

# Hanwha Ocean

BROCHURE

# Sustainable Oceanic Solutions begin here!

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**Hanwha Ocean** is driving a paradigm shift in the maritime energy industry toward an eco-friendly ship market, powered by world-class technology and a steadfast commitment to ocean safety. **Hanwha Ocean** is advancing sustainable growth through its cutting-edge 'Smart Yard,' utilizing automation to ensure safety and efficiency. **Hanwha Ocean** is committed to enriching lives and advancing sustainability through the ocean—the source of all life. **Hanwha Ocean** stands with you for a sustainable future.

## ABOUT Hanwha Group

**Hanwha** — Your partner in building a sustainable future for humanity and the planet

Year of Foundation ————— **1952** 72<sup>nd</sup> anniversary in 2023

Domestic Affiliates ————— **103** As of end-2023

Total Sales ————— **KRW 80.1 trillion** 2023

Global Network ————— **776** As of end-2023

Domestic Ranking ————— **7<sup>th</sup>** Based on total assets as of the end of 2023

Established in 1952, **Hanwha** has been at the forefront of Korea's economic and industrial growth, guided by a founding philosophy rooted in social progress, trust, and shared prosperity.

Embracing challenges and driving innovation, we have evolved into a leading global enterprise.

**Hanwha** continues to advance its business structure and portfolio across clean energy and ocean solutions, aerospace and mechatronics, finance, and retail and services—while strategically investing in advanced technologies to drive future growth.





ABOUT Hanwha Ocean

# Hanwha Ocean Navigates Boldly Toward Limitless Oceans

Geoje Shipyard

## Key Products



**Commercial Vessels**

LNG carriers, ice-breaking LNG carriers, LPG carriers, crude oil carriers, container ships



**Offshore Business**

Drilling facilities (drillship, semi-submersible rig, etc.), production facilities (LNG-FPSO, FPSO, fixed platform, FSRU, FPU, etc.), WTIVs.



**Naval Ships**

Destroyers, frigates, submarines



**Wind Power**

Onshore, offshore



**Plants**

Petrochemical plants, power plants, industrial/environmental plants

## Corporate Profile

<b>Name</b>	Hanwha Ocean
<b>Date of foundation</b>	October 11, 1973
<b>Headquarters &amp; Geoje Shipyard</b>	3370, Geojedae-ro, Geoje-si, Gyeongsangnam-do, South Korea Phone: +82-55-735-2114
<b>Seoul Office</b>	86(Hanwha Building), Cheonggyecheon-ro, Jung-gu, Seoul, South Korea Phone: +82-2-2129-0114  14(Grand Central Building B), Sejongdae-ro, Jung-gu, Seoul, South Korea Phone: +82-2-2129-0114
<b>Siheung R&amp;D Campus</b>	96 Baegot 2-ro, Siheung-si, Gyeonggi-do, South Korea Phone: +82-2-2129-1114
<b>Surface Area of Shipyard</b>	4.9 million m <sup>2</sup>
<b>Personnel</b>	Approx. 30,000



# WHO WE ARE

We chart bold paths across infinite oceans

We continuously challenge ourselves to deliver energy, pioneer new frontiers, and lead progress worldwide.

Our technology safeguards maritime peace, and our innovation turns future ambition into reality.

Every step we take shapes tomorrow—and defines the course of history.

The ice-breaking LNG carrier, a pioneer charting new waters at the North Pole



LNG-FPSO, a floating LNG plant on the sea



Jangbogo-III, the world's stealthiest submarine



HS4, a smart ship technology that offers economical routes optimized for our clients



# PIONEER



# HISTORY

## 2024

- Hanwha Ocean becomes the first Korean shipbuilder to win an MRO contract from the US Navy
- Becomes the first Korean corporation to run a shipbuilding business in the U.S. with the acquisition of Philly Shipyard
- Acquires the wind power and plant business of Hanwha Corporation

## 2023

- Large Offshore Wind Turbine Installation Vessel is included on the list of World's First-Class Products
- Becomes the first Korean corporation to join the First Movers Coalition (FMC)



