

## Korea's Shipbuilding Industry Takes on New Challenges

According to forecasts, local shipbuilders will have a better year in 2011, securing advantageous position in the international shipbuilding market. Daewoo Shipbuilding & Marine Engineering Co., Ltd. (DSME) announced on January 4 that a total of nine ships from Daewoo were selected as the best ships of 2010 by overseas magazines.



## Hyundai Heavy Wins US\$900 Mil. Deal for Qatar's Barzan Gas Project

Hyundai Heavy Industries received a letter of award (LOA) on Jan. for a US\$900 million deal to execute the offshore part of Barzan Gas Project in Qatar. Following the LOA, the official contract will be signed later in January. The project will be located 80 km northeast of Ras Laffan Industrial City, Qatar. As an EPC contractor, Hyundai Heavy will carry out engineering, procurement, fabrication, transportation, installation, hook-up, and commissioning of...



## Port Container Traffic in 2010 Reached Record High

The Ministry of Land, Transport and Maritime Affairs announced that port container traffic in 2010 rose by 18.3% from 2009 (16,341 million TEU) to record 19.329 million TEU, a 7.8% increase from 2008 when cargo volume set the previous record high. As the real economy showed a sound recovery in 2010, export and import cargoes (12.333 million TEU) and transshipment cargoes (6.619 million TEU) grew 18.9% and 15.7% from the same period of the previous year respectively.

## Contents

○ Issue & Focus	2	○ O'seas News	5
- Korea's Shipbuilding Industry Takes on New Challenges		- Hyundai Mipo Launches Asphalt Carrier	
		- DSME-Built Tankers Upgrade Aramo VLCC Fleet	
○ Marine Equipment	3	○ Maritime World	6
- Ballast Water Treatment Patents Issued By Korea		- Port Container Traffic in 2010 Reached Record High	
- Swedish Marine Cluster to Participate in Korean LNG Ship Project		- Ocean Power Industry Set to Take Off in 2011	
○ Shipyard Bulletin	4	- Aquino Lauds Strong Gov't Partnership With Hanjin	
- STX Gets Order for Luxury Cruise Ship to Be Built in France		- Fairstar Invests in Asbestos-Free Fleet	
- Hyundai Heavy Wins US\$900 Mil. Deal for Qatar's Barzan Gas Project		○ Statistics	8

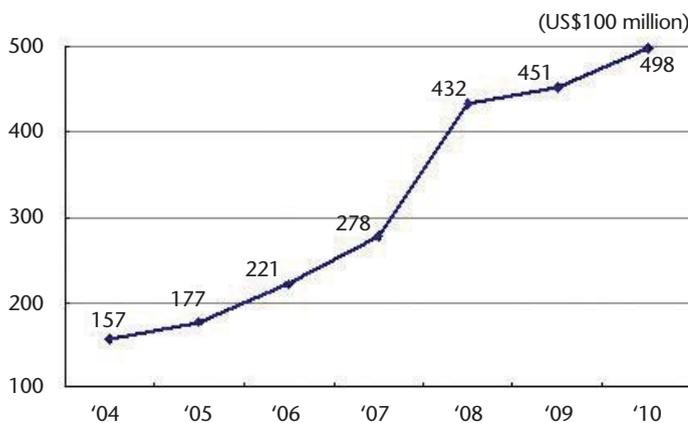


# Korea's Shipbuilding Industry Takes on New Challenges

According to forecasts, local shipbuilders will have a better year in 2011, securing advantageous position in the international shipbuilding market.

Daewoo Shipbuilding & Marine Engineering Co., Ltd. (DSME) announced on January 4 that a total of nine ships from Daewoo were selected as the best ships of 2010 by overseas magazines.

<Export Trends of Ships and Shipbuilding Equipment>



Two U.K.-based monthly magazines, Naval Architect and Fairplay Solution, picked three ships built by Daewoo as the best ships of the year, while two U.S.-based monthlies, Marine Log and Maritime Reporter, picked three Daewoo ships each as the top ships of 2010. Every year, these leading magazines in shipbuilding and engineering select the best ships of the year.

