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Executive Summary

'Creator of Innovative Business Platform', Specialized in Energy Solution Business & Ship Management

STX Marine Service provides the best professional service in a variety of business areas, including ship management, power plant operation and maintenance, power sales business, and ship equipment trading, based on high-quality technology and practical know-how accumulated over 50 years.

By providing differentiated service based on world-class technology, ability to carry out projects, and well-organized overseas networks, STX Marine Service continues to grow as a trusted enterprise as a partner to customers and business partners.

In addition, STX Marine Service continues to strengthen up-to-date professional skills and becomes a 'Creator of Innovative Business Platform' to provide the highest service with the aim of satisfy every single customer.

Company STX Marine Service Co., Ltd.

CEO Sang-Jun Park

Address Jungangdae-ro 102, Jung-gu, Busan

Phone No +82-51-461-2000

Website www.stxmarineservice.com

Energy Solution Business

Based on the technical skills and experience of successfully carrying out 900MW Diesel Power Plant O&M in Iraq and 650MW Thermal Power Plant O&M in the Philippines, STX Marine Service provides integrated Service that oversee power operation, maintenance, restoration, parts supply and technical support for various types of power plants such as diesel, gas turbine, combined thermal power, and renewable energy. Through this, we are taking the lead in improving the power quality of the country by expanding the power capacity and introducing state-of-the-art technology in aging power plants. All power operation projects, including O&M, are high value-added projects that are expected to continue to grow, and based on long-term experience and know-how, we have differentiated competitiveness by establishing manuals and processes for the entire process of business, including 'contract-financial procurement-purchase-logistics-operation-risk management'. STX Marine Service is seeking to continue expanding our market in the Middle East, Africa and Southeast Asia, including Iraq, where we are currently operating.

Ship Management Business

STX Marine Service provides comprehensive service across the ship value chain from ship and crew management to insurance and accident management, operation and ship owner agency duties, as well as ship owner's agency duties, such as flag management, and ship's sale and closure. Based on more than 50 years of experience, we have established our own manual for all areas of skilled land and sea professional technical personnel and ship management service, and has the largest number of ship management system certifications among domestic ship management companies, securing an unrivaled position in the maritime business area. Based on this expertise, we offer integrated solutions ranging from bulkers, tankers, containers and PCTC ships to special ships and installations such as icebreakers and heavy cargo carriers. Since 2006, we have provided the best service to integrate and link ships, companies, customers, and vendors through our own Web-based comprehensive information system and ship-owner portal sites. We also provide energy-saving solution service to enhance customer benefits and introduce

eco-friendly technologies such as greenhouse gas monitoring to differentiate our service.

Equipment Supply Business

STX Marine Service provides integrated supply of equipment related to ships such as engines, parts, consumables, and tools. In order to provide more competitive delivery and price to customers, we have subsidiaries and strive to improve service quality and efficiency by introducing our own global logistics system and expanding our network.

Who We Are

- Core Value
- Company Overview
- Affiliates
- Network



Core Value

STX Marine Service considers 'sustainable' that pursue sustainability, professionalism that values 'trustful' between partners,

'flexible' responsiveness is the core value of corporate management, despite the rapid changes in the business, market, and people's 'trust' as a core value of enterprise management.

Sustainable

A business that is sustainable and beneficial to the world.

Trustful

A trustful professional organization that gives people trust.



fleXible

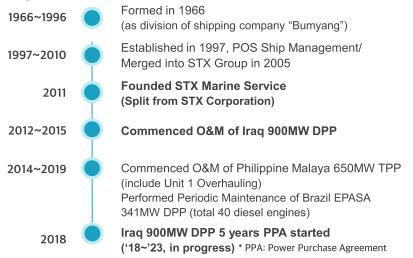
A young and dynamic company that respond flexibly to change.

Company Overview

Company Profile

Company Name	STX Marine Service Co., Ltd.
CEO	Sang-Jun Park
Share Holders	STX Corporation (100% Stake)
Capital	10 bn KRW (400,000 Shares, 2,500 KRW per Share)
Number of employees	126
Address(HQ)	102, Jungang-Daero, Jung-Gu, Busan, KOREA
Established	April 01, 2011 * Split from STX Corporation
Homepage	www.stxmarineservice.com

History



Core Business Sectors

■ Ship Management Business

Investment	Shipbuilding	Operation & Management	S&P	Scrapping
		Ship Management (SM)		
	Shipbuilding Supervision	Crew Management (Manning)		
Arranger		Shipowner Agency		
Finance Brokerage	Shipbuilding Brokerage	Chartering	S&P Brokerage	Scrapping
Tonnage Provider				
Supply of Equipment and Materials				

■ Energy Solution Business



Affiliates

STX's affiliates in various fields, including ship/plant O&M, Aviation MRO, Bio, and IT, are offering new customer experiences in both domestic and overseas markets through close cooperation and synergies.