## 2020

- The world's first successful ship-to-ship LNG loading within the quay wall of a shipyard
- Launches, "Ahn Mu", a 3,000-ton submarine
- Delivers the world's largest container ship, "HMM Algeciras"

## 2019

- Delivers 15 ice-breaking LNG carriers for use in Arctic operations

## 2018

- Opens the Siheung R&D Center
- Launches, "ROKS Dosan Ahn Changho", a 3,000-ton independently developed medium-sized submarine
- Successfully builds the world's first FRS LNG carrier to run on both low- and high-pressure engines

## 2017

- Delivers KRI Nagapasa, the first independently developed submarine, to Indonesia
- Develops a cryogenic, high-manganese steel-based LNG fuel tank (MCTIB)
- Delivers the world's largest jack-up rig

## 2016

- Completes the construction of the world's first ice-breaking LNG carrier for use in Arctic operations
- Delivers the world's first LNG-FPSO
- Becomes the first Korean company to export a submarine (Indonesia)

## 2015

- Builds the world's first LNG carrier equipped with an LNG propeller engine and a PRS
- Delivers the world's largest container ship (19,224 TEU)

## 2013

- Wins an order to build the world's largest 263K LNG-FSRU

## 2011

- Becomes the first Korean company to export submarines
- Builds the world's largest FPSO, "Pazflor FPSO"

## 2004

- Operates the world's first PI system in the shipbuilding industry

## 1996

- Launches Korea's first independently developed destroyer, "ROKS Gwanggaeto the Great"



## 1993

- Korea's first combat submarine, "ROKS Icheon" (SS-062), is listed in the Guinness World Records (Korean edition)
- Simultaneously launches two double-hull crude oil carriers for the first time in the world

## 1992

- Builds Korea's first 1,200 ton-submarine, "Icheon"

## 1985

- Builds a 300,000-ton crude oil carrier

## 1984

- Opens the Ships & Ocean Engineering Research Institute
- Introduces a floating dock

## 1981

- Completes the construction of the Okpo Shipyard/ Goliath Crane

## 1979

- Wins the first order to build a chemical tanker

## 1973

- Begins the construction of the Okpo Shipyard of the Korea Shipbuilding and Engineering Corporation



## Business Areas

### COMMERCIAL VESSELS

Hanwha Ocean applies eco-friendly digital technologies to provide sustainable solutions and continues to lead the commercial shipbuilding industry with globally competitive expertise.

# COMMERCIAL VESSELS

LNG Carrier (LNGC)



Very Large Gas/Ammonia Carrier (VLGC/VLAC)

Container Ship



Very Large Crude Oil Carrier (VLCC)



### HIGHLIGHT

- 2025 Hanwha Ocean becomes the world's first shipbuilder to deliver the 200th LNGC
- 2020 The world's first successful ship-to-ship LNG loading within the quay wall of a shipyard  
Delivers the world's largest container ship, "HMM Algeciras" (24,000 TEU)
- 2018 Builds the world's first FRS LNG carrier to run on both low- and high-pressure engines
- 2017 Develops a cryogenic, high-manganese steel-based LNG fuel tank (MCTIB)
- 2016 Builds the world's first ice-breaking LNG carrier for use in Arctic operations
- 2005 Delivers the world's first LNG-RV
- 1993 Becomes the first shipbuilder to simultaneously launch two double-hull VLCCs



## Business Areas

### OFFSHORE BUSINESS

As a trailblazer in the global energy ecosystem, **Hanwha Ocean** leverages the world's most advanced production systems and facilities to develop and deliver cutting-edge plants and platforms tailored to diverse offshore environments.

