

Engineered Excellence

K1 TOTAL SOLUTION COMMISSIONING

2026 Company Profile
Vision Beyond Performance

CEO's Message

Every project begins with unexpected challenges.



Welcome to K1 Co., Ltd.
I am Sang-Woon Kang, Chief Executive Officer of K1.

I believe that building a company our clients can trust until the very end is far more important than simply building a larger company.

Every project begins with unexpected challenges. Yet our clients expect clear commitments from us: unwavering quality, on-time delivery, and complete responsibility through project completion.

Leveraging extensive technical expertise and field experience, K1 supports the transition from engineering and construction to safe and reliable operation through professional commissioning services. From the initial planning stage to the final handover, we take ownership of every step.

We never compromise on our standards. We identify potential risks before they become problems and remain committed to delivering excellence until the very end. K1's future will not be defined by its size, but by the trust we earn.

Our vision is clear: We aim to become the first choice for the industry's most critical commissioning projects, rather than simply the largest commissioning company.

We will continue to be the most trusted partner for our clients and a company our people are proud to be part of.

Thank you.

Sang-Woon Kang
Chief Executive Officer

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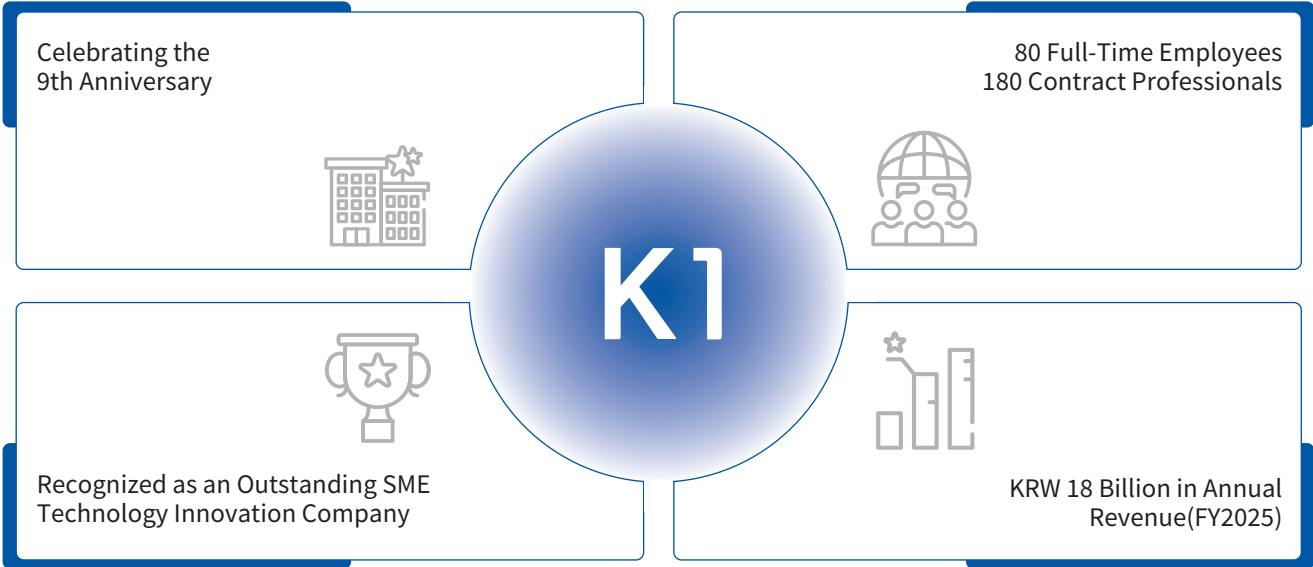
K1