Network



Energy Solution Business

- Service Description
- Business Development
- Sustainable Business Investment
- Major Performance

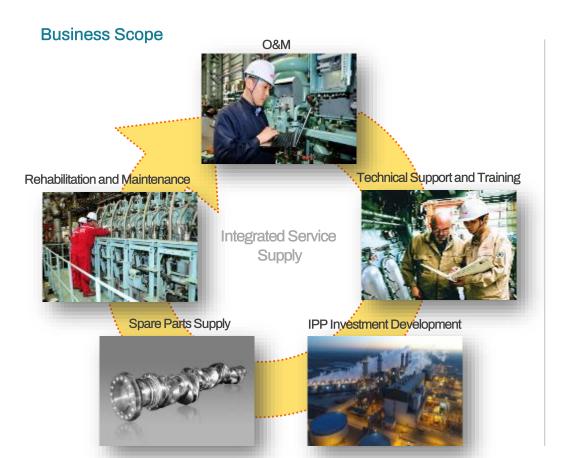


Energy Solution Business, 1/6

STX Marine Service is providing fully integrated services in every aspect of various kinds of power plants not only commercial management and technical operation but also investment such as Construction, Operation and Maintenance, Overhaul and Rehabilitation, Equipment & Parts supply, Solution Service, Engineering Service, Training Service, New Power Plant Development and So on.

Service Description

- Expanding its business portfolio from O&M service of Combined Cycle Power Plant (CCPP)
- Promoting stable long-term operation and electricity production through equity participation
- Sustainable Business Investment "Renewable"













Diesel Power Plant

Experiences of IRAQ 900MW O&M, Brazil 340MW Major Overhaul

Gas Turbine Power Plant

We have full maintenance capacity and experienced technicians on the control systems for gas turbine engines

Thermal Power Plant

Experience of Philippines 650MW O&M

New Renewable Energy

Solar PV, Wind Power (Onshore / Offshore) and Biomass / Biogas project in progress

Energy Solution Business, 2/6

Sustainable Business Investment "Renewable"

- Sustainable Business Area Expansion through Renewable Energy Business
 - New Renewable Energy Business
 - We, STX Marine Service, are striving to create social value through our "clean energy business" which goes beyond creating economic value based on consistently tackling challenges and pursuing innovation
 - Business Area
 - Solar PV
 - Wind Power (Onshore / Offshore)
 - Biomass / Biogas



Solar PV



Wind Power



Biomass/Biogas



Energy Solution Business, 3/6

Sustainable Business Investment "Solar PV Power Business"

- Sustainable Business Area Expansion through Solar PV Power Project EPC and Development

- Solar PV EPC & IPP Business

- Solar PV Business Description: Promoting eco-friendly power generation business in line with the government's green policy as an alternative to fossil fuels and nuclear power
 - ▶ Business Step
 - -. Phase 1: Domestic Solar PV Biz Fulfilment (~ 2022: Accomplish Performance of 3MW)
 - -. Phase 2: Domestic Solar PV Biz Expansion

(~2025: Performance of 10MW over, and Attending to Government Bidding)

- -. Phase 3: Oversea Solar PV Biz Diversification (Southeast Asia to Middle east, and America)
- ▶ Project:
 - -. Domestic: 500kW EPC (ongoing), Roof leasing EPC 3MW, 30MW IPP (Developing)
 - -. Oversea: PNG, PANAM Solar PV Project Developing (Bidding and J/V)









Energy Solution Business, 4/6

Sustainable Business Investment "Biomass Business"

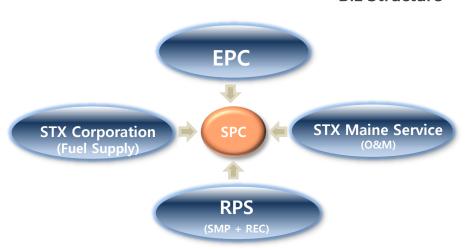
- Sustainable Business Area Expansion through Biomass Project Development

