NEW HORIZONS

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On the Other Side Of Winter

Choi Kil-seon, Chairman & CEO

Kwon Oh-gap, President & CEO

The prolonged lack of recovery in the global economy, persisting weak oil prices and continued stagnation in the emerging markets combine to make the circumstances for the global shipbuilding industry increasingly challenging, as if in the face of a strong headwind in the middle of the deep, harsh winter.

Such a global trend took a toll on our company as well: Due to the cancellation of semi-submersible rigs, weakness in offshore business and continued doldrums in the world construction equipment market, we could not achieve a turnaround in the third quarter. We feel a deep sense of regret for our investors and clients who have been waiting for an early normalization of our business.

In the depth of winter, everything seems to come to a standstill. In the frigid cold, however, all life forms are engaged in dogged, relentless efforts to store up strength to burst out into vibrant life in the spring. We are presently undergoing unprecedented difficulties since our foundation. Nevertheless, we are determined to turn this challenge into an opportunity to look at ourselves, make radical changes within and rebuild our core strengths for a new leap forward.

An emergency calls for an emergency solution. Sharing a common concern on the direness of the challenges facing us, we have embarked on the far-reaching austerity management on the back of the concerted endeavors of all employees. Under the guidance of the Emergency Management Committee, all our employees will unite behind the single-minded campaign to turn the company around in 2016. As such, all reform measures – those taken already and those yet to be taken – will have strong wind in their sales.

With the aim of restoring competitiveness, HHI has actually been taking sweeping measures since the end of last year. Of particular note is that we have delegated greater management responsibilities to each business division. Moreover, since last year we have put in place a series of tough reform measures such as reshuffling of departments, overseas incorporated firms and branch offices as well as reallocation of human, material and organizational resources. At the same time, we have renewed our focus on further upgrading the engineering capability across the company, reducing costs through design standardization and component localization, and enhancing the product quality and services geared toward markets and clients.

Turning our sights abroad, we have also worked diligently to enhance our collaboration with our partners around the world to achieve a breakthrough. As a fruit of such endeavors, we have recently signed MOU with Saudi Aramco to further strengthen mutual cooperation in shipbuilding, energy and industrial plant EPC businesses. We will continue to explore opportunities to bolster our collaboration with our partners.

We are also engaged in R&D drive to further hone our technological edge and to secure future growth engines. Eager to harvest the rising demand for high-efficiency, eco-friendly ships due to stiffening maritime environmental regulations and ever-increasing competitions among shipping companies, we have independently developed technologies and products such as SkyBench™, High Fin, and Hi Regas. In conjunction with partners, we have also developed among other things COGES Powered LNG carriers and the internet of things technology-based Connected Smartship solution, which not only enables safe and efficient operation of vessels but also reduces logistics costs.

Last but not least, we are redoubling our efforts to achieve normalization of our business at the earliest possible time by prioritizing profitability in our sales strategy, securing cost competitiveness on a continual basis, and further pushing ahead with organizational realignments.

This year marks the centennial of the birth of our late founder Chung Ju-yung and at this juncture, we are prompted to ponder the philosophy of our founder as epitomized in the Hyundai Spirit – positive thinking, creative wisdom, and unwavering drive – that inspired the foundation and growth of our company over the years. As we do so, we make a fresh resolve to overcome the current difficulties and hand down our company to our posterity as a sustainable enterprise. We would appreciate your continued support towards this worthy cause. HHI

Developing Safety Culture

With its corporate image tarnished By a string of fatal workplace accidents, HHI is completely overhauling how it Tackles the safety issue.

By Alex Lee

An ounce of prevention is worth a pound of cure.

With its corporate image tarnished by a string of fatal workplace accidents, Hyundai Heavy Industries (HHI) is completely overhauling the way it tackles safety issues. Eager to reduce workplace accidents, the world's biggest shipbuilder has prepared new safety manuals for its employees and subcontract workers. Every day, workers are reminded about various safety measures to be followed and the management looks committed to taking more practical steps to prevent accidents.

The key to this campaign's success will be how to raise safety awareness for tens of thousands of employees and subcontract workers and persistently work to create a sound workplace safety culture though it may take a long time.

"The safety-conscious attitude is a sort of thing that can't be changed overnight," said Koo Jin-hoy, senior vice president of HHI's safety and health department.

"We need to persistently work and invest time and money if we are going to establish a safety culture at workplace," said Koo.

Experts say the active engagement of business owners and managers is essential to the establishment and implementation of an effective safety program.

In May last year, in the wake of major industrial accidents, the company announced a package of steps including adding more in-house safety supervisors, reviewing safety handbooks, and more training programs for employees.

Over the span of five months in early 2014, HHI and its two sister shipyards witnessed a succession of major industrial accidents in which eight workers died in fires, by drowning and in falls. All the casualties belonged to in-house subcontract firms.

"At that time, there was a sudden increase of workload for those working on special-purpose vessels and offshore plant projects," Koo said.

Most of the latest major accidents involved employees from subcontract firms, which prompted HHI to assign more safety supervisors to the firms and enhanced safety training for their workers.

"The accidents in quick succession created a bad image for our company but provided a chance to thoroughly review our safety management system in general."

HHI issued a public apology and then came up with a comprehensive plan to upgrade its safety measures. As part of the plan, HHI reorganized the safety team of each business division, doubled the number of safety inspectors to 400, created a special team of rescuers and actively promoted safety training and activities at all corners of the company, Koo said.

The company saw only two work-related deaths so far this year, and the decline in the workplace deaths would have been unachievable without the vigilance of workers and safety managers.

Most of the latest major accidents involved employees from subcontracting firms, which prompted HHI to assign safety supervisors to the firms and enhance safety training for their workers. There are about 40,000 workers employed by HHI's 230 subcontracting firms.

"Safety specialists have been assigne to all subcontracting firms. And there are four-hour safety training sessions available for all of the 40,000 subcontractors," Koo said.

Labor activists have said HHI has been outsourcing the industrial risk to the subcontract firms, but the company says it is absurd to claim that the fatal accidents last year were all caused by "outsourcing risky jobs to subcontractors."

The high rate of turnover and job transfers is common among subcontractors. Thus, they are relatively more prone to industrial hazards because they lack experience and skills required to do their jobs, Koo said.

"Considering the trend among shipbuilders, it is fair to say the number of fatal accidents involving subcontractors has been on the rise not because they are more exposed to workplace hazards than permanent workers, but because more subcontractors have been involved in the shipbuilding work over the past years," said Koo. Like other major shipbuilders in Korea, the ratio of subcontractors to permanent workers at HHI stands at 70:30.

The company also flatly denied claims that HHI was not taking responsibility for industrial accidents of subcontractors.

"We have been fulfilling our responsibility as the main contractor for all incidents at our yard whether the incidents are ours or the subcontractors'."

"In an effort to prevent our subcontractors from experiencing any industrial accidents, we have been active in promoting their health and safety by taking appropriate measures such as safety education programs."

HHI also denied high-risk works like scaffolding are entirely done by subcontractors. "Our employees and subcontractors work together when scaffolds are being installed or dismantled," said Koo.

Earlier this year, a 46-year-old subcontractor was crushed to death after he mistakenly cut an object supporting steel plates of different sizes though he was a relatively experienced fabrication worker. To prevent such an accident, the company has introduced a 'fool proof' system to make sure that workers engaged in dangerous jobs can't go wrong.

"After the accident, we have taken various steps to avoid similar mistakes at the factory. From the designing stage we are making steel plates of uniform size and also changed work manuals so that we have no misjudgment or errors," said Koo.

In another fatal accident this year, a 28-year-old subcontractor died in hospital after falling 12 meters into the bottom of a dock. He was hit by a steel block lifted by a crane after a signaler failed to notice the subcontractor.

Strict observance of safety rules by workers is a key challenge for the management.

Koo said, "HHI has been actively working to engage employees at all levels in developing a safety culture for all businesses."

Every morning, tool box meetings are held in factory floors where a foreman begins the day with a one-minute meditation with a group of workers who are reminded that they must strictly follow the safety rules. Before afternoon work commences, they also have to closely check the risks associated with their assignment.

Safety inspectors constantly tour factories to check if actions are taken to eliminate hazards, whether workers are using

Every morning, tool box meetings are held in factory floors where a foreman begins the day with a one-minute meditation with a group of workers who are reminded that they must strictly follow the safety rules.

12 Golden Safety Rules

Every business division has its own 12 “golden rules” that workers should strictly follow. Third-time violators will be dismissed immediately from their worksites.

helmets, belt or protective glasses and if there are no damages to safety facilities.

A 20-munite video session is held on a weekly basis for all workers, followed by a brainstorming session to discuss ideas for a safe workplace culture.

Once a month, officials from labor offices and safety agencies join HHI’s executives to line up in front of the main gates to stage a safety campaign for workers reporting to work in the morning.

