

DMC

*Leading crane manufacturer for Marine & Offshore
as well as Industrial crane*



Professional Manufacturer for Marine and Offshore Equipment Oil & Gas Plant Business





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As a leading company for localization development of various kinds of cranes and realization of management for customer's satisfaction through continuous improvement of technologies, product developments, quality improvements and compliances with delivery date, there is a company contributing to the shipbuilding and offshore industry in Korea. Marine and Offshore cranes are essential for Korea to become a powerhouse of the shipbuilding and offshore industry.

Dongnam Marine Crane Co., Ltd. ("DMC") is the leading company that develops, produces and exports these essential equipments.

As the company specializing in marine and offshore cranes for over 30 years, DMC, which locates in Gimhae, Gyeongnam, Korea with a land area 85,150㎡, started as a name of DONGNAM enterprise in 1988. The company has performed the diversified projects successfully such as Marine Cranes (Hose Handling Crane, Provision Crane, Engine Room Crane, Monorail Crane, Deck Crane, Davits), Offshore Equipments (Offshore Crane, Material Handling Equipment), Winches (Deck Machinery, General Winch), Engine Casing, Funnel, Wing Bridge and so on. Also, the company set a target for "Quality is top priority" and holds various international certificate such as LRQA ISO 9001, 14001, OHSAS 18001 and API SPEC Q1 & 2C.

Through the past years, DMC has expanded its business area and global network for customer services. And also, DMC will put top priority on customer's satisfaction and move forward to become the world's number 1 expert on its way.



The hopeful dream we have today evolves into new creations of tomorrow, shining like the very sun that brings light to the world over the horizon.

As the world's number one expert in marine & offshore as well as industrial crane, we sail toward that dream for tomorrow.

We are DMC.

CEO's Message

DMC contributes to the creation of customer values.
Our families are actively engaged in research and development today
to secure competitiveness and improve productivity.



President & CEO
Young-Chae Kim

We are honored to introduce DMC to you.

DMC is the best manufacturer specializing in marine and offshore and structure modules such as cranes, deck machinery, engine casing and funnel.

Since its foundation as small and medium size crane manufacturer, we have constantly grown and succeeded in technical development of offshore cranes, deck cranes penetrating the global market projects with constant efforts of the executives and staffs. Furthermore, we have challenged new item continuously and achieved a success to enter new market by manufacturing new items such as deck machinery, material handling equipments(MHE), burner boom, engine casing and funnel, industrial cranes, etc.

DMC is equipped with an integration service system(the ERP) which was developed by DMC itself and can manage the data of design, procurement, production, commissioning test, after service. This system enables us to produce and deliver high quality, on-time and products satisfying customer. In addition, DMC has acquired international standard LRQA ISO 9001, 14001, OHSAS 18001 and API 2C.

DMC will do our best to be the world-leading company considering customer satisfaction as the first priority in the field of marine and offshore equipment and we can handle the global changes actively based on the experience and technology accumulated by numerous projects that DMC has accomplished successfully.

Thank you.

History



Take-off phase 2016 ~

- 2017. 11 Concluded MOU for a collaboration with PT. BARATA in Indonesia
- 2017. 6 Concluded MOU for a collaboration with PT. Kameswara Radia Pratama in Indonesia
- 2017. 3 Signed a contract for a installation of coal handling system (CSU) (POSCO PLANTEC)
- 2016. 12 Took over JPL for a subsidiary company (80% Shareholding)
- 2016. 12 Concluded MOU for a collaboration with PT. Chandra Jaya Indokoresa in Indonesia
- 2016. 12 Concluded MOU for a collaboration with DSIC (Dalian Shipbuilding Industry) in China
- 2016. 12 Won 100 million dollar export tower by Korea International Trade Association
- 2016. 10 Appointed Present President & CEO, Mr. Young-Chae Kim
- 2016. 1 Achievement of Zero-accident Record : 2,768 days (10 times)