Daewoo's ships received worldwide recognition, with industry magazines praising four of their container ships and three of their oil tankers.

<Order-Securing Status & Targets of Top 5 Korean Shipbuilders>

(Unit: US\$100 million)

Shipbuilders	'10 Results	'11 Targets	Y-o-Y Changes
Hyundai Heavy + Hyundai Samho	106	198	86.8%
Samsung Heavy Industries	97	About 110	13.4%
Daewoo Shipbuilding & Marine	112	110	-1.8%
STX Offshore & Shipbuilding	31	50	61.3%
Hyundai Mipo Dockyard	30	33	10.0%
Hanjin Heavy Industries	0	8	Net Growth
<b>Total</b>	<b>376</b>	<b>509</b>	<b>35.4%</b>

Hyundai Heavy Industries successfully won a contract to build a high-priced drillship for their first order in 2011. Hyundai announced on Jan. 4 that it clinched the deal with U.S.-based Diamond Offshore Drilling, a Houston-based oil and gas drilling firm, to build a US\$590 million deepwater drillship.

Unlike existing drillships that can only work up to 3 kilometers down, this vessel is designed to carry out drilling operations as deep as 3.6 kilometers underwater, Hyundai said. On the same day, Korea's Hanjin Heavy Industries held a naming ceremony for its 180,000-ton bulk carrier, the Christina Bulker, at Yeongdo Dockyard in Busan. The company hopes the ship will play a central role in building Hanjin's status within the industry.

\* Hyundai Heavy Industries win orders and divide shipbuilding volumes with Hyundai Samho Heavy Industries.

Meanwhile, the Ministry of Knowledge Economy announced a plan to help the local shipbuilding industry retake the number one spot in the global shipbuilding industry. The plan involves having leading local shipbuilders like Hyundai, Daewoo, STX and Samsung Heavy Industries teach managerial techniques, core technologies and other aspects of shipbuilding in a wide range of industries, the ministry said. The ministry urged leading local shipbuilders to work together with small and medium-sized enterprises in order to achieve growth and secure industrial competitiveness. The ministry also said it will raise funds to support joint technology development and research and development projects between academia and the industry.



## Ballast Water Treatment Patents Issued By Korea

N.E.I. Treatment Systems, a global market leader in Ballast Water Treatment Systems (BWTS) for the maritime industry, announced Jan. 11 that patents for the company's VOS™, Ballast Water Treatment System have been granted in Japan and Korea.

Patents for N.E.I.'s unique BWTS technology were previously issued in the United States, Canada, the European Union, and other key jurisdictions in Europe and Asia, representing twenty-two major maritime flag states where the company's intellectual property is now protected. Remaining N.E.I. patents are currently pending in China, Brazil and Turkey.

Issuance of the Japanese and Korean patents for the VOS<sub>ϕ</sub>, BWTS represent a key milestone for N.E.I. and its technology licensees - Mitsubishi Kakoki Kaisha, Ltd. (MKK) of Japan and Samgong Co., Ltd. of Korea.

Commenting on the patent approvals, N.E.I. CEO Jon Slangerup said: "This is an important step forward for the company and for our strategic partners in Japan and Korea, further strengthening our position in two of the largest shipbuilding and ballast water management markets in the

world. MKK and Samgong have both made significant investments in the resources needed to aggressively pursue and capture the BWTS business in their respective markets, and these patents are key to this mission."

MKK and Samgong have built state-of-the-art manufacturing, assembly and test facilities to support their market plans for the VOS™, BWTS. N.E.I.'s partnerships with MKK and Samgong extend beyond exclusive VOS™, licensing rights to also providing manufacturing and logistics support for N.E.I.'s global market activities.