Every business division has its own 12 “golden rules” that workers should strictly follow. Any violators will be dismissed immediately from their worksites. First-time violators can return to work after attending a two-hour safety training but second-time violators are subject to disciplinary actions. Third-time violators are dismissed from their assigned projects.

For example, the Shipbuilding Division strictly applies no tolerance rules against such violations as no use of safety belt above five meters, unauthorized dismantling of scaffolds, smoking near inflammables, unauthorized modification of torch and poor welding around lifting lugs.

Koo, who has been in charge of the company’s safety issues for two years, recalled that the worst accident so far at HHI was a fire which broke out in April last year in a drydock where an 84,000-ton LPG carrier was being built.

In response to the outbreak of such major accidents, HHI has formed a 10-member special rescue team. Two fire engines and three ambulances are always on standby at the shipyard.

Koo said the company has a long way to go to embed safety into its corporate culture.

The company offers rewards to the best housekeeping team twice a year and implements various other recognition programs to encourage workers to join the campaign to promote a safe workplace.

Koo said HHI will keep trying to build systems that proactively improve safety and health conditions. HHI

The writer is a journalist based in Seoul.

Safety First at The World’s Top Chemical Companies

Poster of safety committees in DuPont
Photo ©DuPont Korea

DuPont is a global company with headquarters in the U.S. that was launched as a chemical manufacturer in June 1802. Its widely known products include chlorofluorocarbon (CFC), synthetic rubber, and nylon. Since the company is always exposed to danger due to chemical manufacturing, DuPont considers safety as its most important priority. This is well illustrated through its safety management policy that it has established and practiced for a long period of time.

DuPont was the first in the world to stipulate safety regulations on January 1, 1811, that consisted mainly of “Prohibition of drinking and smoking”, “Termination of employees under the influence of alcohol”, “Working at designated locations”, “Prohibition of irresponsible behavior”, and “Prohibition of carrying metals that can generate sparks.” DuPont also did not spare investments in reinforcing safety, even in financially difficult situations following the occurrence of a large explosion in Wilmington, Delaware, where it was headquartered. In 1911, the company formed a commission and developed a “safety first” program, helping to raise an awareness of safety among employees and prevent accidents.

DuPont also thoroughly observes safety rules through its “10 cardinal rules for safety and health management.” They stipulate as follows: All safety and health incidents are preventable; Management has responsibilities and accountabilities for safety and health; Risks exposed on all worksites are manageable; Working safely is one of the conditions of employment; All employees and those of our business partners must receive safety and health training; Audits on safety and health by management are essential; All defects must be given corrective actions immediately; Safety and health activities outside the company are encouraged; Good safety produces excellent business performances; and Employees are invaluable for the company. In addition, the company strives to ensure "safety" by mobilizing all possible methods with an aim to prevent industrial hazards due to natural disasters. This includes encouraging the employees to work remotely from home at times of heavy rain or snowfalls.

BASF SE is a German chemical company with a long tradition that celebrated its 150th anniversary last year. As the largest chemical producer in the world, it also owns the largest chemical factory. Since accidents might happen at any moment, as it deals with a large amount of hazardous materials, BASF has established a safety control system with which it can immediately respond to emergency situations. This is the very safety control center (a large fire station) that is operated 24/7.

At the safety control center with a tradition that spans 100 years, over 120 skilled firefighters are on duty. The center is also equipped with special fire trucks, featuring a firefighting radius that is ten times wider than that of general fire engines. A safety control system also operates promptly when a gas leakage or other harmful materials are detected by the environmental monitoring division inside the safety control center.

In addition, the company's head office in Germany is applying a range of safety management policies to its worksites around the world. Representatives frequently visit and monitor the sites to see if their safety controls are implemented. They also implement drills for preparation against emergency situations with representatives from the head office in attendance. HHI

Groupwide
Shipbuilding
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Industrial Plant & Engineering
Engine & Machinery
Electro Electric Systems
Construction Equipment
Green Energy

Briefing

Offshore & Engineering

HHI Takes Lead In Standardizing Offshore Design

HHI announced it and its domestic counterparts, Samsung Heavy Industries (SHI) and Daewoo Shipbuilding and Marine Engineering (DSME), recently held a meeting for an "Offshore Design Standardization JIP" with American Bureau of Shipping (ABS) at Huston, Texas on October 14. Or the occasion also attended by ConocoPhilips, Technip and Musting, the three Korean shipbuilders agreed to join forces to standardize materials, design, and procedures of offshore facilities that vary by project and client by the first half of 2016.

In the absence of common rules for equipment lists, design and work procedures, offshore facilities contractors and clients alike have been facing increases in the number of materials needed and material procurement costs, and project delays with the project-specific procedures. The three Korean major shipbuilders that have also been working on standardization with DNV GL since May this year plan to expand further their standardization work with LR and BV, and to list the common rules on ISO.

Mr. Choi Kil-seon, Chairman and CEO of HHI, said, "Standardization of offshore design is an essential move to ease material cost increases and project delays, and to enhance our competitiveness in the global offshore market. We hope that the standardization will help lower the entry barrier of domestic offshore facilities equipment manufacturers in the global market."

Engine & Machinery

HHI Develops Most Powerful And Efficient CLEAN HiMSEN Engine

HHI announced it completed type approval testing for its next generation CLEAN HiMSEN (Hi-Touch Marine & Stationary Engine) engines with the presence of eight major classification societies including ABS, DNV/GL, LR and KR on September 10. The CLEAN (Customer, Re-Liability, Environment, Acceptable Technology, No Defect) four-stroke HiMSEN engine (Model H21C) improves power output by 20 percent and fuel efficiency up to 2 percent compared to the existing same class four-stroke engines, H21/32, while making its physical size and weight 10 percent smaller and lighter respectively with the utilization of high pressure combustion technology. The IMO Tier III-compliant engine emits 98 percent less NOx with the attachment of HHI's proprietary Hyundai Selective Catalytic Reduction technology, NoNOx.

Mr. Youn Joong-geun, executive vice president of HHI's Engine & Machinery Division said, "Our next-generation CLEAN HiMSEN engine is the culmination of our 40 years of technological knowhows and experiences. With the customer-oriented engineering, the high-output and high-efficiency engine will surely bring mutual benefits to HHI and its valued customers."

HiMSEN, the world's most selling medium-speed marine engine, was developed by HHI in 2001. Since then, HHI has exported about 10,000 HiMSEN engines accounting for 21 percent global market share. HiMSEN engine's superior design has also been recognized in the market by winning design awards at the 2010 International Forum (iF) Design Award and Red Dot Design Award 2010.

Shipbuilding

HHI and Saudi Aramco Sign MOU For New Business Opportunities Collaboration

HHI entered into a general memorandum of understanding (MOU) with Saudi Aramco, the world's leading integrated energy and chemicals company, to jointly collaborate on business development opportunities in the Kingdom of Saudi Arabia on November 11.

The MOU lays out a comprehensive business cooperation framework going forward, in areas such as EPC, downstream, casting and forging in addition to initiatives in progress to support the maritime industry and diesel engines manufacturing in Saudi Arabia.

The strategic collaboration discussion was initiated when Saudi Aramco's Board of Directors visited HHI's Ulsan complex in April 2015.

Shipbuilding

Nigerian Trainees Complete 18 Month-Long Shipbuilding Training Program

Seventy-one employees of Bonny Gas Transport (BGT) completed their 18 month-long industrial training program at HHI on November 10. Seconded by the Nigerian shipping company to HHI for training, they also attended the naming ceremony of BGT's two 177,000 m³ LNG carriers respectively named LNG Bonny II and LNG Lagos II. Out of 71, 58 trainees attended 2 month-long training courses in welding, outfitting, electricity and paintings, at HHI Technical Education Institute, while 7 took ship structure theory and CAD courses, and 6 were trained in quality and safety management courses. Among these trainees, 28 high performing trainees joined actual shipbuilding work of the two Nigerian LNG carriers.

Construction Equipment

HL955, 960 Hyundai Wheel Loaders

HHI officially launched HL955 and HL960, a new series of wheel loaders, at its subsidiary's headquarters in Atlanta, US on September 17. Equipped with Tier-4 Final / EU Stage IV compliant engines, these new HHI wheel loaders promise to maximize their owners' value with a wide range of innovative features. These machines represent a fruition of HHI's painstaking efforts to incorporate customers' input and live up to the market's expectations for its earth-moving equipment. With the new, fuel-efficient and eco-friendly Cummins engines, HL955 and HL960 offer up to 5 percent increase in productivity as well as up to 10 percent greater fuel efficiency over their predecessors, 9A series.

