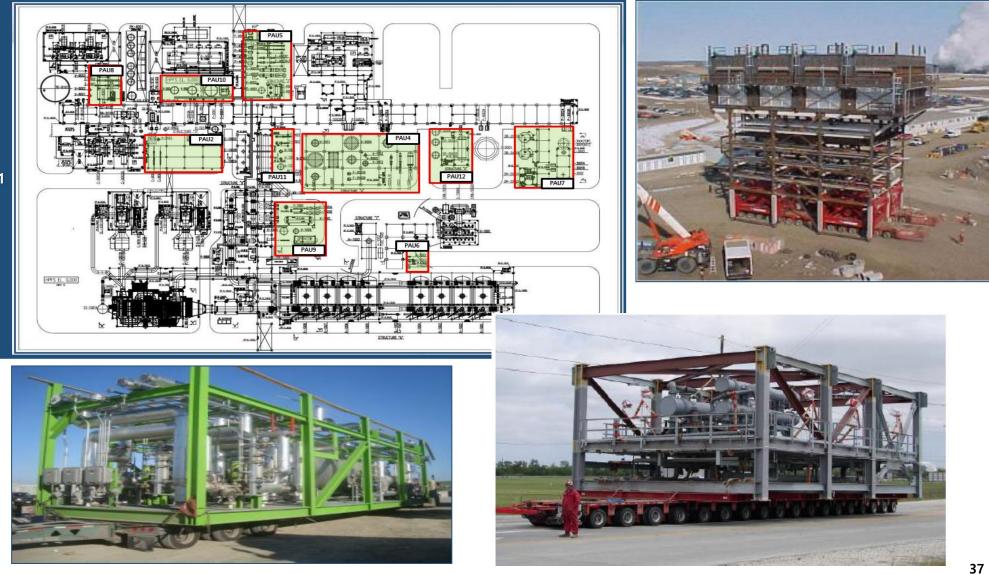








1 INEOS PDH FEED Project / Module (Jul. 2019 – Jun. 2020) 750KTA Propane Dehydrogenation Plant FEED, Module Design, Antwerp, Belgium / INEOS(SKEC)





POWER PLANT

Glotec Engineering has successfully conducted a CCPP power plant, incorporating gas turbine and steam turbine generation, power transmission and substation, as well as a renewable energy plant due to our high technical excellence.

Ulsan GPS CCPP Project (Mar. 2021 – Aug. 2022) Power Generation, Ulsan, Korea / SK ecoplant & GPS

SK Hynix Smart Energy Center Project (Nov. 2019 – Aug. 2022) 570MW(1+1+1) Combined Heat Power Plant, Icheon, Korea / SKEC

Yeoju Natural Gas Power Plant Project (Jan. 2020 – Apr. 2021) Power Generation 1,000MW, Yeoju, Korea / SKEC & SK Hynix

2 KARBALA Power Plant Project (Jun. 2014 – Apr. 2016) Power Generation 30+20MW, Iraq / SKEC & SCOP

Chile Coal Power Project (Jun. 2008 – Jul. 2011) 240Mw Coal Power Plant, Chile / HEC

Hyundai Green Power Project (Oct. 2007 – Dec. 2010) 400Mw(100Mwx4), Dang-jin, Korea / Daelim E&C

LNG combined Power Plant Project (May. 2004 – Oct. 2005) 1,070 Mw LNG, Gwang-yang, Korea / Daelim Energy







FUEL CELLS

GLOTEC Engineering not only executes numerous fuel cell projects based on advanced BIM technology, ensuring competitiveness, but also continues to grow as a leading engineering company through consistent participation in fuel cell business.

Bundang Fuel Cell Power BIM Standardization (Sep.2019 ~ Dec.2019) - 8MW Fuel Cell (accumulatedata standardization), Pilot Modeling

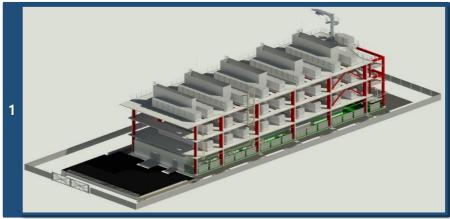
Paju Eco Energy Project (Feb. 2020 – Oct. 2020)
 9.8MW Fuel Cell, Paju, Korea / SKEC

Uiwang Fuel Cell Power Generation Project (Aug. 2020 – Jun. 2021) - 9.9MW Fuel Cell, Uiwang, Korea / SKEC

Honam Fuel Cell Power Generation Project (Sep. 2020 – Sep. 2021)
 - 15MW Fuel Cell, Yeosu, Korea / SKEC

Ulsan Daewon Green Energy Project (Oct. 2020 – Aug. 2021) - 19.8MW Fuel Cell, Ulsan, Korea / SKEC

Paju Eco Energy 2 Stage Project (Dec. 2020 ~ Nov. 2021) - 16.2MW Fuel Cell, Paju, Korea / SKEC









SEMICONDUCTOR & INDUSTRIAL

Glotec Engineering has carried out industrial plant projects that require high technologies involving semiconductors, lithium-ion battery separators, and ultra-pure water treatment facilities.