Development phase 2011 ~ 2015

- 2015. 12 Won 70 million dollar export tower by Korea International Trade Association
- 2015. 8 Research & Development of Lattice Boom Type Offshore Crane
(Economic Cooperation & Industry Promotion)
- 2015. 4 Completed Research & Development of BOP Gantry Crane
(Economic Region of Southern wide area)
- 2014. 12 Delivered a WINCH for 10,000Ton Barge to HHI
- 2014. 7 Appointed CEO, Mr. Won-Ick Jun
- 2012. 9 Concluded Collaboration Agreement for Offshore Load Handling System
with Cargotec Norway AB
- 2012. 4 Completed Research & Development of FPSO Pedestal Crane
(Economic Region of Southern wide area)
- 2011. 10 Concluded Collaboration Agreement for Deck Machinery with Aker Pusnes AS
- 2011. 8 Established QTECH, a subsidiary company (100% Owned)
- 2011. 6 Completed the national Project about Mobile Harbor Crane
- 2011. 2 Appointed CEO, Mr. Eui-youl Lee

Growth phase 2006 ~ 2010

- 2009. 11 Won 50 million dollar export tower by Korea International Trade Association
- 2009. 11 Listed on KOSDAQ, a stock market in Korea
- 2009. 5 Delivered Own Model of Deck Crane (37Ton x 26M) to SHINAN Shipyard with Own Brand
- 2009. 1 Launched Own Model of Deck Cranes (Over 30ton)
- 2008. 12 Delivered Own Model of 100Ton, 37Ton Offshore Cranes for FDPSO to KEPPEL Shipyard
- 2008. 11 Won 10 million dollar export tower by Korea International Trade Association
- 2008. 5 Acquired a certificate of ISO 14001:2004 & OHSAS 18001:2007 (LRQA)
- 2007. 8 Acquired a certificate of API SPEC Q1 8th & 2C 6th
- 2007. 3 Received orders of Offshore Cranes from PROSAFE in Singapore
- 2006. 11 Won one-million dollar export tower by Korea International Trade Association
- 2006. 4 Development Own Model of Floating Dock Crane

The beginning 1988 ~ 2005

- 2004. 6 Changed Company name to Dongnam Marine Crane Co., Ltd. ("DMC")
- 2001. 8 Acquired a certificate of MED 96/98/EC (DNV)
- 2000. 9 Acquired a certificate of ISO 9001:1994 (BVQI)
- 1997. 8 Launched Own Model of Hose Handling Crane (20Ton)
- 1997. 1 Launched Own Model of Deck Cranes (Under 30Ton)
- 1988. 8 Established DONGNAM ENTERPRISE Co., Ltd.

Overview

Located on a company-owned site spanning over 85,150㎡ in Gimhae, Gyeongnam Province, South Korea, DMC began as Dongnam Enterprise, founded in August 1988. We are tirelessly committed to our vision of becoming the world's number one expert in marine & offshore cranes, even in the face of countless challenges, establishing a reputation as the first and best in the South Korean marine and ship crane industry. At DMC, we put you first, we work for our investors, and attract talented people for a newer, brighter, and greater future for all.



Brief Information

Company Name	Dongnam Marine Crane Co., Ltd.
Established	August, 1988
C.E.O.	Young-Chae, Kim
Employee	Total : 220 persons (Including in-house subcontractors : 80 persons)
Address	1102-171, Gimhae-daero, Hallim-myeon, Gimhae-si, Gyeongsangnam-do, Korea
Area	Yard : 85,150m ² / Buildings : 10,600m ²
Listed Stock Market	November, 2009 (KOSDAQ)
Products & Services	Marine / Offshore / Industrial Cranes, Deck Machinery, MHE, Offshore Load Handling Equipment, Ship Block Construction etc.