Construction Equipment

HHI Introduces Two New 6-ton Excavators

HHI introduced two of the next generation 6-ton excavators, HX60 and HW60 on September 14. The Tier-4 final regulation-compliant excavators boasts 95 percent reduction in partical matter and 40 percent in NOx when compared to its previous 6-ton excavator models.

The new type excavators equipped with the 67.8 hp engine delivers 17 percent increased output compared with its previous models. The excavators feature an array of performance upgrades including an optimized main control valve, and improved pulling and turning capacity and driving speed, making them the most powerful earthmovers of its kind in Korea.

Groupwide

Hyundai Mipo Dockyard Builds Korea's First Reefer Container Carrier

Hyundai Mipo Dockyard (HMD) became the first Korean shipyard to build a reefer container carrier, successfully strengthening its presence in the value-added special ship segment.

HMD revealed on November 9 that it held a naming ceremony for the first 770 FEU reefer container carrier out of three ordered by the US-based Dole Food Company Inc. on July 2013. In the presence of 50 guests including Kang Hwan-goo, CEO of HMD; and David H. Murdock, Chairman of Dole, the ship was named "Dole Pacific." The ship, completed in 11 months, measures 190.0 m in length, 30.4 m in width and 17.0 m in height. It is accessorized with a water cooling system in the entire cargo hold so that it can haul various fruits and vegetables in ideal temperature settings. In particular, the ship's electronically controlled engines and wave-resistant design help reduce fuel consumption during voyage.

Moreover, two gantry cranes are installed on top of the deck, and one thruster is attached each to the bow and the stern, so that the ship can be berthed at the quay without the help of tug boats. The ship costs $55 million, which is double the price of containerships in general. Dole Pacific will be delivered to the owner in the afternoon of December 10 and start its maiden voyage to China the next day.

Groupwide

Three State-of-the-art 174,000 m³ LNG Carriers HSHI Built

Hyundai Samho Heavy Industries (HSHI) held a simultaneous naming ceremony of three cutting-edge 174,000 m³ LNG carriers ordered from Greece-based Maran Gas Maritime on October 22. The ships were respectively named Ajax, Achilles and Agamemnon after Greek myth heroes. The naming ceremony was held in the presence of Mr. John Angelicoussis, chairman of Maran Gas Maritime; Mr. Ha Kyeong-jin, CEO of HSHI and other guests.

The fleet measures 290 m in length, 46.4 m in width and 26.4 m in depth. The membrane-type LNG carriers are incorporated with dual-fuel propulsion system, fuel-saving propeller attachments called Hi-Fin (Hyundai End-plated Cap Fin), and specially designed Hi-Rudder that help minimize the wave friction. Moreover, thanks to improved installation system of the LNG tank, the ratio of liquefied natural gas being re-gasified during transportation can be reduced to 0.085% from the conventional 0.1%. In sum, the fuel efficiency of these LNG ships is up to 5% better than other vessels of the same type.

Maran Gas Maritime, one of the subsidiaries of the world's leading Angelicoussis Group, has ordered a total 10 LNG ships to HSHI, out of which six remain in the order book. A member of HSHI said, "HSHI seeks to beef up its technology in LNG carrier construction in light of the bullish outlook for shale gas."

Groupwide

HHI Shows The Smarter Way To Efficient, Green Technology in Shipbuilding at KORMARINE 2015

HHI announced it teamed up with its shipbuilding affiliates, Hyundai Mipo Dockyard (HMD) and Hyundai Samho Heavy Industries (HSHI), to participate in KORMARINE 2015, a major maritime international exhibition from October 20 to 23 at Hall 3, Booth 3F05, BEXCO, Busan in South Korea on October 13.

In the biennial event where about 1,200 companies from 40 countries participated. HHI Group also showcased 38 leading shipbuilding technologies categorized into four sections; Hyundai Heavy Industries Group, Smart Technology, Green Technology and Marine Equipment Solution.

Groupwide

HHI's New PR video Wins IBA Silver Award

HHI's new promotional video won the silver award in the video/film segment of the 12th International Business Awards (IBA).

IBA, hosted by the US-based Stevie Awards, is the only international competition in the business arena that recognizes 15 areas of business accomplishments from management, corporate growth to public relations made by companies and organizations around the globe. IBA received 3,700 entries from 60 countries this year, and HHI was named the runner-up to the US-based charity organization "HelpMeSee," becoming the only Korean company to gain international recognition in the video/film segment of IBA.

Groupwide

HHI Celebrates The Centennial of Its Late Founder Chung Ju-yung

HHI held a commemorative concert to celebrate the centennial of the late founder Chung Ju-yung on November 25. At Hyundai Culture and Arts Center in Ulsan, where HHI is based, the KBS Symphony Orchestra played Ludwig van Beethoven's Egmont Overture, Emperor Concerto and Destiny Symphony in association with pianist An Jong-do, the winner of the Concours International Long-Thibaud-Crespin 2012 in Paris, as a way to pay tribute to the pioneering spirit of the founder. From November 23 to 25, HHIBS, the in-company broadcasting station, aired special video clips featuring the achievements and chronicles of the founder Chung Ju-yung in the form of quotes that Chung Ju-yung delivered in his lectures and meetings from the 1970s to 1990s.

Green Energy

HHI Boosts High Efficiency PERL Cell Production

HHI will start producing 21.4 percent high-efficiency monocrystalline PERL (passivated emitter, rear locally diffused) solar cells from early 2016.

To meet the commercial production schedule, HHI will convert all of its existing monocrystalline solar cell production lines to PERL-type solar cell facilities at Eumseong, South Korea. Upon upgrading the facilities, HHI will be able to roll out 200 MW high conversion rate PERL solar cells annually.

HHI's PERL solar modules can generate 5 percent more electricity than solar modules made of conventional solar cells.

Sailing Together: The Key to Finding The Best Direction To Move Forward

"I think I could win their hearts when I opened mine first and talked with honesty."

By Kim So-hee

Kang Hwan-goo, President and CEO of Hyundai Mipo Dockyard

Behind a swift turnaround of South Korea's Hyundai Mipo Dockyard (HMD) amid global slowdown in the shipbuilding industry, he was there to make the company move forward.

In his first official interview since he took the helm in October 2014, Kang Hwan-goo, president and CEO of HMD, said strong teamwork as well as high quality vessels were the strengths of HMD which enabled them to actively respond to the uncertain market conditions.

"It was my first task to revitalize the company by restructuring when I took office a year ago. We have put tremendous efforts to add what was needed and abolish what was unnecessary," said Kang.

"I can say our company's productivity and process have been improved. It has not been fully recovered yet, but now we are seeing that our business is normalizing at a faster speed," said Kang. Throughout constant talks with each department, the CEO led the company to integrate and simplify inefficient operations, so that the company could start making profits.

HMD, founded in 1975 as a ship-repair yard and turned into a shipbuilder in 1996, has delivered about 960 mid-sized vessels including product and chemical tankers, bulk carriers, LPG carriers, pure car and truck carriers, containerships, and con-ro/ro-ro vessels to 162 worldwide customers.

Kang said HMD is constructing 70 to 80 ships per year, adding that there might be no other shipbuilders in the world which construct such numbers of vessels annually. His vision in the company, however, was beyond the title of the world's leading shipbuilding yard.

"People say that we are the world's No.1 shipyard, but we have to ask ourselves if we are truly the best for design, technology, and quality," he said. "Our vision is to keep making "masterpiece vessels" with superb capabilities in the three sectors and build client-friendly ships which can be easily maintained."

"Improving safety awareness is essential for all workers whether you work at branches or affiliates," Kang underlined that the company had gradually reinforced safety facilities in the yard. "I believe our workplace is a base, a spring, and a starting point of happiness."

After graduating from Seoul National University with a background in naval architecture and ocean engineering, he entered Hyundai Heavy Industries (HHI) - the best career for marine engineers at that time - in Ulsan, which he has cherished as the second hometown since then. Looking back his thirty seven years in the industry, Kang said although he couldn't pick the most special memory, every second working with his 'people' mattered to him.

"I was in charge of designing vessels. Design is like navigating for the best solution at a certain moment. Together with my colleagues, I was very thankful and pleased to discover new ways," said Kang. It was the very point he didn't need to look into his notes anymore, seemed relaxed, and opened up his genuine personality.

"I think I could move their hearts when I opened mine first and talked with honesty. I think my colleagues acknowledged my efforts to get closer to them, and I feel I owe them deep gratitude for that."

Although he was humble and shy to characterize his own leadership style, Kang slowly nodded his head with a gentle smile when he was asked if it was like sailing on the ocean--finding the best ways at every moment.

Mr. Kang appeared confident about overcoming whatever crisis that lies ahead, counting on thoughts of his people who had built trust from casual meetings, Korean style dining, and mostly the time that they spent together.

"You will eat the fruit of your labor; blessings and prosperity will be yours," Kang, who keeps the Bible verse in mind, says he is a blessed man and desires to live an ordinary and pleasant life in Ulsan after retirement.