Vision Beyond
Performance

2026 K1 Company Profile
with Business Overview

About Us

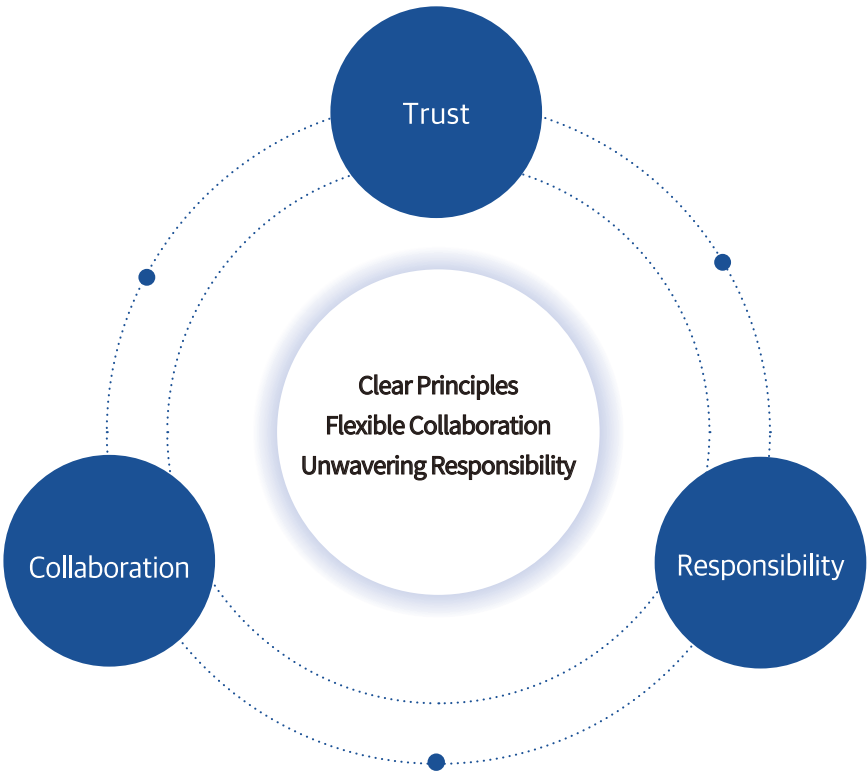
Company History



Company Overview

Business	An integrated commissioning company specializing in the successful completion and performance optimization of systems for the offshore, shipbuilding, and energy industries.
Core Expertise	· Electrical Commissioning Commissioning of generators, transformers, switchgear, protection relays, and power distribution systems Verification of power system stability and reliability through testing and grid integration Instrumentation Commissioning DCS/PLC loop checks, instrument calibration, interlock and trip testing, verification of process control system performance · Mechanical Commissioning Performance testing of mechanical equipment Verification of operational readiness and optimization of system performance · HVAC Commissioning Commissioning of AHUs, FCUs, chillers, compressors, and HVAC systems Optimization of operating efficiency and indoor environmental performance · Quality, Health, Safety & Environment (QHSE) Project execution based on ISO-certified quality procedures JSA (Job Safety Analysis) and PTW (Permit to Work) management Commitment to zero accidents and zero defects · Project Management Punch list management, Schedule control Quality documentation, Integrated project management through global collaboration
Mission	a. Deliver safe and reliable commissioning services b. Provide optimized engineering solutions c. Contribute to our clients' success
Vision	To become a global leader in electrical and integrated commissioning services. · Building trust through ESG and responsible corporate governance · Strengthening technical competitiveness in environmentally friendly marine and offshore systems · Achieving sustainable growth through transparent management and engineering excellence

When the time comes to turn on the final switch,
who will you trust?



Management Philosophy



Clear Standards

Every decision is guided by clear principles and objective criteria. Through consistent execution and transparent communication, we build lasting trust.