Subsidiaries

■ QTECH

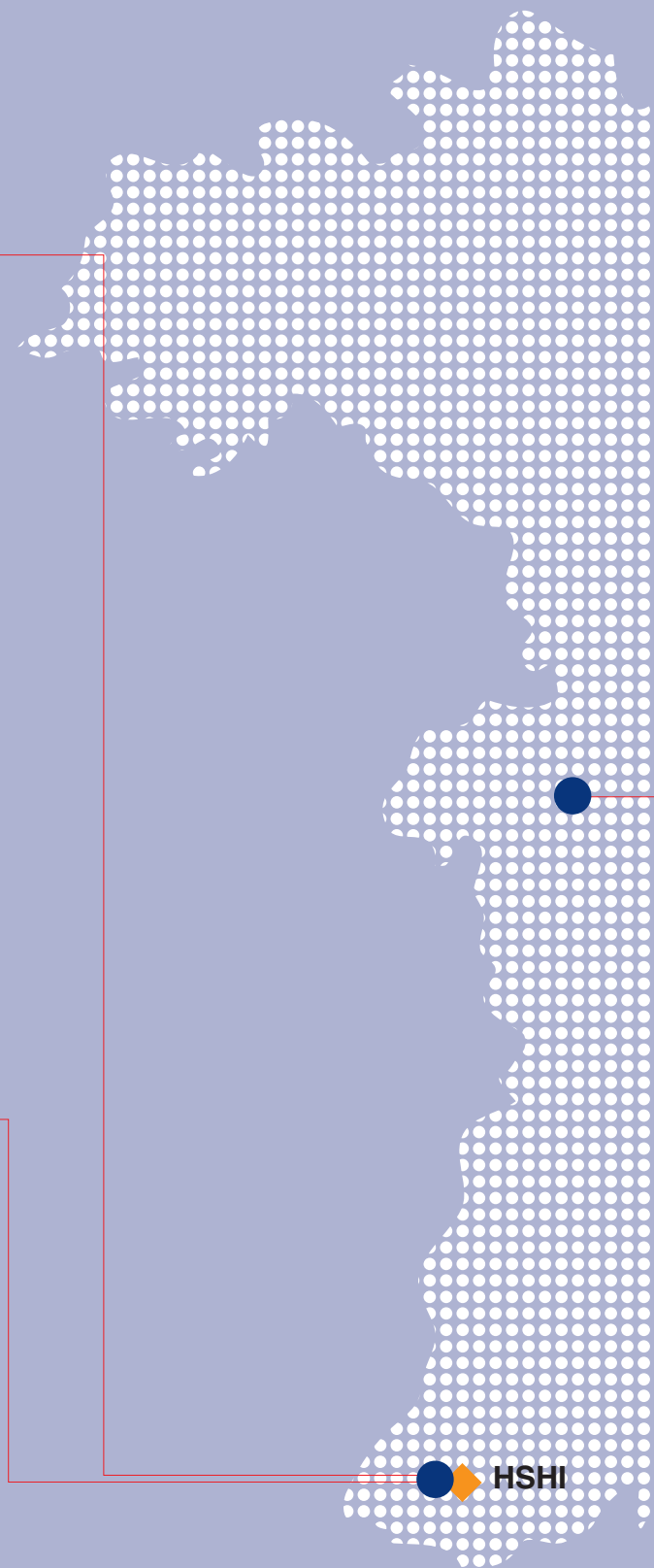


Description	Information
Company	QTECH Co., Ltd.
Location	Yeongam-gun, Jeonnam, Korea
Area	33,000 m ²
Employee	200 Persons (Including in-house subcontractors : 170 persons)
Products	Ship blocks construction Engine Room Casing Ship Funnel, Wing Bridge, etc.

■ Mokpo Factory



Description	Information
Location	Yeongam-gun, Jeonnam, Korea
Area	87,720 m ²
Employee	330 Persons (Including in-house subcontractors : 250 persons)
Products	Industrial Plant & Equipment





■ JPL (M&A)



Description	Information
Company	JPL Co., Ltd.
Loaction	Chungcheongnam-do, Korea
Area	5,450 m ²
Employee	44 Persons (Including in-house subcontractors : 2 persons)
Products	Display Equipment (LCD & OLED)

■ Onsan (on Developing)



Description	Information
Loaction	Onsan, Korea
Area	130,000 m ²
Products	New business

DMC Headquarters ■

HHI, HMD ◆

SHI, DSME ◆

Products (DMC)

The **Hose Handling Cranes** are designed to handle heavy hose use to load & unload oil and chemical tankers. Powered by electric motor and hydraulic pumps, our hose handling crane can handle up to 25 tons, with tanker vessels usually equipped with one or two of such cranes.

The **Provision Cranes** are installed on the side of a deck house, designed to load provisions and goods required for sailors and vessel operation, such as food, food ingredients, household goods, spare engine parts, and such crane can be either hydraulic or electric at the request of the shipowner.