"Beyond making a company which rewards shareholders, my ultimate goal is to build a firm which contributes to the society that it finds itself in," Kang said in his last comments. "I hope that readers will remember HMD and buy our shares as well. I would be more than happy if you visit our company when you have a chance to visit South Korea." HHI

The writer is a journalist based in Seoul.

Medical automation is essential in that it can enhance the quality and efficiency of medical services.

Medical Robots,
The Next Growth Driver of HHI

By Lee Sang-hun

When one hears of Hyundai Heavy Industries (HHI), what usually come to his/her mind would be colossal vessels, gigantic offshore plants and lofty goliath cranes. So it might be a little strange to hear that HHI produces medical robots, too: something one would find in hospitals, instead of shipyards or outfitting quays.

In fact, HHI has a rather long track record of robot production. The company started manufacturing industrial robots in 1996, and now produces a more diverse set of robots whose functions include cleaning and even medical treatment. The robot business has gained such significance in HHI that it was spun off into an independent organization from the Engine and Machinery Division this year.

In particular, medical robots are currently considered the most promising business for HHI: some even view them as a breakthrough and the next cash cow for the shipbuilding giant. According to a global medical equipment research institute Espicom, the global medical equipment market should double to USD 521 bil in 2021 from USD 261 bil in 2013. The medical automation market should, in tandem, increase to USD 61 bil by 2018.

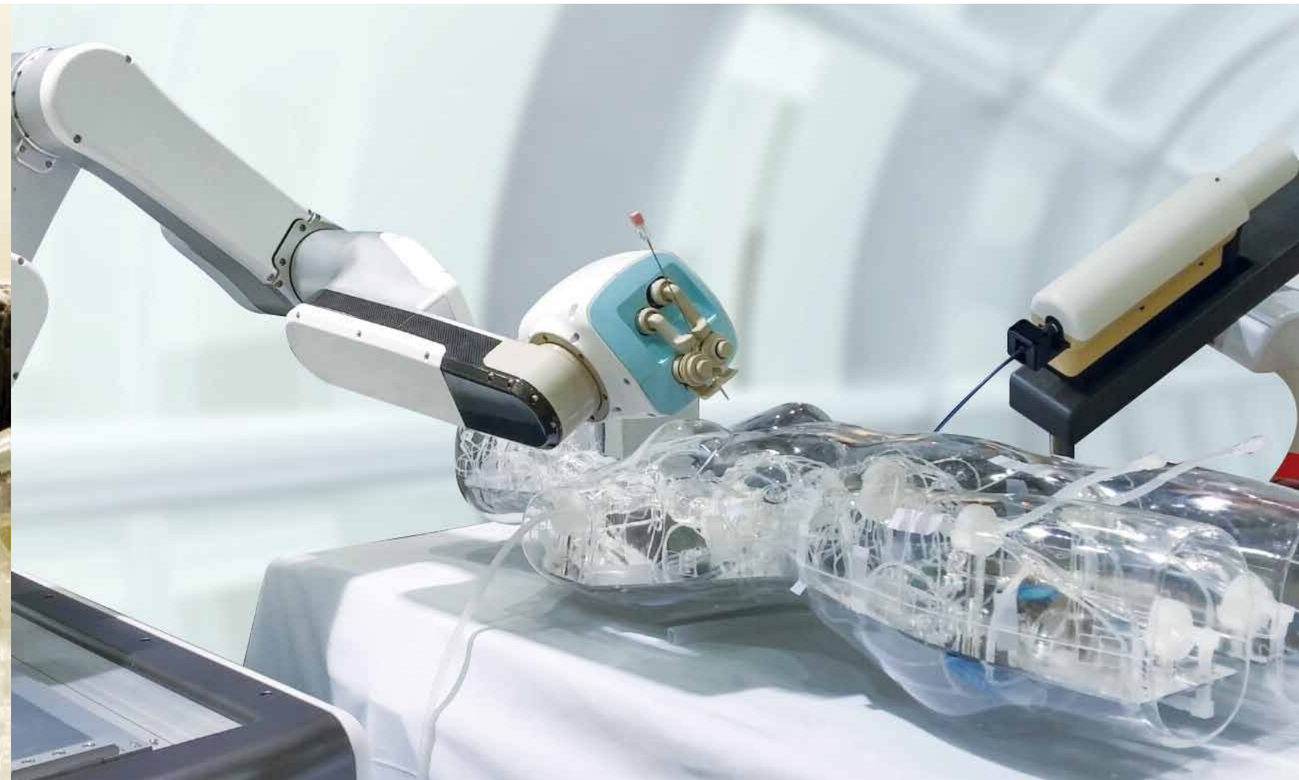
Medical automation is essential in that it can enhance the quality and efficiency of medical services. For manufacturing businesses, medical automation means an untapped business opportunity and a means of value creation. That said, an increasing number of manufacturing companies are likely to embrace the medical automation business going forward.

In view of this, HHI launched Medical Robot and Equipment Joint Lab with Asan Medical Center in February 2012 and Medical System Lab in April 2012 to step up its efforts to develop medical robots.

Robot for Interactive Gait Rehabilitation

To create a presence in the medical automation business, HHI chose gait rehabilitation robots as a starter in belief that rehabilitation robots are where it can best harness its existing automation technologies and clinical expertise of Asan Medical Center. The global market of gait rehabilitation robots is valued at 440 billion won (USD 374.8 million) as of 2015, and is expected to grow to 750 billion won (USD 638.8 million) in five years, and 1 trillion won (USD 851.7 million) in the foreseeable future.

Gait rehabilitation robots can replace the physical effort of therapists. In fact, rehabilitation therapies are very labor-intensive and often require several therapists to manually assist the patients to perform training. The robots can increase the amount of exercise of the patient by over



ten times with hardly any manual assistance required from therapists. This can enhance the efficacy of the therapy, adjust the quantity of exercise and mitigate the burden of therapists.

However, it was not an easy start. HHI engineers were not familiar with the medical field: the jargons, authorization requirements, GMP adequacy tests, etc. were all too new to them. More than anything, they were sometimes demotivated by the long-standing bias that HHI is a shipbuilder, not a robot-builder. However, HHI increasingly felt the need to develop novel products amid the changing global environment, and forged partnership with Asan Medical Center to facilitate the research and development in robotics.

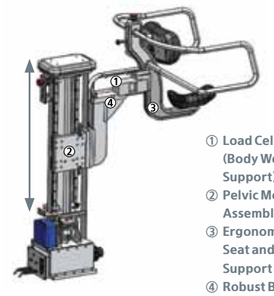
Morning Walk™

In three years since the foundation of the joint lab, HHI and Asan Medical Center rolled out what they believe to be a game changer, "Morning Walk™." It is a gait rehabilitation robot with a chair-like structure that supports the body.

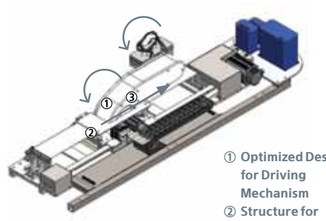
The core technologies of Morning Walk™ include, first, stationary robotic gait training with body weight support technology. Thanks to this technological accomplishment, Morning Walk™ only takes a few minutes to get ready compared to the 30 minutes of traditional systems. Also, the patient does not need to be strapped, harnessed or wear unwieldy robot devices, as the ergonomic design incorporated in the motion and seats helps the robot accommodate the pelvic movement. Moreover, the rehabilitation effect can be maximized with the power control mechanism that caters to changes of the body weight in real time.

Second, the End-effector Orthosis System can train paraplegics on all terrains, from flat land, stairs to hilly areas. In other words, the foot motion sensed by the foot plate translates into the rehabilitation training of the entire limb. If the sensor detects any irregular movement of the patient, the foot plate is automatically separated. Also, to comply with medical device regulations, the noise is limited to 60dB. For optimized operation, a proven compact design was put in place after a series of trials and simulations.

Morning Walk™ was provided to four major rehabilitation treatment centers in Korea, namely Asan Medical Center, National Rehabilitation Center, National Health Insurance Service Ilsan Hospital, and Jeju Regional Rehabilitation Hospital, as part of the multi-ministerial robot penetration project, in September 2015.



① Load Cell for BWS (Body Weight Support)
② Pelvic Motion Assembly Part
③ Ergonomic Seat and Chest Support
④ Robust BWS Assembly



① Optimized Design for Driving Mechanism
② Structure for Various Gait Trajectory
③ Noise Reducing Engineering Design

HHI was able to build a cooperative framework with not only Asan Medical Center but also small-and-medium businesses for production and sales of Morning Walk™ .