#### HIGHLIGHT

- 2017 Delivers the world's largest jack-up rig
- 2016 Delivers the world's first LNG-FPSO to Malaysia
- 2013 Wins an order to build the world's largest 263K LNG-FSRU
- 2011 Builds the world's largest FPSO, "Pazflor FPSO"

#### Production Facilities

Floating Production, Storage, and Offloading (FPSO) Unit



Onshore Modular Plant



Fixed Platform

LNG-FPSO



Floating Production Unit (FPU)





# OFFSHORE

## Drilling Facilities

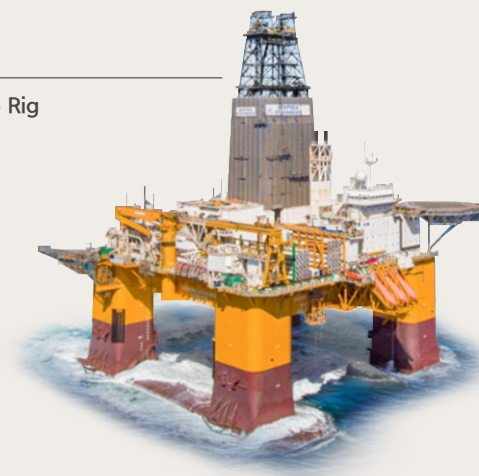
Drillship



Jack-Up Rig



Semi-Submersible Rig



# BUSINESS



## Business Areas

### NAVAL SHIPS

As a Global Top Tier Naval Solution Provider, **Hanwha Ocean** is expanding its role in ocean engineering and defense through the development of breakthrough technologies designed to lead the global market.

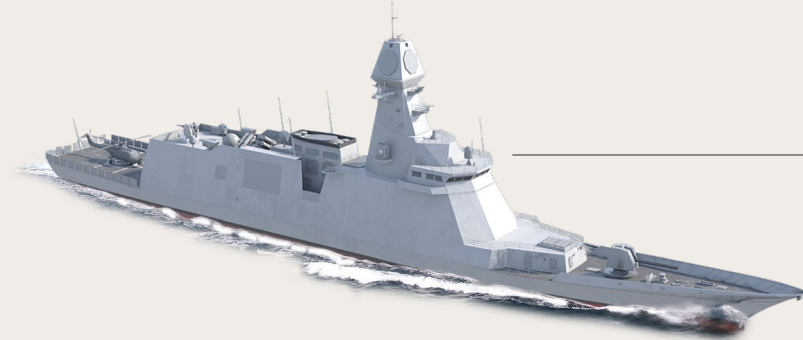
#### Destroyers

KDX-III



#### Frigates

FFX Batch-III



#### Submarines

Jangbogo-III



#### HIGHLIGHT

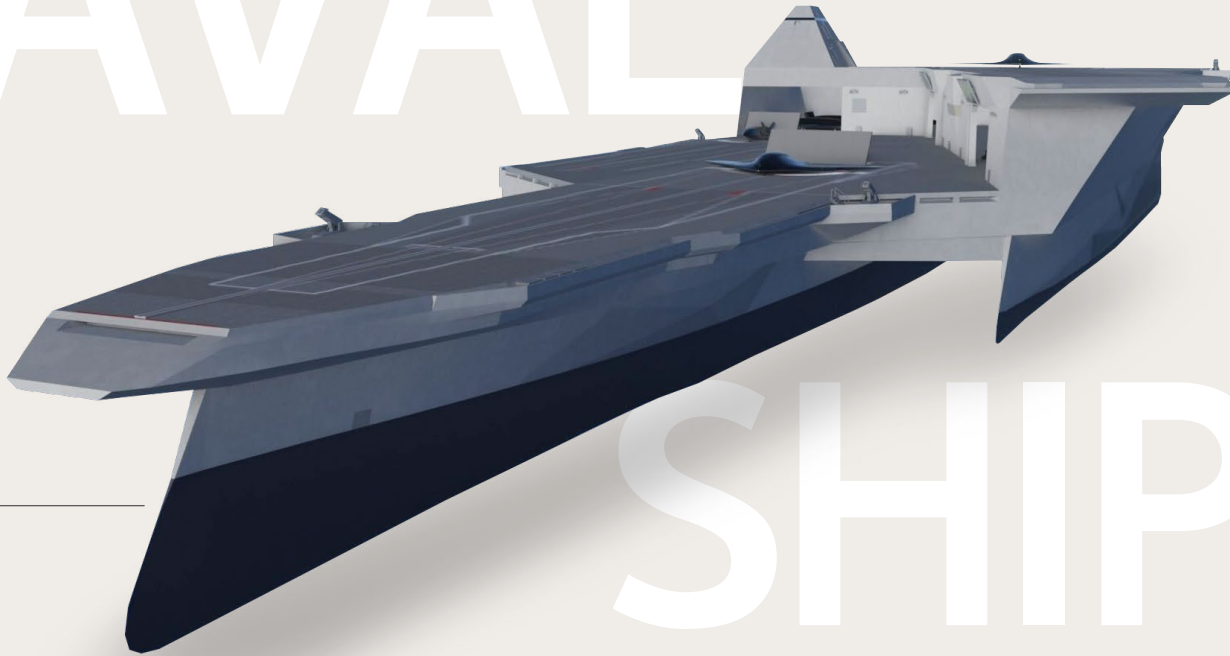
- 2022 Commences the construction of 3 Batch-II, a home-grown 3,000-ton medium-sized submarine
- 2018 Launches, "ROKS Dosan Ahn Changho", a 3,000-ton independently developed medium-sized submarine
- 2017 Becomes the first Korean shipbuilder to export the first home-grown submarine to Indonesia
- 2014 Begins the construction of Jangbogo-II, a 1,800-ton submarine
- 2011 Becomes the first Korean shipbuilder to win an order to build a submarine (1,400-ton) for export
- 1996 Launches Korea's first independently developed destroyer, "ROKS Gwanggaeto the Great"
- 1993 Builds Korea's first 1,200 ton-submarine, "Icheon"