1



2

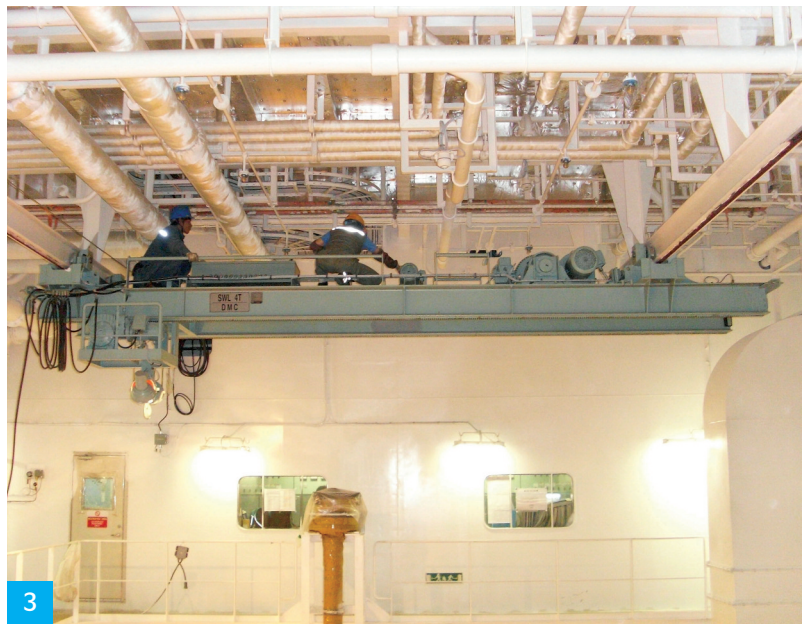
1 Hose Handling Crane

2 Provision Crane

Marine Cranes

The Engine Room Cranes are installed on engine room ceilings and are used for maintenance of main engines. They can be categorized into overhead, low-head and special types.

The Monorail Cranes are installed on the container carrier and installed for the purpose of space saving.



3 Engine Room Crane

4 Monorail Crane



The **Deck Cranes** are used to maximize the loading efficiency of vessels that stop at ports without adequate loading facilities. Ships are usually equipped with two to four deck cranes.

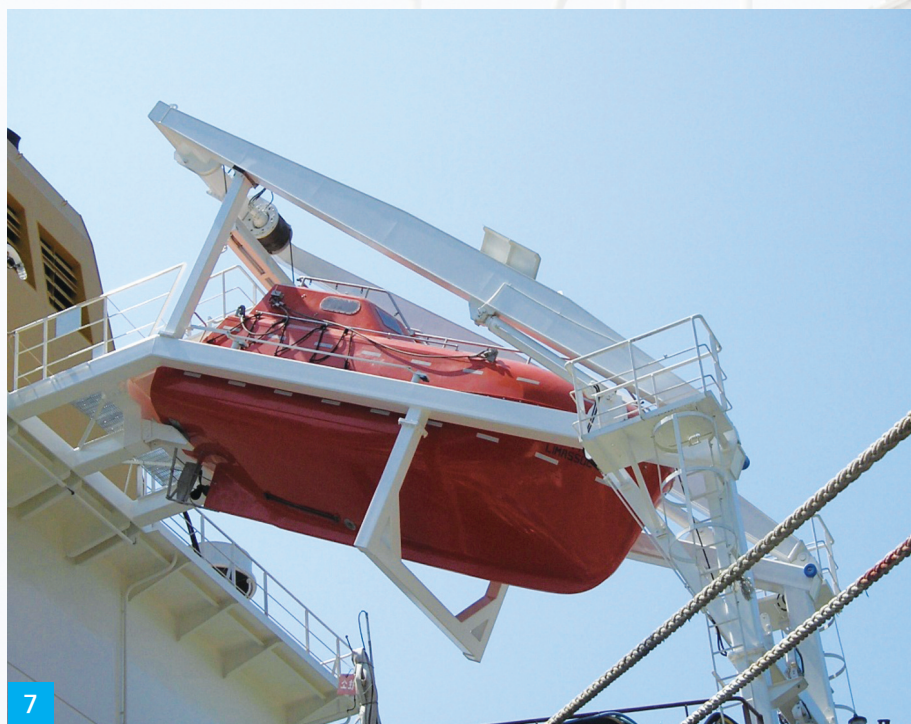
And as a first for any South Korean company, we supplied a superior **50 Ton Twin Deck Crane** that requires some of the most advanced technologies to the US Navy, taking Korean crane technologies to their next level.