HHI was able to build a cooperative framework with not only Asan Medical Center but also with small-and-medium businesses for production and sales of Morning Walk™. Based on the experience accumulated through development and commercialization of rehabilitation robots, HHI will share a corporate-hospital cooperation platform with small enterprises, which should contribute to to the growth of the medical automation industry.

Others

Aside from Morning Walk™, there are three other medical robots under development by HHI and Asan Medical Center, namely, mobility assistive robot, tumor treatment robot and joint substitution surgery robot.
The mobility assistive robot named CarryBot helps patients' mobility, thereby raising the efficiency of nursing and safety of the patient.

Photos below show how CarryBot can be used to carry the patient to the desired destination.

Morning Walk™

CarryBot

Inner Guide 10, developed by HHI, enables the practitioner to plan the needle insertion route with the help of the CT image.

Lastly, the joint substitution surgery robot is considered the next-generation surgery robot for artificial joint substitution surgery for those suffering from degenerative arthritis, rheumarthritis, etc. The robot is designed to enhance the accuracy and convenience of surgeries. It is expected to be licensed and authorized by the Ministry of Food & Drug Safety next year.

"When you are at a dead end, look for a way out. When you look and still can't find a way, pave it out yourself," said the late founder of Hyundai Group, Chung Ju-yung. However, it is much more challenging today to pave a new way than yesterday. The average survival rate of startups that are one year old or younger is 62 percent. In other words, 4 out of 10 startups shut down before starting their full-fledged business, and half of the remaining 6 companies shut down in two years.

HHI has sought to beef up its competitiveness through convergence of medical and manufacturing technologies. The medical automation industry in Korea is yet in its incipiency. However, if HHI can penetrate the market with its medical robotics and help Korean hospitals build experience, then who knows? The industry may flourish as Korea's flagship industry along with shipbuilding or semiconductor industries. HHI

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Surgery Robot

Inner Guide 10

Robots, Upgrading
Medical and Welfare Services Further

Robots are utilized to do chores such as cleaning and laundry. With the development of advanced IT technologies, they are able to significantly contribute to the health and welfare of people. The possibility that robots could be used for medicine was discovered when PUMA 560, an industrial robot arm, assisted in the surgical operation on the human brain in 1985. Since then, various studies have been conducted on the utilization of robots for medical treatment.

Today, robots are starting to play an important role in surgical operations that require precision, as well as simple tests and treatments. Accurate and speedy operations were made possible by drilling holes in the patients and inserting subminiature cameras, a feat achieved by robots that are operated to use surgical instruments with precision. They have also helped minimize pain and the risk of infections through minimum incisions, satisfying both medical personnel and patients.

Beyond the operating room, robots are also utilized even in the areas of rehabilitation, nursing assistance, and diagnoses. Welfare robots have been developed in various forms for the purpose of helping the elderly and the weak. They have contributed to assisting with the activities of patients who are crippled and improve the quality of people's lives. The types of welfare robots include Walk Assist Robots with intelligence to help senior citizens who have difficulty walking due to weakened muscular strength or the physically disabled with reduced mobility.

Meal Assistance Robots help those who have trouble using their hands to eat properly. Also developed are robots that are programmed to improve people's mental health by detecting their touch and responding to their glances, gestures, and sounds. Furthermore, primed for commercialization are robots that deliver hospital supplies, and those that deodorize and sterilize indoor air, while informing the patients' conditions through a real-time camera by visiting sickrooms instead of nurses. Such a diverse range of robots has gradually come in close contact with people to further develop the fields of medicine and welfare. HHI

The PUMA (Programmable Universal Manipulation Arm) is an industrial robot arm at NASA
Photo © Wikipedia

Big Data & 3D Printing

To Change The Industry Landscape

The traditional information system builds data, defines which data is necessary for a certain purpose, and establishes a dependent route for collection and acquisition of such data.

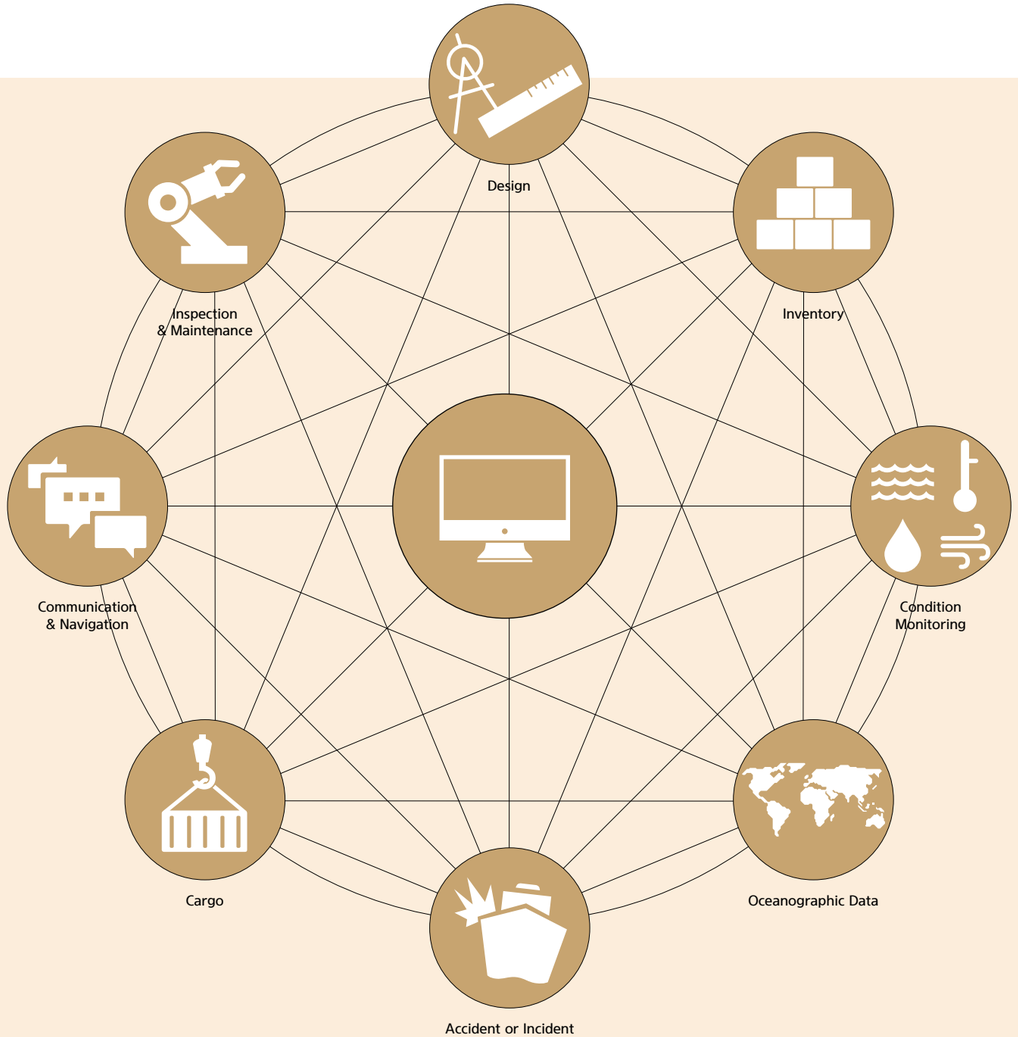
Professor
Kim Young-hoon

Department of Naval Architecture & Ocean IT Engineering, Kyungnam University

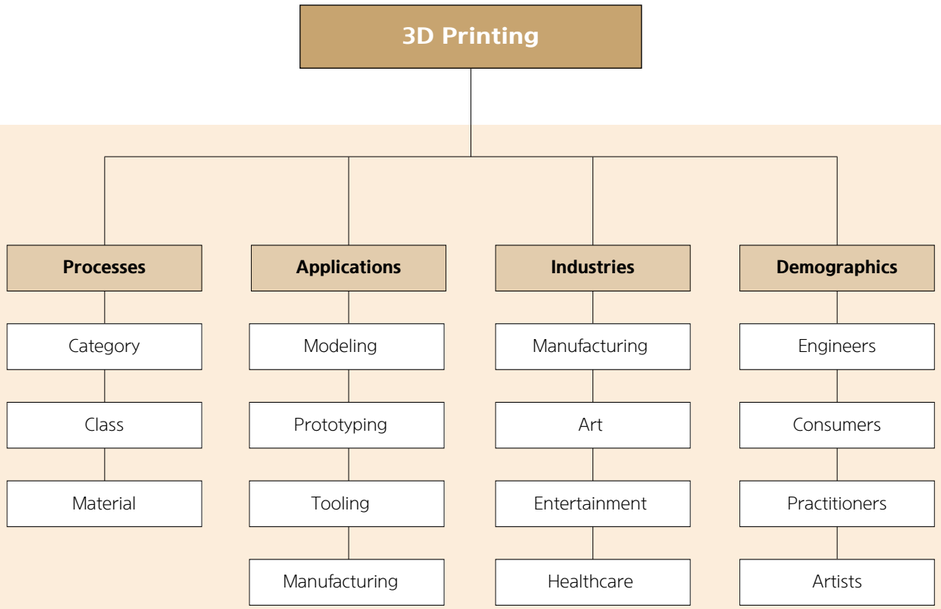
New orders in the global shipbuilding industry have halved since the 2008 financial crisis. Against this backdrop, demand for deepwater projects has kept shipyards afloat and running, but the series of stoppage or cancellations of offshore projects amid the oil price crash have put a drag on shipbuilders that had been commissioned to build vessels or offshore production facilities.