Commenting further, N.E.I. President Peter McNulty said: "MKK and Samgong are long-established market leaders in the marine supply and service businesses in Japan and Korea. Our strategic relationships with these two veteran leaders ensure our ability to rapidly scale operations to meet growing market demand for BWTS throughout the world."

Established in 1997, N.E.I. is a California-based private company and a global market leader in Ballast Water Treatment Systems (BWTS) solutions.

## Swedish Marine Cluster to Participate in Korean LNG Ship Project

SSPA, FKAB, White Smoke and Swedish Marine Technology Forum entered into a joint agreement with Korea's KOGAS to evaluate the possibilities of developing a Korean system for delivery of LNG to gas-fuelled ships.

The order is an acknowledgement of West Sweden as an area with a competent industry cluster for developing technologies for and assessing regulatory aspects associated with, using LNG as a ship fuel. The project will be carried out until April 2011 and will form a basis for further development of an LNG supply system in Korea.

The project is divided into seven tasks; the Swedish cluster has the main responsibility for five of these. Each of these five tasks has a special focus, such as national and international regulations, demand forecasting, and risk evaluation. The project will deliver a common report and also be presented at a common workshop that will be



held in Korea at the beginning of April 2011.

The contract between the Swedish marine cluster and KOGAS is the first result of the joint study agreement between Business Region Goteborg and KOGAS that was signed in July 2009. The purpose is to develop cooperation between Sweden and Korea in the fields of biogas, natural gas and bioDME to promote business in these areas.



# STX Gets Order for Luxury Cruise Ship to Be Built in France

STX Europe announced that it has received an order for a luxury cruise ship to be built at its Saint-Nazaire shipyard in France and operated by Germany's Hapag Lloyd-Cruises.

STX Europe did not divulge the contract amount but said it represented about 2.5 million working hours at its French shipyard.

Construction of the vessel, called Europa 2, will start in 2011, the company said in a statement, adding it would enter into service in 2013.

It was ordered by a third party outside of German

group TUI, one of Europe's leading tourism operators and the major shareholder of cruise operator Hapag Lloyd-Cruises, STX said.

Some 2,150 people work at the French shipyard, which hires just as many people through contractors.

Activity in Saint-Nazaire started picking up again last year with two new orders, one by MSC Cruise and the other by Libyan state-owned company GNMTC.

STX France is held at 66.6% by STX Europe, a division of Korea's STX Shipbuilding, with the remaining 33.3% owned by the French state.

# Hyundai Heavy Wins US\$900 Mil. Deal for Qatar's Barzan Gas Project

Hyundai Heavy Industries received a letter of award (LOA) on Jan. for a US\$900 million deal to execute the offshore part of Barzan Gas Project in Qatar. Following the LOA, the official contract will be signed later in January.

The project will be located 80 km northeast of Ras Laffan Industrial City, Qatar. As an EPC contractor, Hyundai Heavy will carry out engineering, procurement, fabrication, transportation, installation, hook-up, and commissioning of offshore facilities, including three offshore wellhead platforms, 300 km of subsea pipelines and 100 km of subsea cables, by the end of 2013.

The Barzan Project consists of onshore and offshore gas-processing facilities to be operated by RasGas Company, a joint venture between the state-run Qatar Petroleum and Exxon Mobil. The project, which will produce 1.9 billion cubic feet a day of gas, will come on stream in 2014.

This new order is a good start for Hyundai Heavy's



Offshore & Engineering Division, having set their new order goal at US\$4.8 billion this year.

As a reliable EPC contractor, Hyundai Heavy is cementing its status with major offshore projects such as the US\$2.06 billion Australian Gorgon Project, US\$1.4 billion Myanmar SHWE Gas Plant Project, and the US\$1 billion UAE Gas Treatment Plant Project.



## Hyundai Mipo Launches Asphalt Carrier

HMD launched the first asphalt carrier on December 18, 2010.

