



Building your tomorrow today

2012 Doosan Heavy Industries & Construction Integrated Report

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Doosan Heavy Industries & Construction



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About This Report

Report Overview

Doosan Heavy Industries & Construction published the Sustainability Report for the first time in 2012. In 2013, we have come to publish the 2012 Integrated Report which incorporates an annual report and a sustainability report in consideration of the efficiency of reporting. Through the integrated reporting, we have become able to establish more concrete and detailed plans regarding the company's value and vision in connection with its business operation. We anticipate that this integrated report will provide our financial and non-financial performances to stakeholders in a transparent manner.

This report covers economic activities, CSR activities and achievements of all of our Korean business units. It covers our activities from January 1, 2012 through December 31, 2012 with additional information drawn from our efforts up to June 2013 highlighting some of our especially meaningful activities or results. Quantitative data includes the past three years (2010-2012) and allows a time series analysis. Doosan Heavy Industries & Construction aims to publish annual integrated reports to share our meaningful activities with all of our partners and stakeholders.

Core Reporting Principles

The CSR (Corporate Social Responsibility) performance data were created following the GRI (Global Reporting Initiative)'s GRI 3.1 guidelines and using the Korean International Financial Reporting Standards (K-IFRS). The content and guidelines of the draft integrated reporting framework of the International Integrated Reporting Council (IIRC), which is currently under review, were used for reference.

Assurance

The 2012 Integrated Report was checked for CSR data and content by the Business Institute for Sustainable Development. Detailed information about the assurance process can be found in an independent assurance report.

Additional Information

This report is published in Korean and English and can be downloaded from the homepage of the Doosan Heavy Industries & Construction in a PDF file.

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CEO Message

Driven by our vision to be a global leader in power and water, we are working to create a better future for all by delivering power and water with technologies that create greater value for the world.



At Doosan Heavy Industries & Construction, we have been engaged in a wide range of Corporate Social Responsibility (CSR) activities over the years. This integrated report is our first to combine financial reporting previously provided by our annual report with sustainability reporting from our CSR activities covering seven areas, including governance, human rights, labor, the environment, fair business, customers, and local communities.

The year 2012 was a particularly meaningful year for us. As we marked our 50th anniversary, we also unveiled the “Doosan Way”, the philosophy and culture that drive us to be a leading innovator of products and services that improve the quality of life for people and communities around the world as we aspire to be a “Proud Global Doosan.” We strive to practice the values of the Doosan Way in both business and our daily lives.

Grounded in our people-centric philosophy of corporate growth through personal growth, we are now implementing a variety of employee welfare and benefit programs to promote work-life balance. We are running capability-building programs based on our job capability development roadmap to foster professionals in each business field as well as the next generation of leaders. In addition to prohibiting discrimination based on gender, race, education, or age, we are expanding hiring of women, local staff, high school graduates, interns, and disabled persons. We are also building on seven consecutive years of strike-free collective bargaining and a commitment to shared growth to foster a forward-looking labor-management culture.

In 2012, we continued to achieve sustainable growth, surpassing revenues of KRW 10 trillion despite the ongoing global economic downturn. This performance is the culmination of our ongoing efforts to enhance our global top-tier quality products and technical competitiveness as well as growing synergy with our global subsidiaries achieved through the optimization of our global operations. It is also a result of our active involvement in stakeholder-based CSR activities aimed specifically at sustainable growth.

As part of our commitment to social responsibility, we are working to secure world-class transparency in governance as we practice ethical management. We are building innovative win-win relationships with our suppliers through financial and technical assistance as we strive to foster true partnerships. We are striving to create a healthy and pleasant environment by reducing greenhouse gases and managing pollutants. We are also actively involved in a broad range of initiatives to fulfill our commitment to corporate citizenship. In addition to establishing a CSR fund, we are supporting the education of tomorrow's engineers and scientists, children and youth from disadvantaged families, and migrant women as well as conducting community service and free medical clinics. We are also committed to making a difference around the world through medical, educational, and environmental initiatives in Vietnam, India, and other countries.

In 2013, we plan to establish a corporate-wide CSR committee tasked with systematically carrying out our CSR initiatives. The committee will be composed of five sub-committees focusing on human resources, ethical management, shared growth, environment, health, and safety (EHS), and community, each of which will be responsible for formulating, reviewing, and implementing CSR projects in their specific areas.

Thank you again for your interest in and support of Doosan Heavy Industries & Construction. We are committed to actively communicating our CSR activities and achievements with you and all our stakeholders in the days ahead as we dedicate ourselves to becoming a respected global leader in the fields of power and water.

Thank you.

Geewon Park
Chairman & Chief Executive Officer
Doosan Heavy Industries & Construction

A handwritten signature in black ink, appearing to read "G. W. Park".

Doosan Credo

Our Vision

We aspire to be a Proud Global Doosan - a leading innovator of products and services that improve the quality of life for people and communities around the world.
We will achieve this by living the Doosan Credo. Guided by our Credo, we will drive our second 100 years of growth.

Core Values

Doosan's people are our greatest asset and the key to our future.
They are at the heart of all our achievements.

Our continued and distinguished success will only be possible
through developing and cultivating our talent.

Our people possess great capacity, willingness and drive
to contribute to the Company.

They are relentless in enhancing their skills and capabilities.
They embrace our Core Values and demonstrate these beliefs and principles
in their daily behaviors.

Cultivating people is our highest priority and a shared responsibility.
Attracting and recruiting the right talent, who understand and embrace our values,
will be the foundation for developing our people.

We believe people develop and grow through performance at work
and we give them the authority and responsibility that best match their capabilities.

Through experience, people develop to their maximum potential.

Fair and immediate feedback and recognition are offered
as we believe this is central to self-development.

Our people are given the opportunity to develop their strengths
and address areas for improvement. As a result, Doosan people are proud of who they are
and respected as business professionals.

Integrity and transparency are fundamental Doosan strengths.
We make profit by creating value through fair and transparent activities.

We acknowledge our mistakes and keep our promises.

We never compromise our principles.

Inhwa best expresses who we are and provides us with a unique competitive edge.

We define *Inhwa* as teamwork in the truest sense of the word,
grounded upon fairness and camaraderie.

By carefully following these virtues we have created One Doosan;
a collective strength built on the contribution of a wide diversity of individuals.

Inhwa means we maximize our organizational strength and potential
through true teamwork built on defined, transparent rules of fair play.

Selfish rivalries between individuals or departments have no place at Doosan
and discrimination of any kind is not tolerated.

Inhwa means each individual contributes to the success of their colleagues and team,
resulting in both excellent team and individual performances.

Inhwa also means we are open; Doosan welcomes proactive ideas
and constructive criticism from everyone, regardless of seniority or position.

Our unique practice of *Inhwa* extends beyond the internal organization and embraces the
entire Doosan community from our families to our shareholders, affiliates and partners.

Our customers are the reason Doosan exists.

The true measure of Doosan's success is our customers' satisfaction and respect.

Our goal is to always deliver superior value than our competitors.

We achieve this by understanding our customers' needs
and meeting or exceeding their expectations.

Embracing world-class technology and innovation is vital to our survival.

Tomorrow drives today at Doosan; we always look to the future instead of the past.

We strive to understand, and stay ahead of, change.

We continuously seek to improve our business model, products, services and methods.

We celebrate and properly reward successful risk-taking,
while also respecting valuable attempts that fail.

Doosan applauds the spirit of challenge over complacency.

Our future success will be driven by seeking breakthrough ideas, knowledge, technologies and
resources regardless of their origin, either internal or external.

Profit measures our success and drives our growth.

Our profit must exceed our capital cost

and be sufficient to fuel our continuous growth and investment.

Our people understand how the work they do contributes to Doosan's profit.

We recognize that long-term success is built by respecting the rights of our suppliers,
distributors and partners to earn fair profits.

Creating a socially responsible enterprise is our duty to society.

We see business and society as a close partnership and an opportunity for mutual growth.

Doosan will be proactive in this partnership,

contributing the time and resources required for success.

Our goal is to develop and grow alongside society, as a trusted and trustworthy partner.

Wherever we operate, we do so transparently and lawfully.

We aim to contribute to the development of talent in society.

Our community service activities promote both corporate and social development.

We provide clean and safe working environments.

Doosan maintains all our facilities to the highest possible standards.

This is the basis for superior productivity as well as being our responsibility to our people, their
families, our customers and shareholders.

Environmental protection is our duty and obligation

to every community where Doosan does business.

We know this ultimately results in greater value creation.

COMPANY PROFILE

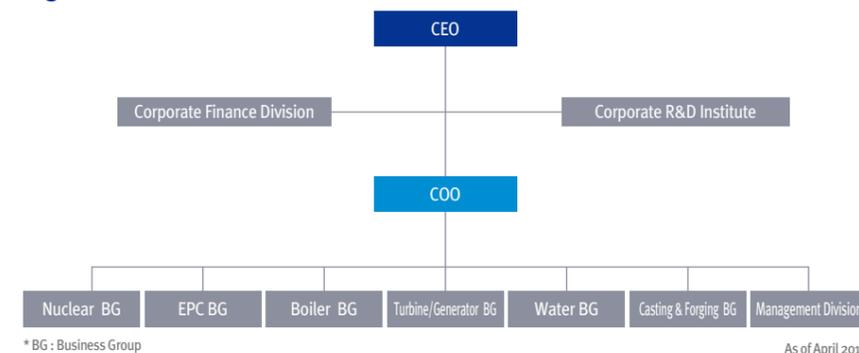
Corporate Overview

Founded on September 20, 1962, Doosan Heavy Industries & Construction has localized and exported a wide range of products and solutions, ranging from basic industrial materials such as cast and forged products, to major industrial facilities for power plants such as nuclear, thermal plants, seawater desalination plants, environmental equipment and material handling equipment, thereby contributing to the national economy. Headquartered in Changwon, the company has grown into a global company comprising 38 subsidiaries operating the same businesses across the world including Korea, Europe, Asia and Americas. Business divisions at Doosan Heavy Industries & Construction consist of "Power" that manufactures power plants such as nuclear and thermal plants; "Water" that produces seawater desalination plants and water treatment equipment; "Industry" that manufactures and delivers material handling equipment and environmental equipment; "Castings & Forgings" that supplies equipment and materials for shipbuilding as well as core industrial materials for power generation/steelmaking/chemical engineering/cement plants; and "Construction" that deals with civil engineering and construction projects. The year 2012 also witnessed continued delay in economic recovery from the global economic downturn, protracting the slowdown in related markets. Amid such difficult circumstances, in the short term, the company plans to concentrate on enhancing internal business fundamentals by strengthening risk management, continuing activities to boost profitability, and maximizing capabilities and business management infrastructure. At the same time, it will proactively explore and foster new growth engines to ensure mid-to long-term growth to realize substantive growth.

Overview

Company Name	Doosan Heavy Industries & Construction
Date of Establishment	September 20, 1962
CEO and COO	Geewon Park, Keysun Han
Major Business Areas	Power plant facilities, Desalination/Water treatment, Industrial facilities, Casting & Forging, Construction, Wholesale and Retail
Places of Business	Korea: Changwon Headquarters, Seoul Office Overseas: Overseas companies & branches (24), subsidiaries (15)
Total Assets	13,5244 trillion won
Total Capital	529.3 billion won
Total Sales	9,6272 trillion won
Operating Income	594.8 billion won
Employees	8,715
Credit rating	A+

Organizational Chart



Global Management

Doosan Heavy Industries & Construction has pursued technology development and market expansion through multinational M&As and strategic alliances with the world's leading companies, thereby boosting its price and quality competitiveness. The company has expanded its partnerships to include not only Asia, but also Europe and the Americas and currently has 24 overseas companies and branch offices and 15 subsidiaries around the globe. Its subsidiaries include Doosan Vina in Vietnam, Doosan E&S in the USA and Doosan Power Systems with business presence in the UK, Czech Republic and Germany.



Category	2010	2011	2012
Korea	2,907,251	2,554,840	2,437,251
America	47,846	71,797	52,528
Asia	1,654,518	1,455,150	1,723,719
Middle East	1,635,161	3,136,427	4,219,728
Europe	1,651,070	1,565,324	1,517,902
Others	423,186	349,957	332,742
Consolidated adjustment	(390,163)	(637,989)	(656,686)
Amount after consolidation	7,928,869	8,495,506	9,627,184

World-Class Products

The Ministry of Trade, Industry and Energy has been selecting "World Class Products" since 2001 to enhance the quality of export products and expand future export drivers. Criteria include a global market share of 5% or above and global ranking of 5th or higher, with global markets exceeding \$50 million in total annually, twice the size of the domestic market, or total exports of \$5 million or more annually. From 2001 to 2012, a total of 13 Doosan Heavy Industries & Construction products have been selected as World-Class Products, which is clear proof of the company's outstanding technological capabilities and leadership.

World-Class Products of Doosan Heavy Industries and Construction

1. Seawater desalination plant (2001)
2. Large vessels crankshaft (2003)
3. Tool & die steel (2004)
4. Heat recovery boiler (2004)
5. Work roll for cold rolling mill (2004)
6. Hydraulic turbine cast steel for hydroelectric power (2007)
7. Stern frame casting steel (2007)
8. Rotor shaft for thermal low-pressure turbines (2010)
9. Nuclear reactor for commercial nuclear power plant (2011)
10. Oil-fired thermal power plant boiler (2011)
11. Turbine generator rotor shaft (2011)
12. Steam generator for commercial nuclear power plant (2012)
13. Super-large forged backup roll for plate rolling mill (2012)

Business Overview

Power



Doosan Heavy Industries & Construction provides turnkey-basis power solutions for various power plants, including coal-fired plants, combined cycle power plants and nuclear power plants, ranging from power plant design to equipment supply, construction and post-project services. The company also manufactures and supplies a wide range of power generation equipment from materials to finished products. It provides power plant solutions as an EPC (Engineering, Procurement & Construction) contractor that offers solutions incorporating not only capabilities in engineering and special construction required for power plant projects, but also expertise in power plant operation and management. As an EPC contractor, Doosan Heavy Industries & Construction handles all areas of plant construction, ranging from engineering such as design to financing, equipment production, construction and post-project maintenance services, while striving to improve equipment supply and plant performance.

The company is Korea's only company that specializes in nuclear power plant equipment, possessing the nation's top-notch technology in the area. In the coal-fired plant segment, it is building large capacity power plants at home and abroad based on its extensive experience and cutting-edge technology, while expanding domestic and international market shares for combined-cycle power generation. Meanwhile, Doosan Heavy Industries & Construction manufactures not only boilers, turbines and generators installed in power plants, but also finished products such as reactors and steam generators which are core equipment for nuclear power plants. It is committed to improving the performance of power plants to reduce emissions of environmentally harmful pollutants and extend the lifecycle of power generation facilities.

As a result of such efforts, Doosan Heavy Industries & Construction supplies main nuclear power equipment for such overseas projects as the Rabigh project in Saudi Arabia, the Mongduong project in Vietnam, the Raipur project in India and nuclear power plant projects in the UAE. The company will continue to enhance its bid competitiveness by expanding areas of business in countries with business presence and advancing into new overseas markets through market diversification.

Water

Doosan Heavy Industries & Construction is the world's No.1 company in the seawater desalination industry, which is recognized at home and abroad. It is the world's only company that holds all three key desalination technologies of multi-stage flash (MSF), multi-effect distillation (MED), and reverse osmosis (RO). The company is a global leader, accounting for 24% of the world's seawater desalination market and supplying 6.5 million tons of freshwater to 21 million people daily in the Middle East. Based on its achievements in the seawater desalination sector, the company plans to advance into the water treatment market, which will contribute to generation of new revenues.

Casting & Forging

Doosan Heavy Industries & Construction possesses internationally competitive casting & forging facilities and related production technologies. The company manufactures essential cast and forged products for power generation, steelmaking, and shipbuilding. In addition, it has also expanded its business areas by securing an overseas production base through acquisition of IMGB in Romania. In particular, it has made facility investment for key products such as backup rolls for plate mills and shells for nuclear power generation/industrial purposes. As the issue of CO₂ emissions reduction is drawing international attention, the company is developing core materials for high-efficiency power plants, doing its utmost to create better value for customers.

Construction

Doosan Heavy Industries & Construction has improved its construction technology capabilities to enhance its bid competitiveness. The company is engaged in civil engineering projects aimed at promoting development of national land and creating a comfortable and convenient living environment, such as by building roads, subways, and tunnel projects, as well as conducting construction projects to improve the quality of life based on its highly developed construction technology. In addition, Doosan Heavy Industries & Construction has performed the entire process of various material handling systems involving design, manufacturing and installation since 1973. The company is recognized as a market leader with its outstanding technology and the latest production equipment. Based on its accumulated experience and technological expertise, Doosan Heavy Industries & Construction supplies best products such as continuous ship unloaders to power plants and steel mills.

Green Energy

Doosan Heavy Industries & Construction is developing technologies to make the planet cleaner and greener. These include development of power-generation systems that do not require fossil fuels such as wind power generation and fuel cells; Ultra-Super Critical Pulverized Coal Thermal Power Plant (USC PC TPP) and Integrated Gasification Combined Cycle (IGCC) plants, as well as eco-friendly energy technologies such as carbon capture & storage (CCS) technology. In 2009, the company completed development of its own offshore power-generation system called WinDS3000™, which is Asia's first 3MW-class wind power system. It also became the first company to receive an international certification for 3MW-class offshore power generation system in Korea. As indicated by the efforts above, Doosan Heavy Industries & Construction's commitment to green energy will continue into the future.



Financial Achievements

Business Achievements

Doosan Heavy Industries & Construction seeks a virtuous cycle by securing product competitiveness and improving profitability through ongoing technology development in its various business areas. In 2012, the company's sales and operating profits improved, compared to that of the previous year, but in terms of orders, it failed to reach its target order intake due to the global economic downturn and ever-intensifying competition among companies. Despite difficult global economic conditions, however, Doosan Heavy Industries & Construction received new orders for large-scale power generation and desalination projects in major markets such as the Middle East, India and Southeast Asia, laying the groundwork for overseas sales growth in the power generation and industrial sectors. Its annual sales are also reaching 10 trillion won, continuing its solid growth momentum. For 2013, the company plans to achieve more than 10 trillion won in order intake, a 79% increase from the previous year. In 2013, it is forecasted that the company's net income will improve significantly thanks to increase in gain on valuation of investments using the equity method of accounting. Doosan Heavy Industries & Construction will build upon the foundations of these financial achievements to meet the high expectations of all of its shareholders, investors, employees and stakeholders.

Sales by BG (Unit: million won)

Division	2010	2011	2012
Power	5,736,363	6,379,717	7,911,288
Water	434,510	813,234	946,594
Industrial	206,392	171,109	162,482
Casting & Forging	732,139	743,595	653,524
Construction	1,203,067	1,018,674	602,092
Retail & Wholesale	6,562	7,167	7,890
Consolidated adjustment	(390,164)	(637,990)	(656,686)
Amount after consolidation	7,928,869	8,495,506	9,627,184

Market shares

Division	Category	2010	2011	2012	Remarks
Power	Nuclear Power	100%	100%	100%	• Korea: Based on major equipment at KEPCO & KHNP
	Thermal Boiler	51%	-	27.9%	
Generation	Turbine	6%	8%	22.9%	• Overseas: MacCoys Database
	Hydro Power	-	-	-	
Water	Desalination Facilities-Overseas	100%	100%	80%	• Based on Middle East, GCC
Industrial	Material Handling Equipment-Korea	17%	-	36.1%	
	Material Handling Equipment-Overseas	4.4%	-	-	
Casting & Forging	Cast Products	33.0%	26.3%	21.1%	• Compared to accessible market size in Korea
	Forged Products	36.8%	36.7%	45.4%	
	Crank Shaft	95.2%	95.4%	96.2%	
	Mold & Tool Steel	56.0%	56.7%	57.8%	
Construction	Work Roll	69.5%	68.5%	68.5%	• Based on data of Construction Association of Korea
	Market Share	1.7%	0.27%	0.48%	

1. In the case of turbines, there have been no new orders in Korea since the orders received in 2008. In the case of overseas subsidiaries, the figures refer to market shares accounted for by turbines used in power plants (excluding 50MW-class).

Production Status

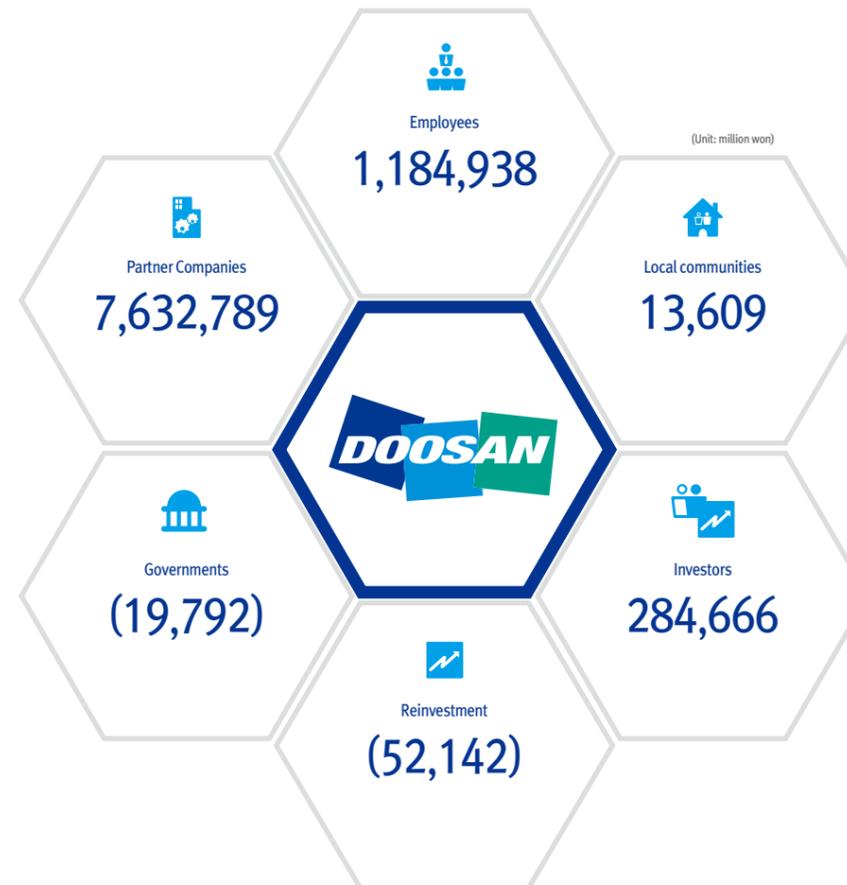
Business Group	Category	2010	2011	2012
Power	Boilers, Turbines, etc.	- Korea	1,531,292 M/H	1,644,041 M/H
		- Overseas	1,000,890 M/H	1,267,654 M/H
		Total	2,532,182 M/H	2,911,695 M/H
Casting & Forging	Cast & Forged products,	- Korea	146,338 tons	153,065 tons
		- Overseas	45,168 tons	52,863 tons
		Total	191,506 tons	205,298 tons
Forging	Mold & Tool steel	- Korea	138,013 tons	138,013 tons
		- Overseas	50,664 tons	50,664 tons
		Total	188,677 tons	188,677 tons

Distribution of Economic Value

Doosan Heavy Industries & Construction generated a total of 9.044 trillion won in economic value through business activities in 2012 and distributed it to stakeholders, including employees, shareholders, governments, partners and local communities.

(Unit: million won)

Category	Stakeholders	Description	2012
Value Creation			9,044,068
Value Allocation	Employees	Salaries, benefits, retirement benefits	1,184,938
	Governments	Taxes & public utilities' charges, corporation tax	(19,792)
	Partner Companies	Cost of sales, selling, general & administrative expenses	7,632,789
	Local communities	Donations	13,609
	Investors	Dividends (Estimated dividends & interim dividend)	284,666
	Reinvestment	Retained earnings (Net income- dividends)	(52,142)
Distributed Economic Value			9,044,068



Management Strategy

Doosan Heavy Industries & Construction is making an all-out effort to enhance the value of the Earth as the home to humankind, by supplying electricity and water, which are essential elements for humans to lead a civilized life, and developing technologies that protect the environment. To this end, the company has pursued business that maximizes the value for stockholders and customer satisfaction. Doosan Heavy Industries & Construction has pursued specific strategic plans since 2007 with the vision of becoming the 'Global Leader in Power & Water.' The company selected top priority tasks such as Enhancement of Business Portfolio, Leadership in Technology Capabilities and Enhancement of Business System to achieve this vision. Enhancement of Business Portfolio refers to a strategy aimed at building a product portfolio mainly centering on high value-added products and diversifying markets, while Leadership in Technology Capabilities refers to a strategy to realize technological self-reliance and secure technology enabling the company to compete with global top-tier companies by obtaining original technologies of the existing core businesses. Enhancement of Business System refers to a strategy to utilize resources efficiently and maximize performance of global operations by optimizing operation of overseas subsidiaries and production bases. In order to achieve the vision of becoming the "Global Leader in Power & Water", Doosan Heavy Industries & Construction will continue to make ceaseless efforts to secure global top-tier level product and technology competitiveness by obtaining fundamental competitiveness and securing growth momentum through diversification of its business portfolio.

