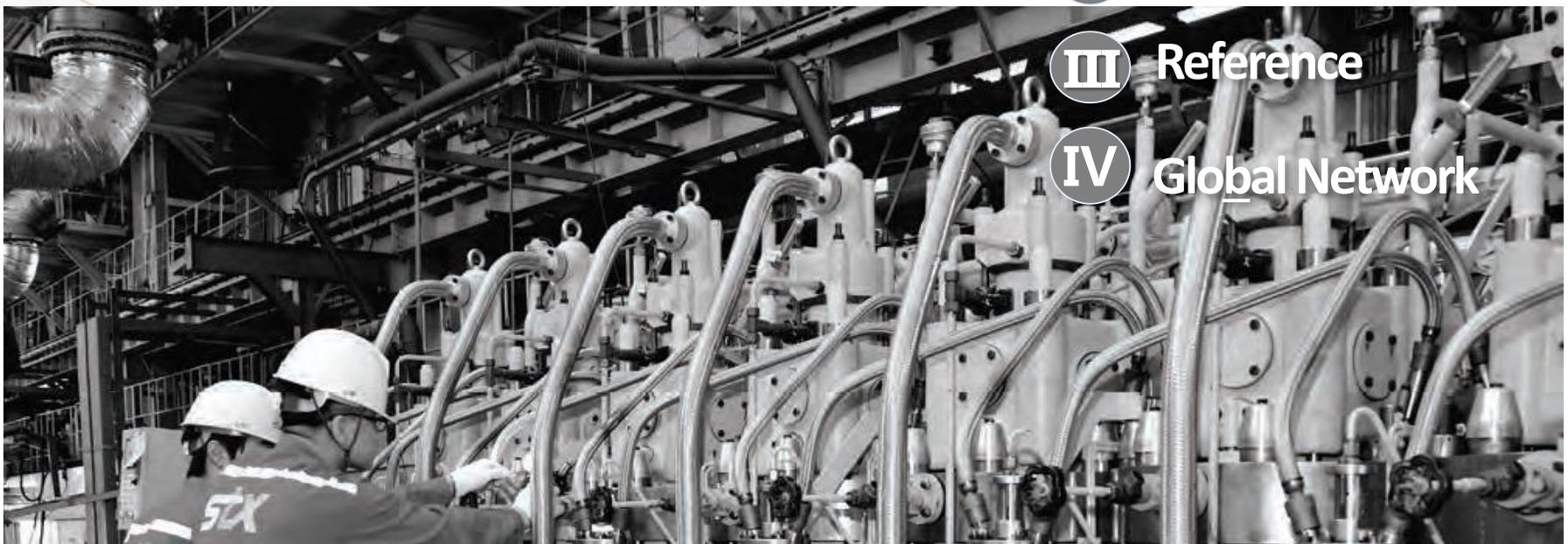




CONTENTS

- I Company Overview
- II Service Business
- III Reference
- IV Global Network



Background

Global Top Engine Maker, Jump up to become the world best company.

STX Engine started out in Dec. 1976 as a diesel engine manufacture. After being chosen as one of Korea's defense force companies, we grew as one of global leaders in areas of diesel engine, power plants and electronic communication equipment with the accumulation of technology and knowhow.

STX Engine has manufactured high-tech medium-speed diesel engines, which have been sharing 70% of the domestic market.

We produce various engines for Defence Industry (such as K1A1 tanks, K-9 self-propelled howitzers and military vessels), Civilian Industry (such as container ships, LNG carriers, oil tankers, fishers and locomotives), and Diesel Engine Power Plants and parts Service.

We export more than 90% of the whole marine diesel engines and multifarious power plants of our own to Asian, European, Middle Eastern and African markets.

STX ENGINE "BUSINESS FIELD"



Marine Diesel Engines



Military Diesel Engines



Diesel Power Plant



Parts & Service

Our Business



Marine Diesel Engine

- 4-ST Gen-set Engine
- Medium Speed 4-ST Propulsion Engine
- Low Speed 2-ST Engine
- Cummins High Speed Engine



Military Diesel Engine

- For marine Purposes
- For Army Projects



Diesel Power Plant

- Installation and Commissioning
- Technical Support and Training
- Performance Recovery & Plant Retrofit
- New Power Plant



Service

- Operation & Maintenance
- Commissioning
- Trouble shooting
- After Service
- Retrofit, Rehabilitation, EPC, Manufacturing
- Spare parts supply
- Solution (BWMS, SCR, ETC...)