5 Deck Crane (DMC Model)

6 Twin Deck Crane (DMC-MacGregor Model)

Life Saving Appliances designed to help with evacuation or rescue operations in the event of emergencies out at sea.



7



8



9

7 Free Fall Life Boat Davit

8 Life Boat Davit

9 Rescue Boat Davit

Offshore Equipments

Burner Boom is an incinerator that is used to burn and recycle used gas, which is stored in a storage container, and burns waste gas or toxic gas generated.

Hose Reel is a device used to wind and unwind hoses carrying oil, water, and gas.

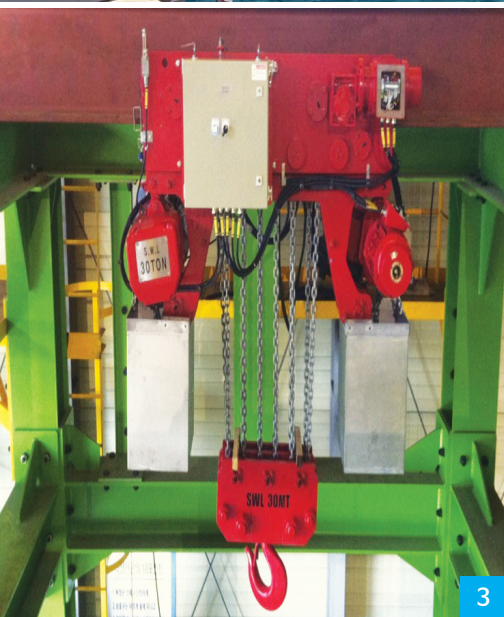
MHE (Material Handling Equipment) is a generic term for machinery that lifts, transports and transports goods.



1



2



3



4



5



6

- 1 Burner Boom
- 2 Hose Reel
- 3 4 5 6 MHE (Material Handling Equipment)

The Offshore Cranes are usually used on rigs, drill ships, FPSOs and other offshore vessels. As they are used to load and unload cargo in the offshore environment, they come with additional design and technical requirements.



7



8

7 Offshore Knuckle Boom Crane (15 Ton)

8 Offshore Deck Crane (20 Ton)



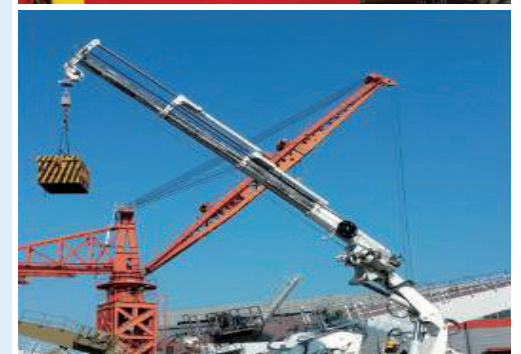
9 Offshore Lattice Boom Crane (37 Ton)

10 Offshore X-mas Tree Handling Crane (100 Ton)

Special Cranes

DMC has persistently dedicated itself to developing its own brands, contributing to national projects, and localizing equipment. In July 2009, we supplied bow and stern cranes to R/V Araon, South Korea's only Icebreaker Vessel in the Polar, taking advantage of yet another opportunity to live up to our well-deserved reputation.

And there is a **Knuckle & Telescopic Crane** classified as a special purpose crane.



- 1 Ice-breaking Polar Research Vessel (ARAON)
- 2 Knuckle & Telescopic Crane

Windlass & Winch

The Deck Machinery such as windlasses, which are used to heave anchors up and down, and mooring winches that reel mooring lines to secure a vessel at port. We have brands developed by DMC as well as DMC-MacGregor models developed as part of technology affiliation efforts.



1 Deck Machinery (DMC Model)

2 Deck Machinery (DMC-MacGregor Model)

Industrial Cranes

CSU & GTSU are facilities where a number of buckets rotate like a bicycle chain and are unloaded continuously to the land when mineral stones such as iron ore and nickel from the bulk carriers are docked at the harbor.