# NAVAL SHIPS

# NAVAL SHIPS

Unmanned Command  
and Control Ship  
(Ghost Commander)

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Auxiliary Submarine Rescue Vessel

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Maintenance,  
Repair and Overhaul

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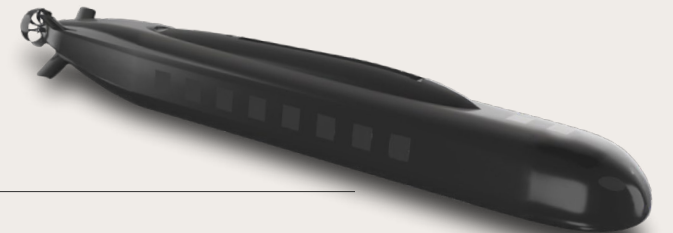
Unmanned Combat Surface Vehicle

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Unmanned Combat  
Underwater Vehicle

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## Business Areas

### WIND POWER & PLANT

**Hanwha Ocean** harnesses innovative technologies to develop nature-based energy solutions and build sustainable resource and energy infrastructure—creating a better future for the planet.

#### New Renewable Energy

Wind Turbine Installation Vessel (WTIV)



Offshore Substation (OSS)



#### Wind Power/Plant

Offshore Wind Power/Onshore Wind Power



Petrochemical Plants/Eco-Friendly Power Plants



# WIND POWER & PLANT

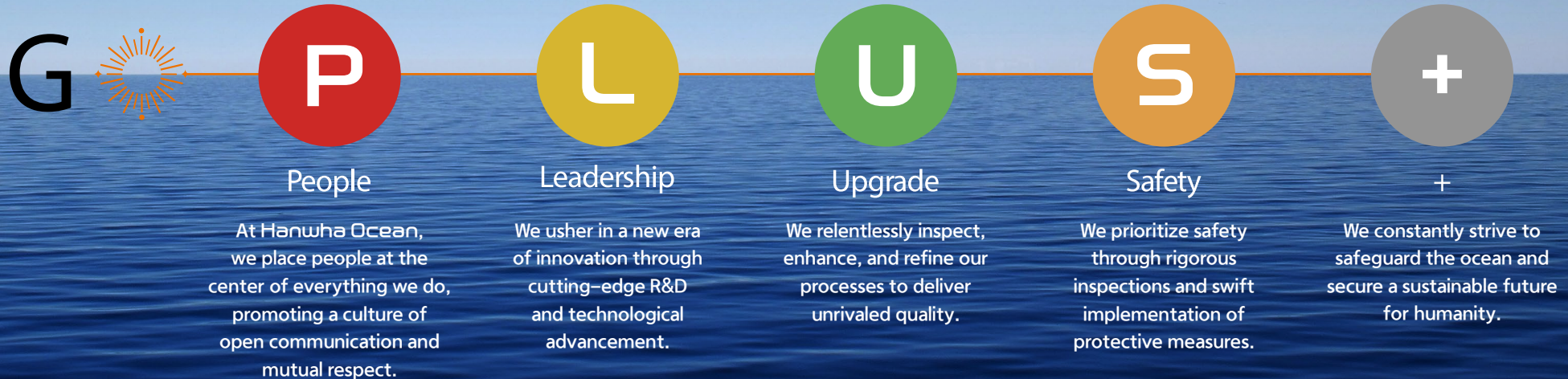


## Sustainability Management

Hanwha Ocean strives to be the world's most trusted company, dedicated to making sustainable maritime journeys a reality

# SUSTAINABILITY

Go Great Ocean, Go Green Builder





## Synergy among Affiliates

# Hanwha SYNERGY

### The Hybrid LNG carrier is equipped with a high-efficiency electric propulsion system

- It maintains high efficiency and stability at all speeds and in all output modes
- Lightweight design and reduced installed power compared to conventional two-stroke engine LNG carriers
- Enables engine checkups at sea, increasing availability and operational hours
- Optimized propeller and hydrodynamic performance beyond traditional engine torque limits
- Designed with a modular concept to enable transition to fuel cells and next-generation energy sources

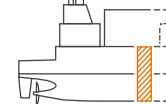
#### Reliquefaction (NRS, PRS, FRS, MRS-F)



BOG technology for LNG carriers is an eco-friendly solution that prevents LNG emissions and lowers operating costs

Hanwha Ocean