'M' China Ph-1 Project (Oct. 2018 – Dec. 2020) Lithium-ion battery separator, China / SKI

LiBS #12, 13 project (Aug. 2017 – Jan. 2019)
 Lithium-ion battery separator, Jeung-pyeong, Korea / SKI

SK Hynix M15 Ph-2 Project (Aug. 2021 – Dec. 2022)
 FAB & Wafer test C/R, UPW, PCW, WWT, Cheongju, Korea/SK Hynix(SKEP)

LiBS #10, 11 project (Aug. 2016 – Dec. 2017) Lithium-ion battery separator, Jeung-pyeong, Korea / SKEC

3 SK Hynix M16 Ph-2 FAB project (May. 2020 – Oct. 2022) FAB & Wafer test C/R, UT/OS, WWT, Icheon, Korea / SK Hynix (SKEP)







SEMICONDUCTOR & INDUSTRIAL

Wuxi hynix project (Jan. 2017 – Jan. 2019)

FAB, Utility facility, CUB, WWT/WT Shop, Clean room extension, Total floor space (new) : 294,990 M² (29.49 ha), Building area(new) : 93,660 M² (9.36 ha), Wuxi, China / SK Hynix (SKEC)





SEMICONDUCTOR & INDUSTRIAL

SKMR R&D Center Project (Oct. 2020 – Aug. 2021)

DIW, IA, Scrubber, N2, Vacuum System, Clean Room, WWT Total floor space (new) : 8,560 M² Floor : A/G 5th Floor, U/G 1st Floor Sejong City, Korea / SK Materials





QUALITY AND VALUE MANAGEMENT



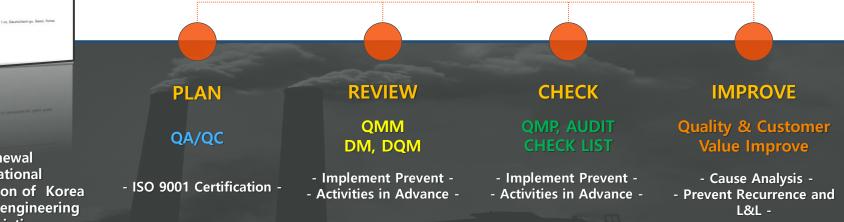
- Certifications
- ISO 9001 : 2015 /renewal
- Registered at International contractors association of Korea
- Registered at Korea engineering and consulting association

Glotec Engineering aims to enhance design quality and project management in order to minimize errors and maximize customer values.

Quality Control

Since 2009, Glotec Engineering has been certified for ISO 9001 quality management and implements faultless guality management and control assurance in all projects.

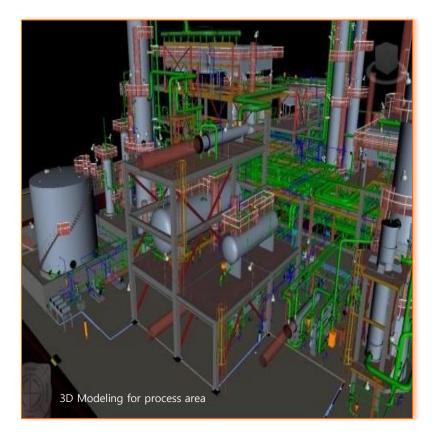
It strives to achieve zero-defect design by ensuring guality control at each step of the work process, and it provides field engineering support through a team of quality experts.