1 CSU (Continuous Ship Unloader)






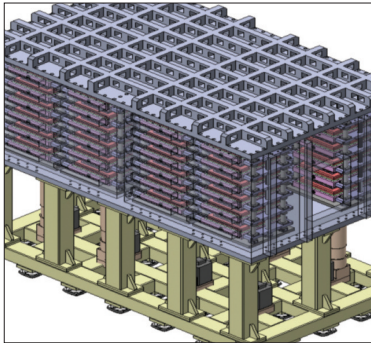

2 GTSU (Grab Type Ship Unloader)

Item		Description		Major Performance	Remarks
Plant Division	Container Crane			RTGC (Total 3 sets) RMQC (total 9 sets)	Indonesia (Pelindo II), HSHI (Qatar), etc. MES (Japan), HSHI (Qatar), KONE (Houston), etc.
	Goliath Crane			1,600Ton, etc. (Total 8 sets)	DSME, HSHI, Shin An, Sejin, Sungdong, etc.
	Bulk Handling System			CSU (Total 6 sets) GTSU (total 5 sets) ST/RE (total 5 sets)	POSCO, HSHI, SMH, etc. POSCO- PLANTEC, etc. HSHI,SMH, etc.
	Level Luffing Crane			Level Luffing Crane	Hyundai WIA (Dong Bu Hitech) HHI,HSHI etc.
Shipbuilding Division	Block & Deck House Assembly			159K COT 300K VLCC	HSHI
				300K VLCC 6500K PCTC	HSHI

QTECH (Subsidiaries)

Item	Description	Major Performance	Remarks
Engine Casing & Funnel , Wing Bridge	   	<p>300K VLCC (Hull no. S777, etc. : Total 20 vessels)</p>	HSHI
	 	<p>14,500 CNTR (Hull no. S744, etc. : Total 19 vessels) 114K PC (Hull no. S809, etc. : Total 7 vessels)</p>	HSHI
	   	<p>115K COT (Hull no. S788, etc. : Total 25 vessels)</p>	HSHI
Deck House		<p>18,800TEU CNTR (Hull no. S748, etc. : Total 3 vessels)</p>	HSHI

JPL (Subsidiaries)

Item	Description	Remarks
Parts Supply (OLED)		
		
		
		
Production Equipment (OLED)		
		
		

Business Partnership

● MacGregor – Deck Crane / Deck Machinery / Etc.



Successful experiences and experience in hydraulic equipment manufacturing



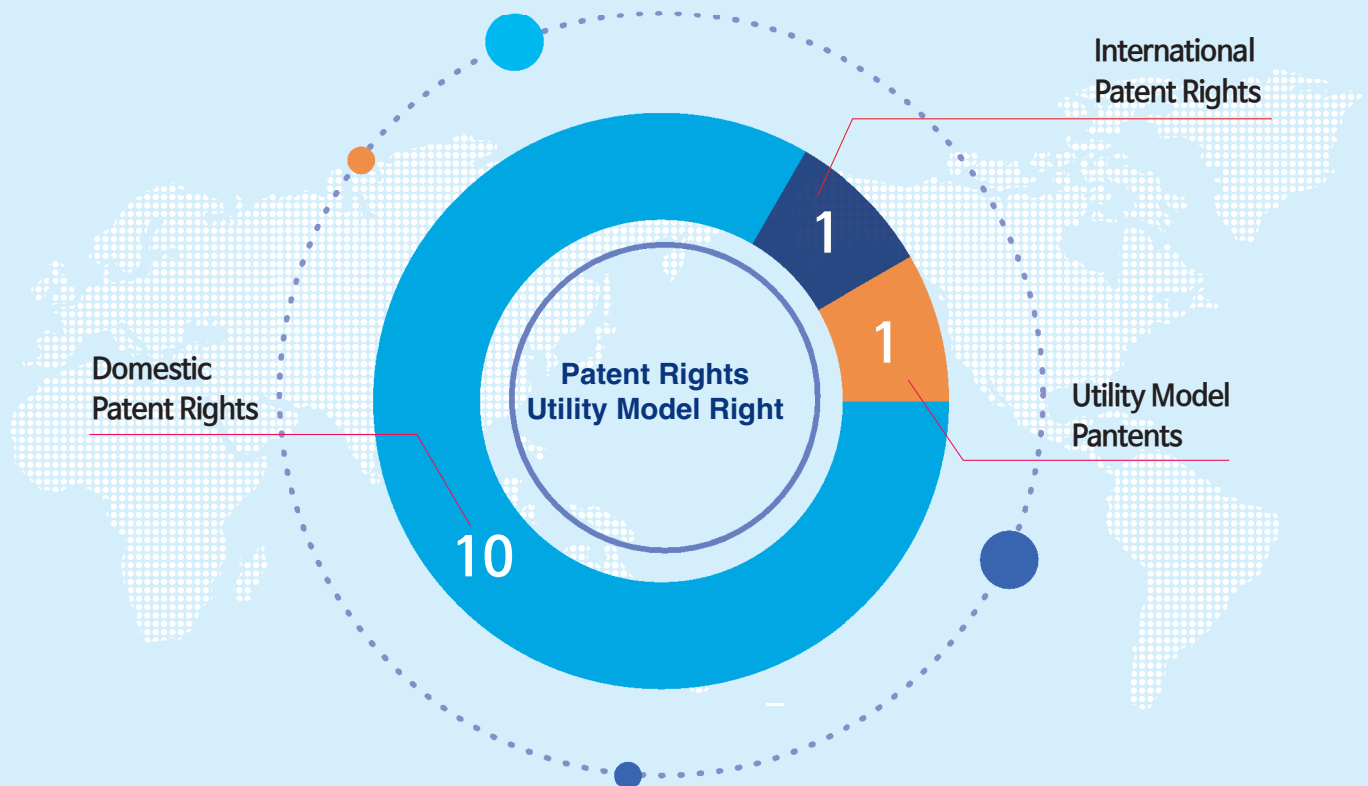
Supply of innovative design and quality key components