Flexible Collaboration

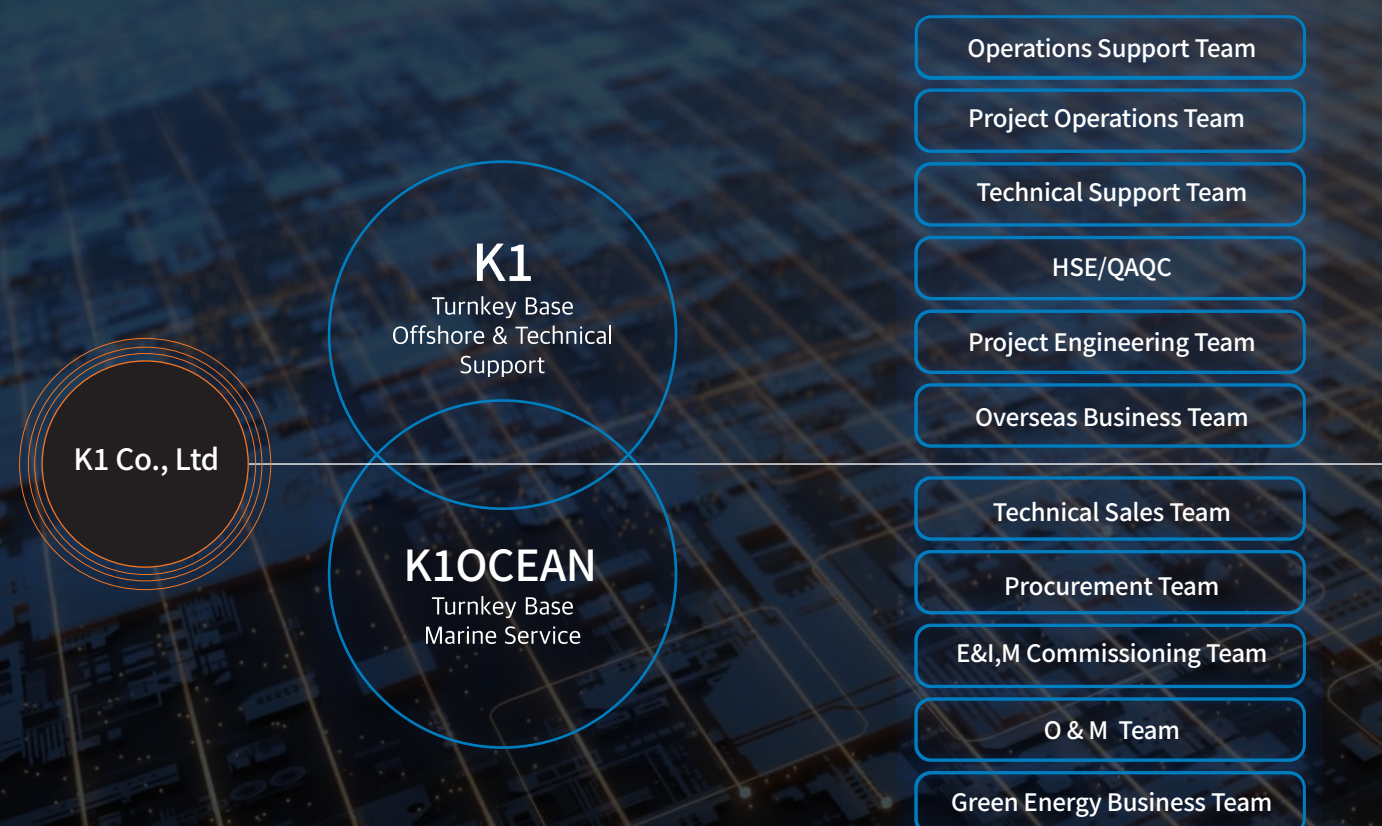
We foster open collaboration, enabling our clients, partners, and employees to work toward a common goal and achieve better results together.



Commitment Until Completion

We believe that successful completion matters more than a strong start. We remain fully committed to delivering the promised quality and schedule, taking full responsibility through project completion.

About Us



K1 Major Projects (2007~Ongoing)

2007

EXXONMOBIL BARZAN Project,
STENA DrillShip #1~#2
SHI
HD Hyundai
South Korea

TECHNIP OOG

TRANSOCEAN #1~#5
DSME
South Korea

SONGA Project
DSME
South Korea

SHELL PRELUDE
SHI
South Korea

2017

INPEX
DSME
South Korea

CHEVRON TCO FGP
DSME
South Korea

CHEVRON TCO FGP
DSME
South Korea

POSCO Flood Recovery Project
Commissioning Services Korea

TRANSOCEAN FGS – Reactivation
Battery Replacement
DSME
South Korea

Ship Commissioning Projects
HD Hyundai Sam-ho
South Korea

Business Areas

| Business Areas

High Voltage Power System Commissioning

- Comprehensive commissioning services for high-voltage electrical equipment, including HV switchgear, transformers, generators, and bus-tie systems.
- IR / Hi-Pot Testing
- Protection Relay Testing and Functional Verification
- Integrated High-Voltage System Commissioning Prior to Energization

“Engineering Excellence Until the Moment of Energization.”



Full-Ship Commissioning

Comprehensive one-stop commissioning services covering all shipboard systems, including:

- Power Generation & Distribution
- Instrumentation & Automation
- Communication
- Security Systems

“Comprehensive Commissioning with a Complete Understanding of the Entire Vessel.”