- Biomass CHP Project Development and Promotion

- Through renewable energy biomass (wood chips/wood pellets, Bio-SRF, unused forests, etc.), Development and Promotion for the combined heat and power plant business, which is a representative distributed power source that produces heat and electricity.
- Entered biomass power plant business in connection with STX Corporation's wood chip and wood pellet supply business
 - ▶ STX Corporation fuel supply (Securing a stable fuel supply network such as wood chips and unused chips)
 - Expansion of new business through our O&M participation (in process of participating in domestic project)
- Key implementation plan for 2022
 - ▶ Securing business rights (acquisition of licensed business or equity investment)
 - ► SHA (shareholder agreement) signed
 - ▶ Promotion of P/F such as establishment of SPC and selection of financial advisors



Biz Structure



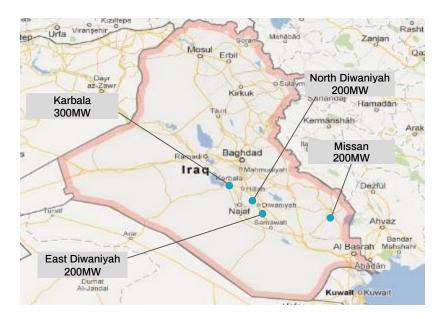
Energy Solution Business, 5/6

Major Performance, IRAQ

- IRAQ 900MW Diesel Power Plants (O&M, Spare Parts, Overhaul and PPA)
 - Client: Iraq MOE (Ministry of Electricity)
 - Capacity: Total 900MW at 4 Sites

No.	Site	Capacity	Blocks	Gen-set	
1	N-D	200MW	8	48	
2	KA	300MW	12	72	
3	МІ	200MW	8	48	
4	E-D	200MW	7	28	
TOTAL		900MW	35	196	

- Completed Contract (2012.07 ~ 2015.03)
- 900MW Diesel Power Plants O&M: USD 130 M
- Spare Part Supply for 900MW DPP: USD 21 M
- Overhaul Work for 900MW DPP: USD 11 M
- On-going Contract (2018.07 ~ 2023.06)
- 900MW DPP PPA (Power Purchase Agreement) Contract in progress
- Major Scope: Rehabilitation, Operation and Maintenance, Overhaul Work, Lubricant Oil Supply, etc.
- Contract amount: USD 499.6 M





Energy Solution Business, 6/6

Major Performance, Other Country

- Philippines 650MW Thermal Power Plant O&M Project

- Client: Power Sector Assets & Liabilities Management Corporation
- Capacity: TPP-1 300MW, TPP-2 350MW
- Completed Contract amount: PHP 1,307 M (USD 26.7 M)
- O&M (3 contracts) / 2014.10 ~ 2019.01 / PHP 1,228 M (USD 25 M)
- Overhauling Work for Unit 1 / 2014.12 ~ 2015.08 / PHP 81 M (USD 1.7M)

- Brazil 341MW Diesel Power Plant Major Overhaul Project

Plant Configuration : MAN 18V32/40 x 38 Sets / 9L32/40 x 2 Sets

Fuel Oil Type : Heavy Fuel Oil

Site output at measuring point : 341MW

Operation : All the Sets are running Base Load

- STX Service Experience for EPASA
 - '2014, 6K Periodic Maintenance
 - '2015, 12K Periodic Maintenance
 - '2016, 18K Periodic Maintenance
 - '2018 ~ '19, 24K Periodic Maintenance
 - '2022, 36K Periodic Maintenance (Discussing)





Ship Management Business

- Business Scope
- · Competitiveness of Ship Management
- Certifications and IT Platform
- Tonnage Provider
- · High Tech & Shipbuilding Supervision



Ship Management Business, 1/4

The ship management business is a comprehensive service business that provides a full range of services, including crew and ship maintenance management and operations necessary for ship operation.

The company is a standalone third-party ship management company. Since the establishment of 'Bumyang Specialized Carriers Co., Ltd.' in 1966, it has been providing comprehensive services covering all aspects of the value chain, from shipbuilding to ship operation and management, based on ship management know-how and expertise accumulated over 50 years.