Having powerful synergy effects through strategic alliance

Reliable quality equipment
Risk decrease
Best quality with best price
Excellent service for customer

Patents & Utility Model Right



- 2006** Acquired a patent of multifunctional crane
Acquired a patent of Electric bucket crane
- 2007** Acquired a patent of Davit of rescue boat
- 2010** Acquired a patent of Davit for Life Boat
- 2011** Acquired a patent of Overload protection apparatus for crane operating in deep sea
Acquired a patent of Active heave compensation system for crane operating in deep sea
- 2012** Acquired a patent of Constant tension system and method for Offshore crane
Acquired a patent of Constant tension system for Offshore crane
- 2013** Acquired a patent for Vessel Engine Room Crane Accessing Trolley
- 2014** Acquired a patent of Active Heave Compensation System for Crane Operating in Deep Sea from China
- 2015** Acquired a patent of System for synchronizing hoisting and lowering for blow out preventer gantry offshore crane
- 2016** Trolley for Vessel

Life Time Service

DMC has manufactured and delivered innumerable cranes for 30 years. DMC has a lot of experience and shapes the marine industries by offering world leading after services with strong service network. And also DMC sells spare parts of all products produced by DMC. (ex, Dongnam Enterprise)

LSA (Life Saving Appliance) : Training & issuing certificate



Service Network



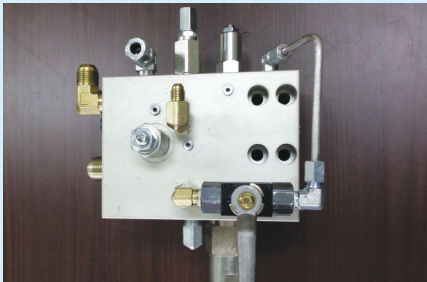
Please feel free to contact us, if you have any queries or need annual / 5 yearly inspection for LSA.
(For more detail, please refer to page no. 38 "Customer Support")

Spare parts

· ELECTRIC PARTS



· HYDRAULIC PARTS



Inspection, Repair, Modification, Etc.