Global Leader in Power & Water

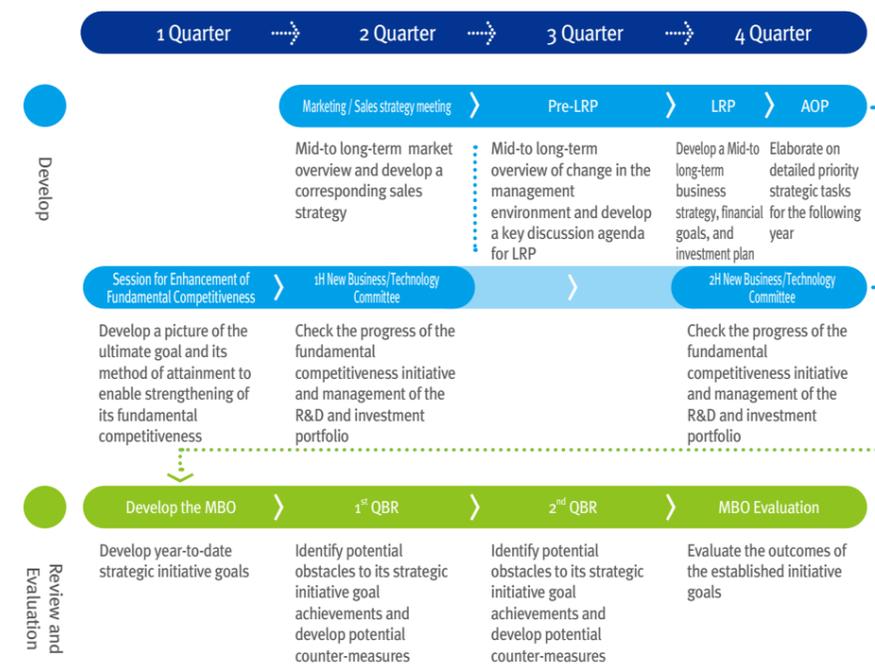


Strategic Management Processes

The strategic management processes of Doosan Heavy Industries & Construction follow the steps of establishment of strategy, review of progress and evaluation of outcome at corporate and Business Group (BG) level, respectively. By satisfying this process every year, it conducts self-evaluations on the appropriateness and efficiency of developed strategies, as well as utilizing the results when establishing the strategy for the following year. Doosan Heavy Industries & Construction establishes a LRP (Long-Range Plan) at corporate level every ten years for the entire organization and a LRP every five years for the BGs. These overall plans are drawn up in detail to provide the basis for company-wide and BG AOPs (Annual Operation Plans) to ensure that practical applications aligned with their mid to long-term strategies.

In addition, Doosan Heavy Industries & Construction is always prepared to take advantage when the market grows and stay one step ahead of its competition to become the global leader. To this end, it has been operating Core Competitiveness Sessions and New Business/Technology Committee meetings to raise the competitiveness of its technology, business activities and effectively manage its R&D investment portfolio. The MBO(Management by Objectives)process involves assigning annual business targets to each managing executive and the QBR(Quarterly Business Review) is held to assist with identifying major problems and developing effective counter-plans. The process involves establishing strategies based on future forecasts and not just looking at past performance reviews. After setting the MBO performance goals, Doosan Heavy Industries & Construction reviews the performance evaluation targeting of all executives including CEO in the fourth quarter.

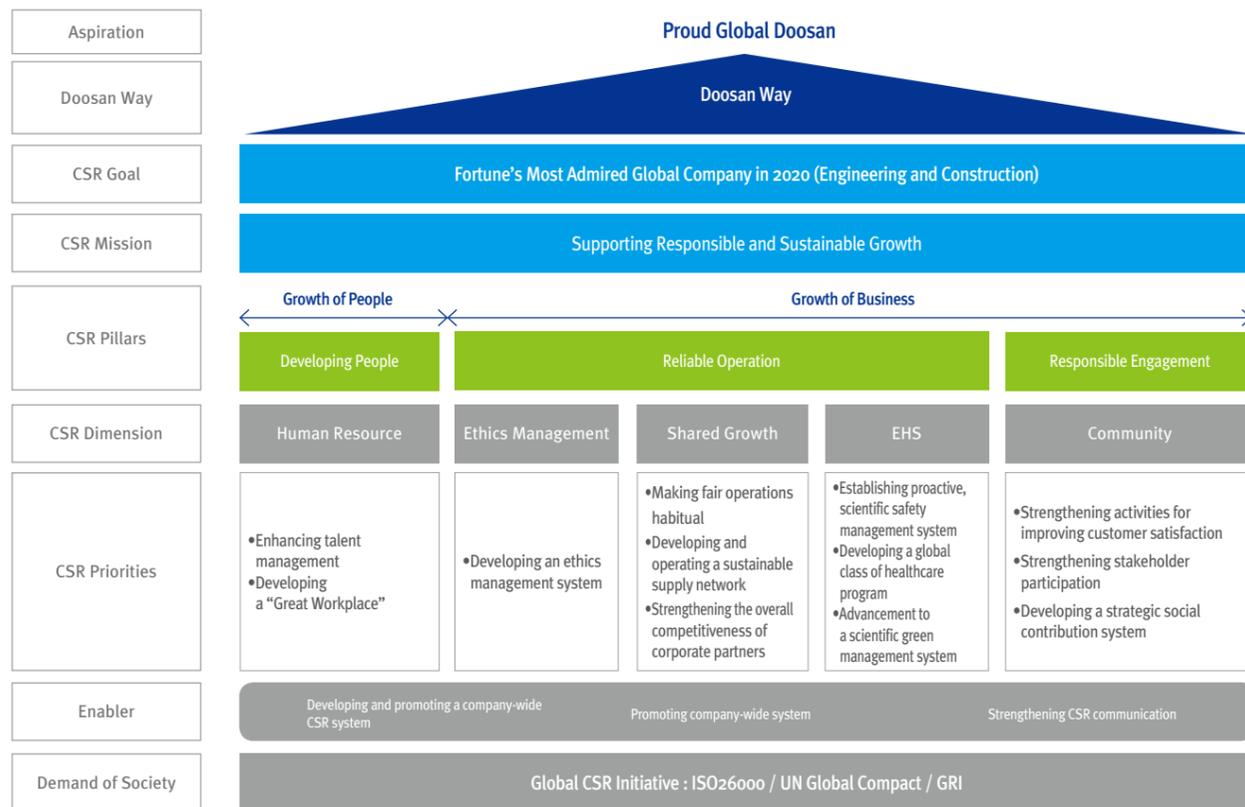
•Strategy Planning/Review/Evaluation Process



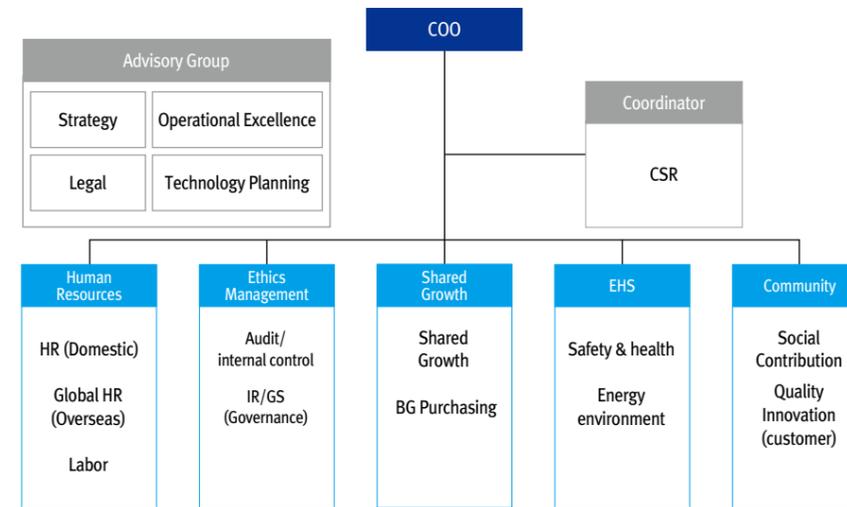
CSR Strategies and Implementation System

In order to implement its CSR activities in a more systematic manner, Doosan Heavy Industries & Construction established its CSR strategies for 2013. In an effort to achieve the vision of "Proud Global Doosan," the company selected five CSR fields of activity and developed assessment tools. In addition, "CSR team" was formed in April 2013 to maintain a company-wide consensus and unified approach to corporate social responsibility. Its primary role is to implement CSR strategies, communicate the objectives and results and operate the CSR committee.

Doosan Heavy Industries & Construction selected Human Resources, Ethics Management, Shared Growth, EHS and Community as the five fields of CSR and is in the process of connecting the CSR activities and strategies within the company. The CSR committee shares global trends, sets and discusses the direction for company-wide CSR activities. The CSR committee, which consists of the COO as the chairperson and the executives in charge of each field, meets annually. Doosan Heavy Industries & Construction intends to proactively promote its CSR strategies to achieve company-wide consensus and create corporate value.



•CSR Committee



•CSR Assessment Tool

To ensure constant monitoring of the current status of its CSR activities and to identify areas of improvement in capabilities, Doosan Heavy Industries & Construction developed the CSR Assessment Tool (CSR AT) and plans to implement it from 2013. The CSR AT will outline the Global Standards of CSR and be able to diagnose and evaluate the current state of the CSR activities and issues in the five fields at all corporate levels. The ultimate goal of the CSR AT is to address CSR issues and achieve constant improvements in all CSR activities.



CSR Strategic Tasks

In 2012, Doosan Heavy Industries & Construction shared the achievements of its CSR activities by respective fields and selected strategic tasks and specific action plans for future planning.

Division	Goals	Activities & Achievements in 2012	Page
Human Resources	•Promote a flexible working system	•Overall implementation of flexible working system for Water BG	61
	•Establish a strategic job rotation system	•Fostered experts per sector, and established a job rotation system reflecting employees' personal desires	58
	•Expand the communication channels for executives and employees	•Operated a grievance committee and meetings for executives and employees	59
	•Expand local hiring	•The number of local people hired is 11,289	57
	•Offer more opportunities for contracted workers to become permanent employees	•Continuously changed the status of contracted workers with good capacities to permanent employees	57
	•Create culture that respects the rights of executives and employees	•Held training programs on preventing sexual harassment, and provided relevant consultation services	58
	•Reinforce implementation of the roadmap on capacity development	•Operated programs to help employees develop a variety of capacities such as management/professional expertise •Established and maintained a technical training program that is linked to the career development plan •Introduced a system to cultivate next generation leaders •Expanded training opportunities for employees and workers at overseas sites	67
Ethics Management	•Establish a monitoring system & evaluation tool against ethics management	•Established and utilized the Internal Control Assessment System (DICAS)	23
	•Reinforce the implementation of ethics management	•Asked for the signing of ethics management pledge	22
	•Expand the scope of ethics education	•Provided education on ethical management to the newcomers, experienced hires and procurement teams	22
Shared Growth	•Implement the fair trade Compliance Program (CP)	•Received the chief citation from the Fair Trade Commission in 2012, expanded fair trade related educations	109
	•Provide advance notice of quantity	•Implemented advance notice of quantity for 116 articles	107
	•Help the partners implement ethical management activities	•Asked partners for cooperation on the ethical code	22
	•Expand programs for helping partners reinforce their competitiveness •Expand financial support •Support joint overseas market expansion •Implement sharing of benefits	•Increased productivity and enhanced competitiveness •Provided customized support in relation with the EHS to partners •Created a shared growth fund worth KRW 64.8 billion, provided direct financial assistance amounting to KRW 4.8 billion, recommended a financing amounting to KRW 15.2 billion for partner companies •Supported participation by the partners in overseas exhibitions	107

Division	Goals	Activities & Achievements in 2012	Page
EHS	•Integrate the EHS management systems at Changwon plant and construction sites.	•Reinforced EHS preliminary reviewing process	95
	•Integrate the EHS management systems of overseas construction sites	•Educated EHS experts at overseas workplaces	48
	•Operate the Health Care Program, and monitor it •Secure safety for overseas workers	•Standardized the work safety observation processes per manufacturing process •Expanded healthcare services •Dispatched medical team to overseas construction sites	75
	•Reinforce monitoring system of green energy	•Established strategy to reduce greenhouse gases, and made use of the selected items	100
	•Expand operational organization of green management	•Dispatched environmental experts to Vietnam, Romania and India	95
	•Reinforce ecology protection activities	•Increased the number of executives and employees who participate in environmental cleanup activities	102
	•Establish a strategy to mitigate greenhouse gases	•Reduced the emission of greenhouse gases by 9% year on year •The amount of reduced greenhouse gases was increased by 40%.	101
	•Reinforce the system for controlling harmful chemicals	•Established a preventative program against outflow accidents caused by harmful chemicals	97
	•Participate in the disclosure of environmental information both domestically and internationally	•Participated in the Carbon Disclosure Project (CDP)	102
	•Develop environment-friendly technology, and expand investment in such technologies	•Increased the number of tasks on environment-friendly technology development, and expanded the size of the investment.	84~85
Community	•Strengthen CSR information disclosure activities	•Published the Integrated Report	19
	•Enhance the VOC response system	•Expanded information provision and sharing activities	90
	•Implement continuous quality enhancement activities	•Secured personnel for enhancement of expertise on quality and operate the Quality Academy •Operated a power plant designed to prevent occurrence of quality-related problems & establish a data monitoring system	67
	•Establish Green Purchase system	•Established Green Purchase Process connected among systems	102
	•Foster talents in local communities & provide support for underprivileged people •Strengthen local community-based CSR activities •Strengthen global CSR activities	•Received a commendation from Minister of Health & Welfare at the 2012 Korea Sharing Awards (for Happiness Sharing) •Early admission of students who took part in Doosan's local talent development program (56 students) & the nation's largest numbers of prize-winners at the 4th Science Olympiad	112
	•Encourage employees' volunteer activities	•Doosan Heavy Industries & Construction's Community Volunteer Corps received a commendation from the Gyeongsangnam-do Governor in 2012 •Increased in numbers of employees involved in volunteer activities and increased in volunteer work hours per employee	114
	•Establish a CSR monitoring system	•Operated a CSR management system and accumulated volunteer work mileage points	114

Communication with Stakeholders

Doosan Heavy Industries & Construction makes available a wide range of communication channels which are offered to implement a CSR management system that is based on open communication and trust with our major stakeholders.

Stakeholder	Shareholders	Customers	Employees	Partner companies	Local community	Government & Related institutions	Competitors
Issues	<ul style="list-style-type: none"> Maximization of corporate value Transparency of business management 	<ul style="list-style-type: none"> Product quality Delivery periods & prices 	<ul style="list-style-type: none"> Work satisfaction & welfare enhancement Balance between work and life 	<ul style="list-style-type: none"> Shared growth Establishment of dialogue channels 	<ul style="list-style-type: none"> Stable supply of power/water Corporate social responsibility 	<ul style="list-style-type: none"> Product quality Delivery date & Price 	<ul style="list-style-type: none"> Comprehensive cooperation Win-Win strategy
Communication Channels	<ul style="list-style-type: none"> IR sessions Conferences Overseas NDR 	<ul style="list-style-type: none"> Road shows Technology presentations VOC 	<ul style="list-style-type: none"> Industrial Safety & Health Committee Labor-Management Council 	<ul style="list-style-type: none"> Win-Win Call Center 	<ul style="list-style-type: none"> Councils & associations Volunteer Service Group 	<ul style="list-style-type: none"> Overseas seminars Attend exhibitions 	<ul style="list-style-type: none"> Quarterly IR reports Press release Visit business sites

Identifying Material Issues

Doosan Heavy Industries & Construction identifies issue priorities in accordance with a systematic and strategic CSR management system and proactively responds to expectations and demands of stakeholders. The company conducted a five-step Materiality Assessment for this Integrated Report. The assessment identified issues in which stakeholders show high level of concern, as well as issues that have potentially high impact on business.

Step1. Issue Identification

Approximately 2,000 domestic and international articles related to CSR were classified into 31 issue categories for materiality assessment.

- Media analysis

Press releases issued by Korean and foreign media agencies over the past year from January to December 2012 were analyzed to determine positive and negative issues in four areas of general topics, economy, society and the environment to categorize major issues.

- Global standard and guideline analysis

Major issues required by the UN Global Compact, ISO 26000, GRI, DJSI (Dow Jones Sustainability Index) were studied in order to analyze global standards and guidelines as well as major initiatives.

- Analysis of leading companies

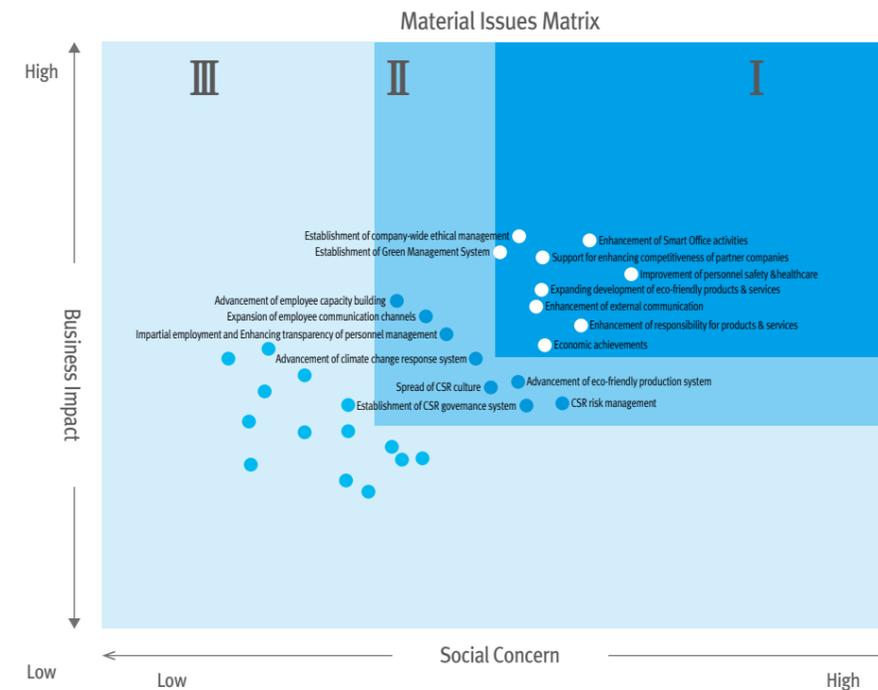
Case studies of leading companies that had published integrated reports were analyzed to examine issues in four categories, including general integrated reporting issues, business strategy & connectivity of information, stakeholder directivity, and reporting methodology.

Step2. 3 Concern of Stakeholders/Business Impact

In order to identify major issues that may have an impact on CSR, issues with a high level of stakeholder interest and business impact were selected. Stakeholder interest was analyzed based on media exposure, global standard analysis and integrated reports published by leading companies, while business impact was determined by reviewing strategic connections, financial impact, risk and reputations that have important effects on management.

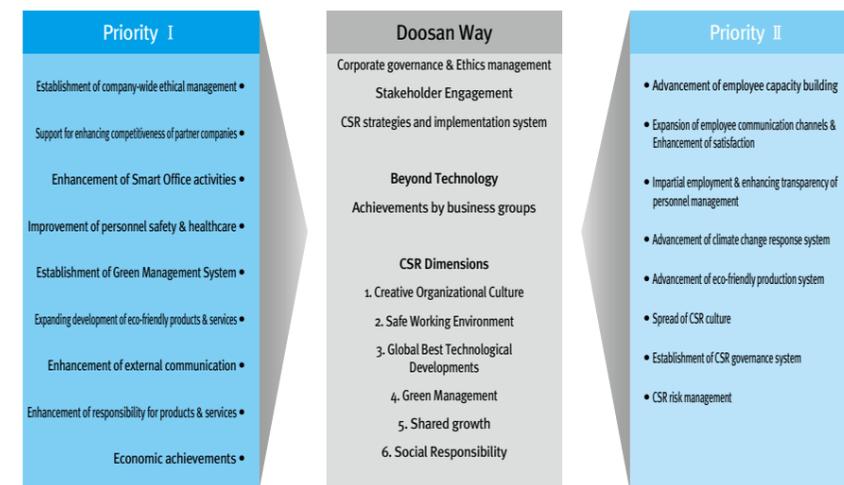
Step 4. Materiality Chart

Most important and pressing issues were identified based on the concerns of stakeholders and business impact.



Step 5. Report Framework

Issues identified through the Materiality Assessment have been reported in the Integrated Report.



Corporate Governance

Doosan Heavy Industries & Construction is maximizing shareholder value and corporate value based on its transparent corporate governance led by the board of directors.

Board of Directors

The board of directors at Doosan Heavy Industries & Construction is composed of two inside directors and four outside directors for a total of six directors on the board. Directors are selected during the shareholders' meeting in accordance with relevant laws, articles of incorporation and regulations of the board of directors. Outside directors account for more than half of the members of the board of directors, maintaining independence of the board. Doosan Heavy Industries & Construction enhances the board's overall level of expertise by recommending candidates with expertise in different fields as directors, and maintains an audit committee, an internal transaction committee, and an outside director candidate nominating committee under the board of directors in order to facilitate efficient decision-making.

Board of Directors (As of March 2013)

Classification	Name	Position	Role
Inside directors	Geewon Park	Chairman & CEO, Doosan Heavy Industries & Construction	Chairman, Board of Directors CEO
	Key-sun Han	President & COO, Doosan Heavy Industries & Construction	COO
Outside directors	Hyoung-Joo Kim	Professor of Computer Engineering, Seoul National University	Member, Internal Transaction Committee Member, Audit Committee Chairman, Outside Director Candidate Nominating Committee
	Dong-Min Cha	Lawyer, Law Firm Kim & Chang	Chairman, Internal Transaction Committee Member, Outside Director Candidate Nominating Committee
	Kyung-soon Song	Representative expert, Korea Expert Consulting Group	Member, Internal Transaction Committee Chairman, Audit Committee
	Bok-Hyeon Baik	Professor of Business Administration, Seoul National University	Member, Audit Committee Member, Outside Director Candidate Nominating Committee

Committees under the Board of Directors

Committee	Members	Major roles
Outside Director Candidate Nominating Committee	Three outside directors	-Recommend outside director candidates
Audit Committee	Three outside directors	-Audit accounting & finances -Evaluate the operation of the internal accounting management system -Approve appointment of outside auditors, etc.
Internal Transaction Committee	Three outside directors	-Deliberate and approve any internal transactions between subsidiaries worth 5 billion won or more

Operation of the Board of Directors

The board of directors is the supreme decision-making body for the company's management and monitors and votes on major management issues to maximize shareholder value and corporate value. The board of directors reviews and votes on issues related to laws and company by-laws, issues delegated to the board by the shareholders' meeting, as well as major issues on the basic management and operation of the company. It also monitors directors' performance of their duties. Decisions made by the board of directors are based on the presence of the majority of the board and approval by vote of the majority of the board. Directors who have special interest in the issue are restricted from exercising their votes. Eleven meetings of the board were held in 2012 to address a total of 38 agenda items related to major management activities. The board of directors deals with agenda items on the economy, society, and the environment. Information on the current board of directors and its operation is available on the company homepage.