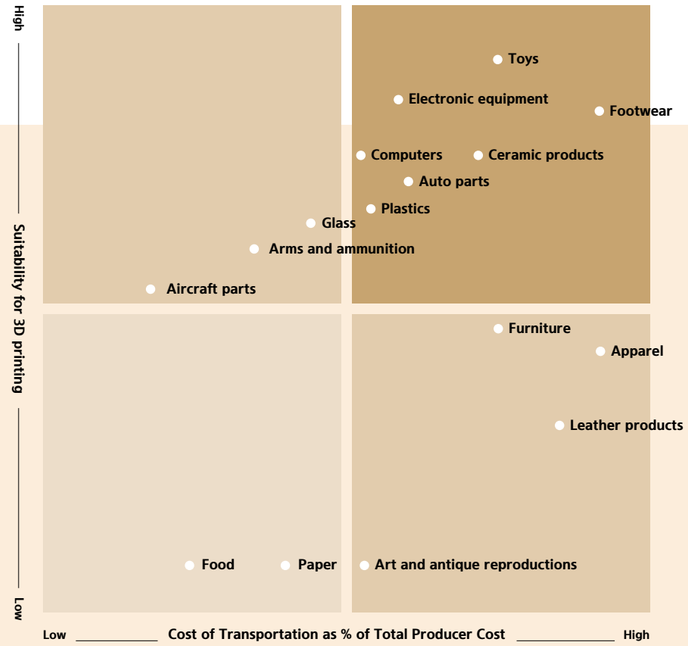
To add to the burden, the International Maritime Organization is tightening its environmental regulations: now that a majority of equipment or devices installed on offshore structures or vessels, as well as ship design and construction methods, need to abide by upcoming environmental requirements, there has been ongoing research and development for shipbuilders to go greener, leading to increased production costs. Moreover, not only international organizations but also shipowners are increasingly seeking high-efficiency, high-performance vessels to save fuel and rein in the maintenance cost. In order to meet the needs for eco-friendly and smart ships, the industry is embracing the technological transition to wireless, information and communication technologies.

The hype on smart and green technologies has led to increased attention to application of big data and 3D printing technologies. In fact, the two technologies are perceived as vital for the future of the shipbuilding industry, though their adop-



Data's Multiple Connections Between Different Sources in the Marine Industry





Wide Applicability of 3D Printing

Computation of the suitablity and cost of transportation of 3D printing is relatively difficult, due to the slow adoption of the 3D printing in the shipbuilding and offshore industry.

tion has not been as fast as in other sectors. The cutting-edge technologies have been widely researched for applicability and embraced extensively in many industries but shipbuilding and offshore.

First, the kind of ICT (Information & Communication Technology) that can be applied to the shipbuilding and offshore sectors are threefold: crowd sourcing for data generation, acquisition and gathering; big data for data accumulation, analysis and processing; and cloud computing service that provides real-time data in 3D via web or applications. The traditional information system builds data, defines which data is necessary for a certain purpose, and establishes a dependent route for collection and acquisition of such data. On the contrary, big data acquires as much data as possible to begin with, and then applies diverse analysis or processing techniques according to the user's needs.

If it is possible to pool data on ship traffic, maintenance and management through sensors on each equipment, PLC, monitoring systems, etc., then the data can be applied to a broad array of areas, from fuel economy, slow steaming, environment conservation, marine safety, meeting international requirements and hull design, and so forth. Moreover, establishing big data on not only a single ship but the whole fleet of a shipping line, vessels constructed and launched by certain shipyards, ships that frequent certain areas and vessels of the whole country or the whole world, would make it easy for users to classify, aggregate and analyze the data for their use.

The big data can be processed to cater to the specific requirements of ship owners, ship managers, shipyards, port authorities, classification societies or international organizations. Shipyards are increasingly automating the production of each module, for example, management of engineering and assembly processes, and the need for big data should increase as data builds up. Ultimately, the big data technology should serve as the foundation for achieving digitally connected shipyards, automated or unmanned vessels, thereby giving a decisive impact on the competitiveness of shipbuilders and the scope of business that can be handled onshore or offshore.

Recently, Daewoo Shipbuilding & Marine Engineering won the government's request for proposal for big-data-based smart services, and is now commissioned to develop smart vessel platforms and smart maintenance, repair and operation (MRO) service. Through analysis of seaborne trade, macroeconomic data and shipping indicators, the government plans to be the first to introduce innovative vessels and technologies in the global shipbuilding and offshore market. Moreover, the MRO service is a business model that provides maintenance services of ship devices and equipment, by capitalizing on such information as conditions of devices and components during voyage, audit schedule of classification societies, supplier data, etc. For instance, if a ship arrives at Busan Port, the ship can be provided with immediate maintenance services without having to wait for engineers to come in and check everything in person.

Meanwhile, 3D printing technologies are highly likely to bring about a sea change in the value chain of shipbuilding and offshore materials and devices. Traditionally, parts are manufactured and transported to vessels and offshore plants. However, if the ship on voyage or offshore plants experience defects in the drilling or production process that requires replacement of parts or machines on the sea, they might end up facing serious hazards if they do not have sufficient inventories readily available in the facility. To prepare against such a disaster, the crew may leverage 3D printing technologies to print the devices or parts to replace defective ones. Also, rather than commercial products whose price includes R&D cost, using the byproducts of 3D printing can save costs and improve quality and performance. 3D data and 3D scanner will prove highly useful for 3D printing.

GE a multinational company, is conducting research to fully capitalize on 3D printing in its key business, offshore business. It costs USD 600,000 per day to maintain offshore oil platforms that are deployed to drill for crude oil on the sea, and if defects should occur on core components like BOP (blow out preventer), possible oil leakage may cause contamination, and skilled workers at the platform may face risks. Thus, defects in oil rig components may be corrected by producing a replica immediately by using 3D prints. Moreover, Drilling iBox Solution may come in handy: the solution predicts the need for replacement or repair of components by using big data. Sensors embedded in such equipment as BOP provide real-time data, which is refined into valuable information about the location of valves, the operating temperature range, stress, tube well status, etc. and transmitted to the facility manager. HHI

Hyundai Power Transformers USA

By Lee Jung-soo

Drawing on all the technical advantages and 38 years of experience of HHI, Hyundai Power Transformers (HPT) manufactures Core Type, Oil Cooled Power Transformers ranging from 105Kv to 500Kv and above in the US.

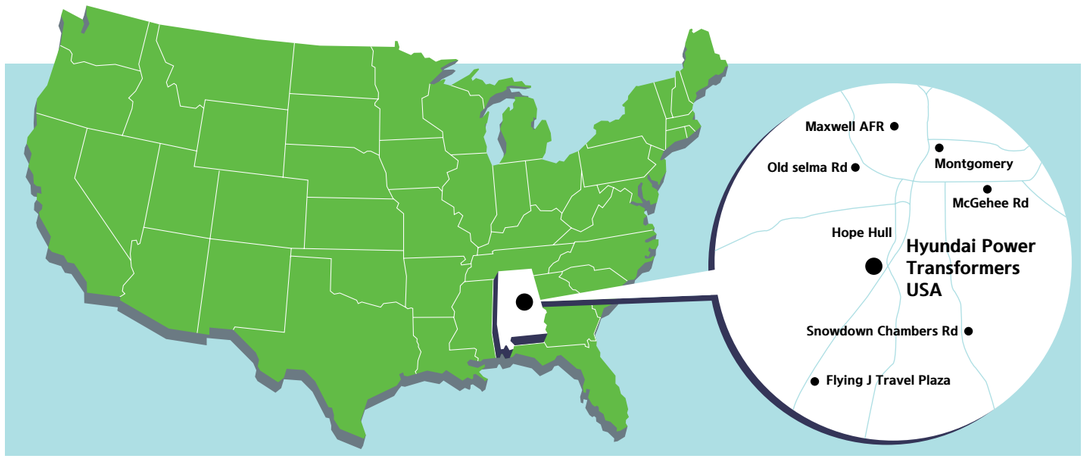
Drawing on the technical advantages and 38 years of experience of HHI, Hyundai Power Transformers (HPT) manufactures Core Type, Oil Cooled Power Transformers ranging from 105Kv to 500Kv and above in the USA.