Introduction

STX Engine starts service business in earnest this year after took over business and organization from STX Marine service with three overseas corporation in Singapore Netherland and USA.

Because we should have sustainable business structure in order to survive from economic recession and the downfall of STX Group. STX Marine service was same as Mobis at Hyundai Motor Group because this company has supplied spare parts and offered service to customer.

So we will provide qualified engine services for STX and other engine and cover spare part, field service, technical support, upgrade service of conversion, safety, etc. We are aiming to increase the market share up to 30 percent of global market while provide high qualified service with reasonable cost for customer.

In addition “STX Engine” plans to create the foundations for profit generation and sustainable management as well as realizing customer satisfaction and business growth when provide parts sales and lifetime services with engine manufacturing and will connected to manufacturing again as recycling structure.

As a result, we will expand our business from manufacturing that have already been concentrated on marine engines to service of equipment, plant and industrial engine with marine engines



Spare Part Service



Engine Service

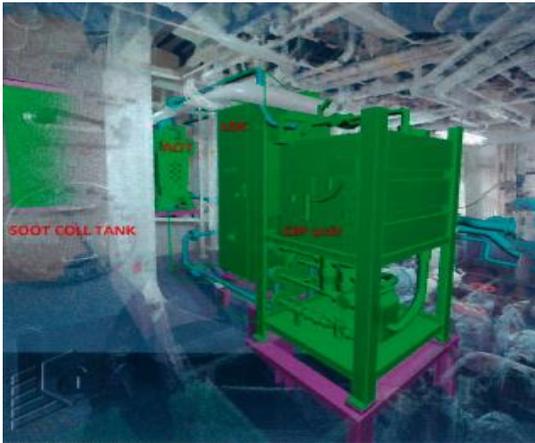
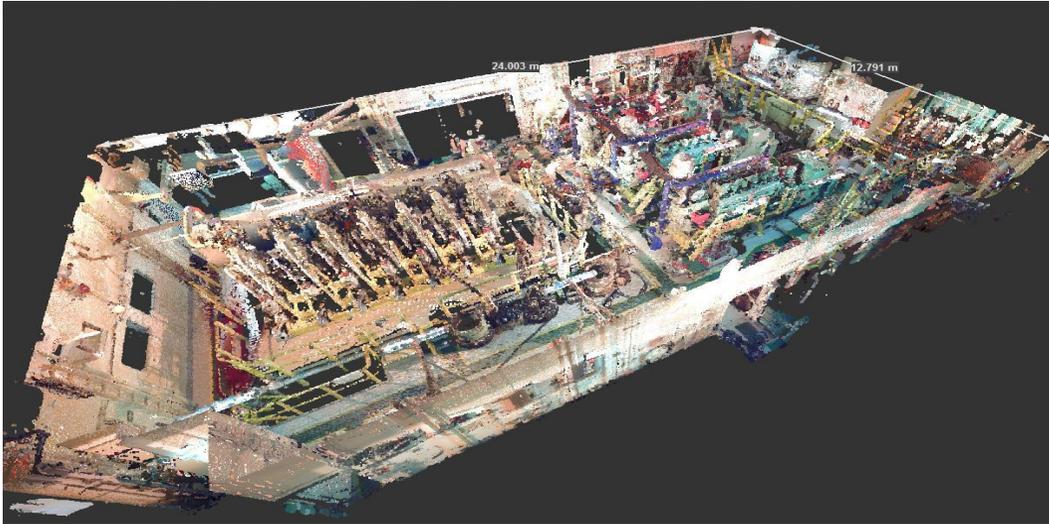


Plant Service



Equipment

STX Engine – Alfa laval BWMS MOU Agreement



< Ballast water treatment system >

STX Engine have made a MOU Agreement of Ballast Water Management System with Alfa laval recently. According to MOU Agreement, STX Engine will supply engineering, installation, commissioning, service to customers as turnkey system. Also we will offer package promotion including engine parts and service in order to help reduce the costs and risks of BWMS.