Operation of the Board of Directors (2010~2012)

Classification	2010	2011	2012
Meetings convened	11	11	11
Proposals voted	22	29	38
Board member attendance rate (%)	86.1	83.3	85.2
Outside director attendance rate (%)	86.7	82.3	89.8

Key Activities of the Board of Directors in 2012

Order of Meeting	Proposals	Approval/ Disapproval	No. of members attending the meeting	
			Inside directors	Outside directors
1st 2012.2.16	Approval of the convening of 49 th Financial Statements & Annual Report and three other proposals / 4 cases	Approved	7/7	7/8
2nd 2012.3.8	Approval of convocation and subject matters of the 49th annual shareholders' meeting and four other proposals / 5 cases	Approved	5/7	8/8
3rd 2012.3.30	Appointment of board chairman & convener and five other proposals / 6 cases	Approved	3/3	3/4
4th 2012.4.26	Delegation of authority on bond issuance for 2012 to CEO and one other proposal / 2 cases	Approved	3/3	4/4
5th 2012.5.24	Appointment of executives and four other proposals / 5 cases	Approved	2/3	3/4
6th 2012.6.28	Revision of regulations on management of advisers and four other proposals / 5 cases	Approved	2/3	4/4
7th 2012.7.26	Establishment of compliance standards and two other proposals / 3 cases	Approved	2/3	4/4
8th 2012.8.23	Relocation of the Dubai R&D Center to Dammam, Saudi Arabia (Koba)	Approved	3/3	4/4
9th 2012.9.21	Conclusion of the project stock transaction contract for the West Suwon-Osan-Pyeongtaek Expressway, and one other proposal / 2 cases	Approved	2/3	3/4
10th 2012.11.13	Establishment of Doosan Enpure Limited and two other proposals / 3 cases	Approved	2/3	3/4
11th 2012.12.14	Parent company guarantee following the borrowing by PS S.A. and one other proposal / 2 cases	Approved	2/3	4/4

Evaluation and Compensation

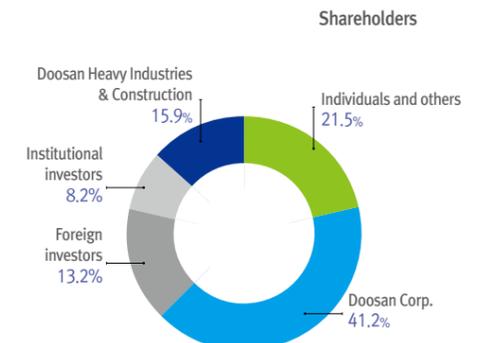
Compensation for inside and outside directors is issued based on the parameters approved during the shareholders' meeting. Executives are granted stock options to encourage their proactive participation and cooperation in achieving the company's short-term and mid-to-long term management plans.

Governance Structure Rating

Doosan Heavy Industries & Construction has operated a transparent management system on an ongoing basis. Accordingly, the company was rated "Good +" in the Governance Structure Assessment Rating conducted by the Korean Corporate Governance Service from 2006 to 2010. It was rated B+ and A in 2011 and 2012, respectively. In 2013, the company was rated A+ and received the grand prize in the ESG Assessment Awards. In 2013, Doosan Heavy Industries & Construction received the grand prize in the 9th Management Transparency Awards jointly awarded by five major business associations, which served as an opportunity to recognize the company's efforts to promote sound governance structure and management of integrity and transparency at home and abroad.

Shareholder Overview

Doosan Heavy Industries & Construction issued a total of 107,856,267 shares of common stocks as of December 31, 2012. The largest shareholder is Doosan Corp., holding 41.23% of the total stocks as of December 2012. An overview of the business management status is presented during the annual shareholders' meeting, with the business report concurrently disclosed to the Financial Supervisory Service and the Korea Exchange to ensure maximum transparency. Quarterly and annual business results as well as medium-term management plans are posted on the company's homepage, and shareholders' needs and expectations are carefully identified through conferences and road shows to be reflected in management activities. Shareholders can participate in decision-making during the annual shareholders' meeting. Doosan Heavy Industries & Construction has introduced the written ballot system to protect the rights and interests of minority shareholders in decision-making.



Ethics Management

Ethics Management System

Doosan Heavy Industries & Construction implements transparent management to ensure sustainable growth of the company. In an effort to boost corporate competitiveness and put corporate social responsibility into action, the company has established a Code of Ethics based on the “Doosan Way” to be used as the value standards for all staff members in carrying out their business tasks. It also shares “guidelines on staff responsibilities and on dealing with companies with conflicting interests” with staff and stakeholders, striving to promote sound and transparent transactions.

Code of Ethics

1. The company and its staff will make the greatest effort to provide good products with reasonable prices to satisfy our customers
2. The company and its staff seek to achieve shared profit with any partner and entity
3. The company and its staff work in good faith, complying with the laws and respecting good social practices
4. The company treats all staff fairly and equally based on ability and achievement
5. The staffs carry out their tasks with passion and supreme effort
6. The staffs take a leading role in work innovation through expert and professional knowledge

Ethics Management Activities

Ethics Management Training

In an effort to raise the staff's awareness of ethical management, Doosan Heavy Industries & Construction held nine training sessions in 2012 to introduce and train the company's staff on its ethical management policy, including new employees, experienced employees, and employees of affiliates. The company also offered ethical management training for the purchasing organization on two occasions. In 2012, a total of 646 employees, including new employees, experienced employees and purchasing personnel, received ethics management training. In 2013, the company plans to further expand the scope of ethics management training to include partner companies and offer training for 4,800 administrative staff and 155 partner companies by dividing training venues into Seoul, Changwon, domestic and overseas construction sites.

Ethics Management Pledge

Every new employee joining Doosan Heavy Industries & Construction is obligated to sign an ethical management pledge, and ethical management practices are further strengthened by creating a system where all employees above the position of team leader are required to complete conflict of interest statements. In 2012, the company sent letters requesting support for ethical management practices to 2,000 partner companies ahead of the summer vacation season and Chuseok holiday in order to prevent irregularities and corruption.

Cyber Reporting Center

Doosan Heavy Industries & Construction has opened a cyber-reporting center on its homepage to receive suggestions on improving the ethical management system in connection with the Code of Ethics or information on unfair transactions committed by employees or other companies. The company evaluates each piece of information for verification, improving business practices or addressing unethical practices according to relevant laws and regulations. The identity of the person or group submitting the report, as well as its contents, is kept strictly confidential to prevent any disadvantages or discrimination against the person or group.

Ethics management training in 2012

Classification	No. of staff
Training for new employees	295
Training for employees with experience	268
Training for purchasing organization	83
Total	646



Cyber Reporting Center

Internal Audit System

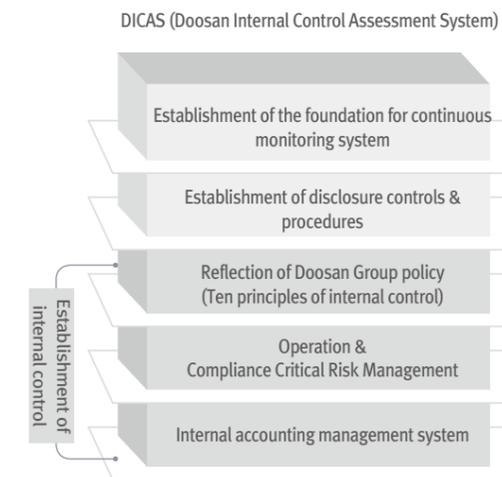
The company operates an internal reporting mechanism as a channel for internal and external communication designed to report violation of ethical management and internal irregularities to the Audit Team. It also operates a system that receives suggestions on improving wrong practices or policies in terms of ethical management of the staff lodged by employees and personnel of partner companies. If an incident involving money of 5 million won or more takes place, the department concerned is obligated to identify the details of the incident and report them to the personnel in charge of audit. Reporting can be made directly or indirectly to the audit team via telephone, e-mail or homepage.

Internal Control System

Amid rising demand for reinforcing internal accounting and internal control internally and externally, Doosan Heavy Industries & Construction has established an internal control system to enhance transparency of information and improve confidence of the public. The internal control system refers to a system that defines task execution processes and evaluates actual implementation according to the established procedures to ensure sound and stable operation of the company.

To this end, Doosan Heavy Industries & Construction has set up the internal control team under the CFO to evaluate appropriate design and operation of control structure and, based on the results, making improvements on an ongoing basis. The company has also defined control activities, involving not only internal control for the internal accounting management system, which is a legal requirement, but also efficiency of operation and compliance categories for risk factor management, while establishing the foundation for continuous monitoring. The assessment is managed by the internal control system of Doosan Heavy Industries & Construction called the “Doosan Internal Control Assessment System (DICAS)” and assessment is conducted five times a year. After completion of assessment by teams, the assessment results goes through implementation review by the internal control team and is finally reported to internal and external stakeholders. Its appropriateness is evaluated through the audit by an external accounting firm.

Furthermore, recognizing the importance of securing reliability and transparency of financial information of overseas subsidiaries subject to consolidated financial statements, in addition to its own information, Doosan Heavy Industries and Construction has improved the operation and processes of the internal control system for its subsidiaries including DPS, DPSI and Doosan Vina. The company conducts review and evaluation activities, which were conducted irregularly, twice or four times a year, depending on matters, to support system improvement and listen to opinions on them.



Risk Management

Risk management at Doosan Heavy Industries & Construction can be divided into the project risk management activities conducted by respective business divisions, and a company-wide risk management system that deals with the rapidly changing business management environment carried out at the company level. Given the nature of Doosan Heavy Industries & Construction, there is a high ratio of metallic raw materials in the production cost, with large amounts of non-ferrous metals used to provide thermal proofing, and corrosion and wear resistance. There is a greater importance placed on overseas exports. Thus the company's business activities are heavily influenced by fluctuations in global metal prices and foreign exchange rates. Company-wide risk management focuses on closely monitoring these fluctuations in foreign exchange rates and raw material prices and applying the emergency contingency plans prepared for different scenarios.

Financial Risk Management

Doosan Heavy Industries & Construction is exposed to various financial risks, such as market, credit and liquidity. The purpose of financial risk management of the company is to enhance efficiency of financial management and improve the financial structure to create stable and continuous management performance.

Financial risk management activities, such as identification, evaluation and hedge, are mostly performed by treasury department under close cooperation of the relevant departments. The company focuses on minimizing the effect of financial risk through regular monitoring.

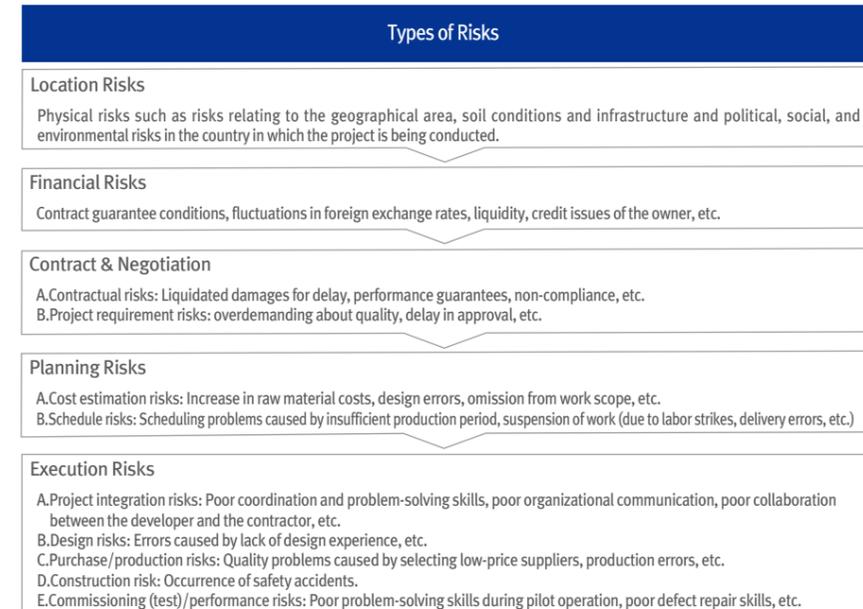
Non-Financial Risk Management

Implementers of the five categories manage the non-financial risks of the respective categories in accordance with the CSR vision and strategy.

Five categories	Areas of Risk Management
Human Resource	Protection of human rights, prevention of discrimination, compliance with labor laws, etc.
Ethics Management	Prevention of irregularities, management of business transparency, monitoring of compliance with laws, etc.
Shared Growth	Risk management for supply networks of partner companies, fair trading compliance, etc.
EHS	Response to climate change, water resource management, emergency management, etc.
Community	Customer management (satisfaction survey, etc.), support for local communities, external reputation management.

Project Risk Management

Doosan Heavy Industries & Construction is normally engaged in large-scale projects that are carried out over an extended periods of time, so the company also carries out project-oriented non-financial risk management activities. Risk management activities for projects are conducted by the project management teams under the respective business division.



Lessons Learned(LL) System

As part of its risk management activities, Doosan Heavy Industries & Construction has established the Lessons Learned (LL) System to prevent recurrence of problems that took place in the past. Through the LL System, which is created based on the strong commitment of the management, employees can share not only case studies of risk management failure, but also diverse case studies, internal/external expertise, newly acquired knowledge, role model cases in the company and, knowledge management activities carried out by the organization, thereby promoting effective risk management.

Quality Gates

Four major risks that highly affect the project performance of Doosan Heavy Industries & Construction include financial risks, contract and negotiation risks, planning risks and execution risks, which account for 70% of the total performance volatility. The company has introduced the Quality Gates (QG) to conduct intensive management of the four risks and improve performance. The QG is a strategic risk assessment and management guideline and a phased decision-making tool for projects. By operating the QG, Doosan Heavy Industries & Construction has established objective criteria for project assessment, as well as the risk tracking management system for pre-project stages. It is also used to share knowledge and experience on risk management within the organization and improve accuracy of cost estimation.



Highlights of 2012



1 Announcement of the "Doosan Way" - Our Story, Our Vision

The "Doosan Way" was announced this year outlining the intrinsic business, cultural and operational philosophy of Doosan Heavy Industries & Construction, which aims to continuously produce "Leading global products." The Doosan Way is composed of nine core values - Doosan People, Cultivating People, Integrity & Transparency, *Inhwa*, Customers, Technology & Innovation, Profits, Corporate Social Responsibility and Safe Environment - which collectively add up to form the "Doosan Credo". This credo has provided the standard of governance that has served as the foundation of Doosan Heavy Industries & Construction's steady growth over the past hundred years and will continue to play a significant role in the next hundred years. To support the Doosan Credo, workshops were held in May 2012 for executives, team leaders, technical personnel, site supervisors and team members and intense discussions were held on these subject matters.



2 The 50th Anniversary of Company and the Next 100 Years

Doosan Heavy Industries & Construction celebrated its 50th anniversary of its founding in 1962. Over the years not only did the company attain national leadership in the power generation sector, but it has also become a global leader in the field of seawater desalination and key equipment for nuclear power plants. To commemorate its 50th anniversary, the company published a book tracing its origins and past achievements and held ceremonies and events such as the We Doo Power Relay and Doosan Family Concert. The company will continue to consolidate its position as a global leader by developing leading core technologies and exploring new growth drivers.



3 Achieving Record Results

For the past two years, Doosan Heavy Industries & Construction has been successful in securing over KRW 10 trillion in contracts each year and the realized sales of these contracts has produced a revenue amounting to KRW 9.7 trillion in 2012 - the highest in corporate history and over five times the results of 2001 when Doosan Heavy Industries & Construction was first privatized. The company showed a significant rise in sales, recording a growth rate of 13% in 2012 after recording a growth rate of 7% in 2011.



4 Winning of Three-Stage Desalination Contract in Yanbu of Saudi Arabia

Doosan Heavy Industries & Construction has been the global number one contractor for seawater desalination for the past three years and this position was reinforced in November, 2012 by securing the contract for the "Yanbu Three-Stage Seawater Desalination Plant" valued at KRW 1.1 trillion in Saudi Arabia. It also supplied evaporator units to Marafiq MED Plant and Ras Al Khair Plant No.5.

5 Diversification from Traditional Power Generation Activities

Doosan Heavy Industries & Construction has been diversifying its operations into areas such as servicing power generation facilities and wind power generation with great success. In March 2012, it secured the construction contract to boost performance at a thermoelectric power plant in Bandel, India and also secured a long term maintenance contract of Yangju cogeneration plant's gas turbines in July. In addition, it also secured orders to supply critical power generation equipment such as a 350MW circulating fluidized bed boiler and turbine generator for the Yeosu Thermal Power Plant No.1. Another significant achievement in 2012 was the successful test run of a locally designed total integrated control system at the Taean Thermal Power Plant No.1 - a technology that was until now monopolized by foreign companies. In wind power generation, it installed and successfully test run a 3MW offshore wind turbine system in Jeju-do and secured the contract for a 24MW offshore wind farm to be built in the Incheon area.



6 Supplying Critical Nuclear Facility Equipment such as AP 1000

Doosan Heavy Industries & Construction has been able to retain its market leading position as the premier supplier of critical nuclear facility equipment for over 30 years even in the face of a shrinking market during this period. In July 2012, it secured the order to supply the AP1000 steam generator to be installed in China's Haiyang Nuclear Power Plant. It was also the supplier of the first AP1000 type to be shipped to an AP1000 nuclear reactor in Sanmen, China in 2011. As a result of the success achieved in changing the construction for Hanwool (Uljin) Steam Generators No. 3 and 4 and winning a contract for the Hanbit 3 Nuclear Reactor (Yeonggwang) coolant repair work in June 2012, the company successfully established the foundation for nuclear power service expansion in the global market.



7 Enhancing Global Business Competitiveness including Acquisition of Enpure

Doosan Heavy Industries & Construction strengthened its business capacity by taking over Enpure - a British water treatment company. By doing so, Doosan Heavy Industries & Construction now has access to a world-class preconditioning process. This helped to significantly and innovatively increase the company's water treatment competitiveness. In addition, the company founded DPSI (Doosan Power Systems India) by merging with Indian corporate bodies and organizations to improve its performance capability in India. Last but not least, Skoda Power had its name changed to Doosan Skoda Power on December 11, 2012, three years after its takeover, to strengthen its brand value.



8 Accelerating CSR Efforts

Doosan Heavy Industries & Construction has expanded its CSR activities such as publishing the first Sustainability Report and pursuing harmony between the economy, the environment and society. By developing GEMS (Green Energy Management System) it was able to manage energy consumption and it obtained EHS management system certifications for all domestic operations. The company fulfilled its policy of offering "open" employment opportunities to all those with the necessary skills and accelerated this process through the operation of "Doosan Classes" pursued in cooperation with local colleges and specialized high schools. It donated a seawater desalination plant in An Bihn Island, Vietnam and carried out various activities to foster, sponsor and promote corporate social responsibilities. Its activities concerning shared growth with 27 partner companies with which the company signed MOUs on sharing achievements were widely recognized at home and abroad, and led to Doosan Heavy Industries & Construction being awarded the "Shared Growth Industry Award" in October 2012.



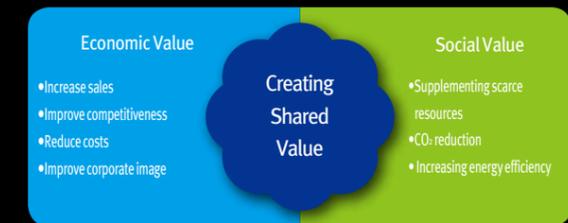


Creating Shared Value for the World

“A time of harmony from a time of change

The history of Doosan Heavy Industries & Construction mirrors the progress of the South Korean economic development of achieving rapid success based on talented people, know-how and technology. It made priority investments into outstanding workmanship as well as fostering talented people, a historical Doosan Heavy Industries & Construction practice that is now adopted in the Doosan Way philosophy. Furthermore, it has endeavored to improve global quality of life by being an innovative leader in the supply of power and water sector related products and services, a practice reinforced by proceeding with the “Proud Global Doosan” ideology. In 2012, despite difficult economic times, Doosan Heavy Industries & Construction achieved record revenues of KRW 9.7 trillion by optimizing its operations and maximizing the synergies of its domestic and overseas subsidiaries resulting in improved competitiveness of its products and technology elevating Doosan Heavy Industries & Construction as a global top tier corporation.

Doosan Heavy Industries & Construction believes social problems can be solved when harmony is attained between what a corporation can do and what society needs and by maximizing synergies. In the case of Doosan Heavy Industries & Construction, by providing light and water to regional areas and local communities, it creates added value and shares economic and social benefits with the communities. In addition, by fostering and developing green energy businesses such as wind power generation, carbon capture and storage technologies it ensures continuous growth and great prosperity for the future.





Light of Happiness

During the 1970s when the power-generation industry was still in its infancy, Doosan Heavy Industries & Construction was successful in constantly developing relevant technologies to eventually build large power-generation facilities and became the national leader in setting new industry standards. In addition, by expanding its operations into foreign markets, it increased its competitiveness and thus, further enhancing its ability to supply the benefits of light all across the globe.

Doosan Heavy Industries & Construction's journey to secure source technology and constant efforts for capability improvement had a definitive role in its ability to deliver light to where it was needed. In 1994, it successfully built the first Korean standard thermal power plant by constructing, supplying and installing all the primary equipment at the Boryeong Thermal Power Plant No.3. In 2009, it built the most advanced 180MW large gas turbine generation unit at the Yeongwol Combined Cycle Power Plant. Even in the nuclear power field, from the supply of Korean standard nuclear power equipment to the exporting of nuclear power facilities to the UAE, Doosan Heavy Industries & Construction has been one of the world's top suppliers of nuclear power generation equipment for the past 30 years.

Furthermore, Doosan Heavy Industries & Construction has significantly increased its capabilities by securing source technologies through several successful M&As. For example, in 2006, it secured boiler technology by acquiring Mitsui Babcock in the United Kingdom and in 2009, it secured steam turbine technology by acquiring Skoda Power in the Czech Republic. In 2011, by acquiring Lentjes in Germany, it ultimately secured technologies for the three areas boilers, turbine generators and eco-friendly technologies, such as circulating fluidized bed(CFB) boilers and Flue Gas Desulfurization (FGD). Through these technologies, Doosan Heavy Industries & Construction has set a very sound and solid foundation in its pursuit to become a global leader in the power-generation sector.

Finally, to enhance its global competitiveness, Doosan Heavy Industries & Construction expanded its global manufacturing operations. For example, Doosan Vina, a manufacturing facility similar to its Changwon factory was built in Vietnam in 2007 to serve as the operational base for global tenders. In order to enhance competitiveness in India Doosan Heavy Industries & Construction acquired Chennai Works, a local boiler manufacturer, in 2011. This and other efforts allowed Doosan to win a 1.5 trillion-won contract for the Bulk order II coal power project in the Kudgi and Lara regions in 2012.

Securing excellent technologies to provide electric power for the benefit of others is not just a business activity but the core foundation of Doosan Heavy Industries & Construction's vision. To ensure Doosan Heavy Industries & Construction continues to be the global best power generator and supplier to regional and local communities, the company seeks to continuously increase its global competitiveness through technological improvements.

Green Energy

Since the mid-2000s, interest in clean energy technology has increased primarily due to the consolidation of regulations on greenhouse gas emissions as well as depletion of fossil fuels. Doosan Heavy Industries & Construction accepts and understands that it cannot secure future growth if it does not address these issues and develop relevant and appropriate countermeasures. As a result, Doosan Heavy Industries & Construction has invested in energy technologies such as USC high-efficiency thermal power, IGCC, coal/gas combined power, wind power and CCS (Carbon Capture & Storage) as a source of future growth.

In the first instance, by raising the efficiency of the existing thermal power systems, we successfully developed a top tier level of eco-friendly, high-efficiency, and large-capacity 1000MW Ultra Super Critical power generating system by applying our own technology. With the system, the company was able to reduce CO₂ emissions as well as gain recognition for its cutting-edge technology. In 2011, Doosan Heavy Industries & Construction also entered into the first national IGCC (Integrated Gasification Combined Cycle) partnership with Korea Western Power. We are still working hard on the design and construction of major equipment, installation and test-running of the processes. IGCC is still in its infancy has only been utilized on a demo-scale. However, it offers great promise as it has the advantage of 30%-50% pollutant emission rate compared to that of existing coal fired thermal power plants and is able to capture CO₂ emissions, as well as minimize the emission of pollutants such as sulfur oxides.

Secondly, Doosan Heavy Industries & Construction will be applying to additional CO₂ capture and CCS technology. CCS will be necessary technology for all thermal power plants as the trend of growing environment regulation continues into the future. Doosan Heavy Industries & Construction has been applying CCS technology since 2006 and it secured the original technology with DPS.

Finally, Doosan Heavy Industries & Construction is striving to fulfill demands for the supply of energy whilst minimizing resource consumption and expanding the business into new and renewable energy technology, such as wind-power generation systems. Development of its wind-power generation system was completed within three years after starting the technological development as a national scale project in 2006. In addition, its system became the first certified power plant system in Asia when it secured the contract to develop a 3MW wind power system "WinDS3000™" on Jeju Island. Furthermore, fuel cell technology which produces electricity, heat, and water by combining hydrogen and oxygen is one of the green energies that Doosan Heavy Industries & Construction is focusing on as it believes this type of energy will play a significant role in its future goals and strategies.

Water of Life

Doosan Heavy Industries & Construction has been supplying valuable water across the global village since it started its seawater desalination business activities in 1978. As the global leader in seawater desalination technology, Doosan's plants constructed in the Middle East alone provide over 21 million people with 6.5 million tons of fresh water.

Doosan Heavy Industries & Construction's secret to its success in the water business was its unwavering commitment to the business and continuous technological development. In the Middle East, with the turnkey order for design to construction of the Shoaiba project using the MSF method gaining wide recognition from neighboring countries, this generated additional business from Kuwait, Oman and Qatar, generating successful results across the region. However, not satisfied with these results alone, Doosan increased its sales activities in the Reverse Osmosis (RO) market and was successful in designing and developing the world's first MSF and RO hybrid system. Doosan secured the contract for the Yanbu MED project and with its expanded range of services, it was able to increase its activities in this market.