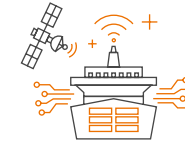
#### Maximized Cargo Capacity



The compact engine room design maximizes cargo capacity

Hanwha Ocean

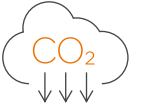
#### Smartship



Smartship offers optimized sailing solutions via the integrated control of core equipment

with  
Hanwha Aerospace

#### Offshore Carbon Capture and Storage (OCCS)

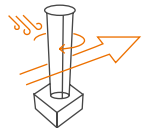


OCCS refers to a technology that captures and stores carbon dioxide from the gases emitted during a ship's operation

Hanwha Ocean



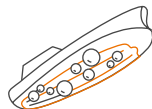
#### Rotor Sail



The rotor sail uses the Magnus effect for wind propulsion, creating an energy saving effect of 3 to 5%

Hanwha Ocean

#### Air Lubrication System



The air lubrication system reduces friction resistance on the surface of a ship, creating an energy saving effect of 5 to 8%

with  
Hanwha Power Systems

#### Shaft Generator Motor (SGM)



SGM uses the torque of the main engine axis, which is responsible for the propulsion of the ship, to generate the power needed to operate the ship

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#### Energy Storage System



The Energy Storage System (ESS) functions as both a backup power source during voyages and a solution for peak load management, spinning reserve, and power outage prevention and recovery

with  
Hanwha Aerospace

#### Gas Turbine



The gas turbine minimizes carbon emissions and enables efficient transition to ammonia fuel, featuring enhanced efficiency and zero methane slip technology

with  
Hanwha Power Systems

#### Electric Power Generating System



The Electric Power Generating System ensures optimal efficiency and stability through an advanced power management system

Hanwha Ocean

## Synergy among Affiliates

# Hanwha SYNERGY

### Cutting-edge defense technology from the ocean to outer space

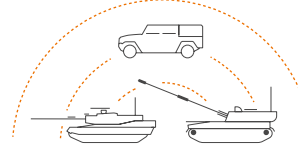
**Hanwha Ocean** delivers sustainable defense solutions across sea, land, and space through proprietary innovation in advanced defense technologies.