The ship, the first of four 6,050 DWT asphalt carriers ordered by Vroon, is 110m in length, 18.2m in width, 9.8m in depth and can carry various products like asphalt, heavy oil and diesel oil in separate cargo tanks. The ship also features a thermal oil boiler, which keeps the internal temperature of the cargo tanks at 230°C during sailing and prevents the asphalt cargoes from solidifying.

On the same day, the fifth of eight 52,000 DWT product carriers ordered by Often and the third of four 74,000 DWT product carriers for ST were also launched.



## DSME-Built Tankers Upgrade Aramo VLCC Fleet

Saudi Aramco said a new very large crude carrier (VLCC) entered service with its tanker-operating subsidiary Vela International Marine Ltd.

The Homam Star is Vela's fourth double-hulled VLCC to be built by Daewoo Shipbuilding and Marine Engineering Co., of Korea.

Vela's website shows its fleet contains eight other VLCC's built by the Daewoo shipyard from 2008 through 2010.

Vela began in 2000 to replace many of its single-hulled tankers with larger, double-hulled vessels, Mohammed S. Al-Gusaier, Vela's president and chief operating officer, said in the statement. The Homam Star is part of this effort.

Tankers with double hulls are more resistant to punctures and less likely to leak oil. Vela's fleet of supertankers contains both single- and double-hulled ships, according to the tanker operator's website.

Vela International Marine was established in 1984 with four ships. Today, Vela is a leader in the maritime transportation industry and renowned for its safety and operational efficiency.

In 2009, the Vela-owned fleet of 22 VLCCs, one Aframax class vessel and four product carriers completed 447 voyages, transporting slightly more than 1 million bpd of crude oil to customers primarily in the US and Europe.

The fleet carried more than 280,000 bpd of crude oil and refined products between domestic ports within the Kingdom. In addition, vessels chartered by Vela completed 454 voyages, carrying more than 400,000 bpd of crude oil to international customers and more than 280,000 bpd of crude oil and refined products to domestic customers.

In 2009 Vela took delivery of the supertanker Saiph Star, the last of six double-hulled VLCCs ordered from a shipbuilder in Korea.



## Port Container Traffic in 2010 Reached Record High

The Ministry of Land, Transport and Maritime Affairs announced that port container traffic in 2010 rose by 18.3% from 2009 (16,341 million TEU) to record 19.329 million TEU, a 7.8% increase from 2008 when cargo volume set the previous record high.

As the real economy showed a sound recovery in 2010, export and import cargoes (12.333 million TEU) and transshipment cargoes (6.619 million TEU) grew 18.9% and 15.7% from the same period of the previous year respectively.

Especially, coastal cargoes (376,000 TEU) significantly



increased by 48.5% thanks to efforts to promote coastal shipping for green growth.

< Monthly Container Volume in 2010 (month-on-month) >

(unit: 1000 TEU, %)

Section	'10.1	'10.2	'10.3	'10.4	'10.5	'10.6	'10.7	'10.8	'10.9	'10.10	'10.11	'10.12	2010
total	1,472	1,367	1,614	1,648	1,716	1,665	1,671	1,662	1,529	1,616	1,651	1,718	19,329
(increase)	(25.6)	(26.5)	(21.6)	(22.4)	(28.7)	(23.8)	(20.2)	(19.6)	(7.1)	(9.0)	(10.3)	(10.8)	(18.3)
im/ex	911	852	1,024	1,043	1,088	1,062	1,061	1,053	979	1,063	1,068	1,130	12,333
(increase)	(31.1)	(24.2)	(21.8)	(23.2)	(26.3)	(22.1)	(17.7)	(18.9)	(7.0)	(13.8)	(13.2)	(14.0)	(18.9)
transship	525	489	562	574	600	576	579	582	523	520	542	547	6,619
(increase)	(14.8)	(28.9)	(19.0)	(19.0)	(31.5)	(26.1)	(23.8)	(19.5)	(6.6)	(△0.8)	(3.9)	(4.6)	(15.7)
coastal	37	26	28	30	28	27	31	27	27	33	41	41	376
(increase)	(85.5)	(75.1)	(96.1)	(80.8)	(76.9)	(48.2)	(50.8)	(55.8)	(20.4)	(37.2)	(27.3)	(11.4)	(48.5)

Cargo volume at Busan Port was 14.18 million TEU in 2010, which was 18.4% higher than in 2009. With increased coastal shipping services such as the Busan-Pohang route, etc., Pusan port handles 73.6% of the nation's total container volume, a 0.3 percentage point increase compared to 2009.