Currently, Doosan Heavy Industries & Construction is the only company in the world with source technology for all three types of desalination technologies - Multi-Stage Flash (MSF), Multi-Effect Desalination (MED) and Reverse Osmosis (RO). Utilizing these technologies, Doosan Heavy Industries & Construction was able to create new hybrid methods and recently implemented a hybrid system successfully at the Fujairah project.





The technology applied in this project was perfect for the Middle East region, where the summer and winter electricity consumption differs greatly. The characteristics of the local environment in which the steam supply differs by season was taken into account to devise the most optimal technology for the region. As a result, Doosan Heavy Industries & Construction became the market leader in the seawater desalination sector. In addition, Doosan Heavy Industries & Construction wrote a new chapter in the seawater desalination business by being the first ever to attempt and successfully accomplish the shipping of a fully assembled evaporator to the Al Taweelah Project in the UAE, demonstrating to the world the business synergy that can be created by constantly taking on challenges.

Doosan Heavy Industries & Construction, as the world market leader in water technology, has successfully carried out 27 projects in the Middle East and to further increase its understanding of the market trends and technologies of the water business, it currently operates four Water R&D centers globally, including the ones in Saudi Arabia and the United States. In addition, it was able to secure the pretreatment technology, which is required for the RO desalination process, through the acquisition of Enpure, a UK-based water treatment company. The water market is projected to be valued over US\$10 billion by 2015 and Doosan Heavy Industries & Construction will continue to be proactive in this field with long term investments and continuous technological developments to achieve its goal of becoming a total water solution provider.

Using light, water and green energy to create future value

According to “State of the Future” report issued by the UN, future climate change will be picking up speed, and water resources will be on the brink of being exhausted. The issue of energy supply has been highlighted again with approximately 20 percent of the world’s population not having access to electricity and about 78 million people not benefiting from water resources. By 2050, the population is projected to increase by a further two billion people, adding significantly to the demands on electric power and exerting more pressure on the already strained water resources making it difficult to provide the required water supply. State of the Future suggested solutions like increased energy efficiency, use of new and renewable energy and development of seawater desalination technology. In preparation for this increase in demand, Doosan Heavy Industries & Construction believes that light, water and new energy technology will be the fundamental solution for relieving these worldwide issues which are closely linked to the livelihood of humankind.

Doosan Heavy Industries & Construction’s corporate goals and the requirements and needs of communities are all interlinked. Doosan believes that by helping solve the fundamental social issues around the world with the provision of indispensable technology and services to mankind, it can gain customers’ trust and thus secure the foundations for future growth.

These are the shared values upheld by Doosan Heavy Industries & Construction in its corporate objectives. The company aims to continuously develop cutting-edge technology to serve customers’ needs by providing them with necessary services in a timely manner and by doing so, confer benefits to the global community while also striving to become an enterprise that grows together with its customers.

Business Results - Beyond Technology

- EPC Business Group
- Power Business Group
- Nuclear Power Plant Business Group
- Water Business Group
- Casting & Forging Business Group
- Consolidated Financial Statements
- Management’s Discussion and Analysis
- Independent Auditors’ Report
- Independent Auditors’ Review Report on Internal Accounting Control System



EPC Business Group



○ Global top-tier EPC Player

- Providing the total service from receiving orders to design, engineering, material and equipment procurement, installation, construction and post-project maintenance services (Rabigh thermoelectric power station)



○ Construction of Thailand's largest thermal power plant, Gheco One
-700MW super-critical coal-fired thermal power plant

2012 Review

Based on its extensive experience in power generation and top-tier technology, the EPC Business Group offers total service in plant construction as an EPC (Engineering, Procurement, and Construction) contractor from plant design to construction, pilot operation and post-project maintenance services. In 2012, Doosan Heavy Industries & Construction pursued the vision of becoming "the Global Premier Partner in EPC", with the aim to create synergistic effects based on its accumulated experience and core technology capabilities. Under the vision, the company not only took concrete actions to strengthen its capabilities by setting up a new construction technology unit, but also actively publicized achievements of the EPC Business Group in a global environment to boost brand perception. Through such efforts, the company produced outstanding achievements despite unstable global economic conditions evidenced by the completion of Thailand's largest thermal power plant, Gheco One. It is a 700MW super-critical coal-fired thermal power plant, the largest of its kind in Thailand, and is also an eco-friendly power plant that has adopted a high-efficiency power generation method, equipped with seawater desulphurization and dust-collection facilities, using less fuel, yet boosting power generation efficiency. As such, the EPC Business Group has steadily elevated its project execution capabilities to the next level and expanded business and boosted profitability by offering the total service from equipment production to construction and ensuring solid project management.

2013 Outlook

As it is forecasted that diversification by region will intensify in 2013, the EPC Business Group plans to employ a pre-emptive management strategy to further boost profitability. In addition, as the world's leading companies are competitively entering the market, we will maintain our competitiveness by equipping ourselves with the world's best technology and business efficiency. To this end, we will maximize our potential for winning orders, conducting market surveys to advance into new regions such as the Americas and Africa and launching full-fledged sales activities, thereby accelerating our bid to enter new markets. Meanwhile, we will lay the foundation for improving project profitability not only through risk control during the low-growth period, but also establishment of a field-oriented organizational culture that can drive growth during the economic recovery phase in the future. In addition to strengthening the existing core capabilities of the EPC Business Group, we will further enhance our execution capabilities by building a procurement and fair management system. Furthermore, we will advance into not only the combined-cycle power plant (CCPP) market, but also the medium and small-sized plant market and establish cost prediction models and develop plant performance optimization system to continue to boost our project competitiveness. The EPC Business Group will do its utmost to firmly establish itself as a global power in 2013 by drawing a big picture of the global market and implementing detailed strategies differentiated by market. We will continue to make unsparing efforts to achieve our vision of becoming "the Global Premier Partner in EPC", which was envisaged in 2012, with the aim being to secure competitiveness as the world's top-tier player.

Power Business Group



○ Successfully manufactures Korea's largest 270MW gas turbines



○ Wins a project to construct 24MW inland wind farm
- Eight units of 3MW wind turbines (WinDS3000™) at Yeongheung Thermal Power Plant, Incheon

2012 Review

In 2012, despite unstable global economic conditions, the Power Business Group won a 1.5 trillion won coal-fired thermal power plant project (Bulk Order II) from India. The production capacity of the subsidiary Doosan Power Systems India was increased, leading to the establishing of a local production system in India. Furthermore, the company established the services business implementation system and organization in India, paving the way for performing the services business in the Indian market. As for domestic achievements, the company won an order of Yeosu Unit 1 thermal power plant (Korea) circulating fluidized bed boiler and turbine/generators, as well as signed a contract of long-term maintenance for the gas turbines of the cogeneration plant in Yangju, Gyeonggi-do, Korea. In addition, the Power Business Group clinched a deal for the Yeongheung onshore wind farm project and thus, secured the position as a key supplier supply for Korea's onshore market, laying the foundation for expansion of future businesses. Meanwhile, the Power Business Group strived to enhance core equipment technology to ensure sustainable growth. Responding to the demands of the market, the Business Group developed low-emission coal burners for boilers, as well as new models. In addition, the Business Group developed core component technologies in phases to improve the efficiency of steam turbines, while promoting technology development for securing new models. The Power Business Group's efforts to enhance its fundamental competitiveness and maintain product competitiveness as a global top-tier player will continue in 2013 as well.

2013 Outlook

In early 2013, Doosan Heavy Industries and Construction revamped its organizational structure to strengthen its boiler, turbine and generator equipment business by subdividing the Power Business Group into the Boiler Business Group and Turbine/Generator Business Group. Despite market contraction and intensifying competition amid the prolonged global economic downturn, the Boiler BG and the Turbine/Generator BG will strive to secure fundamental technological competitiveness at an early date to maintain its standing as a world-leading maker of top-tier power generation equipment. To this end, Doosan has established equipment-oriented R&D organizations affiliated with Boiler BG and Turbine/Generator BG, separately. Led by the newly established R&D organization, the Boiler BG will strengthen its model line-up, to include boilers using low-grade, high moisture coal, boilers using low-volatile matter coal, and high-efficiency, large-capacity boilers, while securing cost competitiveness on an ongoing basis by developing innovative technologies and enhancing its global operations. The Turbine/Generator BG plans to develop generic/element technologies ensuring top-tier efficiency and enhance the steam turbine model line-up by developing the Last Stage Blades (LSB), while striving to secure cost competitiveness through design optimization and expansion of global sourcing. Furthermore, both business groups will strengthen their sales/marketing activities as a means of expanding the market to ensure the growth of the equipment business. As part of the effort, we will seek customized sales by operating key account managers (KAM), while making inroads into new markets by partnering with companies that already have a business presence by region. Meanwhile, in order to secure sustainable growth engines, we will expand service business capabilities such as equipment performance enhancement (Renovation and Modernization : R&M) and Long Term Service(LTS), while paving the way for the growth of new renewable energy business by winning greater numbers of contracts for wind power generation projects in the domestic market and successfully conducting the Taean IGCC project.

Nuclear Power Plant Business Group



- Finished delivery of key equipment for the AP1000 reactor vessel and steam generator to China
- First 3rd generation WEC-type nuclear power plant

2012 Review

In 2012, the Nuclear Power Plant Business Group completed shipment of reactor vessels and steam generators, which are the core components for the AP1000 to be installed at nuclear power plants in Shanmen and Haiyang, China. The AP1000 is the first Generation III reactor model designed by Westinghouse of USA with an advanced technology to target the global nuclear power plant market. The shipment of the AP1000 reactor vessels and steam generators is expected to serve as a springboard to further boost our unrivalled position in the third-generation nuclear power plant market. In addition, we successfully won contracts for steam generator replacement at Hanwool (Ulljin) Nuclear Power Plant Units 3 and 4 and RCP (Reactor Coolant Pump) maintenance and repair project for Hanbit (YeongGwang) Nuclear Power Plant Unit 3, thereby broadening the base in the nuclear power plant services market. Meanwhile, the Nuclear Power Plant Business Group's steam generator for commercial nuclear power plants was selected by the Ministry of Knowledge Economy (currently the Ministry of Trade, Industry and Energy) as one of the 2012 World Class Products, which means the BG possesses two World Class Products, along with the nuclear reactor vessel for commercial power plants selected in 2011. We are striving to become global No.1 in design/manufacturing of nuclear power plant components and, at the same time, to become the nation's leading player in nuclear power plant services, nuclear power instrumentation and control (I&C), and nuclear fuel handling-related equipment manufacturing.

2013 Outlook

After the Fukushima accident, the nuclear power market seemed to fall into a slowdown. The market expected a visible movement for development of new nuclear power plants across Europe and the Middle East. In response to the movement, the Nuclear Power Plant Business Group plans to further strengthen systematic, customer-tailored sales activities by reflecting the demands of countries wishing to construct nuclear power plants, such as by providing localization in an effort to additionally export Korean-type nuclear power plants. In addition, we will accelerate our bid for the services business segment, further expanding our involvement in the nuclear power components service and replacement market. We also plan to review ways to join the nuclear markets of the future such as transportation/storage containers for spent fuel and nuclear decommissioning. Furthermore, in order to strengthen our core competitiveness, we will acquire an advanced and scientific production system by applying the work station production method. Meanwhile, we will carry out intensive pre-emptive quality assurance activities for major nuclear power products to secure "zero defects" quality for nuclear power equipment. We will further enhance our already global top-tier manufacturing competitiveness, ceaselessly striving to become a global champion in manufacturing major nuclear power equipment.

Water Business Group



- Won a contract for the Yanbu Phase 3 Seawater Desalination plant project
-Worth 1.1 trillion won

2012 Review

The water industry is a high-technology, knowledge-intensive industry requiring not only engineering skills for product production, manufacturing, construction, and maintenance, repair technologies, but also a series of capabilities related to the business such as financing and contract management. As of December 2012, the company won contracts for a total of 27 seawater desalination projects in the Middle East region. By successfully completing these projects, the company provided the capability to produce 6.5 million tons of fresh water which is supplied to 21 million people on a daily basis. In order to gain more momentum and further expand our dominance in the Middle East, we established an R&D center in Saudi Arabia to provide products and services tailored to local needs. As a result, we successfully landed a contract to construct the 1.1 trillion won Yanbu Phase 3 seawater desalination plant, which will serve as a springboard to receive additional orders from Saudi Arabia and the Kuwait. Revenues of the Water BG continued to grow, with our recording 927.3 billion won in 2012, up from 806.6 billion won in 2011. The company continues to rank No.1 in terms of accumulated market share in the MSF (Multi-Stage Flash distillation) market and is constantly pursuing technology development and pushing ahead with projects based on MED (Multi-Effect Distillation) and RO (Reverse Osmosis filtration) technologies. Following the winning of Saudi Arabia's Yanbu MED project and the Marafiq MED project in 2011, the company completed the Yanbu MED project in Saudi Arabia in 2012, becoming a leader in the MED market as well.

2013 Outlook

Major water-industry agencies around the world are predicting the formation of a seven trillion-won global desalination market by 2013, with the water treatment industry growing to 207 trillion won by 2013. It is also forecasted that capabilities to offer overall water solutions including desalination facilities, as well as maintenance/repair and water treatment solutions, will become a vital factor in the market competition. The Water Business Group will proactively utilize its capabilities and experiences, securing technology and price competitiveness with an aim of obtaining top-tier level competitiveness of the RO technology, while enhancing value chains by strengthening internal capabilities and actively carrying out sales activities.

Not complacent with being complacent with the existing seawater desalination business, the Water Business Group is growing into a total solution provider in the water business, one that provides water treatment, Operation and Maintenance services(O&M). Water treatment technology refers to technology that transforms used sewage/waste water into reusable water to suit different needs. One example being seawater desalination, this is one of the major ways to secure alternative water resources. The sewage treatment market is the very area on which the Water Business Group is focusing. In order to ensure seamless advancement into new areas of business and achieve technological independence, Doosan Heavy Industries & Construction acquired Enpure of the United Kingdom, a water treatment company with top-tier level pre-treatment technologies and an extensive track record of success in the water treatment sector. Buoyed by the new acquisition, the company is striving to further boost its capabilities in water treatment and pretreatment engineering. As mentioned above, the Water BG will continue to create profits in new areas of business by entering the water treatment and O&M market which is available across the world, unlike the seawater desalination business which is only focused on the Middle East.

Casting & Forging Business Group



○ Supply core materials of world-class level

2012 Review

With abundant experience and global top-tier technology in cast and forged materials, a total of eight products of the Casting and Forging Business Group, including crankshaft, work roll for cold rolling mills, mold steel in 2011 and super large forged backup roll for plate rolling mill in 2012, were selected as World Class Products in an acknowledgement of the global competitiveness of the products. The casting & forging BG succeeded in localizing key large-scale casting and forging products that form the core of a wide number of major industries including power generation, shipbuilding and steel, and supplied the world with high-quality products manufactured utilizing batch production facilities and technical capabilities. In addition, we completed the installation and establishment of vertical boring machines, which are equipment for processing reactor shells. This enabled a total package system in which the Casting and Forging Business Group can provide total solutions from manufacturing of nuclear power materials to processing, further boosting its competitiveness in the materials industry. In order to secure global top-tier core capabilities to continue the growth momentum, the Casting and Forging BG carried out a wide range of quality stabilization activities, while securing ultra-large/first-article product processing capabilities to enhance manufacturing competitiveness, thereby strengthening its core capabilities in the materials industry on an ongoing basis. Furthermore, in an effort to achieve business advancement, we explored new customers to broaden our areas of business and supplied products in a stable manner through facility stabilization, thereby leading the global castings and forgings market.

2013 Outlook

The growth potential and scale of the castings and forgings market are determined by trends of leading frontline industries such as power generation, shipbuilding, steelmaking and automobiles. As competition in the castings and forgings market has intensified due to the global economic downturn, we will enhance our cost competitiveness, based on our top-tier technology in the existing business areas, by pursuing mid-to long-term technology development and securing critical technology elements to secure a superior position in the market. In addition, in order to seek new business opportunities, we will accelerate R&D activities on high-specification products and secure strategic customers to secure new growth engines. We will also achieve thorough quality improvement by each process to satisfy the world's top-tier level quality needs. Furthermore, the Casting and Forging BG is making facility investments for electrode slag remelting, which is a core process in the ultra super critical rotor manufacturing to respond to the increased demand for high-efficiency power stations amid global trends placing priority on reducing CO₂ emissions. Meanwhile, in addition to enhance our technology competitiveness, we will make multifaceted efforts to expand our overseas sales network and broaden sales activities to enhance our sales capabilities. As indicated above, the Casting and Forging BG will lead the global castings and forgings market through productivity enhancement, development of materials technology meeting customers' needs, and sales activities tailored to customers' needs.

Consolidated Financial Statement

Consolidated Statements of Financial Position

(In million of won)

	2012	2011	2010
Assets			
I. Current assets	5,718,607	5,263,651	8,639,190
1. Cash and cash equivalents	1,134,431	783,253	1,517,606
2. Short-term investments	27,249	75,744	266,054
3. Trade receivables	1,161,330	1,026,095	2,236,046
4. Due from customers for contract work	1,564,567	1,607,583	1,962,834
5. Other receivables	139,602	202,869	268,220
6. Prepayments	581,022	709,070	796,459
7. Prepaid expenses	53,361	39,249	99,138
8. Short-term loans	86,941	9,739	569,877
9. Derivative assets	233,348	121,042	105,929
10. Firm commitment assets	87,348	130,968	108,577
11. Inventories	556,354	457,467	591,863
12. Non-current assets held for sale	22,571	-	13,226
13. Other current assets	70,483	100,572	103,361
II. Non-current assets	7,805,807	8,325,518	8,337,952
1. Long-term financial instruments	71,104	58,727	41,003
2. Long-term investments in securities	43,341	96,539	301,234
3. Investments in equity-accounted investees	3,367,822	3,825,563	2,871,335
4. Long-term loans	9,890	102,497	64,065
5. Property, plant and equipment	2,674,298	2,689,591	3,521,807
6. Intangible assets	1,210,836	1,157,877	1,070,352
7. Investment property	13,175	10,052	127,420
8. Derivative assets	180,424	135,443	158,498
9. Firm commitment assets	43,526	125,869	66,777
10. Deferred tax assets	26,616	19,763	11,843
11. Guarantee deposits	161,733	69,890	99,469
12. Other non-current assets	3,042	33,707	4,149
Total assets	13,524,414	13,589,169	16,977,142
Liabilities			
I. Current liabilities	5,284,400	6,076,132	8,754,106
1. Trade payables	868,869	668,027	1,303,545
2. Short-term borrowings	1,017,320	1,699,680	2,206,457
3. Other payables	381,769	414,524	376,052
4. Advanced receipts	85,028	113,602	1,115,202
5. Due to customers for contract work	1,858,636	2,067,923	1,846,656
6. Withholdings	11,957	9,651	106,563
7. Accrued expenses	198,563	339,826	295,700
8. Income tax payable	14,581	60,288	96,977
9. Current portion of long-term debt	390,097	385,655	973,680
10. Derivative liabilities	229,427	213,382	178,839
11. Firm commitment liabilities	205,165	45,981	52,048
12. Other provisions	-	27,651	142,368
13. Other current liabilities	22,988	29,942	60,019
II. Non-current liabilities	3,730,435	2,716,109	3,046,832
1. Debentures	1,216,358	958,587	1,335,385
2. Long-term borrowings	1,357,773	528,467	477,937
3. Long-term other payables	27,557	42,592	47,296
4. Employee benefits	307,263	256,818	204,319
5. Deposits received	211,557	170,943	178,863
6. Derivative liabilities	165,870	255,085	218,964
7. Firm commitment liabilities	141,688	55,277	62,934
8. Deferred tax liabilities	56,595	210,641	232,994
9. Provisions	172,491	140,998	256,638
10. Other non-current liabilities	73,283	96,701	31,502
Total liabilities	9,014,835	8,792,241	11,800,938
Equity			
I. Equity attributable to owners of the Controlling Company	4,505,923	4,770,595	4,796,151
1. Share capital	529,282	529,217	529,082
2. Capital surplus	874,943	883,637	956,958
3. Other capital adjustments	(195,639)	(197,870)	(134,427)
4. Accumulated other comprehensive income (loss)	(216,959)	2,321	(26,988)
5. Retained earnings	3,514,296	3,553,290	3,471,526
II. Non-controlling interests	3,656	26,333	380,053
Total equity	4,509,579	4,796,928	5,176,204
Total equity and liabilities	13,524,414	13,589,169	16,977,142

Consolidated Statements of Income

(In million of won)

	2012	2011	2010
I.Revenue	9,627,184	8,495,506	7,928,868
II.Cost of sales	8,240,845	7,250,464	6,582,510
III.Gross profit	1,386,339	1,245,042	1,346,358
Selling and administrative expenses	791,500	718,885	794,553
IV.Results from operating activities	594,839	526,157	551,805
Finance income	889,471	442,471	423,377
Finance costs	1,143,414	677,472	640,348
Share of profit (loss) of equity - accounted investees	(300,740)	504,914	(91,198)
Other income	50,678	100,096	41,017
Other expenses	103,294	35,706	77,056
V.Profit (loss) before income tax	(12,460)	860,460	207,597
Income tax expense (benefit)	(27,192)	119,276	125,665
VI.Profit from continuing operations	14,732	741,184	81,932
VII.Loss from discontinued operations	-	(479,489)	1,280,568
VIII.Profit for the year	14,732	261,695	1,362,500
IX.Profit (loss) attributable to :			
Owners of the Controlling Company	38,045	274,781	1,251,584
Non-controlling interests	(23,313)	(13,086)	110,916
X.Earnings per share			
Basic earnings per share (won) - Continuing operations	427	8,382	977
Basic earnings per share (won)	427	3,063	13,937
Diluted earnings per share (won) - Continuing operations	427	8,381	976
Diluted earnings per share (won)	427	3,062	13,929

Consolidated Statements of Comprehensive Income (Loss)

(In million of won)

	2012	2011	2010
Profit for the year	14,732	261,695	1,362,500
Other comprehensive income (loss) for the year	(228,808)	(123,745)	429,818
Net change in unrealized fair value of available-for-sale financial assets	(37,392)	34,885	17,630
Changes in unrealized gain (loss) on valuation of equity method investments	(125,903)	114,042	7,097
Effective portion of changes in fair value of cash flow hedges	(90,478)	18,823	38,542
Foreign currency translation differences for foreign operations	2,817	(57,606)	(37,656)
Actuarial gains and losses	(11,818)	(67,030)	(17,379)
Actuarial gains and losses of associates	(1,236)	(74,901)	-
Changes in the scope of consolidation	-	(94,965)	434,432
Income tax on other comprehensive loss	35,202	3,007	(12,848)
Total comprehensive income (loss) for the year	(214,076)	137,950	1,792,318
Total comprehensive income (loss) attributable to:			
Owners of the Controlling Company	(191,501)	178,449	1,456,407
Non-controlling interests	(22,575)	(40,499)	335,911

Consolidated Statements of Change in Equity

(In million of won)