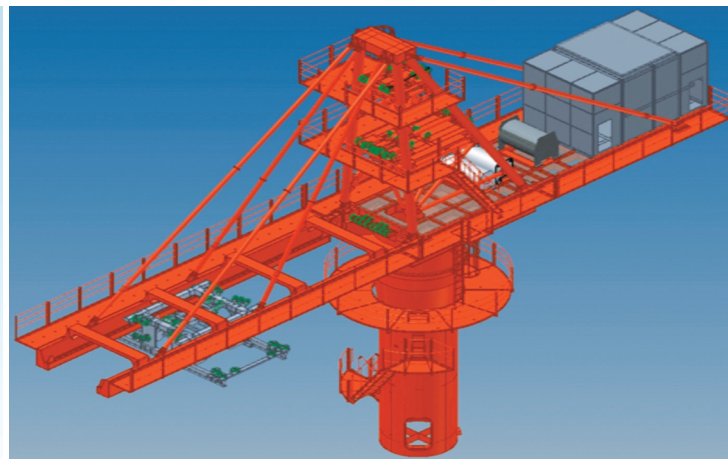


Governmental R&D Project

Project Name	FPSO Pedestal Crane
Capacity	85T x 18M, 34T x 39M, 17T x 42M
Period	2009.10.01 ~ 2011.12.31. (31 months)
Co-developer	The Ministry of Knowledge Economy
Vessel	Drilling ship, Semi-Rig, FPSO
Class & Code	DNV & KR / API 2C
Specialized Technology	PLC(Programmable Logic Controller) CT(Constant Tension system) AOPS/MOPS (Auto/Manual Protection System)
Purpose	The handling for raiser, pipe rack, material from top side deck. Better maneuverability to reach tight space with precision.



Project Name	Mobile Harbor Crane
Capacity	4.5Ton x 13M (Scale Down Model)
Period	2010.04.01 ~ 2011.07.31. (12 months)
Co-developer	Korea Advanced Institute of Science and Technology (KAIST)
Vessel	Mobile Harbor Vessel
Class & Code	Maker Standard
Specialized Technology	ZMC(Zero Moment Crane) stabilization technology. Spreader position control system Compensation for horizontal and vertical ship motions. CT (Constant Tension system)
Purpose	Novel maritime cargo transport solution that can connect a large containership anchored in the open sea and ports with shallow water.



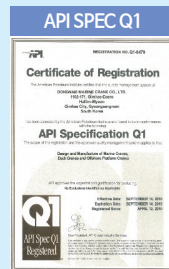


Project Name	60ton Lattice Boom Offshore Crane
Capacity	Main Hoist : 60T x 12M, 24T x 25M, 10T x 42M Whip Hoist : 5Ton x 46.5M
Period	2015.08.01 ~ 2018.04.30. (33 months)
Co-developer	Ministry of Trade, Industry and Energy
Vessel	All offshore Vessel
Class & Code	ABS / API 2C
Specialized Technology	AOPS / MOPS (Auto/Manual Protection System) Hook level positioning system Personnel Handling CT (Constant Tension system)
Purpose	The handling for raiser, pipe rack, material from top side deck. It minimizes the effect of wind force due to its lattice structures.



QHSE System

To satisfy our unrelenting desire to offer superior cranes, we rely heavily on technological innovation and are committed to research and development. To date, we've acquired utility model and patent rights for a number of offshore cranes in Korea and outside of Korea.





Achievement of Zero-accident Record

- 2016. 1 : 2,768 days (10 times)
- 2015. 1 : 2,476 days (9 times)
- 2014. 1 : 2,184 days (8 times)
- 2013. 2 : 1,892 days (7 times)
- 2012. 1 : 1,600 days (6 times)
- 2011. 2 : 1,350 days (5 times)
- 2009. 12 : 1,100 days (4 times)
- 2009. 2 : 850 days (3 times)
- 2008. 6 : 600 days (2 times)
- 2007. 8 : 300 days (1 time)



Customer Support

Sales

- New Inquiry

E-mail : dongnam@dongnam-crane.co.kr

Tel : +82-55-720-3033 or 3036

- Spare Parts & Life Time Service

E-mail : spare@dongnam-crane.co.kr

Tel : +82-55-720-3038

After Service

- Warranty Claim

E-mail : cs@dongnam-crane.co.kr

Tel : +82-55-720-3110

Global Network

Spare Parts & Life Time Service

- INTRA MARE (Greece)

E-mail : sales@intramare.gr

Tel : +30-210-429-3843

- Dalian Marine Boilers & Engineering (China)

E-mail : dewlcm@163.com

Tel : +86-411-8626-9006

- DSK GLONET (Vietnam)

E-mail : jenifer@dslogis.com

Tel : +84-225-3836737

- Chandra Jaya Indokoresa (Indonesia)

E-mail : jsju@chandrajayaindokoresa.co.id

Tel : +62-778-327-648

Life Saving Appliance

Please refer to page no. 30.

For more details, please contact us (the above Spare Parts & Life Time Service).



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DMC

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