At Gwangyang Port, accumulated cargo volume recorded 2.066 million TEU in 2010, up 14.1% from a year earlier, exceeding 2 million TEU for the first time in 12 years and laying the foundation of quality services for shipowners and shippers.

## Ocean Power Industry Set to Take Off in 2011

According to IHS Emerging Energy Research, more than 45 wave and tidal prototypes are expected to be ocean tested in 2010 and 2011, signaling that the ocean power industry may be set to take off over the next year.

The research outlet estimates that more than 1,800 MW of ocean projects in 16 countries are in the pipeline. For reference, IHS said that only 12 projects were installed in 2009. The UK is the world's leading market for ocean energy, with 300 MW of projects seeking to be installed over the next five years, according to IHS. Ireland, France, Portugal, Korea, and Australia are also key ocean energy markets and will remain the industry's primary focus for

the next decade, according to the study.

Of the various forms of ocean energy, tidal energy is poised to mature first, mostly due to the fact that major hydro players understand the technology and are starting to enter the industry. "The strong synergies between tidal turbine manufacturing and the hydro power industry have attracted major power sector OEMs," IHS Senior Renewable Power Analyst Marianne Boust said. Greater involvement by large original equipment manufacturers (OEMs) will help the ocean energy industry overcome its technological challenges and drive down costs.



## Aquino Lauds Strong Gov't Partnership With Hanjin

Philippine President Benigno S. Aquino III lauded Korean shipbuilding giant Hanjin Heavy Industry Corp.-Philippines (HHIC-Phil) for bringing huge economic gains to the local economy during his attendance at a vessel-naming ceremony for two bulk-carrier ships that were recently produced at the Subic shipyard.

Both vessels, which were subsequently named M/V Rahi and M/V Vanshi respectively, were purchased by the Adani Shipping Pte Ltd. of India and weighed 175000 deadweight tons each.

Aside from Aquino, those who participated in the event included officers of HHIC-Phil, led by group chairman Jin Kyu Ahn, officials of the Subic Bay Metropolitan Authority (SBMA), which administers this free port, and representatives of local government units.

"The ships that we are naming today signal the sending off of another ship? the ship of cooperation toward the horizon of the future," Aquino said in his message.

The President also noted that among the foreign direct

investments (FDIs) in the country, "Korean investors, like Hanjin, are among the most aggressive in placing their bets in the Philippines."

Aquino said Korea in 2010 funneled some US\$24.2-billion worth of investments into the country, which accounted for about 40% of the total FDIs last year.

He added that HHIC alone, which has invested a total of US\$1.9-billion in its shipyard and skills training center in this free port since 2006, now accounts for some US\$3.5-billion in shipbuilding exports annually.

"You have given a lifeline to many of my countrymen who have tethered on the edge of poverty," Aquino told Hanjin officials.

In return, Aquino vowed that his administration will continue to support foreign investors to sustain the quality of their outputs, and to extend tax privileges such as VAT exemption in the importation of equipment and machinery, and waive certain restrictions in the use of consigned equipment, among others.

## Fairstar Invests in Asbestos-Free Fleet

Dutch company Fairstar Heavy Transport has signed a US\$4,800,000 contract with DSME to transport FPSO components from Angola to Korea, making this the third marine heavy transportation contract between the two companies. Fairstar's open-stern, semi-submersible vessel FJORD will perform the contracted transport.