	Share Capital	Capital Surplus	Other capital adjustment	Controlling Interests			Total equity
				Accumulated other comprehensive income(loss)	Retained earnings	Non-controlling interests	
Balance at January 1, 2010	528,699	938,455	(197,016)	(247,564)	2,280,574	1,114,353	4,417,501
Annual dividend	-	-	-	-	(44,879)	(4,636)	(49,515)
Profit (loss) for the year	-	-	-	-	1,251,584	110,916	1,362,500
Defined benefit plan actuarial losses	-	-	-	-	(15,753)	(1,626)	(17,379)
Share-based compensation	383	4,934	530	-	-	-	5,847
Acquisition of treasury stock	-	-	-	-	-	-	-
Changes in retained earnings arising from equity method investments	-	-	-	-	-	-	-
Net change in unrealized fair value of available-for-sale financial assets	-	-	-	9,463	-	3,799	13,262
Changes in unrealized gain on valuation of equity method investments	-	-	-	7,013	-	83	7,097
Effective portion of changes in fair value of cash flow hedges	-	-	-	25,886	-	4,177	30,063
Foreign currency translation differences for foreign operations	-	-	-	(37,686)	-	30	(37,656)
Changes in interests of subsidiaries	-	13,569	30,752	-	-	(62,689)	(18,368)
Changes in the scope of consolidation	-	-	31,307	215,900	-	(784,355)	(537,148)
Changes in Equity	-	-	-	-	-	-	-
Others	-	-	-	-	-	-	-
Balance at December 31, 2010	529,082	956,958	(134,427)	(26,988)	3,471,526	380,053	5,176,204
Balance at January 1, 2011	529,082	956,958	(134,427)	(26,988)	3,471,526	380,053	5,176,204
Annual dividend	-	-	-	-	(67,376)	-	(67,376)
Profit (loss) for the year	-	-	-	-	274,781	(13,086)	261,695
Defined benefit plan actuarial losses	-	-	-	-	(50,740)	-	(50,740)
Share-based compensation	135	1,689	2,222	-	-	-	4,046
Acquisition of treasury stock	-	-	(50,000)	-	-	-	(50,000)
Changes in retained earnings arising from equity method investments	-	-	-	-	(74,901)	-	(74,901)
Net change in unrealized fair value of available-for-sale financial assets	-	-	-	26,156	-	-	26,156
Changes in unrealized gain on valuation of equity method investments	-	-	-	114,042	-	-	114,042
Effective portion of changes in fair value of cash flow hedges	-	-	-	14,268	-	-	14,268
Foreign currency translation differences for foreign operations	-	-	-	(56,067)	-	(1,539)	(57,606)
Changes in interests of subsidiaries	-	-	-	-	-	-	-
Changes in the scope of consolidation	-	(76,708)	(15,695)	(69,090)	-	(339,095)	(500,588)
Changes in Equity	-	1,698	30	-	-	-	1,728
Others	-	-	-	-	-	-	-
Balance at December 31, 2011	529,217	883,637	(197,870)	2,321	3,553,290	26,333	4,796,928
Balance at January 1, 2012	529,217	883,637	(197,870)	2,321	3,553,290	26,333	4,796,928
Annual dividend	-	-	-	-	(66,773)	(101)	(66,874)
Profit (loss) for the year	-	-	-	-	38,045	(23,313)	14,732
Defined benefit plan actuarial losses	-	-	-	-	(9,030)	-	(9,030)
Share-based compensation	65	1,562	2,193	-	-	-	3,820
Acquisition of treasury stock	-	-	-	-	-	-	-
Changes in retained earnings arising from equity method investments	-	-	-	-	(1,236)	-	(1,236)
Net change in unrealized fair value of available-for-sale financial assets	-	-	-	(28,343)	-	-	(28,343)
Changes in unrealized gain on valuation of equity method investments	-	-	-	(125,903)	-	-	(125,903)
Effective portion of changes in fair value of cash flow hedges	-	-	-	(67,114)	-	-	(67,114)
Foreign currency translation differences for foreign operations	-	-	-	2,080	-	737	2,817
Changes in interests of subsidiaries	-	-	-	-	-	-	-
Changes in the scope of consolidation	-	-	-	-	-	-	-
Changes in Equity	-	(10,256)	38	-	-	-	(10,218)
Others	-	-	-	-	-	-	-
Balance at December 31, 2012	529,282	874,943	(195,639)	(216,959)	3,514,296	3,656	4,509,579

Management's Discussion and Analysis

Consolidated Statements of Cash Flows

	(In million of won)		
	2012	2011	2010
I. Net cash provided by operating activities	367,801	13,527	652,223
1. Cash generated from operating activities	677,515	229,263	1,008,520
2. Interest received	24,332	25,112	30,959
3. Interest paid	(228,809)	(161,106)	(322,002)
4. Dividend received	4,989	12,166	6,426
5. Income taxes paid	(110,226)	(91,908)	(71,680)
II. Net cash used in investing activities	(379,886)	(1,239,502)	(1,328,448)
1. Net decrease (increase) in short-term investment instruments	48,264	50,761	(26,668)
2. Net decrease (increase) in short-term loans	18,040	(4,738)	(263,971)
3. Decrease in guarantee deposits	46	49,198	34,861
4. Increase in guarantee deposits	(70,398)	(38,300)	(32,685)
5. Collection of long-term loans	-	2,513	2,703
6. Increase in long-term loans	(393)	(96,200)	(9,659)
7. Acquisition of long-term financial instruments	(15,444)	(16,910)	(20,575)
8. Proceeds from sale of long-term investment in securities	2,571	22,400	-
9. Acquisition of long-term investment in securities	(24,497)	(3,119)	(16,679)
10. Proceeds from sale of investments in equity-accounted investees	-	1,897	3,971
11. Acquisition of investments in equity-accounted investees	(6,862)	(218,850)	(277,460)
12. Proceeds from sale of investments in subsidiaries	-	(610,333)	(252,778)
13. Acquisition of sale of investments in subsidiaries	-	(51,354)	(109,175)
14. Acquisition of property, plant and equipment	(200,269)	(261,174)	(270,755)
15. Proceeds from sale of property, plant and equipment	17,759	3,625	2,589
16. Acquisition of sale of investment property	-	-	(10,054)
17. Proceeds from sale of investment property	-	12,408	3,347
18. Proceeds from sale of intangible assets	998	1,600	12,616
19. Acquisition of intangible assets	(149,701)	(82,926)	(97,991)
20. Net increase (decrease) in investing activities	-	-	(85)
III. Net cash provided by financing activities	370,765	511,663	176,552
1. Net increase (decrease) in short-term borrowings	(649,459)	281,615	284,605
2. Repayment of current portion of long-term debt	(394,110)	(510,000)	(954,250)
3. Proceeds from securitization debt	-	-	360,000
4. Repayment of securitization debt	-	-	(50,000)
5. Proceeds from issuance of debentures	547,165	653,940	677,048
6. Repayment of debentures	-	-	(15,592)
7. Proceeds from long-term borrowings	944,344	228,321	113,187
8. Repayment of long-term borrowings	(10,840)	(26,068)	(192,613)
9. Stock option exercised	539	1,265	3,682
10. Dividends paid	(66,874)	(67,376)	(49,515)
11. Acquisition of treasury stock	-	(50,000)	-
12. Net increase (decrease) in financial activities	-	(34)	-
IV. Effect of exchange rate fluctuations on cash held	(7,503)	(20,040)	(52,690)
V. Net increase (decrease) in cash and cash equivalents	351,177	(734,352)	(552,363)
VI. Cash and cash equivalents at 1 January	783,254	1,517,605	2,069,969
VII. Cash and cash equivalents at 31 December	1,134,431	783,253	1,517,606

Achieving Record Revenues

In 2012, the company won orders for large-scale projects in key markets, including India's Lara coal-fired thermal power plant and Saudi Arabia's Yanbu Phase 3 seawater desalination plant and achieved record sales of 9,627 billion won, despite global economic downturn and intense overseas competition in winning orders. This is attributable to the fact that briskly receiving orders over the past few years resulted in increased revenues. The revenues rose by 13%, compared to the previous year (8,496 billion won), which is a phenomenal growth of a five-fold increase, compared to late 2000 when we were privatized and our revenues stood at around 2 trillion won.

Strengthening the Fundamental Competitiveness

It is forecasted that the global economy will show prolonged low-growth trends averaging 3% of growth over the three to five years from now, leading to scaled-down market sizes and ever-intensifying competition. In the short term, it is necessary to strengthen fundamental competitiveness of our technology and cost for us to overcome the heated competition and become a global leader at the time of market recovery in the future. We will enhance competitiveness by business groups and secure a large number of top-tier quality products to achieve organic growth.

Building the "One Global Leadership" System

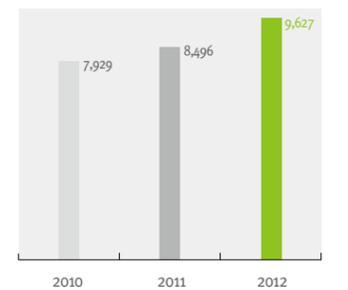
At Doosan Heavy Industries & Construction, the company conducted an organizational reshuffle, reorganizing the Power Business Group and Doosan Power Systems into the Boiler Business Group and Turbine/Generator Business Group and enhancing the professionalism and expertise of the domestic and international marketing and sales organizations. To this end, the "One Global Leadership" system by product line was established at Doosan Heavy Industries & Construction, key supplier of boilers and turbines/generator products and its subsidiary Doosan Power Systems, in a bid to maximize synergistic effects in executing business, while maintaining respective independence. As for the marketing organization, we have enhanced regional expertise and Proactive Marketing (PAM) activities and allowed each Business Group to conduct their own sales activities, thereby creating a platform for further boosting order competitiveness.

Financial Review

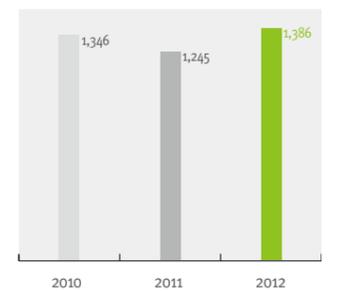
In 2012, our revenues stood at 9,627 billion won. By business group, as work got underway in full swing on such large-scale projects such as the Rabigh and Mong Duong projects, revenues of the Power Business Group rose by 29.3% or 1,280 billion won and the those of Water Business Group rose by 18.8% or 145.3 billion won, compared to the previous year.

Operating income amounted to 594.8 billion won, an increase of 13.1% or 68.7 billion won from a year ago. By business group, thanks to the Power Business Group and Water Business Group's ongoing effort to reduce cost, their operating income rose by 84.9% and 7.7%, respectively, compared to the previous year. However, we also experienced difficulties with decreased operating income of the Casting and Forging Business Group following the slowdown in the shipbuilding industry. We are doing our utmost to overcome unfavorable conditions, such as scaled-down markets following the global financial crisis, and supporting all our business groups to achieve another take-off in the coming years.

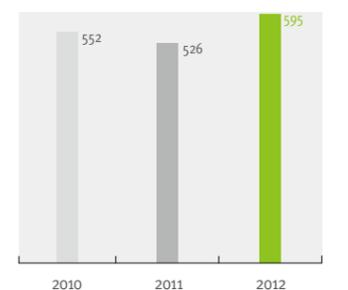
Revenues (Unit: 1 billion won)



Gross Profit (Unit: 1 billion won)



Operating Income (Unit: 1 billion won)



Independent Auditors' Report

The Board of Directors and Shareholders
Doosan Heavy Industries & Construction Co., Ltd.:

We have audited the accompanying consolidated statements of financial position of Doosan Heavy Industries & Construction Co., Ltd. and its subsidiaries (the "Group") as of December 31, 2012 and 2011 and the related consolidated statements of income, comprehensive income (loss), changes in equity and cash flows for the years then ended. Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with Korean International Financial Reporting Standards. Our responsibility is to express an opinion on these consolidated financial statements based on our audits.

We did not audit the financial statements of four subsidiaries and two associates. The financial statements of the four subsidiaries reflect total assets constituting 19.82% and total revenues constituting 19.86% as of and for the year ended 2012 (2011: 17.40% and 18.00%) of the related consolidated totals before eliminating intra-group transactions. The Group's investment in the two associates at December 31, 2012 was 2,930,833 million won (2011: 2,847,677 million Won) and the Group's equity in profits of the associates was 205,324 million won (2011: 181,438 million Won). The financial statements of the four subsidiaries and the two associates were audited by other auditors whose reports were furnished to us, and our opinion, insofar as it relates to the amounts included for the four subsidiaries and the two associates, is based solely on the reports of the other auditors.

We conducted our audits in accordance with auditing standards generally accepted in the Republic of Korea. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

In our opinion, based on our audits and the reports of other auditors, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Group as of December 31, 2012 and 2011 and its financial performance and its cash flows for the years then ended in accordance with Korean International Financial Reporting Standards.

Without qualifying our opinion, we draw attention to the following:

The procedures and practices utilized in the Republic of Korea to audit such consolidated financial statements may differ from those generally accepted and applied in other countries. Accordingly, this report and the accompanying consolidated financial statements are for use by those knowledgeable about Korean auditing standards and their application in practice.

Seoul, Korea
March 6, 2013

KPMG Samjong Accounting Corp.

Independent Auditors' Review Report on Internal Accounting Control System

To the President of Doosan Heavy Industries and Construction Co., Ltd.:

We have reviewed the Report on the Operations of Internal Accounting Control System ("IACS") of Doosan Heavy Industries and Construction Co., Ltd. (the "Company") as of December 31, 2012. The Company's management is responsible for designing and maintaining effective IACS and for its assessment of the effectiveness of IACS. Our responsibility is to review management's assessment and issue a report based on our review. In the report of management's assessment of IACS, the Company's management stated: "Based on the assessment on the operations of the IACS, the Company's IACS has been effectively designed and is operating as of December 31, 2012, in all material respects, in accordance with the IACS Framework issued by the Internal Accounting Control System Operation Committee."

We conducted our review in accordance with IACS Review Standards, issued by the Korean Institute of Certified Public Accountants. Those Standards require that we plan and perform the review to obtain assurance of a level less than that of an audit as to whether Report on the Operations of Internal Accounting Control System is free of material misstatement. Our review consists principally of obtaining an understanding of the Company's IACS, inquiries of company personnel about the details of the report, and tracing to related documents we considered necessary in the circumstances. We have not performed an audit and, accordingly, we do not express an audit opinion.

A company's IACS is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with Korean International Financial Reporting Standards. Because of its inherent limitations, however, IACS may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Based on our review, nothing has come to our attention that the Report on the Operations of Internal Accounting Control System as of December 31, 2012 is not prepared in all material respects, in accordance with IACS Framework issued by the Internal Accounting Control System Operation Committee.

This report applies to the Company's IACS in existence as of December 31, 2012. We did not review the Company's IACS subsequent to December 31, 2012. This report has been prepared for Korean regulatory purposes, pursuant to the External Audit Law, and may not be appropriate for other purposes or for other users.

Seoul, Korea
March 6, 2013

Special Story - Global CSR



Creating Value for the World - Global CSR

Step up from local community to global society - Doosan Vina

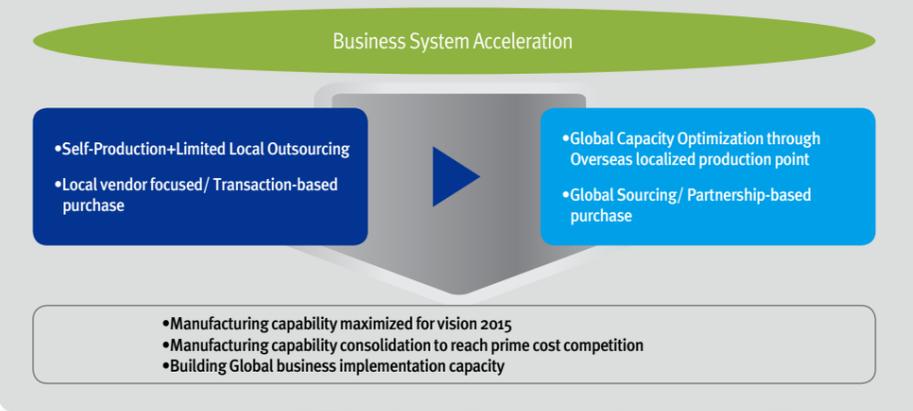
Doosan Vina (Doosan Heavy Industries Vietnam) is the only manufacturer of the mega infrastructure type power-generating units operating in Vietnam today. The Company was established in February, 2007, covers 1,100,000 m² and is located in the Dung Quat Economic Zone on the east coast of Vietnam. Doosan Vina is a Vietnamese corporation owned by Doosan Heavy Industries & Construction and Doosan Engineering & Construction (E&C). As one of the overseas production bases of Doosan Heavy Industries & Construction, and at the same time a local subsidiary of Doosan Heavy Industries & Construction, an investment of about USD 300 million was made to enable the production of boilers for power plants, Heat Recovery Steam Generators (HRSG), and seawater desalination evaporators, transporting, loading and unloading equipment, and chemical engineering equipment at the site. Efforts for a production increase and accumulation of technology are constantly being made at Doosan Vina, which effectively helped it to expand its reach in the global market and record business growth each year.

Since opening, labor skill and technology at Doosan Vina has been continuously developed to improve quality and expand the company's market share. A key strategy is the active recruitment of local talent, constant consultation on course requirements with Vietnamese universities and ongoing and continuous training of employees so that the company's localization goals can be soon achieved.

Through these and our extensive CSR program strong links to the local community have been established and as Doosan Vina continues to grow they plan to hire additional staff reaching a total of 3,000 local employees in the near future. The goal for 2015 is to reach production capacity of \$200 million by 2015, becoming one of the largest enterprises in Vietnam.

Visions

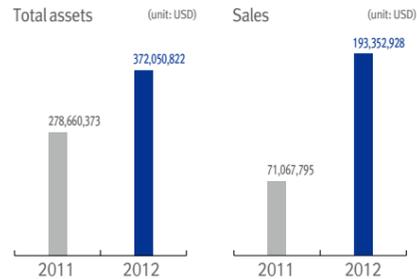
Doosan Vina aims to continue developing, attaining a sophisticated business system that is one of the strongest and most rapidly growing affiliates of the Doosan Group.



History of Doosan Vina

2006	2007	2008	2009	2010
<ul style="list-style-type: none"> Investment certificate was issued (Nov. 2006) 	<ul style="list-style-type: none"> Groundbreaking Ceremony (Feb. 2007) Construction permit approved (Apr. 2007) Reclamation for the site needed to construct the company's own port commenced (Jul 2007) Initial pile driven (May. 2007) 	<ul style="list-style-type: none"> CPE factory commenced operation (Aug 1. 2008) Entire plant constructed (Oct 31. 2008) 	<ul style="list-style-type: none"> Factory operation (Jan. 2009) CPE first-time shipment (Mar. 2009) MHE first-time shipment (May. 2009) 	<ul style="list-style-type: none"> General completion ceremony (May 15. 2009) Port construction finished (Apr. 2009) Employee Apartment (Dec. 2009) Boiler first-time shipment (Sep. 2009) HRSFG first-time shipment (Nov. 2009) Fresh water evaporator first-time shipment (Nov. 2009)
				<ul style="list-style-type: none"> Won an order for Mong Duong power station in Vietnam (Dec. 2010) Partnership with localization of power generating (Dec. 2010)

Major financial achievements of Doosan Vina



In 2012, Doosan Vina recorded two hundred million dollars in sales, with a total of 3,500 employees, including its direct hires, partners and other human resources. The goods produced at Doosan Vina have been shipped to 80 overseas markets and accounts for nearly 50% of the exports in Quang Ngai province where Doosan Vina is currently located.

Products from Doosan Vina

Product	Product Description
BOILER	One of the core roles of a coal-fired electrical power plant is to generate electricity by combusting the fossil fuels such as coals, followed by creating steam of high temperature and high pressure.
HRSFG	One of the core facilities of a combined cycle power plant is to produce steam of high temperature and high pressure after collecting the heat energy emitted from running the gas turbine.
MHS	RMQC/RTGC : Container shipping/unloading/moving facility Steel Structure : Thermoelectric power plant boiler/turbine steel structure and steel structure for Plant equipment
Evaporator	One of the core facilities of a desalination plant is to produce steam by heating the seawater, followed by concentrating the steam to produce drinking water.
CPE	This is an airtight container that has fluid inside, which is of a pressure higher than the air pressure. Examples include pressure vessels, tanks and heat exchangers, which are needed in oil refinery plants, gas processing plants and power plants.

CSR at Doosan Vina

Doosan Heavy Industries & Construction has made contributions to boost the diplomatic relations between Korea and Vietnam by engaging in a variety of social contribution activities in Vietnam through its local production site in Vietnam. Doosan Vina has engaged in the CSR activities with the focus on Quang Ngai province where the company has been located since 2009, and for the past four years, it has engaged in medical volunteer services and made donations for desalination facilities installation, amounting to US\$3 million in total. The many social contribution activities carried out by Doosan Vina also served as a momentum for invigorating the local economy, an achievement for which Doosan Vina received the "CSR Grand Prize" from Vietnam's Ministry of Planning and Investment, as well as "Best Volunteer of the Month" award for the overseas volunteer section in 2011.

CSR in Doosan Vina



(unit: USD)

Details of activities	Major achievements	Costs involved in execution
Donation of desalination facilities	<ul style="list-style-type: none"> Donated RO facilities to Anh Binh Island and Ly Son District Two RO facilities (produces 200 tons of drinking water daily) Improved economic conditions, as well as contribute to the protection of the land 	1,000,000
Medical services (consultation & treatment)	<ul style="list-style-type: none"> 8,200 residents on Ly Son Island as well as in the vicinity of Quang Ngai Medical subjects: Internal medicine, Surgery, and Dentistry 	
Medical services (surgeries)	<ul style="list-style-type: none"> Provided surgery for cleft lip and palate patients: 53 persons (including 10 for whom surgery was jointly pursued with the MBC) They were invited to Korea and they also received the surgery locally Surgeries for cataract patients: 19 persons 	512,000
Donation of medical instruments	<ul style="list-style-type: none"> Donated cataract surgery instruments & rehabilitation physiotherapy equipment 	120,000
Donation of nutrients for children	<ul style="list-style-type: none"> Donated essential nutrients for children who suffered from nutritional deficiencies in Quang Ngai province. 	185,200
Supporting the youth in Vietnam by sponsoring soccer	<ul style="list-style-type: none"> Sponsored the first Park Ji-Sung Charity Soccer Cup in 2011. 	1,000,000
Improving the environments of primary schools	<ul style="list-style-type: none"> Improved the learning environment of the primary schools in the vicinity of the company 	15,000
Scholarship to excellent college students	<ul style="list-style-type: none"> Delivered scholarships to students from excellent universities in Vietnam 	200,000
Supporting the Quang Nam Central General Hospital with its operations	<ul style="list-style-type: none"> Jointly with KOICA, implemented the Q Health Program Supported the advancement and be stable in the medical services Planning to implement the program for five years 	2,500,000
TOTAL		5,532,200

The EHS management system of Doosan Vina

Through the ISO14001 and OHSAS 18001 system, the entire EHS process, from the product planning to research, manufacturing and services, is managed. In addition, to improve the entire EHS system, Doosan Vina seeks to enhance its management capacity by hiring domestic EHS specialists.





•Providing An Binh Island with seawater desalination equipment

Doosan Vina signed an MOU to make a donation of seawater desalination equipment to Quang Ngai and An Binh islands in August 2011, and held the groundbreaking ceremony for the seawater desalination on An Binh Island in May 2012. With no indigenous sources of water and no electricity, the residents of the remote An Binh Island have relied on rain for water for centuries and have never even dreamed about having electrical power. However Doosan Vina's world-leading desalination technology has allowed over 500 residents in more than a hundred households to drinking the cleanest water in all of Vietnam, finally fulfilling the dream of fresh water that had gone unfulfilled for centuries. The Vietnamese government regards Doosan's donation of the An Binh Island plant not only as providing vital support for improving economic conditions but as a key project that is closely linked to Vietnam's territorial and national security issues. The An Binh plant is regarded by the government of Vietnam as one of the best 50 examples of a foreign company carrying out social responsibility activities in the country.

•Medical Services

Since 2009, Doosan Vina and Chung-Ang University are working closely together to give a medical service such as pediatrics, internal medicine, dental clinic, and geriatric disease to local residents in Quang Ngai province in Vietnam. They are engaged in medical service activities, regularly inviting Cleft Palate and Cardiology patients in the Quang Ngai province in Vietnam to Korea for free surgeries. Doosan Vina and the medical center at Chung-Ang University engage in medical services by dispatching a medical service group to Quang Ngai province every summer in addition to the surgery supports, resulting in about 8,200 local residents receiving medical benefits and surgery for cleft lip and cataract counting 72 people. Besides that, the company makes a huge donation such as cataract surgery device, rehab device and physical treatment equipment, and all kind of medicines and vitamins to local hospitals in Quang Ngai province. Moreover, in 2012, the company makes a consortium of KOICA/Doosan Heavy Industries & Construction/Doosan Vina named as 'Q Health Program' which is hospital total consulting pledged to provide US\$5 million in support for 5 years to Quang Nam hospital in Quang Nam.

•Scholarships

Doosan Vina has also been actively engaging in Scholarship projects. Every year Doosan Vina has been providing funding and establishing scholarships for Vietnam's top public engineering colleges since 2008, and has contributed scholarships as a part of the financial aid project for the Korean language department of overseas colleges' to four colleges where the Korean language department is opened, including the Humanities and Social Sciences college of Ho Chi Minh University. It also has delivered US\$200,000 worth of scholarships to the students at nine colleges across the country.

•Activities of the Social Volunteer Corps involving local employees in Vietnam

The officers and employees of Doosan Vina organized a social volunteer corps to make contributions toward raising the quality of life of the local people in Vietnam. The Doosan Vina Social Volunteer Corps where all the officers and employees of the company are participating has been actively engaging in contribution activities, including renovating housing of the local residents and supporting restoration of distressed areas, along with the renovating activities of the nearby primary school's facilities and donating books.

Proud Global Doosan

The Doosan Way - Our story, Our vision.