Business Scope

- Comprehensive work in all areas of ship management from ship construction to dismantling

Crew Management	Crew recruitment/placement/management; crew training and care	
Technical Ship Management	Docking repair; document management (drawings /cert.); provides IT solutions	
Safety/Quality/Environment	Management of safety/quality/environmental standards; accident response and management	
Shipbuilding Supervision	Shipbuilding & retrofit consulting; other advisory	
Supply Provision & Spare Parts	Inventory management; billing, ordering and supply; vendor management	
Ship Owner Agency	Ship nationality registration and administration; insurance management; claim processing; legal advice	

MUNDAN SELECTION SELECTI

Korea's Best Ship Management Company for Third Party including HYUNDAI GLOVIS, IS Shipping & others



Ship Management for Overseas Ship Owners including STEEL SHIPS (USA) & DOUN KISEN (JAPAN)



Specialized Ship Management for 'Korea Polar Research Institute'

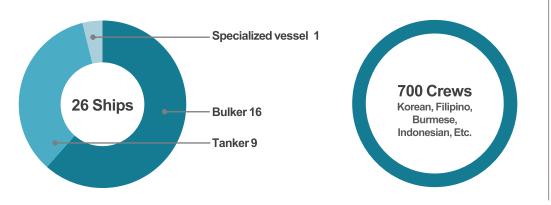
Icebreaker Research Ship <ARAON> (Ongoing management since 2009)



Tonnage Provider

BBC Chartering 3 Vessel T/C Revenue for Global Top Charterers

Diversified Types of Managing Fleets & Crew



Ship Management Business, 2/4

Competitiveness of Ship Management

<u>Scale Merit Negotiation Power</u> (Lub. oil, Spare, Store, Insurance Premium)

- Exclusive Procurement team / Competitive price
- Quality / price management
 (Yearly package price negotiation, Regular Evaluation of Provider)
- Agent management / Network utilization
- Excellent inventory system
- Best insurance (H&M, P&I) Premium base low accident ratio

Customized - Diverse ship management service available (Total Management)

- Contract flexibility according to ship owners' preferences.
- Simple tech. Management / Insurance / Commercial / Fixed Cost
- Extensive commercial management service including insurance, chartering, S&P are available to provide
- Technical consulting and market analysis in connection with ship management are available to provide
- Total platform service are available thru Tonnage Providing business to investor and/or non shipping company
- Development of new shipping project/structuring according to market status
- Total solution to be provided by team exclusively for chartering/S&P/etc



Ship Management Business, 3/4

Certifications for Ship Management

	Certification	Certification Body
And the section of the sec	POLAR CODE (Standards for Ships Operating in Polar Waters) • Certification system for conformity to safe operation of ships operating in polar waters(target ships: ships operating in polar waters) • Acquired the first and only certification among domestic ships (R/V Araon)	Korean Register of Shipping(KR)
APERSON COMMANDE	International Safety Management System(ISM Code, International Safety Management) • Safety conformity certification system for companies and ships (certified countries: Republic of Korea, Panama, Marshall) • Essential certification items for ship management companies	Korean Register of Shipping(KR)
ISO	Safety/Health Management System (ISO 45001) • To establish accident and disaster prevention system through risk assessment	Korean Register of Shipping(KR)
22301	Business Continuity Management System (ISO 22301) • Comprehensive crisis response certification system whereby quick response and recovery can be made in the event of an accident occurrence • Acquired the first and only certification among domestic ship management companies	Korean Register of Shipping(KR)
ISO 150 50001	Energy Management System (ISO 50001) Ship energy saving certification system to prevent air pollution and global warming Domestic large ship management companies mainly possess this certification (4 companies)	Korean Register of Shipping(KR)
ISO	Environmental Management System (ISO 14001) • Certification system for reduction of wastes and preventing pollution accidents through environmental impact assessment of pollutants	Korean Register of Shipping(KR)
ISO	Quality Management System (ISO 9001) • Certification system for process establishment and monitoring processes for customer satisfaction and continuous improvement	Korean Register of Shipping(KR)

STX Ship Management IT Platform(POMARIS)

- Organic linkage of work handled by shore & ship
- With an IT system for crew management/ship management developed with proprietary technology for the first time in Korea, all work processes can be simplified & carried out through the IT system
- Realize work transparency, effective budget execution, prompt work feedback
 & decision-making through organic/effective linkage between the shore & ship



Ship Management Business, 4/4

Tonnage Provider (Own Ship, Commercial Operation, and Ship Management)

- Strategic business that gets capital gains by securing ships on time and selling them at the optimal time after operating the ship by TC or CVC with the global top charterer.
- Developing and managing new projects with various financial structure and world-class partners
- Providing the high-quality total ship management service involving insurance or commercial service for our valuable customer's needs.