From submarines and K9 self-propelled artillery to radar systems and precision-guided missiles,

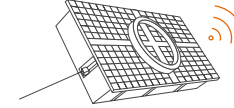
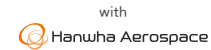
**Hanwha Ocean** develops globally competitive capabilities that strengthen national security.



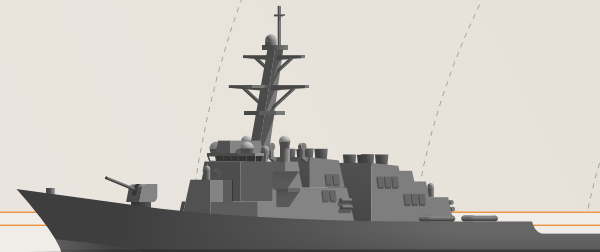
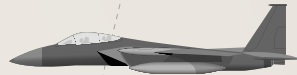
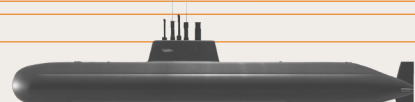
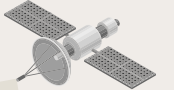
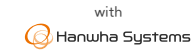
- Destroyers
- Frigates
- Corvettes
- Offshore Patrol Vessels
- Submarines
- Auxiliary Vessels
- Submarine Rescue Ships
- Unmanned Vehicles



- Fire Power Systems
- Combat Vehicles (Redback)
- Air Defense System
- Energy Storage System
- Aircraft Engines
- Space Launch Services
- Guided Weapon System
- Unmanned & Underwater
- Monitoring System



- Radar · Electro-optics Avionics · Aviation Sensors
- Combat Management System
- Tactical Data Links
- Low Earth Orbit Satellite Communication
- Hyper connected Multi-layer Communication Command Control





## Affiliates

# ABOUT OUR GROUP

### Clean Energy & Ocean Solutions

- Hanwha Ocean
- Hanwha Energy
- Hanwha Power Systems
- Hanwha Solutions
- Hanwha Impact
- Hanwha Total Energies Petrochemical
- YEOCHUN NCC
- Hanwha Advanced Materials

### Aerospace & Mechatronics

- Hanwha Corporation
- Hanwha System
- Hanwha Robotics
- Hanwha Aerospace
- Hanwha Precision Machinery
- Hanwha Vision
- Hanwha Momentum

### Finance

- Hanwha Life
- Hanwha Asset Management
- Hanwha Savings Bank
- Carrot General Insurance
- Hanwha General Insurance
- Hanwha Investment & Securities
- Hanwha Life Financial Service

### Retail & Services

- Hanwha Hotels & Resorts
- Hanwha Connect
- Hanwha Galleria

### Clean Energy & Ocean Solutions

Hanwha provides eco-friendly energy and material solutions essential for building a more sustainable planet.



Hanwha Engine

### Aerospace & Mechatronics

With its own technological innovation in the aerospace and high-tech defense sectors, Hanwha offers solutions for the construction of sustainable infrastructures for the Earth and space.



Hanwha Aerospace

### Finance

Our digitally-based financial solutions are optimized for diverse lifestyles to help our customers and society to achieve sustainable prosperity and growth.



Hanwha Life Insurance

### Retail & Services

Hanwha strives to enable sustainable and aspirational lifestyles through integrated retail and service platforms, both online and offline.



Hanwha Hotels & Resorts

# GLOBAL NETWORK

Hanwha Ocean Connects the World across the Oceans

## Asia

### Hanwha Ocean Shandong Corporation

<b>Website</b>	www.hanwhaoceansd.com
<b>Address</b>	264006, Qingdao Street 2-1, Yantai Economic & Technical Development Zone, Shandong Province, China
<b>Phone</b>	+86-535-308-2400
<b>Products</b>	- R&D, production and sale of products and parts related to blocks for ships - Design, manufacture, installation, and construction of onshore and offshore plants