The Doosan Way is our unique way of doing business and the philosophy and culture that will guide us to become a “Proud Global Doosan”. In order to lay the foundation for an even greater legacy in the future, we have identified and reinforced the corporate values that have served as the primary drivers of the Doosan Group’s unprecedented success over the past 100 years and are now instilling them as the Doosan Way in our 40,000-strong global family. As part of a global business group active on the world stage, our growth cannot be sustained if our people’s thinking and conduct are based upon different sets of values. Only by embracing a common set of corporate values that span the diversity of our nationalities and backgrounds will we be able to continue growing and become a truly global leader. A corporation finds deeper meaning and value to its existence when each and every employee finds meaning in their lives and continues to grow within the organization. This is the path the Doosan Way pursues.

Doosan Way Workshop foster open communication and consensus

Between May 7 and 9, 2012, the Doosan Group held a three-day Doosan Way Workshop for leaders from across the entire Doosan Group, including CEOs from all Doosan subsidiaries as well as business group and division heads. This global gathering of Doosan leaders was an opportunity to come together to understand and foster consensus for the Doosan Way and take the first step toward its successful dissemination across the group.

In his opening speech at the workshop, Doosan Group Chairman Yongmaan Park stressed, “Over the next few years, instilling the Doosan Way through all our efforts must be our top priority. This is not something that will happen through the efforts of a few. It will require a tremendous sense of calling, responsibility, and unity from each leader gathered here.” This was just the first of 77 workshops held in Korea and overseas in 2012, including workshops for executives in June, team leaders in August and September, and team members and technical staff during the remainder of the year.

One of the unique aspects of the Doosan Way Workshops was the use of discussion and participation to foster understanding and consensus. The “Chat with the CEO” session in particular was a truly open forum with its amphitheater-style circular seating setup reminiscent of a Greek agora, allowing participants to freely exchange and listen to opinions on the Doosan Way. In addition to the workshops, a number of townhall meetings were held to communicate and solicit feedback from as many employees as possible. Chairman Yongmaan Park and Vice Chairman Geewon Park visited a number of Doosan worksites both in Korea and abroad for these townhall meetings, including ones held at the Ras Al Khair and Rabigh 2 project sites in Saudi Arabia in March 2013.

The Components of the Doosan Way

The Doosan Way consists of four core components. First is the ‘the Doosan Credo’, which reflects the core values Doosan aspires to. Next is ‘Doosan People’, who practice those values each and every day. The final two are ‘Strong Competitive Edge’, followed by ‘Advanced Processes and Systems’.

The Credo is a charter that reflects Doosan’s core values, the standard by which all business activities and decision-making is conducted. Doosan People live the Credo and share six distinctive traits. They have limitless aspirations. They cultivate people with genuine care. They practice Inhwa or teamwork. They seek open communication. They have tenacity and drive. And they prioritize and focus on the things that matter most.

A foundation that supports and fosters individual growth is essential to achieve the Doosan Way and ensure the ongoing cultivation of Doosan people. The cornerstones of this foundation for growth are a strong competitive edge and advanced processes and systems.



Building a strong competitive edge and advanced processes and systems

In order to achieve the Doosan Way and continually foster the growth of Doosan people, it’s essential to secure a strong, fundamental competitive edge in products and technologies unaffected by market circumstance or competition. At the same time, it’s also essential to foster talent by taking an advanced, scientific approach to our work processes and systems. At Doosan Heavy Industries & Construction, our core approach to internalizing the Doosan Way centers on internalizing these principles both in the core operations of each organizational unit as well as in individual and team conduct.

Internalizing the Doosan Way in our operations requires us to strengthen our ability to execute existing technical development projects and innovation initiatives as well as transform the way we work and do business to bring it in harmony with the Doosan Way. Toward this end, we have launched a pilot agenda initiative to give leaders and staff the opportunity to frankly evaluate work processes, build a clear consensus on the issues and areas in existing processes that need change, and successfully put them into practice.

Internalizing the Doosan Way in individual and team conduct is being done through two major initiatives: “Proud You & I” and “Team Vision Workshop II”. The former initiative aims to foster an organizational culture that encourages the practice of Doosan traits in daily life and taking a genuine interest in others. We encourage our people to identify and praise these traits in each other as well as model them in their own lives. The latter initiative aims to formulate team-specific codes of conduct for putting the Credo into practice in the course of daily work. We aim to build on these team codes of conduct to create a company-wide code of conduct that each employee will practice in the workplace.

Doosan Way Time & WHY Campaign

Beginning in May 2012, the Doosan family rapidly formed an understanding and consensus about the core values of the Doosan Credo and the essential traits of Doosan people through the Doosan Way Workshops. In 2013, we launched a variety of efforts to internalize the Doosan Way in both work and conduct. The “Doosan Way Time” meeting and “WHY” campaign are the two primary initiatives launched to accelerate the internalization process.

The Doosan Way Time is a meeting held at the executive or team level at regular intervals depending on the organizational situation that provides a forum for discussion or sharing success stories that link the Doosan Way and work. The success stories shared at the meetings range from small but meaningful individual work accomplishments to major orders, technical developments, and other significant organizational achievements.

The Why campaign is designed to establish an environment for open communication and prevent breaks in communication caused by rigid organizational cultures as well as the inefficiencies that arise from those breaks. The campaign encourages a three-stage communication method—think, explain, and ask “why”. By encouraging people to work through and implement work objectives and communication methods together, the campaign aims to transform communications across the entire range of work processes encompassing work instructions, meetings, information sharing and requests, reporting, and feedback.



Developing the world's first integrated monitoring and control system for thermal power plants

The Doosan Way turns the “impossible” into a “world first”

Late spring, 2007

At the time, it was extremely rare to find a case where domestically-developed instrumentation and control technology was in use in power plant control systems in Korea, a situation that led to significant operating inconveniences and inefficiencies. Motivated by concerns about decades of continuing technical dependence, the Korean government had announced a national project to develop core technologies in the field of power generation. One of the projects was to develop an integrated monitoring and control system for thermal power plants. This was unlikely to be an opportunity that would come again since it would be virtually impossible to adopt an unproven new solution - no matter how exceptional - in an area so fundamental to the national infrastructure as power plants. Although our researchers had no prior experience in replacing the entire control system used in Korea's standard 500 MW thermal power plant design, they did have one pointed question: “Why does the equipment we build need to be operated with control systems from overseas firms?” Spurred by a conviction that the task was definitely achievable and a realization that this would likely be our last and best shot, we set out to develop the world's first single-platform integrated monitoring and control system. While the challenge appeared slightly ill-advised and unfeasible at the outset with a development team of just 12, we rose above the intense competition to win the project tender. Although we had achieved our initial objective, there was no model that we could benchmark, and we lacked both the personnel and budget needed for development. We also had to overcome other obstacles, ranging from a lack of confidence in our capabilities by our own project partners, to pessimism and presumptions about our prospects for success by others.

October 4, 2011

Having weathered the challenges, the day we would unveil the prototype of Korea's - and the world's - first integrated monitoring and control system for thermal power plants finally arrived. However, we weren't finished yet. At the request of client Korea Western Power, we set a target of completing the removal of the existing control system as well as the installation and commissioning of the new system in just 63 days, a full week earlier than the already challenging original 70-day schedule. Trimming a week from the project schedule meant there was zero room for error. Beyond meticulous preparation, it would require close communication and collaboration with the client. Above that, it would require proactive teamwork and the full support of the EPC, Boiler, and Turbine Generator business groups. Ultimately, we were able to complete the project in just 60 days, beating our target by three days.

November 27, 2012

All the time and hard work we had poured into achieving technical independence in control systems for Korea's power plant industry finally brought us to the final stage of verification. On this day, client Korea Western Power's words of praise for us included “Doosan is the only company capable of building power plants and flawlessly passing verification in all respects” and “The performance exceeds our expectations.” This successful localization of an integrated monitoring and control system for thermal power plants is also the world's first to provide a single-platform solution capable of fully supporting the functionality of all the traditionally independent systems used to control boiler, turbine, generator, and other key plant systems.

Over the past 2,000-some days as we progressed from a blank sheet through a step-by-step process, the growth that has followed is a feat that was hard not only for others to believe, but ourselves as well. And in our story, we find the Doosan Way at work, from the pursuit of world-class technology and innovation by understanding customer needs and delivering value that is superior to our competitors, to risk-taking that mitigates risk through reliability verification, to tenacity and drive that utilize all possible resources, regardless of their origin, either internal or external to solve fundamental issues.

Today, our integrated monitoring and control system is handling operations at Taean Thermal Power Plant Unit 1, a plant we originally supplied equipment to some two decades ago. It's been extremely satisfying and gratifying to play a part in ushering in an era where the facilities we build are operated by our control systems.

Jung Hae-won, Staff R&PD Manager, Corporate R&D Institute



CSR Pillar 1

Empowering People

Dimension 1. Creative Organizational Culture

Dimension 2. Safe working environment

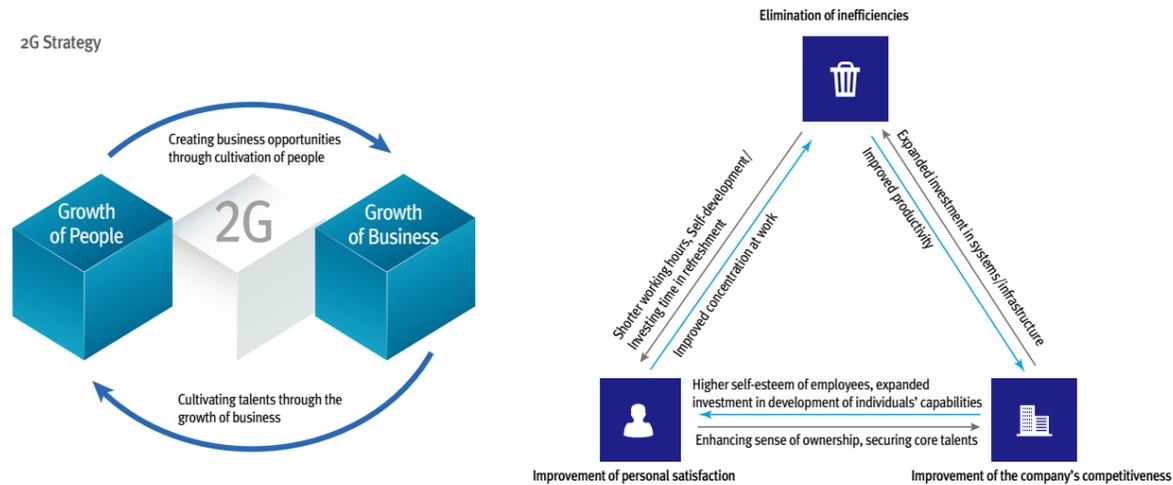
Doosan Heavy Industries & Construction puts people first in all the stages of its management. In order to help its employees show their full potential and help them work in safer environments, Doosan Heavy Industries & Construction spares no efforts at all. Doosan Heavy Industries & Construction pledges to do its utmost to provide them with “the best and the most favorable workplace” by ensuring an impartial corporate culture, and a safe and productive working environment.



CSR Dimension 1 Creative Organizational Culture

[Approach]

Based on our belief that “People are our greatest asset and essential to achieving our dreams,” Doosan Heavy Industries and Construction has adopted the 2G strategy, which is based on a virtuous cycle linking the “Growth of business” with the “Growth of people.” As it became evident how important the support of individual employees’ growth is for the growth of business, we have made ceaseless, focused efforts since 2011 to build an organizational culture where individuals and the company can grow together by striking a healthy balance between work and life.



[2012 Results]

- Cultivation of experts by field and establishment of a systematic job rotation system reflecting individuals' wishes
- Operation of a variety of competency development programs such as management programs and functional competency programs
- Offered more training opportunities to overseas site workers and overseas assignees
- Converted contract workers to permanent employees
- Established and operated training programs for technical staff in alignment with career path
- Operation of training programs designed to embed the Doosan Way
- Shifted to a function-oriented structure to cultivate experts
- Introduction of a system for developing functional competencies based on the functional competency development roadmap
- Full-fledged operation of the flexible work system at Water BG
- Introduction of a systematic system to cultivate next-generation leaders

[2013 Plan]

- Establishment of a systematic resource plan to secure and cultivate talents
- Implementation of functional competencies evaluation system and reflection into development plan
- Enhancement of back-up plans to systematically cultivate next-generation leaders
- Re-establishment of the global HR governance system to achieve Global One Doosan
- Expansion of management programs to all employees and development/implementation of functional competency programs for all functions
- More contract workers converted to permanent employees

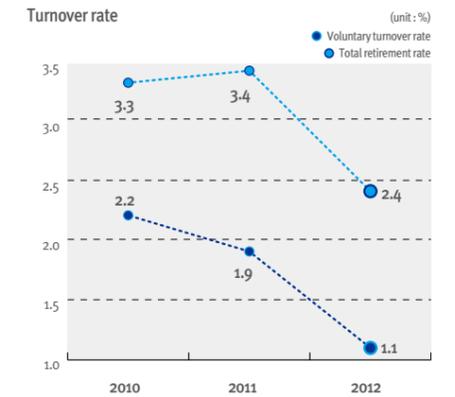
[Key Indicators]



Our People

Staff and Employees

The total number of employees in all the Korean and overseas locations of Doosan Heavy Industries & Construction is 20,004 people. Among these, the number of employees in Korean locations is 8,715 and among them the number of permanent employees is 7,270. The number of employees locally hired by overseas subsidiaries and corporations is 11,289. The average number of years worked for the company is 10.8 years, which is relatively longer than other companies in the industry. The turnover rate in 2012 stood at 1.1%, which is considerably lower than 19.4%, the turnover rate of the entire manufacturing sector, serving as evidence of employees' satisfaction with the company. There are 554 female employees in Korean locations, which accounts for 6.4% of the workforce, with male employees outnumbering female employees due to the nature of Doosan Heavy Industries & Construction's main business. The company, nevertheless, is continuously endeavoring to create a work environment and atmosphere that promotes a good work and life balance to recruit more female employees. The company also hires some contract employees due to the necessities of operating in an order-based industry, yet the company is giving opportunities for experienced contract employees with excellent capabilities to be converted into permanent employees on an ongoing basis. We plan to further expand the process to convert contract employees to permanent employees in the future, and to hire employees based on their competencies and capabilities.

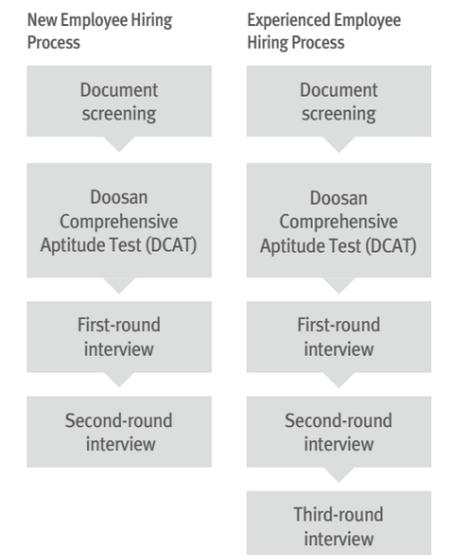


Creating Jobs

Doosan Heavy Industries & Construction prohibits discrimination based on educational background, age, gender, race or any other personal characteristics for hiring, employment, promotion, pay and benefits. In particular, when recruiting employees, the company does not require applicants to enter personal details of their families, as well as their academic grades, providing equal and impartial job opportunities based on competencies of applicants. Regarding Doosan Heavy Industries & Construction's new employee recruitment system, the internship program is characterized by a 90% conversion rate of interns into full-time employees, which is significantly higher than 60-70% of other companies. This is attributable to the company's systematic four-week internship program where interns improve their problem-solving skills by conducting projects to help them directly or indirectly learn business activities that are difficult to experience in university curriculums. After the internship is completed, interns are hired as new employees of Doosan Heavy Industries & Construction after undergoing final interviews. The company's internship program has dually positive effects in that it allows the company to secure talents in advance, while interns can acquire actual working experience and cultivate loyalty to the company, thereby reducing early turnover rate. In addition, Doosan Heavy Industries & Construction has signed MOUs on industry-academia partnership for talent cultivation and recruitment with meister high schools and specialized high schools such as Sudo Electric Technical High School, Busan Automotive High School and Changwon Mechanical Technical High School and opened the "Doosan Class" that offers customized education for high school seniors to provide technical education in 14 areas including welding, processing and quality, as well as on-the-job training during vacations. The company hires certain numbers of high school graduates who have completed the "Doosan Class" curriculum offered at technical high schools every year. Over the past two years, it has hired 62 such high school graduates. Meanwhile, Doosan Heavy Industries & Construction has also signed MOUs on industry-academia cooperation with junior colleges such as the Changwon Campus of Korea Polytechnic College VII, Changwon Moonsung University, Yeungjin College, and Inha Technical College to secure technical talents early and foster them, thereby contributing to the development of regional education and talent cultivation.

2012 Employment overview

Year	Office positions (New/Experienced)	Technical positions	Industry-Academy partnership	Internship	Disabled employees	National Merit recipients	Female employees
2010	352/225	126	8	-	1	15	39
2011	426/173	122	15	79	2	9	61
2012	271/135	97	7	90	5	11	28



Respect for the Rights of Employees

Doosan Heavy Industries & Construction creates a work environment in accordance with the company policy based on the entire cycle of hiring, employment and maintenance to help employees work in a continuously stable environment. The company complies with all internal and external regulations governing human rights and working conditions, strictly prohibiting child labor and forced labor in all business locations as per Labor Standards Act and the International Labor Organization (ILO) policies. The education standard for new employees is the junior college level and high school graduate employees are hired only after graduation to prevent the occurrence of child labor. In addition, collective agreements prevent employees from excessive or forced labor, and arbitrary transfers are also forbidden to make sure that employees are not moved or given work against their will, thereby protecting the rights of our employees.

Furthermore, we make sure that employees establish their short-term, mid-term and long-term career plans and communicate on them with their bosses on a regular basis to allow job rotation fully reflecting individual employees' wishes, thereby helping them to realize their vision. We also implemented the "Why Campaign" and built a culture of open communication where employees are encouraged to explain the purpose and key points of their work and freely communicate regarding areas they do not understand. This is designed to respect rights of employees by preventing unilateral, one-way communication.

In addition, Doosan Heavy Industries & Construction is striving to respect the various rights of employees institutionally and culturally. As part of these efforts, we provide institutional support to form a proper organizational culture and respect human rights of employees by conducting sexual harassment awareness education among all employees in accordance with the Act on Equal Employment and Support for Work-Family Reconciliation and offering grievance counseling services.

Labor-Management Partnership

In 2012, the management and labor union at Doosan Heavy Industries & Construction successfully concluded collective negotiations without any disputes for seven consecutive years. The negotiation period was also reduced realistically, reaffirming trust between labor and management. In addition, a labor-management partnership was declared in a ceremony in 2012 which was attended by the CEO, 20 executives and 2,000 employees. At the ceremony, labor and management pledged to make proactive efforts to establish a future-oriented labor-management culture of partnership based on trust and respect and become a company that fully fulfills its social responsibility in accordance with the labor-management partnership declaration.

In addition, Doosan Heavy Industries & Construction has formed a labor-management council which holds regular meetings quarterly and ad hoc meetings to promote welfare of employees, handle grievances, improve the EHS and other work environments and promote the health of workers. The labor-management council holds candid consultations on formally proposed agenda items, working to promote shared interests of labor and management. The council is attended by ten members each from labor and management. In 2012, the labor-management council accepted 162 cases and handled them during regular or ad hoc meetings.

In February 2013, Doosan Heavy Industries & Construction decided to transfer its heat recovery steam generator (HRSG) business worth 571.6 billion won to Doosan Engineering and Construction in the form of investment in kind to secure its business competitiveness. Concerning the business transfer, comprehensive succession of labor relations, pay & benefits and other working conditions were reaffirmed to prevent the occurrence of any disadvantages to employees concerned.



Labor-Management Partnership Declaration

After the business transfer was decided, the business transfer was notified to the union pursuant to the labor-management collective agreement and efforts were made to sufficiently negotiate working terms of employees concerned with the union. More specifically, briefing sessions for employees by sub-organizational units under the HRSG and office/technical positions were held and agreement was reached after labor-management negotiations on nine occasions.

Benefits

Doosan Heavy Industries & Construction offers a wide range of benefit programs to ensure convenience for employees. In order to support both the workplace and the home, the company has established nursing rooms and rest areas for pregnant employees at its Seoul and Changwon locations. In 2012, we opened the "Future Tree Childcare Center" in Seoul and Changwon to reduce employees' burden of childcare. At the same time, the company provides support to employees' children so that they can receive a wide range of education curriculum, receiving favorable responses from employees.

Meanwhile, Doosan Group launched company support for backpacking trips in 1995 to help employees build a global mindset by experiencing different cultures around the world and motivate them to learn foreign languages. In 2012, as many as 244 employees were given opportunities for backpacking trips to experience foreign cultures and refresh themselves. So far, a total of 1,129 employees have enjoyed the backpacking trip benefit. In addition, the company introduced a retirement pension system to provide retirees with later-life stability and currently all employees are subscribed to the pension scheme. Top employees who are slated for retirement are also given opportunities to sign up for up to three additional years of work. Furthermore, the company seeks to handle grievances in a smooth manner by offering communication channels such as meetings and a grievance handling committee that listens to grievances of employees and effectively handles them.

Doosan Heavy Industries & Construction allows employees to use summer vacations for two consecutive weeks and year-end vacation for a week to encourage them to spend time with families through travel and leisure activities and have time to refresh themselves for better work productivity. This initiative has entered the establishment phase, earning great satisfaction among employees. Meanwhile, Doosan Heavy Industries & Construction offers a total funeral service package for the bereaved involving funeral directors, funeral home supplies, and hearses for funeral services for immediate family members of employees including dispatched employees. This system, which is one of the company's unique employee benefit policy, helps employees conduct funeral services without any procedural burden, receiving very positive feedback from employees.

In addition, given the fact that 800 employees, who comprise more than 10% of the company's total workforce in Korea, work at overseas worksites, Doosan Heavy Industries & Construction launched the "Family DOO" program that supports families of employees deployed overseas and their families in 2011 for the first time in Korea. In 2012, the company offered a wide range of programs, including English camps for children of employees deployed overseas, invitations to family members to overseas worksites, life consulting and counseling services and family volunteer service corps activities, which were attended by 2,576 employees and their families.

In particular, 74 employees in 2012 participated in the "Family to Site" program, through which families of employees are invited to overseas worksites to spend holidays together with employees. The program institutionally supports employees in not only spending valuable quality time with their families at overseas worksites, but also offers great opportunities to their children to experience foreign cultures, thereby reducing stress caused by working overseas and consolidating bonds among family members.



Future Tree Day care center



Children of staff at the English Summer Camp



Shuttle bus for Seoul-Changwon round trip 4-times a day



Telepresence facilities installed in Seoul, Changwon, England, and Czech Republic

Meanwhile, we make continuous efforts to provide an optimal working environment. As part of these efforts, we offer a call service 24 hours a day for the first time in Korea to enable employees to communicate with their families in the event of emergencies in order to give employees working overseas peace of mind and a sense of stability. In addition, Doosan Heavy Industries & Construction offers a real estate consulting service and legal counseling service for employees who are transferred to different business locations in Korea. By doing so, the company aims to minimize difficulties and inconveniences experienced by employees due to changes in the work environment and help them adapt to a new environment in a more convenient and safer manner. We collect diverse opinions and update the system on a regular basis to establish policy that places the top priority on safety and convenience of employees.

In addition the company provides real estate consulting services and legal aid for employees who frequently relocate between job locations within Korea to help them better adjust to new working environments and minimize the impact of their relocation. Telepresence systems in locations in Korea and abroad minimize the need for business trip for short conferences for employees working in Korea as well as the United Kingdom and the Czech Republic as well as improve face-to-face communication that boost overall work efficiency. Shuttle buses running between Seoul and Changwon provides a door-to-door service for employees in either location. These and other measures are a part of Doosan Heavy Industries & Construction's efforts to put the safety and convenience of its employees first, and feedback from employees are used to continuously upgrade and augment these measures.

