

List of Related Companies

• The shipbuilding and marine industry is comprised of shipbuilding companies, such as Korea Shipbuilding & Offshore Engineering (KSOE: Hyundai Heavy Industries, Hyundai Mipo Dockyard, Hyundai-Samho Heavy Industries, and Daewoo Shipbuilding & Offshore Engineering), Samsung Heavy Industries, shipping companies (Hyundai Merchant Marine, SM Line, Korea Marine Transport, etc.), and several engine and equipment suppliers.

Company name		Main items	Website	Location	
	Hyundai Heavy Industries	Offshore plants, ships, engines, pumps, electric motors, heavy electric equipment, and heavy equipment		1000, Bangeojinsunhwando- ro, Dong-gu, Ulsan	
KSOE Marine	Hyundai Mipo Dockyard	Ships	www.hmd.co.kr	100, Bangeojinsunhwando- ro, Dong-gu, Ulsan	
Iviaririe	Hyundai-Samho Heavy Industries	Ships	www.hshi.co.kr	93, Daebul-ro, Samho- eup, Yeongam-gun, Jeollanam-do	
	Daewoo Shipbuilding & Marine Engineering	Offshore plants and ships	www.dsme.co.kr	3370, Geoje- daero, Geoje-si, Gyeongsangnam-do	
Samsung Heavy Industries (SHI)		Offshore plants and ships	www.shi.samsung.co.kr	23, Pangyo-ro 227beon-gil, Bundang- gu, Seongnam-si, Gyeonggi-do	
Korean shipping companies (Hyundai Merchant Marine, SM Line etc.)		Ships, logistics			

- In 2019, the three shipbuilders are expected to achieve their sales targets thanks to a surge in orders in 2H.
- The achievement rates of the three shipbuilders are 20.1% for Hyundai Heavy Industries, 33.1% for Daewoo Shipbuilding & Marine Engineering, and 41% for Samsung Heavy Industries.
- Composition of backlogs of the three shipbuilders (end of May 2019)
- 43.3% for LNG ships, 23.3% for tankers, and 21.3% for container ships (backlog as of October 2018)

— INVESTMENT OPPORTUNITIES IN KOREA

Potential Partners -

- Korean shipbuilders won 17 out of 19 orders for LNG carriers of 170,000 CBM or higher in 2019. (It won all the orders in 2018.)

Korea Shipbuilding & Offshore Engineering (KSOE: Hyundai Heavy Industries, Hyundai Mipo Dockyard, and Hyundai-Samho Heavy Industries)

- On January 31, 2019, Hyundai Heavy Industries (HHI) signed a basic agreement to take over Daewoo Shipbuilding & Marine Engineering (DSME), raising the issue of restructuring of the shipbuilding industry.
- As the world's largest shipbuilding and offshore company, the company has secured orders for 268 ships (94 ships by Hyundai Heavy Industries, 110 ships by Hyundai Mipo Dockyard, and 64 ships by Hyundai Samho Heavy Industries) and 2 offshore plants (by Hyundai Heavy Industries), with USD 35.357 billion in backlog as of end of August 2019.

Cumulative Orders (as of May) and Backlog of Shipbuilding and Marine Sector of KSOE

(Unit: USD million, No. of units)

	New order			Same period last year		Backlog		Same period last year	
Company	Amount	No. of ships		Amount	No. of ships	Amount (Delivery)	No. of ships	Amount (Delivery)	No. of ships
Hyundai Heavy Industries	1,677	8	TK 2/Con 0/ LNG 4	2,494	19	24,099	100	21,180	94
Commercial vessel	1,044	8		1,913	19	12,878	98	11,148	93
Marine	5	0		-8	0	2,600	2	1,889	1
Plant	7			86		6,599		6,629	
Engine machine	621			503		2,022		1,514	
Hyundai Mipo Dockyard	727	19	TK 14/Con 5/LNG 0	871	25	4,148		4,072	109
Hyundai- Samho Heavy Industries	1,002	10	TK 9/Con 0/ LNG 1	2,782	25	7,085		6,279	67
Korea Shipbuilding & Offshore Engineering (KSOE)	3,406	37		6,147	69	35,332		31,531	270

Source: Hanwha Investment & Securities Research Center, July 2019 Note: As of May 2019 / Same period last year (as of May 2018)

- Hyundai Heavy Industries Group establishes a global R&D center in the Pangyo New Town
- Located at Pangyo New City, Seongnam, Gyeonggi-do, the R&D center has 5,000 employees and is aimed at strengthening the company's technological competitiveness acting as a technology control tower within the group by gathering research personnel scattered in the metropolitan area.

Samsung Heavy Industries

- · Winning offshore plant orders in two years
- By the first half of 2019, it received orders for 10 LNG carriers, 3 tankers and special vessels, and 1 offshore plant (as of the end of June), which amounted to USD 3.2 billion in total. Combined with two LNG carriers and two tanker ships in July, the total sales will reach USD 3.6 billion or 46% of its annual target. ¹¹⁾
- In April 2019, it won an order from Reliance MJ FPSO in India, amounting to USD 1 billion, which was the first offshore plant order since 2017. Positive effects are expected based on years of learning, downsizing, and customer diversification.