### Tokyo Branch

<b>Address</b>	Hanwha Building 6F 10-1 Shiba 4-Chome Minato-Ku Tokyo 108-0014 Japan
<b>Phone</b>	+81-90-4723-2386
<b>Email</b>	hs.lee23@hanwha.com

### Hanwha Offshore Singapore

<b>Website</b>	www.hanwhaoffshoresingapore.com
<b>Address</b>	45 Gul Road Singapore 629350
<b>Phone</b>	+65-6762-5816
<b>Products</b>	Offshore business modules

### Singapore Branch

<b>Address</b>	#14-01 Suntec City Tower 1, 7 Temasek Boulevard, Singapore 038987
<b>Phone</b>	+65-6336-0940
<b>Email</b>	hyunsic.kim@hanwha.com

### Hanwha Ocean Ecotech

<b>Website</b>	www.hanwhaoceanecotech.com
<b>Address</b>	111, Yulchonsandan 3-ro, Gwangyang-eup, Gwangyang-si, Jeollanam-do, South Korea
<b>Phone</b>	+82-61-780-3000
<b>Products</b>	- Hatch Cover - Trans Bulkhead - Side Shell (Bench Block) - LNGC Trunk Deck - CMR (Cargo Machinery Room) - Lashing Bridge - Rudder - Other steel structures

### Hanwha Ocean Engineering

<b>Website</b>	www.hanwhaoceanengineering.com
<b>Address</b>	3370 Geojedae-ro, Geoje-si, Gyeongsangnam-do, South Korea
<b>Phone</b>	+82-61-780-3000
<b>Business Area</b>	Quality inspection for ships

## Americas

### Hanwha Ocean Americas LLC

<b>Address</b>	Galleria Tower II, 5051 Westheimer Rd Suite 1400, Houston, Texas USA 77056
<b>Phone</b>	+1-832-389-8892
<b>Business Area</b>	Marketing and contracts for commercial Vessels in the Americas

### Hanwha Shipping LLC

<b>Address</b>	Galleria Tower II, 5051 Westheimer Rd Suite 1400, Houston, Texas USA 77056
<b>Business Area</b>	Eco-friendly/digital solutions, ship-based LNG transportation

### Hanwha Ocean Global Operation Center LLC

<b>Address</b>	580, Westlake Park Blvd, Houston, Texas, USA 77079
<b>Business Area</b>	Global control tower for offshore businesses

### Houston Branch

<b>Address</b>	580 Westlake Park Blvd., Suite 500, Houston, TX 77079
<b>Phone</b>	+1-281-2024242
<b>Email</b>	skylee@hanwha.com, skylee@hanwhaoceanus.com

### Hanwha Philly Shipyard

<b>Address</b>	2100 Kitty Hawk Ave, Philadelphia, PA 19112
<b>Phone</b>	+1-215-875-2600
<b>Business Area</b>	Builds Commercial vessels & US Naval Ships, MRO

### Hanwha Drilling LLC

<b>Address</b>	Galleria Tower II, 5051 Westheimer Rd Suite 1400, Houston, Texas USA 77056
<b>Business Area</b>	Drillship technology-based energy infrastructure solutions

## Europe

### Hanwha Ocean Europe Ltd.

<b>Address</b>	C402, Westfield London Shopping Centre, Ariel Way, W12 7FD, London
<b>Phone</b>	+44-(0)20-3249-1150
<b>Business Area</b>	Marketing and contracts for commercial Vessels in Europe

### Luanda Branch

<b>Address</b>	Rua Rainha Ginga n° 187, Edifício Rainha Ginga, Piso Intermedio, Ingombota, Luanda, Angola
<b>Phone</b>	+244-222-02-78-18
<b>Email</b>	jbwee@hanwha.com

### Greece Branch

<b>Address</b>	2 Leof. Amfitheas, nea smyrni 17122, Greece
<b>Phone</b>	+30-210-422-6786
<b>Email</b>	athens@hanwhaocean.gr

### Oslo Branch

<b>Address</b>	C.J. Hambros Plass 2C, 0164, Oslo
<b>Phone</b>	+47-90-29-94-70
<b>Email</b>	juk6240@hanwha.com