Specialized Commissioning Organization & Project Execution

- Highly skilled commissioning engineers across all disciplines
- Flexible workforce deployment based on project schedules
- Structured site management led by experienced Team Leaders
- Systematic organization and efficient project execution

“A Team Driven by Systems, Not Individuals”



PTW Coordination & HSE Management

- Permit to Work (PTW)-based work control system
- Risk assessment, work authorization for commissioning activities
- PTW coordination among Construction, Operations, and Commissioning teams
- Strict compliance with Lock-Out/Tag-Out (LOTO), de-energization, and electrical isolation procedures
- HSE briefings and implementation of Safe Work Practices

“Safety Is Achieved Through Control, Not Chance.”



2020

PETROBRAS P78 FPSO
FPSO Hull (EPC)
HD Hyundai
South Korea

NOC GALLAF Project
Jansz IO Compression Field
Control Station
Hanwha Ocean
South Korea

WTIV CADELER
(Wind Turbine Installation Vessel)
H3306~3307~
Hanwha Ocean
South Korea

2024

PETROBRAS P79 FPSO
FPSO
Hull & Topside (EPC)
Hanwha Ocean
South Korea

K469, TIDAL ACTION
Drill Ship DongHwa Pneutec
South Korea

FGSS Full Commissioning
SB-Sunbo
Shenzhen, China

FGSS O&M
GSI China
Hanoi, Vietnam

-Ongoing

Woodside Trion Project

Chevron JIC Project

HD HYUNDAI SAMHO

E&I Mechanical commissioning

PETROBRAS P79 FPSO
Hull & Topside (EPC) SAIPEM (offshore)
Brazil

Business Areas

K1 proves its expertise in high-voltage power systems through real-world commissioning and start-up experience.

| High Voltage Power System



Generator Load Test

- Comprehensive services from Load Bank selection and installation to testing and commissioning
- Load testing and system stability verification under actual operating conditions
- Performance validation and optimization through detailed analysis of test data

“Validated Under Real Operating Conditions.”



High-Potential Test

- High-voltage insulation testing including VLF testing
- Isolation of test sections and precise verification of insulation integrity
- Assessment of system integrity based on comprehensive analysis of test results

“Verifying Even Hidden Risks.”



Switch-gear/board Test

- Functional testing of switchgear and switchboards
- Verification of synchronizing, load sharing, and load transfer functions
- Integrated testing of power distribution & control systems, including the Power Management System (PMS)
- Final verification of protection functions and operational stability

“Validating the Entire Power System as One Integrated Solution.”

Business Areas

Commissioning begins even before energization. K1 supports the project from that very starting point.

| All-round Commissioning

Electrical Commissioning

- Commissioning of high-voltage and power system integration
- Synchronizing / load test / PMS verification
- DP & FMEA commissioning

“Completing Power Systems Under Real Operating Conditions.”

Mechanical Commissioning

- Testing of rotating and static equipment, including pumps, compressors, and valves
- Verification of equipment functions and operating conditions
- Confirmation of system stability and performance

“Bringing Systems into Operable Condition.”

Instrumentation Commissioning

- Calibration and loop check
- Verification of control valves, transmitters, and instrumentation systems
- Confirmation of control logic and system functions based on C&E tests

“Verifying Control Accuracy.”

HVAC Commissioning

- Performance verification of heating, cooling, and ventilation systems
- Functional testing of ductwork and HVAC systems
- Confirmation of indoor environmental control and operational stability

“Creating a Comfortable and Stable Operating Environment.”

Navigation & Telecom. Commissioning

- Interface testing for navigation and communication systems
- Functional verification of GPS, radar, and GMDSS equipment
- Confirmation of integrated interfaces across navigation and communication systems

“Completing Navigation & Telecom Systems — the Vessel’s Eyes.”

Business Areas

A deep understanding of the field determines the quality of commissioning.

| Commissioning Engineers

A field-proven commissioning engineering team, built on practical experience rather than theory

Available Personnel Types

Key Roles

- Electrical Commissioning Engineer
- Commissioning Technician / Inspector
- Instrument & Telecom Technician
- Punch Clear & Trouble Shooting Team
- Document Controller
- (Able to use Aconex / IPIMS / TPI / Teepee / Dolphin)