HPT, an overseas affiliated factory of Hyundai Heavy Industries (HHI), is based in Montgomery, Alabama. HPT utilizes the most recently developed technology and designs to create power transformers that meet and exceed its customers' requirements. The newly constructed HPT facility is quickly becoming a leading manufacturing plant in the power industry due to its highly developed technology and strong-commitment to building the best product line for its customers.

HHI established its power equipment business in 1977 to diversify its revenue structure; supplying circuit breakers, power distribution systems, current motors, switchgears and many more. In 2011, with over 34 years of experience building high quality power transformers at HHI headquarters in Ulsan, South Korea, and its presence growing steadily in North America, it became apparent that a power transformer manufacturing plant was needed in the North American market. HPT was established in November 2011 to meet the growing demand of power transformers in North America. The average life span of a transformer is 30 years, and 60 percent of the North American transformers will soon be in need of repair or replacement.

Utilities companies in North America have long voiced the need for the presence of local suppliers and HPT plans to fill that need.

HHI has strategically placed HPT's state-of-the-art facility in Montgomery, Alabama, affectionately known as the "City of Dreams." HPT purchased a 100-acre site for current and future support of its North American customer base; the current facility is approximately 319,000 square feet



HPT purchased a 100 acre site for current and future support of its North American customer base; the current facility is approximately 319,000 square feet with 66 unused acres for future development.

with 66 unused acres for future development. This location also allows HPT and HHI to meet the long-time request from its customers in the United States and Canada. This enables an unprecedented level and ease of access to its customer base for communication and service based opportunities.

Strategy

From 2011 to 2014 HPT has increased its output by 39 percent while boosting its skills. In 2015 the company is looking to increase output by another 30 percent. As it has matured as a power transformer manufacturer it has begun to gain the trust of many of the top power supplying corporations in North America. Moving into new markets across the continent and meeting with power supplying companies, along with giving advanced tours of its facility has allowed HPT to gain new customers at a higher rate than the industry standard. With ever-improving skills and outstanding reputation, HPT is moving forward with a sense of purpose and a clearly defined goal. With many customers having already placed orders with expected deliveries three years in advance. HPT is expecting to achieve important milestones in the next calendar year. This allows HPT to provide quality products and services commensurate with that of HHI Power Transformers.

Vision

By utilizing the most modern designs, technology, and equipment, Hyundai Power Transformers can complete a product and provide services that more than satisfy various requirements of customers. HPT's goal is to become the premier power transformer provider in the North American market, providing high quality transformers to all the major power suppliers in the region. Like HHI, HPT aims to satisfy every customer with high quality and unparalleled service. HPT values its customers and strives to build and maintain relationships that are mutually beneficial and support the values and requirements of both HHI and HPT's customers. Its goal is to overachieve all federal and international regulations concerning safety, quality, efficiency, positive communication, and environment stewardship. HPT understands what is important to its customers and will continue to place top priority on these strategic values.

Multicultural Workforce

HPT is proud to bring its multicultural workforce together to forge the unique Hyundai culture. HPT's workforce diversity includes team members from North America, Korea, Mexico, Iran, and India. HPT aims to bring its diverse workforce together by focusing on team building, singleness of purpose, and other activities. A weekly soccer club is held at a local park and attended by many of its team members, especially its Korean and Central American team members as soccer is such a popular and important part of their culture. Every year HPT sponsors a family fun day as an opportunity for employees to introduce their families into the HPT culture. This day includes multiple events, a barbeque and prize raffles as its members and their families come together to strengthen the Hyundai culture. Ice cream days and an employee appreciation day also allow its employees to mingle and get to know the cultures of their fellow coworkers. These events work in harmony to bring about an atmosphere of cohesiveness. Through training and bonding activities HPT continues to promote tolerance and understanding in the community and between team members and other cultures. Each incoming team member is taught the importance of remaining respectful. Hyundai Power Transformers USA combines the cultures of its members to create its own unique culture and maintain its standing as a company with a proud multicultural history.

HPT Appreciates The Opportunity to Serve Its Customers

HPT is thankful for the opportunity to support its existing and prospective customers in North America, and to provide power transformers and related power industry products and technical services. Its goal is to seek, understand, and satisfy the individual requirements of every customer. HPT values its customer relationships, and strives to meet the quality and delivery standards. HPT believes that mutual trust and profitability are obtained, when it focuses on meeting its customers' requirements of safety, quality, technical competence, professional communication and on-time delivery. HHI

The writer is a manager at HPT.

Talladega Superspeedway, The Best Track to Enjoy Speed

Talladega Superspeedway in Talladega, Alabama / Photo © Wikipedia

Alabama, where the factories of prominent carmakers such as Hyundai Motor, Toyota, Honda Motor, and Mercedes Benz are located, has attracted the auto industry on the world's largest scale. In 2014, the number of automobiles produced in the entire state came close to one million, an all-time high, making up seven percent of all automobiles sold in the United States last year. These automobiles are also exported to 99 countries around the world.

An American state that is represented by automobiles, it has another related source of pride. That is the Talladega Superspeedway, a motor sports complex located north of Talladega in Alabama. It boasts an impressive 12km^2 in scale with a parking capacity that can accommodate as many as 143,000 vehicles. It is also an area where the world's fastest records were achieved. It is common to see the racing speed exceed 320km/h on the track.

Talladega Superspeedway is also the best track where fans of The National Association for Stock Car Auto Racing (NASCAR) can enjoy car racing.

This is because the track hosts the Sprint Cup Series*, one of the nation's largest motor racing series along with the Formula One (F1).

A total of 36 races are carried out in different race tracks for nine long months. The Alabama 500, one of Sprint Cup Series, was held here on October 25, attracting the attention of racing fans. HHI

* The NASCAR Sprint Cup Series was formerly the Nextel Cup Series from 2004–2007. The racing series leased its naming rights to the wireless service operator Nextel Communications but changed its name to the Sprint Cup since 2008 after Sprint acquired Nextel in 2005. The series is carried out for about nine months every year from February until November in 28 cities throughout the United States, and most races are held in oval tracks.

Heritage

Missing the Chairman Of Chairmen

Early this year, the late Chung's name hit the headlines of a fairly large number of media outlets at home and abroad.

By Shim Sung-won

A fraternity of former chief communications officers (CCOs) for big business conglomerates in Korea has recently released results of its survey on the most popular, favorite quotations made by renowned Korean business tycoons.

The respondents, composed of the country's active businessmen, picked "Hey, have you ever tried it yourself?", a phrase that the late Hyundai founder Chung Ju-yung loved to use to admonish naysayers, as their most favorite. Ranked second was "Change everything except for your wife and children!", a phrase from Lee Kun-hee, chairman of the country's current top business empire, Samsung.

As mirrored in the retort, Chung was a man whose vocabulary does not include the words "impossible", "indolence" or "impracticable", and we can hardly find anyone out there who failed as many times as him yet never gave up.

Early this year, the late Chung's name hit the headlines of a fairly large number of media outlets at home and abroad as Hyundai's satellite conglomerates, including Hyundai Kia Automotive Group, Hyundai Department Store Group, Hyundai Heavy Industries' Group and Hyundai Development Company, began preparing to celebrate the centennial of his birth.

Chung was born to impoverished peasants on November 25, 1915 in Tongcheon in what is now North Korea during the Japanese colonial period. Chung had little schooling and in his teens, he ran away to Seoul, learning several trades before setting up an engineering and construction firm in 1946, named Hyundai -- the word means "modernity" in Korean. American military contracts during the 1950-53 Korean War were an early boost for Chung's business. However, Chung and Hyundai really took off after President Park Chung-hee took office and steered South Korea towards industrialization, which rewarded favored enterprises with a wide range of expansion opportunities.

Under the "predestined" relations with the then President Park, Chung was able to push ahead with domestic industrial and infrastructure projects that are too numerous to enumerate one-by-one.

Both Hyundai's automobile and shipbuilding sectors are based in Korea's southeastern city of Ulsan, prompting the former industrial town to become a megalopolis with a population of over one million and a befitting nickname "Hyundai City." Once in a while, South Korea itself would even be dubbed the "Republic of Hyundai" by critics observing the dominance of Chung's Hyundai brand in almost all walks of life in the country. Trains, bridges, ships, and a plethora of consumer goods including cars and apartment complexes as well, have been built under the brand.

An Inexorable Streak of Ventures

In 1962, Chung's company won the project to build the Soyangang Dam which features one of Korea's largest hydroelectric power stations. Construction of the 123-meter (404-feet) tall dam began in 1967 and was completed in 1973. The dam

is capable of withholding a reservoir of 2.0 billion cubic meters and supplies water to a 200-megawatt power station.