< STX Engine – Alfa laval BWMS MOU Agreement >

1. Spare Parts Service



Parts Supply

- Engine Spare Parts (STX & Non-STX Engine)
- Turbocharger
- Ships Spare Parts (Deck & Auxiliary Machinery)
- Reconditioning Parts (Tools & Consumption Parts)
- Propulsion Spare Parts
- Electrical Parts
- BOP (Balance of Power Plant)

Management Service

- Highly Qualified Engineers
- IT-Based System

Strategic Inventory System

- Warehouse : Korea, Netherlands, Singapore, and USA.
- Workshop : Korea, Netherlands, Singapore, USA
- Just In Time Delivery via Worldwide Network

2. Engine Service

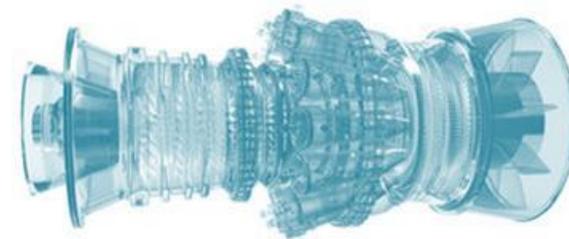
Engine Service Group

- STX 2&4 Stroke Engine
- Non-STX 2&4 Stroke Engine
- Gas Engines
- Gas Turbine Generator



Commissioning Service Scope

- Shop Trial, FAT (Factory Acceptance Test)
- Installation supervision
- Mechanical & Electrical Commissioning
- Sea Trial and Maiden Voyage Attendance
- Trouble Shooting and Performance Evaluation



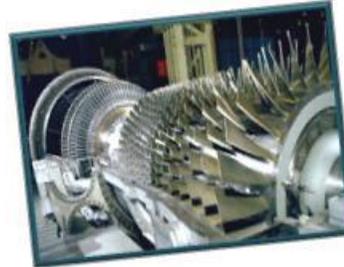
Engine Service Scope

- Engine Maintenance
- Workshop Component Maintenance
- Engine Modification
- Engine Performance Optimizing Service
- Environmental Retrofit Service
- Warranty Service Handling
- On-board Disassembly / Assembly

3. Plant Service

Combined Cycle Power Plant O&M Service

- Gas Turbine
- Steam Turbine
- Generator
- Boiler Feed-Water Pump
- Cooling Water Pump
- Cooling Tower Fan



G/T Maintenance & Repair Service

- C.I. inspection (Combustion Inspection)
- H.G.P.I. inspection (Hot Gas Path Inspection)
- M.I. inspection (Major Inspection)

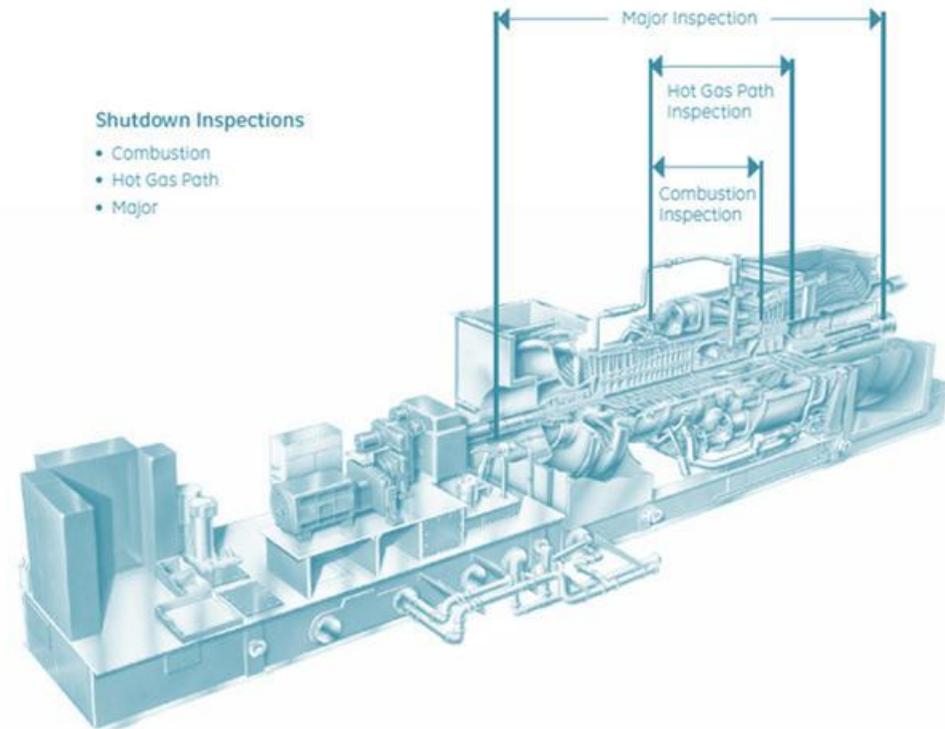
Typical Safety Instrumented Functions

- Emergency Over-Speed
- Emergency Stop (Local/Remote)
- Flame Detection
- Exhaust Purge Timer
- Excess Firing Fuel Flow
- Seismic Vibration
- Hazardous Gas Detection
- False Start Drain Temp