Technical Capability

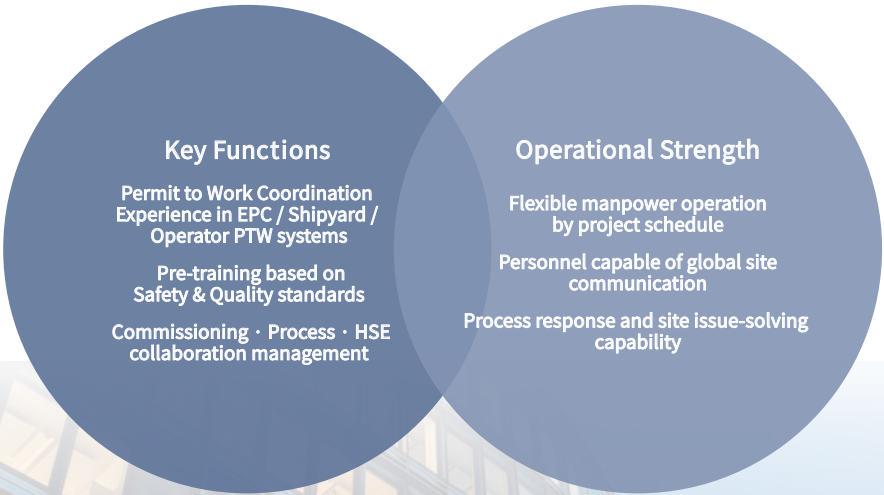
- High Voltage System (6.6 kV and above)
- PMS / ESS / Hybrid System
- DP & FMEA Commissioning
- Power System Analysis
- PMS, ESS, Hybrid, DMS, DP FMEA, Power Analysis

Engineering Technical Support Team

- Beyond commissioning, we support ship systems engineering.
- System integration and interface technical support
- Preparation of commissioning procedures and test procedures
- Commissioning technical advisory and troubleshooting
- Project technical support and site engineer support
- Engineering and commissioning support for eco-friendly ship systems
- LNG / Dual Fuel system support
- FGSS (Fuel Gas Supply System) technical support
- ALS, BOG, BWTS, Scrubber
- Technical verification of eco-friendly propulsion systems
- Energy efficiency and emission reduction technical support

| PTW Coordination & HSE

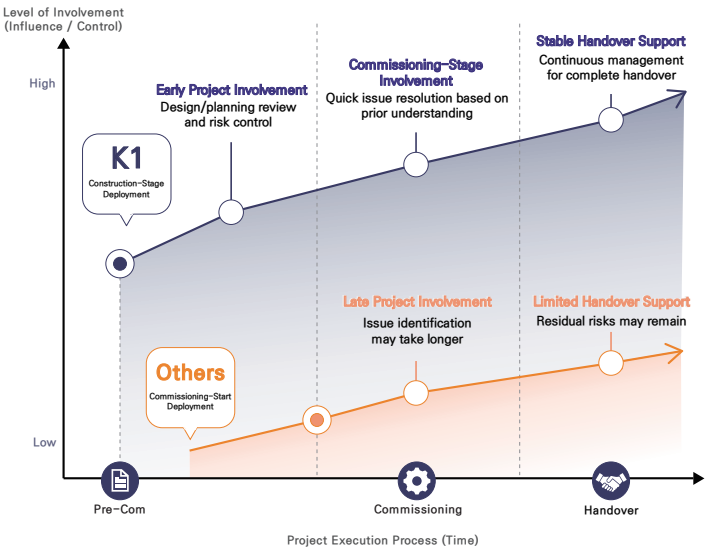
Safety is not just a procedure. It is control.



K1 KES Differentiators

KES is an integrated execution system that turns reactive commissioning follow-up into proactive control

| Differentiation of K1 KES



Performance Comparison for the Same Vessel Type (Based on Sample Data)		
Category	Others	K1
M/H	Basis(100%)	12% ↓
Completion	85-92%	86 - 98%
Productivity	Basis(100%)	15% ↑
Rework	8 - 15%	3 - 5%
M/H Saved	Basis(100%)	8 - 15% ↓
Delay	Basis(100%)	30% ↓
Safety accident	0.5 - 1.2	0 - 0.2
Quality Pass	90 - 94%	98% ↑



K1 engages early from the construction stage to proactively control project execution and deliver optimal outcomes.

Equipment Inventory

보유 장비 목록

Commissioning quality begins with the right equipment. K1 is equipped with a comprehensive range of high-voltage power, instrumentation, measurement, and analysis equipment.