Major benefits

Benefits	Description
Leisure	Summer vacation, Year-end vacation, Refreshment vacation, Congratulations/Condolences leave, Support for overseas backpacking trips, Condominiums, Club activities, etc.
Housing and finances	Housing and dormitories for employees who do not own housing or are single, low-rate loans
Childcare	Dormitory for the Seoul region (for children of employees who attend colleges in Seoul), company childcare facilities, scholarships and financial support
Transportation	Commuting bus, Transportation stipend given to work locations adjacent to subway stations
Total funeral service	A total funeral service package is provided for the bereaved
Education and self-development	Training centers and technology education centers, Educational institutions at home and abroad, Universities, Corporate training, Cyber education programs, Company welfare center, Doosan Academy
Medical and health	Financial support for surgeries, Physical examinations, Group insurance and saving insurance, Company clinic and physical therapy facility, Flu and H1N1 vaccinations, Healthcare program
Counseling	Real estate advice, Grievance counseling service
Others	Long service awards, Uniforms, Gifts (Lunar New Year's Day, Chuseok, foundation day), Sports festival by department, Learning aid books for children of employees, English camps for children of employees, Shuttle bus service, Doosan Festival, Doosan family theater, Cultural festival, Concerts, etc.



March 10, 2012. General Manager Park Do-won and his family: Family to Site Program-At the Sphinx in Egypt

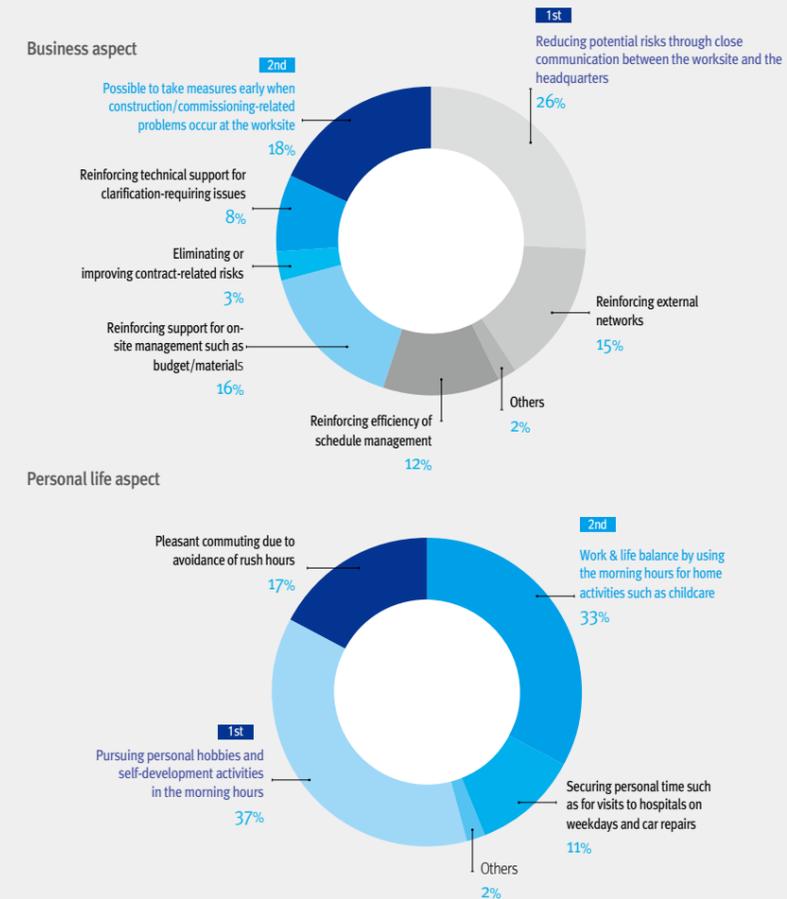


In front of dormitory in Changwon

[A case study of the flexible work system]

〈Water BG implements the flexible work system〉

Doosan Heavy Industries & Construction has introduced a flexible work system to help employees pursue a good balance between work and life. The flexible work system was adopted in 2012 for the 359 Water BG employees in the Seoul office. The 41 units were allowed to select working hours of either 8a.m.-5p.m. or 10a.m.-7p.m. to flexibly adjust their time to come to and leave office. The system earned a high satisfaction rate of 92%. It earned a particularly positive response from units that have a lot of communication and contact with overseas worksites in that it can facilitate speedy and convenient communication by reducing time difference from the overseas worksites and measures can be taken early when problems occur at overseas worksites. On the other hand, a number of employees expressed opinions that the flexible work system is helpful in terms of improving the quality of life in that morning hours can be invested in childcare and self-development. As indicated above, based on the degree of employee satisfaction and opinions, Doosan Heavy Industries & Construction pursues a harmonious balance between work and life by adopting the flexible work system and the concentrated work systems in order to boost work efficiency and seek work and life balance.



Big Opportunity

Human Resource Development

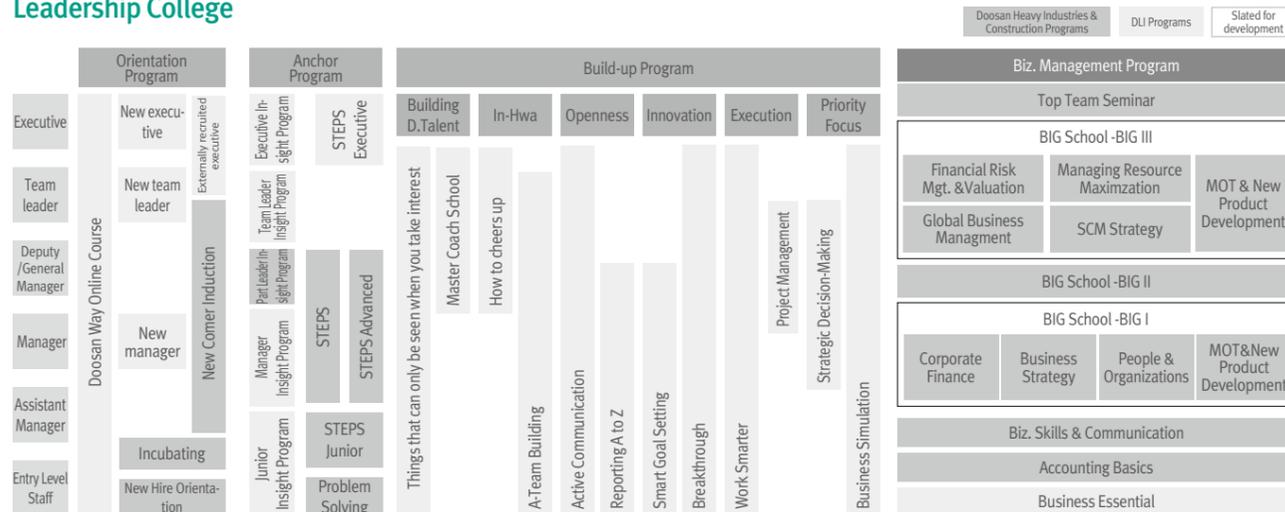
At Doosan Heavy Industries & Construction, we believe that sustainable results can only be achieved through the right people and their growth. Therefore, human resource development comes before any other investment and providing unsparing support to human resources is a key obligation of Doosan Heavy Industries & Construction. This means that all employees are entitled to human resource development and at the same time they are the key players who have the responsibility for developing their skills and talents. Reflecting this belief, the company's human resource development philosophy is based on "growth of all employees," not "selection and concentration" which centers on fostering a few leaders. In order to internalize the philosophy, we have set the strategy directions as internalization and dissemination of the traits required of Doosan People, expansion of opportunities for development of all employees, and realization of human resource development through practical work experience.

In order to internalize and disseminate the traits required of Doosan People, the company conducts leadership programs designed to implement the Doosan Way not only in Korea, but also at overseas business locations. In addition, a systematic training program by function and positions in consideration of individual development roadmaps is offered on an ongoing basis to expand opportunities for development of all employees. In an effort to develop human resources through practical work experience, the company has reinforced OJT (On the Job Training) and learning activities, laying the groundwork for employees to grow into experts with core competitiveness.

Doosan Heavy Industries & Construction's training program is comprised of the "Leadership College" and "Professional College." The company has developed and implemented systematic education programs by position, offered in accordance with the growth phase of individual employees.

The Leadership College has the goal of cultivating leaders who have internalized the Doosan Way and consists of four programs, including the Orientation Program, the Anchor Program, the Build-up Program, and the Business Management Program. The curriculum consists of training programs devised to fulfill the objectives of each position, ranging from various incubation programs, such as orientation programs for new hires and basic functional competency development programs for BGs, the STEPS program which aims at improving strategic problem-solving capabilities, as well as BIG School I, II, III, Doosan's internal MBA program, which are designed to improve employees' business management capabilities. In addition, the company plans to offer various "Build-up" programs to address the development needs identified for the employees through the DCM assessment.

Leadership College



Next, the Professional College aims to cultivate experts with core competitiveness and consists of five programs, including the Foundation Program, the Expert Program, the Faculty Program, the Global Program, and the Essential Program. It also offers a systematic curriculum by position. Its major curriculum consists of training programs that suit the development goals by position, including the Business Products & Introduction (BPI) that aims to offer basic knowledge on the company's products and businesses, the Before the Job Training (BJT) that helps employees acquire a basic understanding of the company's value chains, and various academies that aim to improve the professional capabilities of all functions by position, such as the Procurement Academy, the PM Academy, and the Quality Academy. In an effort to facilitate smooth communication between business majors and engineering majors, the company conducts the Engineering for Commercial program for business major employees to help them acquire basic knowledge on engineering, and plans to offer the Economics for Engineers program to engineering major employees to help them obtain basic knowledge on economics.

In addition, Doosan Heavy Industries & Construction offers programs designed to improve global capabilities such as Intensive English courses, as well as education on information security, fair trade, EHS and IP to make it possible to create value through integrity and transparency, the values emphasized by the Doosan Way.

In order to ensure that employees receive education in a comfortable and pleasant environment, Doosan Heavy Industries & Construction opened a learning center in Seoul, while remodeling the existing learning center in Changwon, improving the value and quality of the education environment. In addition, we created an environment to realize the so-called "paperless education," allowing employees to easily review the education content anywhere, anytime through tablet PCs. The paperless education not only boosts the educational effects, but also reduces waste generated by printed education materials, thereby contributing to the creation of an advanced and scientific education environment.



Learning Center in Changwon, Seoul



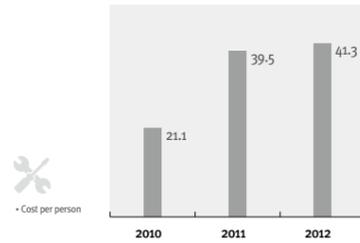
Paperless education

Professional College

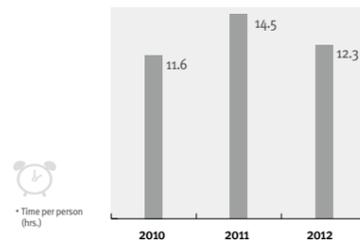


1) BPI : Business&Products Introduction, 2) BJT : Before the job Training, 3)EFC : Engineering for Commercial, 4) Economics for Engineer, 5)PI/ERP : Process Innovation/Enterprise Resources Planning, 6)IP : Intellectual Property, 7)DCM : Doosan Competency Model

Education cost for technical staff



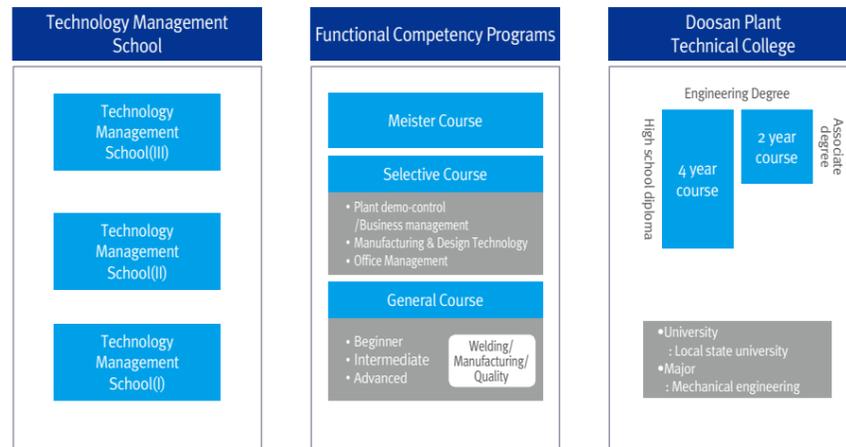
Education hours for technical staff



In case of technical employees, the company pays attention to upholding their honor, improving their environment and strengthening their capabilities, which has been pursued by implementing "Technical Staff Personnel System" in 2011. As a result, the technical positions were aligned with that of the office staff, which helped to instill pride among the technical staff.

Technical Staff Training Programs consists of three main courses, which are Leadership & Management Programs(Technology Management School), Functional Competency Programs, and the Doosan Plant Technical College. First, the Leadership & Management Programs(Technology Management School) are composed of leadership development for production sites, production/technology management, and development of problem solving skills. This course was initially offered to a small select number of employees, but now it is open to all employees. Second the Functional Competency Program consists of subjects like welding, manufacturing, and quality, which are subjects that cover over 65% of technical staff. This course is focused on strengthening the fundamental competitiveness of the company and motivating employees to pursue technical development. Finally, Doosan Plant Technical College, a course offered in connection with a local state university, aims at employees' self-development and meeting growth needs to help technical staff acquire a degree. The company offers appropriate training programs to employees at the right time, so that they can grow to become responsible qualified employees at the workplace.

Technical Staff Training Program



Doosan Heavy Industries & Construction conducts a DCM assessment (capability assessment) and an MBO assessment (performance assessment) based on the traits required of Doosan People. Compensation is determined by competency and performance with a salary and reward system determined through annual competency and performance evaluations. A standardized performance evaluation process is also applied to technical personnel through performance evaluation, competency evaluation and attitude evaluation. In 2012, the company revamped the performance-based compensation system for technical staff, raising performance-based pay by 30% following the surpassing of the operating income target.

The evaluation process is conducted in a fast and accurate manner through the computerization system. It is translated into different languages and the same evaluation standards based on Doosan's philosophy are applied to all locations to ensure impartial evaluation. Prior to evaluation, a one-on-one meeting is held between the assessor and assessee to discuss the individual's performance, competency and development plan results, thereby preventing any unilateral evaluation. After the evaluation, a one-on-one meeting is held between the assessor and assessee to provide appropriate feedback and establish and implement a development plan reflecting the results. This is designed to ensure that the evaluation does not end as a one-time event, but is reflected and linked to the development process. Moreover, in order to prevent making judgements of people by evaluation results and their rank/grade, the company sought to improve the evaluation process by adopting a no-scoring policy and this resulted in a stronger alignment between employee evaluation and development.

As such, Doosan Heavy Industries & Construction adopted a compensation system based on competencies of individuals by reflecting results of evaluations that are performed in a fair and transparent fashion and guarantees the best compensation package in Korea to top employees, securing compensation competitiveness in the industry. The company plans to maintain the nation's top compensation package to attract top talents. Promotions are carried out once a year and the company operates an impartial and objective promotion process. Under the process, candidates are selected based on individual competency assessment, performance evaluations, and other scores for aptitude in foreign languages and accounting. And then, in-depth discussions are held at the sessions and the decision is made on who the final candidates are for promotions.

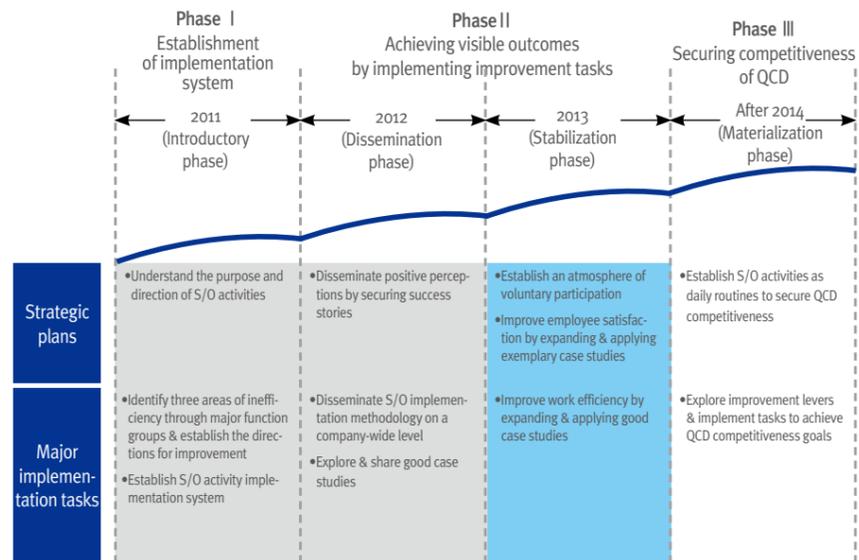


HR evaluation session in 2012

Smart Office

Since 2011, Doosan Heavy Industries and Construction has been carrying out Smart Office activities that aim to pursue individual and corporate growth through “work & life balance.” Smart Office activities refer to activities that eliminate inefficiencies in work processes, and the saved work hours are instead invested in the employee’s personal development and rest, enhancing work efficiency and improving employee satisfaction. This ultimately boosts the fundamental competitiveness of the company.

Mid- to-long-term Smart Office roadmap



Smart Office Implementation Framework

Three types of inefficiency at Doosan Heavy Industries & Construction have been identified through work diagnosis utilizing a tool called “ABA (Activity Based Analysis)” by major functions. At the same time, employee satisfaction surveys have been conducted to identify major causes of employee dissatisfaction. In order to address issues identified, four axes have been established under which seven activities are carried out to boost personal satisfaction and enhance corporate competitiveness. In the implementation process, a system led by the business is in place to secure execution power, while achievements are monitored by conducting employee satisfaction surveys and defining competitiveness indexes.

The Current Status of the Smart Office Initiative

Smart Office Activity Framework and Key Case Studies

	Action Initiative	Description
Capability advancement	Individual work capability development	• Establish & implement work capability development roadmap
	Excellence of organizational capability	• Establish & implement ways to promote work advancement from Process/System/Organization perspectives to promote organizational capability excellence
Improvement of the ways work is done	Elimination of inefficiency issues	• Eliminate waste of three types of inefficiency, including rework, customary work execution, & low-value work
	Smart Work	• Share & utilize know-how on individuals' tasks through Smart Work
Improvement of policy/personnel operation	Reestablishment of policies/regulations/ systems	• Perform work efficiently by improving policies, internal regulations, & personnel system
Improvement of working environment/ infrastructure	Establishment of IT infrastructure	<ul style="list-style-type: none"> Improve IT infrastructure to overcome time/spatial limitations Introduction of Telepresence & VDI, support for mobile working
	Work space	<ul style="list-style-type: none"> Improve work environment to enhance employee satisfaction Build space for creative work & relaxation at the Technology Research Institute



A flag for smart workers

Capability Advancement

• Individual work capability development

Departing from the traditional capability transfer method, Doosan Heavy Industries & Construction evaluates work-capability levels of individuals and establishes/operates a systematic capability development road map, thereby helping its employees improve their capabilities as soon as possible. The company focuses on establishing/implementing systematic capability cultivation programs that are linked with work based on individually customized road maps, while regularly offering feedback on implementation results to boost execution power. Meanwhile, more emphasis is placed on the importance of work capability development, as it is a practical means of “fostering talents” based on the Doosan Way.

• Excellence of organizational capability

Doosan Heavy Industries & Construction has formulated plans on advancing organizational capability from the perspectives of process, system and organization. Currently, initiatives such as Doosan Procurement Excellence (DPE), EPC-Works, and Doosan Quality Excellence (DQE) are under way.

Improvement of the way work is done

• Elimination of inefficiency issues

Doosan Heavy Industries & Construction is eliminating three types of inefficiencies, which include rework, customary work execution and low-value work through bottom-up, voluntary activities to eradicate inefficiency. The company is rectifying inefficiency in individuals' work by simplifying the document review process through utilization of Excel functions, while exploring and improving inefficiency issues between organizations to enhance inter-organizational collaboration.

• Smart Work

Smart Work is designed to perform tasks in an easier, faster and more accurate manner. It refers to sharing individuals' work know-how by posting it on the internal portal bulletin. Successful implementations are selected for recognition and reward each month.

• Improvement of policy/personnel operation

With regard to matters related to policies, internal regulations and personnel system that require company-wide approach among bottom-up issues, the Operational Excellence Division takes the lead in making improvements in the areas concerned.

Core-time working system	A working system designed to increase employees' level of immersion by allowing them to concentrate on their work during the designated time
Flexible working system	A working system designed to enhance work collaboration between the headquarters and on-site locations by operating working groups that start work at 8a.m. and 10a.m., respectively, in consideration of working hours of overseas construction sites.
Modification of approval authority	Approval standards are modified to reduce waiting time for work report and approval.
Part leader system	A system designed to ensure efficient team operation and lay the groundwork for fostering development of junior personnel. Under the system, official position, evaluation and approval authority is given to the part leader.

•Improvement of Working environment/Infrastructure

Doosan Heavy Industries & Construction is working on providing a creative workplace and improving its IT infrastructure to provide an efficient working environment at their site. The company is also working on an ideal system buildup that can work with any device anywhere at anytime by VDI (Virtual Desktop Infrastructure) and creating a space for knowledge sharing and discussions at the Corporate R&D Institute.

Smart Office Communication

•Building consensus & common understanding of Smart Office

Explain Smart Office activities by organizing on-board sessions, the Operational Excellence Academy, and agent workshops, while listening to employees' opinions on Smart Office activities to reflect them in the corporate policy.

•Nominate / Award Excellent Cases

Best agent is selected each month and is awarded a prize to encourage implementation of Smart Office activities. Employees' opinions and ideas on Smart Office activities are shared through the internal Web portal community and good ideas are selected and awarded prizes. Sessions designed to share good case studies are organized by business units. Support will be given to help other organizations benchmark case studies of exemplary organizations.

Stakeholder Interview

BCG Partner Do-won Kim

According to OECD statistics, Korea's average working hours are longer than those of advanced countries by 30-40%, yet its labor productivity per hour is still found to be lacking, reaching merely about 50% of that of advanced countries. This indicates that Korea's economic development still relies on the diligence of its people. Doosan Heavy Industries and Construction would not have been an exception. However, improvements relating to creative productivity has become the trend of the time and employees have come to prefer companies where balance between work and life is ensured and personal capabilities and performance of the organization grow together.

Against this backdrop, Doosan Heavy Industries and Construction has introduced Smart Office, and employee perceptions and satisfaction regarding the initiative are found to be very positive. Most employees are well aware of the purpose of such activities and, most of all, they are proud of the authenticity of the top management's commitment to change and the leadership's attitude to take the initiative. Smart Office activities carry significance in two aspects. First, from the perspective of the company, they enhance competitiveness. Second, from the perspective of employees, they promote balance between work and life.

When the company boosts competitiveness and employees have greater satisfaction and loyalty toward the company, it ultimately leads to greater social contribution through sustainable growth, which is a fundamental goal of CSR. In essence, CSR aims to support society by companies achieving sustainable growth to create jobs and returning the wealth created to society. From this perspective, Smart Office activities are designed to create a virtuous cycle of CSR. I anticipate that the Smart Office activities of Doosan Heavy Industries and Construction will result in an enhanced work environment, improved employee satisfaction and, more importantly, fundamental corporate competitiveness, which will be unprecedented in Korea in the next few years.

[A case study on Smart Work]

〈Mr. Kim becomes a spearhead of data management with Excel programming〉

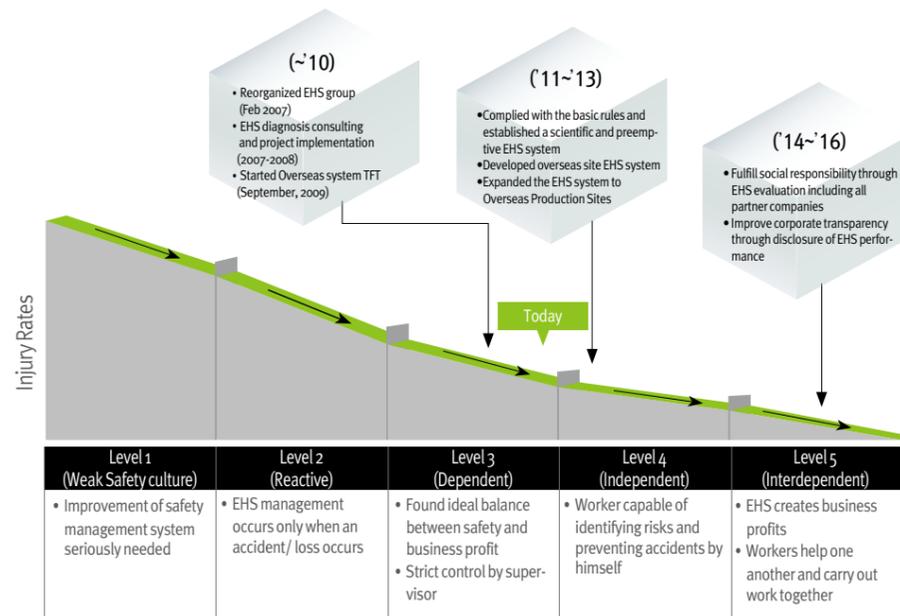
Assistant Manager Kim Jang-hwan, Instrumentation Control Design Team, EPC P/E Center

Anyone would have experience with the Excel program, starting with Excel sheets filled with data for hours on the computer monitor. The Instrumentation Control Team, in particular, has to manage thousands or tens of thousands of pieces of data. It is extremely important for the team to properly manage changing data, as the power station control system is created based on the data. However, when data go through modification several times, the drawings are colored with numerous highlighter colors and one or two errors may occur. In addition, as shortening delivery time has become one of the key elements of competitiveness of EPC projects and initial processes and later-stage processes have been increasingly combined, the amount of data whose content has been altered has become greater. A few employees who were fed up with the existing way of doing business where altered data had been managed manually came to believe that they can achieve work efficiency by reducing the time consumed in data management through computerization and spend more time in higher-value added tasks. We came up with an idea of importing CAD drawings into Excel by using location coordinates. The idea conceived the VBA Program Smart Navigator that compares data of each drawing on Excel and records the changed content and history on new sheets. Although it was not easy to study and apply computer programming languages which were new to us, we mobilized all available resources to find the solution, sometimes searching on the Internet and purchasing relevant study materials. Computerization of data management work has helped employees focus more on the major tasks of the team and fully mobilize their capabilities in control system design.