Shutdown Inspections

- Combustion
- Hot Gas Path
- Major



4. Solution Service

Cost Saving

- F.O Drain Modification
- L.O Quality Control Modification
- Alpha Lubricator Installation & Retrofit
- T/C Cut out (Low Load Operation)

Safety

- Change Air Shut off Device Installation
- Splash Oil Monitoring System
- Bearing Wear-down Monitoring System

Troubleshooting & Maintenance

- Machinery & Electric Troubleshooting
- Crankshaft Recovery (Polishing & In-suit)



Upgrade

- PLC Modification
- L16/24 2008 Version Up
- L16/24 Viscosity Control System

Rule Regulation

- E-MAS (On-line Engine Monitoring System)
- Customized Training Causes
- Workshop Training Causes



5. Other Service



Building Commissioning & Modification

- Mechanical Completion Control
- Pre-Commissioning
- FTR & Commissioning
- Document Control and Issue
- Mobilization with equipment maker



Machinery Service

- Supply of Equipment and Spare Part
- Installation
- Upgrade
- Repair and Modification
- Maintenance
- Preservation
- Cleaning

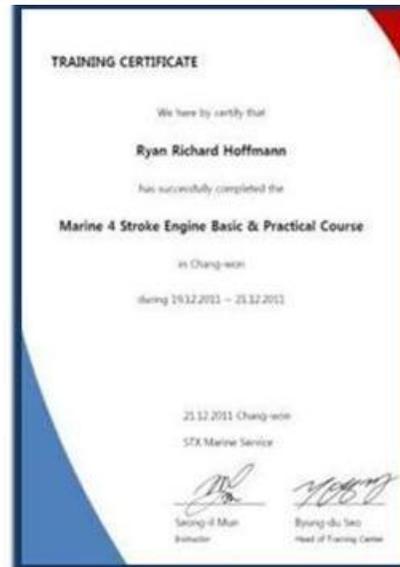


Automation Service

- Inspection Service: Operation and Electric System
- Measurement Service: Generator Condition and Medium voltage
- Analysis Service: Power Plant and Grid
- Agreement: O&M and Technical Support
- AMS and Control Systems
- Governor Service
- Pneumatic Service



6. Training Service



Lecture Training

- 2 & 4 Stroke Engine
- Various Sample Components of Engine
- Special Tools, Electric Measuring Kits
- Text Book and Video

Hands-on Training

- Training to maximize the Plant's Availability & Viability
- Global Staff Management System
- Engineer Training Center in Korea
- Online Course
- In-service Training
- Localized Training Program
- Qualification

Engine Service

Exchange program

- Scope: One stop Service
 - Swing sets supply (Cylinder head, Liner, Fuel pump, Piston, Con-rod)
 - Onboard replacement
 - Workshop overhaul
 - Re-delivery
- Customers : Drillship Customers, German Container owners
- Location : GOM, Singapore, Korea



Major Engine Recovery / 2010.11.19~2011.01.13

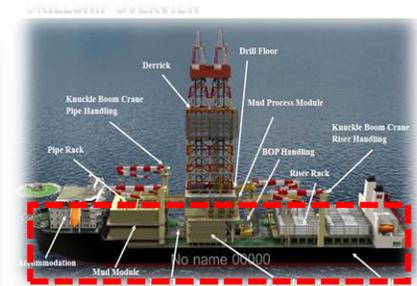
- Scope : Y-329 PJT Engine Recovery
- Customers : ABG Shipyard, India
- Place : India
- Engine type : 6S46MC-C
- Work scope :
 - Main Engine Crankshaft, Bed plate replacement
 - Commissioning and Sea trial



Engine Service

Offshore Commissioning

- Scope: NGT II Drillship Commissioning
- Customers : Drillship Customers, USA
- Place : China