Category	Sub Category	Equipment Name	Specification / Model	Remarks
High Voltage Test	Relay Test	Protection Relay Test Set	OMICRON CMC Series	
High Voltage Test	Injection	Primary Injection Test Set	Megger SPI225	
High Voltage Test	HV Test	Hipot Tester	HVI PTS PORTABLE DC TEST SET	
Generator Test	Analysis	Power Analyzer	Hioki PW3390	
Electrical Diagnostic	Insulation/Ground	Insulation/Earth Resistance Tester	Hioki IR4056	
Electrical Diagnostic	Quality	Power Quality Analyzer	Fluke 1770	
Instrument Calibration	Signal	Multifunction Calibrator	Fluke 725	
Instrument Calibration	Signal	Loop Calibrator	Fluke 707	
Instrument Calibration	Pressure	Pressure Calibrator	Druck DPI611	
Instrument Calibration	Pressure	Pneumatic Hand Pump	Fluke 700PTPK2	
Instrument Calibration	Pressure	Hydraulic Hand Pump	Fluke 700HTPK	
Instrument Calibration	Temperature	Temperature Calibrator	Fluke 724	
Tools	Hand Tools	Screwdrivers and ETC	ETC	
Tools	Hand Tools	Torque Wrench	Tohnichi 450QL-MH	
Tools	Measurement	Digital Multimeter	Fluke 719	
Safety	PPE	Arc Flash Suit		
Safety	PPE	Insulated Gloves		
Safety	PPE	Safety Helmet		
Safety	Equipment	LOTO Kit		
Field Support	Power	Temporary Distribution Board		
Field Support	Communication	Industrial Laptop		
Field Support	Communication	Walkie-Talkie	Motorola	
Field Support	Trasportation	Truck		

Capability at a Glance

K1 핵심역량

At the final stage of your project, K1 is there to support you.



Full-Ship Commissioning

Integrated commissioning of vessel-wide power and control systems



High Voltage System

Generator, transformer, and HV switchgear testing and system integration



Integrated E&I Commissioning

Electrical and instrumentation interface verification



Commissioning Workforce

HV-specialized engineers ready for immediate site mobilization



Early-stage Risk Control

Punch reduction and rework minimization from the construction stage



Equipment & Standards

Specialized test equipment operation and PTW/JSA-based safety management

부록 (Appendix)

International Certifications

Operated under quality, environmental, and safety management systems certified to international standards.

- ISO 9001 (Quality)
- ISO 14001 (Environmental)
- ISO 45001 (Safety)
- 전기공사업 면허 보유 (Licensed Electrical Contractor in Korea)



Trusted Performance in Commissioning

K1 has been involved in commissioning projects across approximately 75% of major domestic shipyards.

- | | |
|--|--|
| LNG Carrier Commissioning | Marine Electrical System Integration |
| Offshore Platform Electrical Commissioning | OEM Equipment Commissioning |
| Power Plant Gas Turbine Commissioning | Experience mainly in large-scale vessel and offshore plant projects |
| Global Offshore EPC Projects | Experience in high-level power and integrated commissioning projects |

Contact Us

K1 supports you through the final stage of your project.



Your Commissioning Partner

K1 Co., Ltd.
Since July 1, 2017
CEO Dennis Kang

Power & Energy Systems

Advanced commissioning and stabilization of thermal, nuclear, and renewable energy systems.

Shipbuilding & Offshore Engineering

End-to-end execution from Pre-Commissioning to Final Start-up (Electrical, Instrumentation, Mechanical, HVAC, FGSS)

Integrated Project Solutions

Installation, Preservation, Retrofit, Optimization

OPERATION & MAINTENANCE

Integrated O&M for stable and reliable operation

www.k1tnc.com

HEAD OFFICE 2F, 59 Okpodaechep-ro, Geoje-si, Gyeongnam, Korea

BRANCH OFFICE 1 93, Rm. 607, Production Building, 93 Daebul-ro, Samho-eup, Yeongam-gun, Jeonnam, Korea

BRANCH OFFICE 2 6F, Technology Building, 400 Bangeojinsunhwando-ro, Dong-gu, Ulsan

TEL. +82-55-736-5959 | FAX. +82-55-736-6969 | M.P. +82 10-9307-5004 | Email, k1ocean@k1tnc.co.kr



K1 Co., Ltd. Geoje-si, Gyeongsangnam-do, Korea

Tel +82-55-736-5959 | **Email** k1ocean@k1tnc.co.kr www.k1tnc.com