Fairstar Client Services Group Sales Team Leader Chris Muilwijk says of DSME, "Their standards for safety, on-time delivery and precise engineering support are extremely high. Winning this contract in the face of intense industry competition is another important achievement for Fairstar. Additionally, it perfectly positions FJORD to begin its work on the Gorgon Project in Q1 of 2012. These two contracts combine to give FJORD almost two years of continuous utilisation in 2012 and 2013."

Fairstar claims to be on the cutting edge of heavy transport with its new vessels like the FJORD. The company's Chief Executive Philip Adkins says that Fairstar

is well aware that "clients will not consider vessels older than 15 years" and that modern, safe and efficient ships are the future.

Adkins specifically cites Australian energy projects that are beginning to require vessels that are certified "asbestos-free" as the types of change for the better that the industry can expect to see. Asbestos is a highly toxic mineral used commonly in shipbuilding, despite the fact that it causes lung cancer and mesothelioma, a rare cancer of the protective lining of the body's major cavities and organs. There has been a long and tragic legacy of environmental hazards and malignant mesothelioma because of asbestos' role in this industry.

Fairstar says it welcomes these higher standards and that they validate "the investment of our shareholders in Fairstar's fleet of four modern, asbestos-free, open-stern semi-submersible vessels."

**<Results & Projection of World's Medium & Long-Term Annual Average Newbuilding Demands (Clarkson, Oct. '10)>**

Period		No. of Ships	1 Mil. CGT
1996~2009		1,917	35.2
2010~2011		1,325	27.4
2012~2019	(Low Case)	1,047	22.2
	(Base Case)	1,526	31.6
	(High Case)	2,163	43.5

**<Results & Projection of Shipbuilding Capacities of World's Major Shipbuilding Countries (Clarkson, Oct. '10)>**

(Unit: 1 Mil. CGT)

Year	Japan	Korea	China	Europe	Others	Total
2009	10.0	16.5	13.0	7.0	3.5	50.0
2010	10.0	17.5	19.0	6.0	3.5	56.0
2015	6.0	14.0	14.0	2.0	2.0	38.0
'09~'15	-40%	-15%	8%	-71%	-43%	-24%

**<Order, Building Volume and Order Backlog Shares (%)>**

Year	Order Volume			Building Volume			Order Backlog		
	Korea	Japan	China	Korea	Japan	China	Korea	Japan	China
2007	35.0	15.0	34.8	34.2	25.3	18.5	34.3	19.1	28.7
2008	34.8	18.2	34.5	36.3	23.1	21.5	33.4	19.0	31.8
2009	33.3	10.5	44.5	34.4	21.2	27.8	32.6	18.1	34.6
2010	34.8	6.0	46.9	30.9	18.8	36.7	32.3	16.0	37.1

**<Ship Prices by Ship Type>**

(US\$1 Mil., Index: points)

Ship Types	'05	'06	'07	'08		'09		'10	
				Aug.	Dec.	Aug.	Dec.	Aug.	Dec.
LCC (320k DWT)	120	120	146	160	150	141	101	97	105
Containership (6,350 TEU)	89	101	107	108	100	95	67	66	79.5
Bulk Carrier (180k Capesize)	59	68	97	99	88	81	56	56	57
LNG Carrier (160k)	205	220	220	250	245	245	212	212	202
Clarkson Price Index	162	168	184	190	177	157	138	136	142

**<Trends of Domestic Shipbuilding Industry>**

(Unit: No. of Ships, 1 Mil. CGT, Change %)

Year	Order Volume			Building Volume			Order Backlog		
	Ships	CGT	(Change)	Ships	CGT	(Change)	Ships	CGT	(Change)
2007	1,208	32.79	(53.1)	419	12.04	(9.7)	2,172	65	(46.1)
2008	674	18.66	(-43.1)	508	15.47	(28.5)	2,389	69.36	(6.7)
2009	176	4.81	(-74.2)	518	15.48	(0.1)	1,905	55.11	(-20.5)
2010	458	11.78	(144.9)	497	15.52	(0.2)	1,604	45.54	(-17.4)