Having won over Park Chung-hee to his side who during his first visit in 1964 to the West of the then divided Germany, was very impressed with Bundesautobahn, or federal motorway, Chung a few years later celebrated another triumph in his life by obtaining a contract to build the Gyeongbu (Seoul-Busan) Expressway, Korea's first major highway and the most representative icon of the country's "Miracle on the Han River." Only Park and Chung could come up with the idea of building the 428-kilometer economic artery in an underdeveloped country like Korea at that time. Regardless, the groundbreaking ceremony was held in February 1968 and the super highway was completed in only 29 months. This highway story may remind us of another adage coined by Chung: "Conviction creates indomitable efforts. This is the key to miracles."

The Korean government was determined to industrialize South Korea in order to free it from dependence on foreign aid, and Chung's business interests continued to well conform to the president's economic development initiatives.

In the late 1960s, he built an automobile manufacturing plant in Ulsan, on the country's southeastern coast. Initially the automotive firm built two Ford Motor Company models for the Korean domestic market, but in 1974 it unveiled the first true Hyundai car, named "Pony." Chung's younger brother, Chung Se-yung, was put in charge of the auto group. Now, Hyundai Motor Group, the world's fifth largest automaker, is led by Chung Ju-yung's eldest living son, Mong-koo. In 2014, Hyundai sold and rolled some 5 million units of cars into about 200 countries across the globe.

The Hyundai founder kept expanding his conglomerate to include 86 companies at its largest. He persistently strove to stay ahead of other top Korean chaebols like Samsung and Daewoo. In 1971, Chung met with bankers from London's esteemed Barclays house and successfully obtained financing to begin a shipbuilding yard. To quell the banking house's doubts, he showed them a 500-won bank note with an illustration of the world's first ironclad ship, called "The Turtle Ship" built in 16th-century Korea.

As with all of Chung's other ventures, Hyundai Heavy Industries (HHI) thrived and within 10 years since its foundation had become the world's largest shipbuilder. To write another chapter of the saga in the world's shipbuilding industry, Hyundai brought a lump to throats of the people of the Swedish southern port city of Malmoe, once the hub of Europe's flourishing shipbuilding industry. In 2002, the citizens of Malmoe had to bid farewell to the world's largest gantry crane at the Kockums shipyard in Malmoe, sadly sold to HHI just for one U.S. dollar. The 138-meter (453-feet) crane was dismantled and then reassembled at Hyundai's shipyard in Ulsan, nearly 8,000 km (4,950 miles) away from its home the next year. HHI now does business with a total of 309 shipowners in some 50 countries around the world.

There seemed to be no brakes on Chung's relentless business expedition. In the early 1980s, checking the dominance of Samsung in the technology market, Chung launched Hyundai Electronics, which soon flourished as a producer of semiconductor chips for computers. The business has now been merged with the country's No. 2 conglomerate, SK Group, to be reborn as SK Hynix. The company is now the world's second largest memory chipmaker.

The tycoon's invincible business skills landed him a post as head of his home nation's Olympic Bidding Committee, and he was instrumental in South Korea's winning the right to host the 1988 Summer Olympic Games. The hosting of the international sporting extravaganza was a turning point in promoting the image of Korea which the rest of the world only identified of as a country somewhere in Asia, or maybe in Africa. His sixth son Chung Mong-joon, a former six-term lawmaker and the controlling shareholder of HHI, just like his father brought home 2002 FIFA World Cup which Korea co-hosted with Japan.

Despite his success at home, Chung Ju-yung was interested in expanding his company beyond his country's borders. In the 1970s, Hyundai Engineering and Construction won a great many lucrative contracts for projects in the Middle East, including the construction of a vast oil terminal port facility. In 1985, Hyundai Motor produced its first sedan for the US market and within a few years placed Korea in the ranks of car exporting nations.

He was an ardent supporter of conciliatory policies with North Korea and in 1998, following reports of widespread starvation in North Korea, he came forward to become the first South Korean civilian to cross the demilitarized zone (DMZ), the heavily-fortified buffer zone that divides the Korean Peninsula into the capitalist South and the communist North. Chung completed the last part of the trip on foot to bring with him 500 heads of cattle from his own nearby farm as a gift to Tongcheon, his hometown. Before the border-crossing event, Chung already made a landmark visit to North Korea in 1989 and announced an ambitious project to develop the scenic North Korean Mt. Kumgang of his home province as a special tourism zone in the North's east coast and a place where Korean War-separated family members could reunite briefly.

His dream finally came true in 1998 when South Koreans were allowed for the first time to visit Mt. Kumgang, traveling at first by cruise ship, and then by bus on a newly built road through the DMZ. Only a year after his death, the Mt. Kumgang tourist region became a special administrative zone of North Korea. This past October, the two Koreas staged a couple of rare rounds of war-split family reunions at the Mt. Kumgang resort.

A Tycoon Who Loved People

Chung fathered nine children and held daily breakfast meetings with his sons, who became top executives of Hyundai, at 5:30 a.m. every day. Though he was said to be worth billions of dollars, Chung lived in a modest home built from leftover

His dream finally came true in 1998 when South Koreans were allowed for the first time to visit Mt. Kumgang, traveling at first by cruise ship, and then by bus on a newly built road through the DMZ.

construction materials from his company, walking the three-mile trek to his office in downtown Seoul daily until his health began to falter. He liked to sing karaoke and to play tennis.

At the time when Chung passed away in March 2001, the obituary of the Guardian, an influential British national newspaper, read, "His chutzpah and energy were legendary. When the US army wanted cemetery grass to look green for a visit by President Eisenhower, he transplanted 30 truckloads of barley shoots ···. Because Hyundai's dockyard was too small, its first tanker was built in two halves. When the pieces would not fit together, Chung had them welded, set up a shipping business to use the vessel - and made another, which did fit, for his foreign client."

It is a story about the very man who did not measure his success in life by the type of work he does, or by the medals he has won, but was convinced that he was doing work exactly the way he believed it should be done.

Chung would have also told them that one of the factors that made his business or other work easy was that he had a true love for people, having no difficulty mingling with them. That's why he is still being worshipped, or pined for at least, by many at home and abroad, along with the name of Hyundai, the world-class brand for which he gave his all.

In his autobiography, No Failures but Trials published in 1991, Chung said, "I am proud that Hyundai played a leading role in this radical transformation of the nation. If anyone would ask me what drove Hyundai to lead the Korean economy and join the league of global business heavyweights, I wouldn't hesitate to answer that it is Hyundai's fearlessness and unwavering spirits."

The legacy of inspiring and pithy remarks made by Chung, who throughout his kaleidoscopic life greatly contributed to transforming his moribund home country into a global success, still resonates today -- "Hey, have you ever tried it yourself?" HHI

The writer is a journalist based in Seoul.

A caravan of 501 cattle and 50 vehicles enter Panmunjeom, Oct. 27, 1998.
Photo © Wikipedia

Honorary Chairman Chung Ju-yung
Who Received the World's Attention

Chung Ju-yung (1915 – 2001), the late founder of all Hyundai Groups, left indelible footprints in the South Korean economy during the 20th century. He left a strong impression to the international media and important figures. An incident that grabbed the world's attention was his visit to North Korea, crossing the Panmunjeom village with 500 cows on June 16, 1998. His move was unprecedented at the time, when no civilian visited North Korea through the Panmunjeom since the division of Korea.

The Independent, a British national morning newspaper published in London, reported the event as "cattle diplomacy" between North and South Korea, while "table tennis diplomacy" was used to describe the rapprochement between the United States and China. In addition, the historic moment was broadcast live to the world through the CNN. CNN noted that the head of cows, a symbol of peace, peacefully crossed the DMZ, the world's most acute area of military confrontation.

Guy Sorman, a French futurologist who had been active as a columnist for various international media outlets, including Le Figaro and the Wall Street Journal, also spoke very highly of Chairman Chung, saying it was "the last avant-garde art in the 20th century". Apart from these, The Daily Telegraph said that Honorary Chairman Chung Ju-yung made an achievement of passing the truce line that even a US president hadn't crossed with 500 cows and bulls.

The international media's attention on Chung did not focus solely on his cattle diplomacy alone. Time magazine selected him as one of the "six tycoons who achieved economic miracles of Asia for the past fifty years" in 1996. In 2006, he was chosen as one of the "leading heroes who brought honor to Asia for the past sixty years".

Reasons for the selection included his ability to "lead South Korea to the world's 11th largest economy with an iron will and a 'can-do' spirit," and he "inspired South Korea ravaged by war and poverty with a new hope and a strong will." HHI

“A country that shows
honest respect and praise to those
who do remarkable work in their
respective fields can prosper.”

Chung Ju-yung, Hyundai Group Founder

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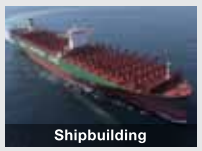

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