DESIGN SOFTWARE & TOOLS

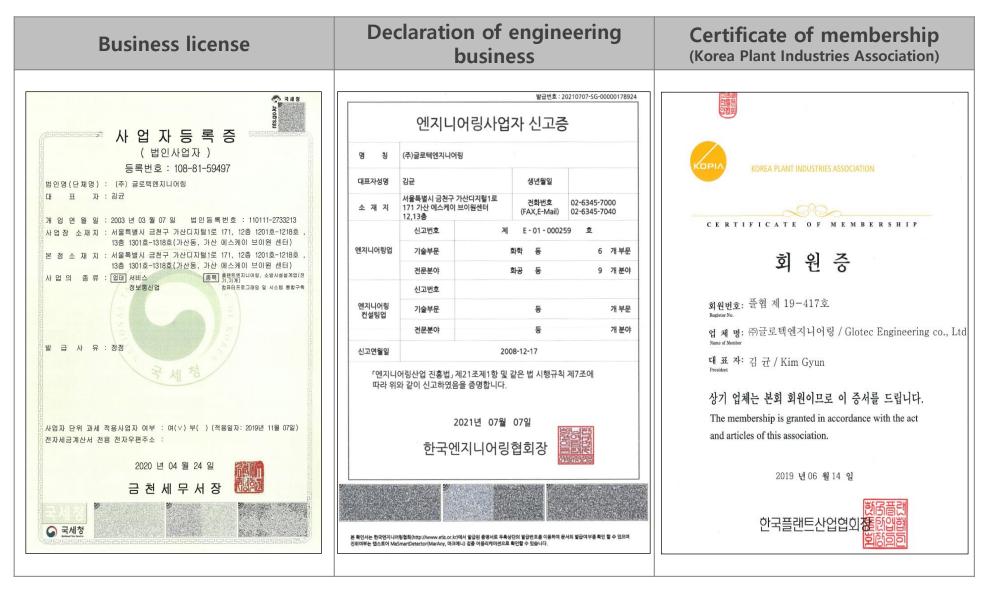
Glotec Engineering provides optimal design and engineering tools, including the latest design software. We use up-to-date techniques such as concurrent 3D modeling for improved accuracy.



COMMON	AUTO CAD ADT Network Version PDMS, PDS/Micro-Station, SP-3D, BIM (RAVIT), SPR (Smart Plant Review)
PROCESS	ASPEN HYSYS : Process Simulation HTRI : Thermal Rating
MECHANICAL	Compress : Tower / Vessel Strength calculation B-JAC : Heat exchanger calculation
PIPING	CAESAR II : Piping Stress Analysis EZ - ISO & GTX Image CAD
ELECTRICAL	SPEL : Smart Plant / Electrical ETAP : Electrical transient analysis program
INSTRUMENT	Intools : Instrument data base & design SPI : Smart Plant / Instrumentation
CIVIL STRUCTURE	SAP2000 : Finite Element Analysis of Structures STADD Pro : Finite Element Analysis of Structures MIDAS GEN : Finite Element Analysis of Structures InLOAD : Site Grading iAFES : Foundation Analysis PEDAS : Foundation Analysis TEKLA : 3D Modeling











Certification of international contractor	KS Q ISO 9001	Certificate of R&D center				
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Construction technical consultancy license	Certification of licensed architect	Firefighting supervision license					
등록번호 : 서울-2-653호 건설기술용역업 등록증	 전축사법 시행규칙[별지 제39호서식] 〈개정 2020. 6. 18〉 (앞 쪽) 제 2022·궁천구·엔지니어링사업자소속건축사·2 호 ☑ 엔지니어링사업자 소속 건축사 신고확인증 □ 건설사업자 소속 건축사 신고확인증 	제 2020-01-00060 호					
	상호 또는 명칭 (주)글로텍엔지니어링 소 개 지 서울특별시 금천구 가산디지털1로 171 SKV1센터 12-13층	소 방 시 설 업 등 록 증					
상호 또는 법인명: (주)글로텍엔지니어링 서울특별시 금천구 가산디지털1로 171, 12층 영업소의 소재지: 1201~1218호, 13층 1301호~1318호(가산동, 가산 이	신고인 (건축사) 황순태 생년월일 (건축사) 황순태 제 6521호	업 중: 일반소방시설설계업(전기,기계) 상 호(명칭): 주식회사 글로텍엔지니어링					
스케이 브이원 센터) 소 속 국 가 명 : 대 한 민 국 성 명 (대표자): 김균 생년월일: 19 1년 월 일	I · 엔지니어링산업 진홍법, 계21조제1항에 따라 신고한 엔지니어링사업자	대 표 자 : 김균 생년월일 :15					
전문분야(세부분야): 설계·사업관리 (건설사업관리)	위 건축사는	영업소 소재지: 서울특별시 금천구 가산디지털1로 171, 12층 1201호-1218호, 13층 1301호-1318호(가산동, 가					
등 록 연 월 일: 2020년 6월 10일 「건설기술 진흥법」 제26조제1항에 따라 건설기술용역업자로 등록하였음을 증명합니다.	에 소속한 건축사로서 『 건축사법 시행규칙」 제16조1항에 따라 신고를 하였음을 확인합니다.	산 에스케이 브이원 센터) 「소방시설공사업법」제4조 제1항에 따라 소방시설설계업이 위와 같이 등록되었음을 증명합니다.					
2020년 6월 10일	2022년08월01일	2020년 4월 17일					
서 울 특 별 시 사용특별	서울특별시 금천구청장 (12)	서울특별시점장이인					
	210mm× 297mm(보존용지(1종) 120g/ní)						