Cumulative Orders (as of May) and Backlog of Shipbuilding and Marine Sector of Samsung Heavy Industries (Unit: USD million, No. of units)

	New order			Same period last year		Backlog		Same period last year	
Company	Amount	No. of ships		Amount	No. of ships	Amount (Delivery)		Amount (Delivery)	No. of ships
Samsung Heavy Industries (SHI)	2,600	9		2,300	24	19,900	88	17,500	82
Commercial vessel	1,500	8	TK 0/Con 0/ LNG 8	2,300	24	13,400	84	11,000	77
Marine	1,100	1		0	0	6,500	4	6,500	5

Source: Hanwha Investment & Securities Research Center, July 2019 Note: As of May 2019 / The same period last year (as of May 2018)

¹¹⁾ NH Investment & Securities, Samsung Heavy Industries (010140.KS), Stable order status for both LNG and offshore plants, July 23, 2019

- INVESTMENT OPPORTUNITIES IN KOREA
Potential Partners -

Daewoo Shipbuilding & Marine Engineering

- Daewoo Shipbuilding & Marine Engineering (DSME) has recorded 11 ship orders by May 2019, including 5 LNG carriers and 6 VL tankers. As the type of ships ordered is the same as those of Daewoo Shipbuilding & Marine Engineering, the shipbuilding margins are likely to be further improved.
- As repeated shipbuilding of the same ship type continues, the shipyard's dockyard efficiency is maximized and ship delivery volume increases within a unit period.
- As Daewoo Shipbuilding & Marine Engineering has an order backlog consisting of three types of vessels, LNG carriers, VL tankers, and super container ships, its dockyard efficiency seems relatively high compared to rival shipbuilders.¹²⁾

Cumulative Orders (As of May) and Backlog of Shipbuilding and Marine Sector of Daewoo Shipbuilding & Marine Engineering (Units: USD million, units)

	New order			Same period last year		Backlog		Same period last year	
Company	Amount	No. of ships		Amount	No. of ships	Amount (Delivery)	No. of ships	Amount (Delivery)	No. of ships
Daewoo Shipbuilding & Marine Engineering (DSME)	2,490	11		2,790	24	21,660	101	23,640	96
Commercial vessel	2,490	11	TK 6/Con 0/ LNG 5	2,790	24	16,570	96	17,250	89
Marine	0	0		0	0	5,090	5	6,390	7

Source: Hanwha Investment & Securities Research Center, July 2019 Note: As of May 2019 / SThe same period last year (as of May 2018)

Related Associations

Company name	Website	Major roles
Korea Offshore & Shipbuilding Association	www. koshipa. or.kr	This association promotes friendship among members, strengthens the market information system, and seeks mutual benefits through the cooperation of the shipbuilding industry. It also contributes to the national economy by supporting the export of ships and expanding the Korean shipbuilding industry through efforts to nurture it.
Korea Marine Equipment Association (KOMEA)	www. komea. kr	This association strengthens the linkage among shipyards ranging from small and medium to large, and increases the world's top-class products by developing excellent equipment companies in the shipbuilding and marine fields.
Korea Shipbuilding Industry Cooperative	www. kosic. or.kr	This organization contributes to the sound development of the shipbuilding industry and mutual welfare among members, and encourages independent economic activities by carrying out cooperative projects and mutual-aid projects. It also tries to promote the economic status of members and the balanced development of the national economy.
Korea Shipowners' Association	www. shipowners. or.kr	This association was established not only to promote the interests of members but also to foster friendship among members. It also exerts efforts to improve the economic and social status of Korea's overseas shipping industry and promote international activities and the sound development of the industry.
Korea Marine Equipment Research Institute (KOMERI)	www. komeri. re.kr	This foundation is established to improve the international competitiveness of the shipbuilding and marine equipment industry by carrying out research and development activities necessary for technological innovation in the shipbuilding and marine equipment and related parts industry and by building close cooperation networks among industry, academia, R&D institutes, and the government.
Korean Register (KR)	www. krs. co.kr	As a nonprofit corporation that performs the classification of ships, this organization is intended for protecting the safety of life and property at sea and for promoting technological advances in shipbuilding, shipping, and marine activities.
The Korean Society of Marine Engineering (KOSME)	www. kosme. or.kr	It contributes to the improvement and dissemination of knowledge and technology related to shipbuilding, marine equipment, and related industries; plays an active role in promoting information exchange among industry, academia, research, government, and press; and serves as a think tank.
The Society of Naval Architects of Korea	www. snak. or.kr	This corporation was authorized to be established on January 31, 1976, and is supervised by the Ministry of Science, ICT and Future Planning. It aims at promoting science and technology by contributing to the advancement, application, and distribution of shipbuilding and marine engineering.

¹²⁾ Hanwha Investment & Securities, Daewoo Shipbuilding & Marine Engineering (042600), June 12, 2019 (Equity Research)