Offshore Engine Recovery / 2011.12.21~2012.02.10

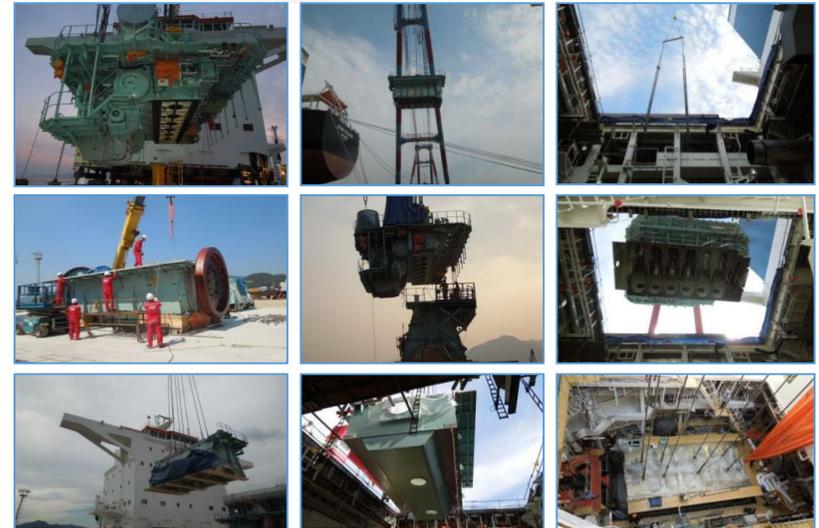
- Scope: Ocean Rig Corcovado C/S Replacement
- Customers : Drillship Customers, Greece
- Place : Brazil
- Engine type : 16V32/40
- Work scope :
 - Main Generator Engine Crankshaft replacement



Engine Service

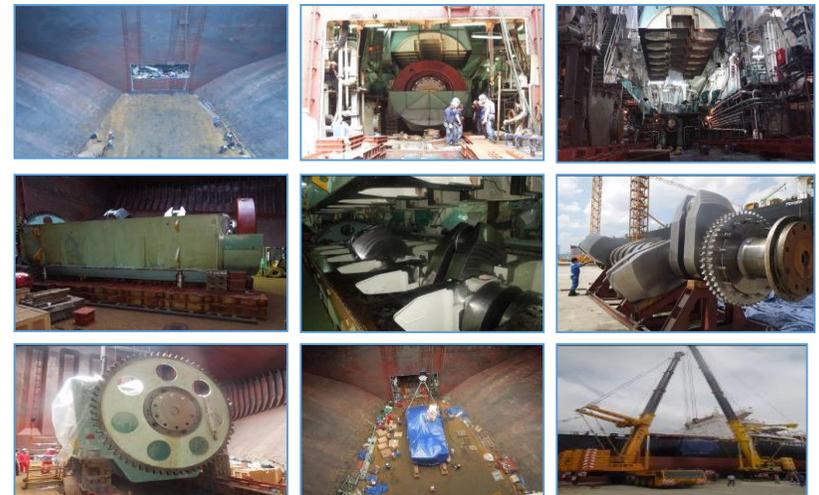
Major Engine Recovery / 2012.07.16~2012.11.18

- Scope : M/V Star Polaris Engine Recovery
- Customers : Star Bulk, Greece
- Place: Pyeongtaek → Gosung Shipyard, Korea by towing
- Engine type : 6S70MC-C
- Work scope :
 - Deck house lifting, remounting and welding
 - Main Engine Crankshaft, Bed plate replacement
 - Commissioning and Sea trial



Major Engine Recovery / 2015.06.10~2015.08.

- Scope : M/V Ricsea Engine Recovery
- Customers : Five Ocean, Korea
- Place: Kwangyang
- Engine type : 6S60MC-C
- Work scope :
 - Hull Cutting and withdrawal
 - Main Engine Crankshaft, Bed plate replacement
 - Commissioning and Sea trial



Engine Service

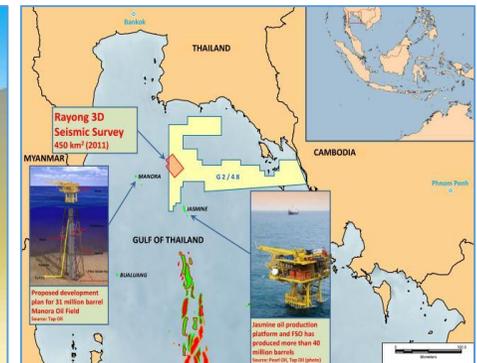
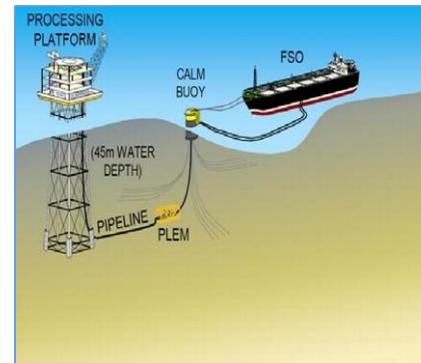
Major Conversion Work / Oil Tanker to FSO