Business Structure, BBC



Business Structure, Financing and Investing



Our Partners of Tonnage Provider Biz

















Equipment Supply Business

- Marine Equipment Package Provider
- Green Technology Consulting Service
- Special Equipment Provider
- Lubricator for Automobile



Equipment Supply Business, 1/2

In order to provide more competitive delivery times and prices in the supply of marine equipment such as engines, parts, consumables and tools, we are continuing our efforts to improve service quality and efficiency by introducing our own global logistics system and expanding our network.

Marine Equipment Package Provider

- Full Turn-Key Service from Technical consulting to Supplying spare parts & ship's store for newbuilding project
 - Technical Consulting and Engineering Service to meet client's needs
 - Reduce project management cost through supplying full range of equipment
 - Qualified equipment through long-term experience and know-how on marine equipment and ship's stores

Preparation of Shipbuilding Stage

Shipbuilding Stage

After Vessel Delivery

Procurement Commissioning

After Vessel Delivery

A/S & Spare parts, Ship's store

Promoting marine equipment in Korean to Russian market

- Increasing trend of newbuilding project in Russia
 - Problem of Vessel's deterioration (abt. 35 years, over 60%)
 - Development of underneath of Arctic Circle
 - Increase the transportation volume in inland water
 - Newbuilding plan until 2035 years (abt. 900 vessel)
- Lack of manufacturers for marine equipment
 - Disruption of Europe/USA's major equipment supply chain after economic sanctions in 2014
 - Korea emerges as an alternative supply chain
- The Russian government's policy to build eco-friendly ships in accordance with international environmental regulations

[Newbuilding Plan until 2035 year for Russia Federation]

Ship Type	2025	2035	Total
Tanker (Oil, Chemical), Bulker	114	19	133
Fishing vessel,, Fishing Processing Vessel	112	46	158
LNG Carrier & Ice Breaker	34	17	51
Cruise, Dredger, Tug boat, Research Vessel etc.	401	149	550
Total	661	231	892

<Source: KOMEA>

Client's Benefit

- Manufacturer
- Strengthen of negotiation power
- Risk Management through STX
- Shipyard
- Quick response from distant manufacture
- Project Schedule & Quality Management
- Integrated Sales with domestic manufacturers (Signing MOU with abt. 20 manufacturers and will increase the number of manufacturers)
- Promotion of expansion to other overseas regions

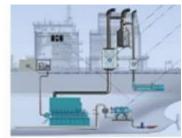
Equipment Supply Business, 2/2

Green Technology Consulting Service

- Ballast Water Management System (BWMS) & Scrubber Retrofit Solution
 - Main Target: Small and medium size shipping companies in Korea
 (Until 1st half of 2021: abt. 10 vessel ordered, some of them are finished installation)
 - Turn-Key Service

 Pre-evaluation → Engineering → Procurement & Fabrication → Installation & Service
 - BWMS: Until 2024, Number of target vessel: Over 100 vessels
 - Scrubber: Increasing demand depending on international oil price





Special Equipment Provider

Securing sales rights from major oversea manufacturers and promoting in domestic market

- Cryogenic Piping Insulation
 - Official Agent of TI Callenberg in Norway, Manufacturer of Revolving Generation System
 - Spraying Type Pipe Insulation System (Revolving Generation, RG)
 - Optimized insulation solution for LNG pipe line of onshore and offshore

Hospital Equipment

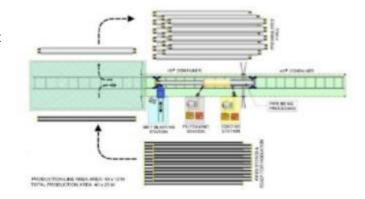
- Official Agent of PMS Medicalization in France, Engineering Company of Hospital Solution
- Turn-Key Service including Engineering, Procurement and Installation for Navy & Hospital vessel etc.

- Pilot Chair

- Official Agent of Cleemann Chair-System, Manufacturer of Pilot Chair
- For commercial vessel, Sub-marine, Navy Vessel, Special Vessel etc.

Lubricant Oil

- Promotion of Lubricant oil for automobile repair industries in Iraq
- Promotion of Lubricant oil for onshore diesel power plant in other countries









End of Document