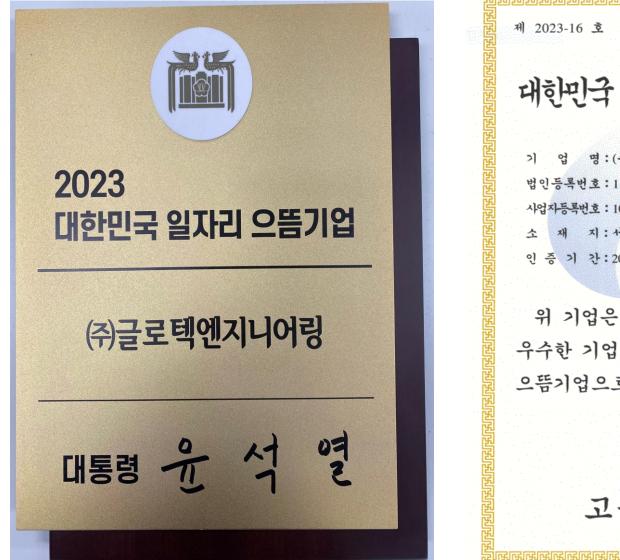








※ Awarded as an outstanding job-creating company by the Korean Government



제 2023-16 호
대한민국 일자리 으뜸기업 인증서
기 업 명:(주)글로텍엔지니어링
법인등록번호:110111-2733213
사업자등록번호: 108-81-59497
소 재 지:서울특별시 금천구 가산디지털1로 171
인 증 기 간:2023년 9월 4일 ~ 2026년 9월 3일 [편문]
위 기업은 양질의 일자리 창출에 앞장선
우수한 기업으로 2023년 대한민국 일자리
으뜸기업으로 선정합니다.
2023년 9월 4일 [편]
고용노동부장



※ Awarded the Silver Tower Order of Industrial Service Merit from Korean Government



*** Company Credit Rating**

DNA PLUS (주)글로텍엔지니어링 | 108-81-59497 | 김균 | ECC202304008653

기업체명		(주)글로텍엔지니어링 (Glotec Engineering Co.,Ltd.)									신용동	클급		
사업자등록번	<u>ż</u>	108-81	-59497		법인번호 110111-2733213									
본사주소 (08503)서울특별 호(가산동)					đ시 금천구 가산디지털1로 171, 12층 1201호-1218호,13층 1301호-1318							BBB	2	
대표자		김균										DDI	רכ	
전화번호		02-6345-7015												
산업분류		기타 언	지니어	링 서비스	느업						현금흐름등급			
설립일		2003년	03월 0)7일								Α		
재무결산일		2022년	12월 3	1일		보고서 최종수	-정일	2	023년 (4월 14일				
신용등급 유효	기간	2023년	04월 1	4일~202	4년 04월 1	3일								
신용등급	이격													
결산기준일		3	정기평2	የ			하반	기평가			Watch 등급			
월전시 문 월	평가일		1852) 현	금흐름등급	평가일	신용	등급	현금	흐름등급				
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2021/12/31	2022/04/	/12 BBB+		C+		2022/08/31	BBB+		C+		정상			
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산업플랜트설계용역		4	중업원 54		19 명 에스케이에. (주)			1플랜트 34		i	김균	5		
반도체설계용역		2	업규모	-	기업	업 에스케이에크 어링		지니	31			1		
발전어	너지설계용	9	2	입형태	5	외감	롯데건설		주) 13					
	임대		2	사본급 350		백만원	백만원 (주)대우		설 7					
			주기	시래은행		-행 구로디지 지점	(주)한국2	가스기:	술공사	2				
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2020/12/3	1 59,916		- Credit Rating · BBB+											
				1										
		개출성장승	4	-	- W	atch R	ating	J	:	Norn	nal			
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결산기준일 2022/12/3 2021/12/3			31.5 -6.7		(E	Based of	on A	pr.	9 th	, 202	23)			

※ Great Culture Built with our Customers





We, Glotec Engineering, aim to cultivate a customer-centered corporate culture where we prioritize our customers and employees.





SUSTAINABLE GROWTH

Glotec engineering pursues sustainable growth through a strong corporate culture that values its customers and creates a great workplace and quality of life for all.









- Received the Presidential Commendation for Korea Engineering and Consulting Association (Oct. 2013)
- Received the Silver Tower Order of Industrial Service Merit from
- Technical Service (MOU) signing ceremony (July. 2020 Korea Gas Technology Corporation)



SUSTAINABLE GROWTH

- 1 An outdoor activity like a hiking to communicate closely. (April, 2010)
- 2 Strengthened the teamwork through the company track meet. (October, 2013)
- ³ Promoted strong fellowship in the year-end party. (December, 2013)
- Event for the 15th anniversary of the founding. (May, 2018)







CHALLENGE AND ACHIEVEMENT

With our challenge, innovation and passion, we are creating a better world, better future.