- Scope : Banyu Urip Project
- Customers : Modec
- Place: Singapore
- Engine type : 7L23/30 x 3SETS to 9L21/31 x 2SETS
- Work scope : Engine & Electric Panel Modification



Major Engine Maintenance

- Scope : Omni Offshore - Manora Princess Work
- Customers : Omni Offshore, Singapore
- Place: Singapore
- Engine type : M/E, G/E, Automation Entire Maintenance
- Work scope : Engine & Electric Panel Modification



Workshop Service

Work Shop Service

Each malfunction parts are delivered to our work shop and carry out cleaning, maintenance and re-conditioning. Our workshop is equipped with various measuring tool, maintenance & treatment instrument which is advanced technology. This advanced technology and facility lead the service improvement and fulfill remarkable service reference.



Training Service

Training Service



Training Service

STX training center provides practical training on engine components and simulators in a classroom or workshop setting for engine control systems and components. STX has access to well-equipped training centers and technical facilities where the participants can gain valuable hands-on experience.

Lecture Training

- 2 & 4 Stroke Engine
- Various Sample Components of Engine
- Special Tools, Electric Measuring Kits
- Text Book and Multimedia

Hands-on Training

- Training to Maximize the Plant's Availability & Viability
- Global Staff Management System
- Engineer Training Center in Korea
- Online Course
- In-service Training
- Localized Training Program
- Qualification

Spare Parts Service



Spare parts service

We supply full range of spare parts, tools and consumables produced by each of the STX affiliates and general products for Marine and Oil industry throughout the entire life cycle of your machinery.

We operate four main warehouses located in Korea, Netherlands, Singapore and USA in order to secure the key parts and essential replacements sufficiently and provide appropriate services to our valuable customers.

Parts Supply

- Engine Spare Parts (STX & Non-STX Built Engine)
- Turbocharger
- Balance of Power Plant (BOP)
- Marine Equipments
 - Engine Reconditioning Parts
 - Marine Propulsion Products
 - Subsea Offshore products for Oil and Gas Industry
 - Auxiliaries, Living Quarters & Cargo Handling Equipments
 - Generating Unit Products

Strategic Inventory System

- Warehouse : Korea, Netherlands, Singapore, and USA
- Workshop : Korea, Netherlands, Singapore, USA, China and Iraq
- On-time Delivery via Sufficient Spare Parts in Stock

Spare Parts Service



Parts Supply

- Engine Spare Parts (STX & Non-STX Engine)
- Turbocharger
- Ships Spare Parts (Deck & Auxiliary Machinery)
- Reconditioning Parts (Tools & Consumption Parts)
- Propulsion Spare Parts
- Electrical Parts
- BOP (Balance of Power Plant)

Strategic Inventory System

- Warehouse : Korea, Netherlands, Singapore, and USA.
- Workshop : Korea, Netherlands, Singapore, USA, China and Iraq
- Just In Time Delivery via Worldwide Network



Management Service

- Highly Qualified Engineers
- IT-Based System



Spare Parts Service



- BP Shipping Frame Agreement
 - new building initial spare parts supply
 - USD 1,200,000 (Total 14Vessel / Main engine parts)
(2015.09 ~)
- SHELL Air Cooler Bulk order
 - 32/40 Engine Total 80 Sets / USD 500,000 (2015.11 ~)

Agreement

- CMA CGM service agreement
 - L27/38 Module Replacement Program
 - Cylinder unit and major equipment exchange service
 - More than 20 engine overhauled / year
(2016.11 ~)
- CMA CGM service agreement
 - L28/32 Module Replacement Program
 - Cylinder unit and major equipment exchange service
 - More than 5 engine overhauled / year
(2018.01 ~)
- APMM Frame Agreement
 - Daewoo new building initial spare parts supply
 - USD 1,500,000 (Total 11Vessel / 32sets)
(2017.04 ~)

III Reference Major Customer List

Global Total Service Provider

Major Customer List for Marine & Offshore





End of Document