CSR Dimension 2 Safe Working Environment

[Approach]

Doosan Heavy Industries & Construction is committed to activities that enhance work environment safety, health and emergency management: By being proactive, taking preventive measures and assessing the risks, we ensure the safety of our staff at both our domestic and overseas sites. Our healthcare program is now expanded to include psychological and emotional care and this care extends to our overseas sites and partner companies, as well as our employees. To encourage preventive management, we provide emergency training to both the plants and other departments to minimize the occurrence of large-scale accidents and other various risks.



[2012 Results]

1) Safety

- Enforced job safety standards across all production and operation processes.
- Took advantage of video technology to identify, monitor and remove risk factors.
- Established procedures to ensure all new partner companies are introduced to EHS and raised their competency level.
- Raised competency level of overseas construction personnel in their EHS
- Standardized safety work processes (process standardization of steel structure installation and commissioning).

2) Health

- Implemented employee healthcare program for employees of partner companies working at Doosan's business sites.
- Promoted activities aimed at preventing cerebral and cardiovascular diseases – low salt diets, non smoking campaigns and aquaerobics
- Expanded healthcare support services, distribution of three types of information booklets and notification services for off-site/traveling employees.
- Supported medical service for dispatched employees to overseas construction sites

[2013 Plan]

1) Safety

- Identify those workplaces that are poor in EHS or at peak capacity and work closely with support activities and increased EHS patrol.
- Train specialized EHS officers for overseas deployment and the development of Web Tools to allow EHS data to be stored and shared amongst EHS staff on construction sites and overseas production facilities.
- Enhance EHS competencies of managers at domestic constructions sites and overseas facilities to receive IOSH training.
- Promote inter-BG communication to raise EHS competency.

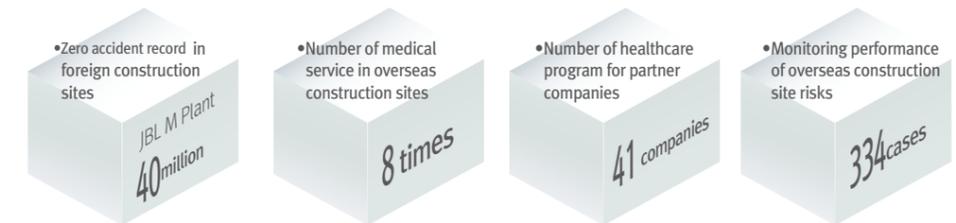
2) Health

- Strengthen the individual employee's health by performing regular general and thorough check-ups, analyzing them and tailoring treatments based on their specific pre- and post-conditions.
- Implement a healthcare program that includes detection and treatment of mental and stress-related conditions.
- Systematic follow-up of high-risk groups with chronic illnesses (brain, musculoskeletal, cardiovascular etc)
- The development and implementation of health-promotion programs for partner companies.

3) Security

- Establish a response system that is tailored to the different Country Risks to proactively support the employees.
- Identify risk and establish countermeasure prior to conducting project in high-risk areas.
- Continuously update all emergency contact details and maintenance organizations whenever changes occur, as well as update the Evacuation Plan and conduct periodic training.

[Key Indicators]



[Stakeholder Interview]



Hyun Hee Lee, Head of Department, Risk Management DNV Business Assurance Korea

Doosan Heavy Industries & Construction is an exemplary example of a safe and hygienic corporation with a superbly proactive S&H management system that is a safety model benchmarked by many companies operating in the same field, as well as related companies and groups. This is the result of having an integrated and unified management system for both domestic and overseas sites and full participation by the organization from top management all the way down to the field workers, internally as well as with partner companies. In addition, Doosan Heavy Industries & Construction makes all out efforts to not just simply implement and conduct safety supervision and short term corrections, but to take a corrective action through the Root Cause Analysis (RCA) of incidents and implement a strategic and systematic management process through preventive action.

Doosan Heavy Industries & Construction recognizes more than any other company that outstanding EHS outcomes are the global no.1 competitiveness. It has instilled safety and health management as a primary motivator of organizational management as well as establishing an anticipative system through sustainable corrective actions. The competitiveness of the safety and health management system of Doosan Heavy Industries & Construction is significant in the development of energy to support outward growth as well as the expansion of the various divisions.

Safety Management

Safety Management System

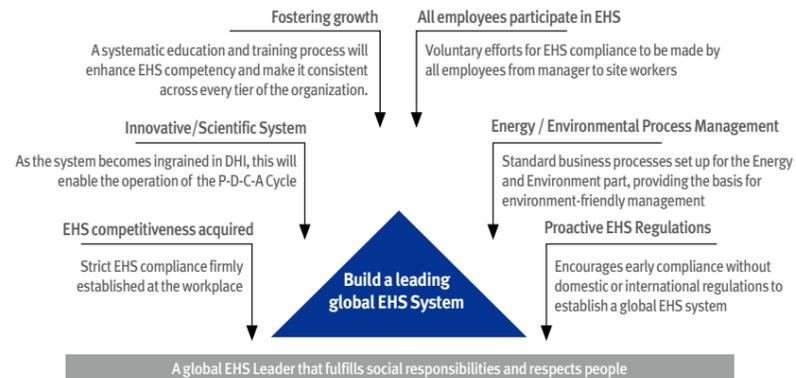


Doosan Heavy Industries & Construction believes that ensuring employee safety is a fundamental social responsibility – not only for the protection of those under their care, but also an essential requirement for corporate competitiveness. To this end, Doosan Heavy Industries & Construction makes all efforts and commitments to build, manage and constantly advance a scientific safety management system as part of its core business operations to ensure the safety of all its employees and employees of partner companies. In particular, all potentially dangerous factors should be identified, and any aspect that can hinder or hamper safety should be evaluated to draw up preventive and responsive action plans, provide comprehensive training to all employees and be continuously monitored to ensure that such events are minimized. In addition, all safety issues should be addressed and constantly improved by actively modifying plans and activities to proactively respond to changing situations affected by various factors. In June 2013, the management of the company made a public announcement to reaffirm their strong commitment to EHS policy reinforcement.



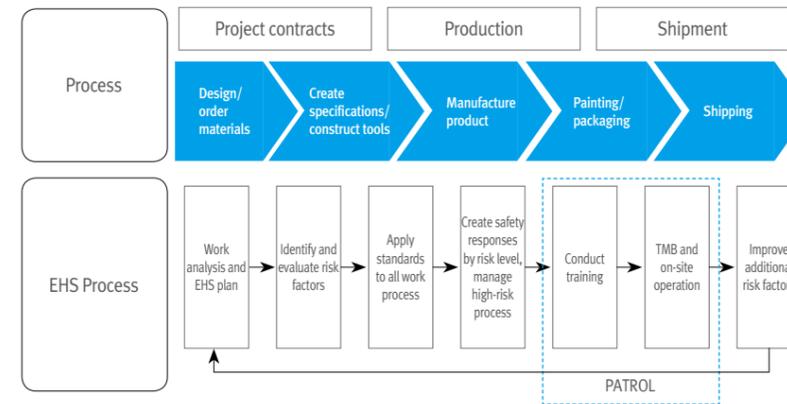
Future Vision

Doosan Heavy Industries & Construction seeks to build a leading global EHS system with the goal of proactively addressing the key issues and implementing processes to meet their mid to long-term EHS objectives.

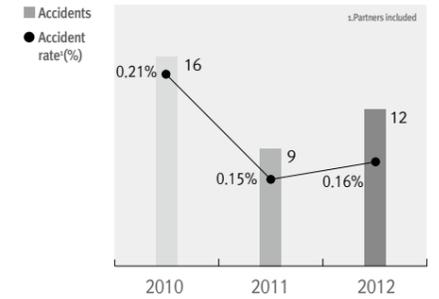


Strengthening the Safety Management Per Work Process

Doosan Heavy Industries & Construction's approach to occupational safety management is already in place in the company's manufacturing processes. Through this process, the company will be able to identify what risks exist in the work process and prevent accidents from occurring.



Accident Status



Proactive Safety Activities

Since 2007, the accident rate has decreased owing to the continual strengthening of patrol services and the company plans to continue with such patrol services to ensure that active safety measures are in place at the work site. Systematic and effective patrol services were conducted, particularly focusing on high-risk factors by taking into consideration the characteristics of each work site, and such inspections were made to be visible to the employees. The safety process can be built by establishing standard production processes and analyzing such production processes can help to develop continuous revisions and raise ("level up") the standards.

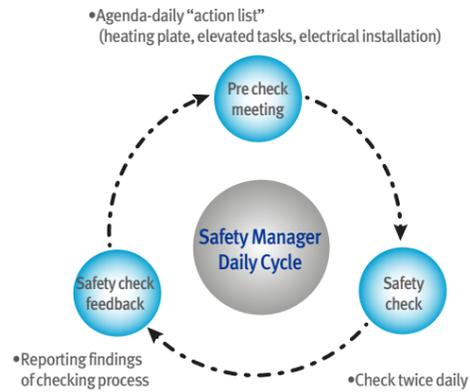
Inspection operations, risk evaluation



*MSLT: Management Safety Leadership Tour

Inspection Process





Responsibility For Daily Worker Safety

Doosan Heavy Industries & Construction is dedicated to closely monitoring the safety of workers and their activities on a daily basis. In addition, the company seeks to encourage each worker to be responsible for the safety of his/her fellow colleagues, promote proactive and preventive risk assessment activities and take advantage of video footage to be able to identify and remove risks from the workplace.

Safety Management at Domestic/Overseas Construction Sites and Overseas Manufacturing Sites

Doosan Heavy Industries & Construction is reinforcing its safety management at its domestic and overseas manufacturing sites. In order to strengthen preemptive action, the company sends professionals to support sites identified as being weak in safety management and support the set up of the EHS system to enable preemptive action at the work sites. The company has also started professional training to improve the EHS level and planned training activities for construction managers, all of which look to be in good shape. In 2012, certified total of 77 employees completed the IOSH international certification program and 7 certifications were acquired in the Middle East region and 1 in the Asian region.



International certificate: IOSH

*IOSH : Institution of Occupational Safety and Health, Safety and health manager certification issued by a U.K.-based international certification agency



Record for accident-free overseas work sites	
(Unit: 10 thousand hour)	
Saudi Arabia, Rabigh : 3,000	Arab Emirates, JBL M : 4,000
Saudi Arabia, Ras Al Khair : 400	India, Raipur : 1,000
Saudi Arabia, Jeddah RO : 300	Vietnam, Mong-Duong 2 : 500
Saudi Arabia, Yanbu : 150	Egypt, Ain Sokhna : 300



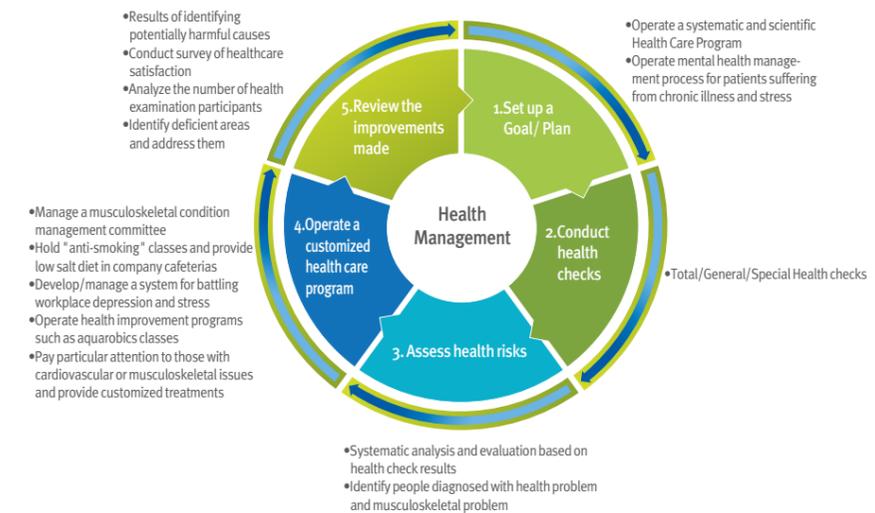
Safety standards for visiting personnel

Partner Companies Safety Management Activities

Doosan Heavy Industries & Construction is supporting its establishment of safety and health activity procedures to improve the level of safety management systems of suppliers. The 'Corporate partner EHS Setup Process Manual' was created to establish systematic processes, and a safety management framework was established in 2012 for 54 partner companies. Safety management as well as vehicle control systems for third-party nationals and temporary workers help improve safety standards for visiting personnel. Partnership programs provide support for setting up 4M risk assessment training and EHS systems.

Health Management System

In order to provide a healthy workplace, Doosan Heavy Industries & Construction has implemented a systematic and scientific "total healthcare program" that consists of "welfare centers" and "fitness centers" to improve the fitness and well-being of its employees. Both employees and partner companies all undergo a health check and assessments are performed using the data obtained to determine if the employees suffer from any illness and ensure a productive and healthy life for the employees.



Implementation of a Comprehensive Healthcare Program

Doosan Heavy Industries & Construction conducts annual comprehensive health examinations and subsidizes costs for any unforeseen illness requiring surgery (up to 15 million won). The company has set up an in-house clinic providing physiotherapy and medical services and operate a comprehensive health care program for disease management, as well as accident prevention education programs. The health care program also identifies low, moderate and high risk groups to chronic illnesses by regularly measuring blood pressure and testing for diabetes, as well as prescribe personalized treatment programs that improve health including movement (aquarobics, physical fitness test, exercise prescription) and diet (consultation to improve eating habits, anti-smoking programs).

Operating Healthcare and Welfare Centers

The Health Care Center with 8 personnel (2 doctors, 3 nurses, 2 physical therapists, 1 exercise therapist) will provide treatment and disease management from the minor to chronic diseases (brain, cardiovascular / musculoskeletal / noise-induced hearing loss). In addition, it takes the lead in promoting health and welfare of employees, their families, and employees of partner companies by building a corporate welfare center with sports facilities, such as a pool and gym as well as vaccination programs for the seasonal flu and swine flu for disease prevention.



Overseas Workers Health Management Plan

Doosan Heavy Industries & Construction operates comprehensive people and facility management programs for maintaining the health of wellness of employees working overseas.

	People management			Facility management
	Before departure	While in-country	Medical emergency	Health Intra
Current activities	<ul style="list-style-type: none"> Inoculations Hepatitis A vaccine Safety guide Insurance 	<ul style="list-style-type: none"> First aid and AED training Verify at-risk individuals during TBM 	<ul style="list-style-type: none"> International SOS support for medical emergencies abroad 	<ul style="list-style-type: none"> First aid or medical center Inspection of food facility sanitation as well as drinking and general water supply
Future improvements	<ul style="list-style-type: none"> Prior filtering of high-risk groups before deployment Verify whether personnel has received a medical checkup Strengthen health-related training Consultation with an M.D. Provide first aid kit 	<ul style="list-style-type: none"> Medical checkups for employees below the age of 35 Medical traffic light Neurological / cardiac disorder management Emergency hotline 	<ul style="list-style-type: none"> Emergency recovery process Support structure for major regional hospitals Provide support for medical consultation with specialists 	<ul style="list-style-type: none"> Establish medical facilities through a site health review conducted by a professional agency Carry out in-depth assessment of the sanitary and safety standards of caterers, health-care suppliers and water supply companies



Healthcare Booklet

Support for overseas operations

In 2012, Doosan Heavy Industries & Construction provided healthcare support and medical dispatch to its employees working in overseas operations such as Mundra, Cirebon, MD, Rebig, and four other construction sites. In addition, hygiene, sanitation, on-site dining and drinking water inspections were carried out to all overseas operations.



Onsite medical support.



Overseas on-site restaurant sanitation inspection, checking the drinking water

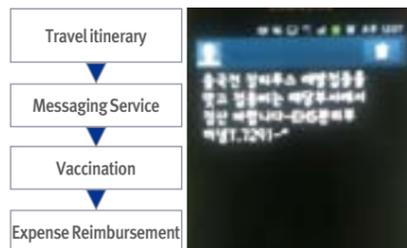
Provision of health information

Doosan Heavy Industries & Construction strives to provide health information to encourage employees to utilize in-house health promotion schemes. In 2012, three types of healthcare booklets were produced and distributed. In addition, immunization information is distributed to all employees traveling overseas as well as notification service for any requirements for inoculation.

Health Promotion Activities for Partner Companies

Doosan Heavy Industries & Construction is committed to improving the health of employees of partner companies by promoting and encouraging the participation in health promotion programs. In 2012, there were 41 employees from partner companies who were provided with individually tailored health programs.

Traveling Employee Alarm Service



* A notification service for employees for inoculation against typhoid

Emergency Management Systems

Doosan Heavy Industries & Construction implemented an emergency management system to minimize life and property damage in the event of an emergency, such as natural disasters (typhoon, flood, earthquake, etc.), epidemics, fires or environmental accidents and ensure rapid recovery. The information is organized by disaster type with a detailed action plan to assist facility management address the specific and relevant issues.

Alarm Stages of Emergency Management System

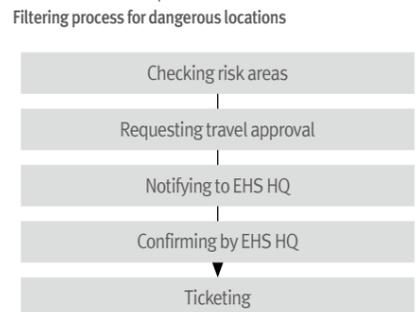
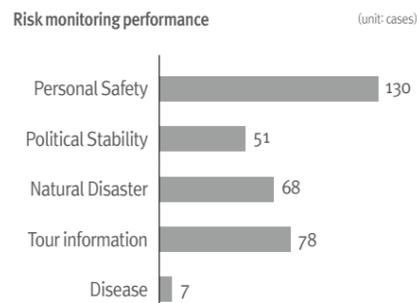
Classification	Description	Activity
Level 1 Warning	<ul style="list-style-type: none"> A natural disaster is expected following the issuance of a warning for a typhoon, storm, flood or heavy rain from a public source 	<ul style="list-style-type: none"> Collect important contact details Circulate the information at company-wide level Reinforce cooperation between related departments Inspect the premises and take precautionary steps Check potentially hazardous areas Take preventive measures and promote personal hygiene
		<ul style="list-style-type: none"> Operate the emergency disaster management office Alert maintenance/repair personnel of damage Disaster preventive activities Operate environmental crisis management system Enact pollution prevention activities Alert the internal fire officer and commence dousing activity
Level 2 Alert	<ul style="list-style-type: none"> A natural disaster is expected following a public warning of a typhoon, storm, flood or heavy rain, or minor damage has occurred Minor internal spillage of pollutants Minor fire 	<ul style="list-style-type: none"> Direct all EHS personnel to enter into emergency work mode Assess and report damages Where possible, repair and restore damages and assist injured personnel
		<ul style="list-style-type: none"> Establish a response plan to repair/restore affected areas Enact activities to minimize or stop further pollutant spillages Monitor anyone suffering from diseases and food poisoning Take preventive measures and close off the affected kitchen/eating area Alert the internal fire officer and commence dousing activity Contact the fire department for assistance Request for aid from related agencies
Level 3 Emergency	<ul style="list-style-type: none"> Major damaged occurred following a natural disaster, such as at typhoon, storm, flood or heavy rain External spillage of pollutants and spreading to outskirts of company Outbreak of infectious disease or food poisoning Major Fire 	<ul style="list-style-type: none"> Assess and report damages Where possible, repair and restore damages and assist injured personnel
		<ul style="list-style-type: none"> Establish a response plan to repair/restore affected areas Enact activities to minimize or stop further pollutant spillages Monitor anyone suffering from diseases and food poisoning Take preventive measures and close off the affected kitchen/eating area Alert the internal fire officer and commence dousing activity Contact the fire department for assistance Request for aid from related agencies

Emergency Response Exercise

Doosan Heavy Industries & Construction, in preparation for emergencies, has developed a scenario for the risk response system to enable appropriate responses in the event of such emergencies. To this end, a crisis response organization was formed to coordinate emergency measures to ensure the safety of workers as its highest priority, minimize damages and provide training for evacuation and expedite recovery processes.



Emergency training and plan		
Date	Drill	Drill Details
September 2012	Explosion caused by damage to a electric furnace	- How to extinguish initial fire and remove electric devices, combustibles etc. - How to minimize the secondary pollution caused by fire-fighting
October, 2012	Explosion of electric furnace	- How to extinguish initial fire and remove flammables and dangerous materials - How to report the situation, notify appropriate personnel and treat any injured personnel
November, 2012	154kV power substation blackout	- How to cope with blackout caused by an earthquake - How to report the situation, supply emergency power and restore the site
December, 2012	Spillage from an electric furnace	- How to evacuate the electric furnace operator and workers in the offices and vicinity - How to install safety fence at dangerous sites and give first aid - How to warn and notify hydrogen spillage accident and cope with the situation
May, 2013	Fire/explosion at a generator testing facility	- How to report the fire, notify appropriate personnel and extinguish initial fire
July, 2013	Fire/explosion at a gas turbine testing facility	- How to cope with initial fire and contact fire station (119). - How to extinguish fire using in-house resources
October, 2013	Fire at a hazardous material storage facility (cold storage)	- How to evacuate and direct people to safe zones - How to direct the fire services and assist them to put out the fires including providing of any useful information
October, 2013	High temperature asphalt spillage from compound facility malfunction	- How to report oil (asphalt) spillage and notify the accident - How to cope with potential consequential hazards of spillages
October, 2013	Fire at a balancing plant	- How to assist fire services to put out the fires and provide any information that assist in this process and first aid training to any injured personnel - How to extinguish initial fire and take countermeasures when the situation cannot be controlled



Enhance Risk Monitoring And Response System To Overseas Sites

Doosan Heavy Industries & Construction established the Evacuation emergencies procedure for their overseas sites using the potential natural disasters and security risk information to pre-identify potential risks. In 2012, the security risks of every country for its 67 overseas subsidiaries/branches (political, personal safety, disease, natural disaster risk analysis, information and travel information) were analyzed and a risk management manual was updated.

Provide Risk Information to Overseas employees



Doosan Heavy Industries & Construction improved the monitoring processes to check the location of overseas employees residing in or traveling to overseas locations in real time. Identified areas open to risk and provide personal safety. The company also strives to establish a risk assessment plan and to conduct periodic safety training to the overseas employees. Develop and manage a risk filtering process system to identify dangerous/high risk countries/ areas for the sake of ensuring the safety of employees assigned overseas or those going on an overseas business trip.

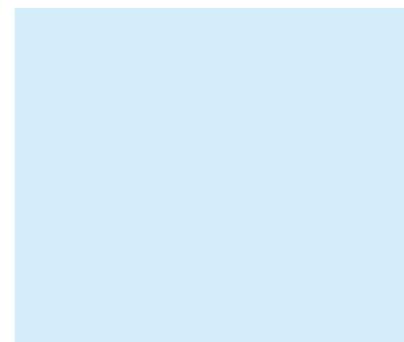
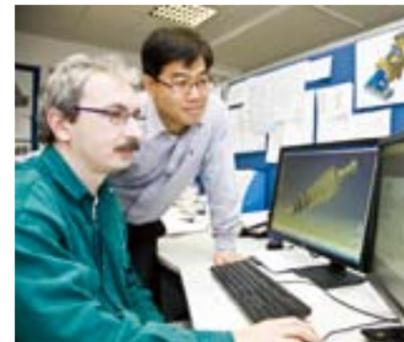
CSR Pillar 2

Creating Operational Synergy

Dimension 3. World Leading Technological Developments

Dimension 4. Green Management

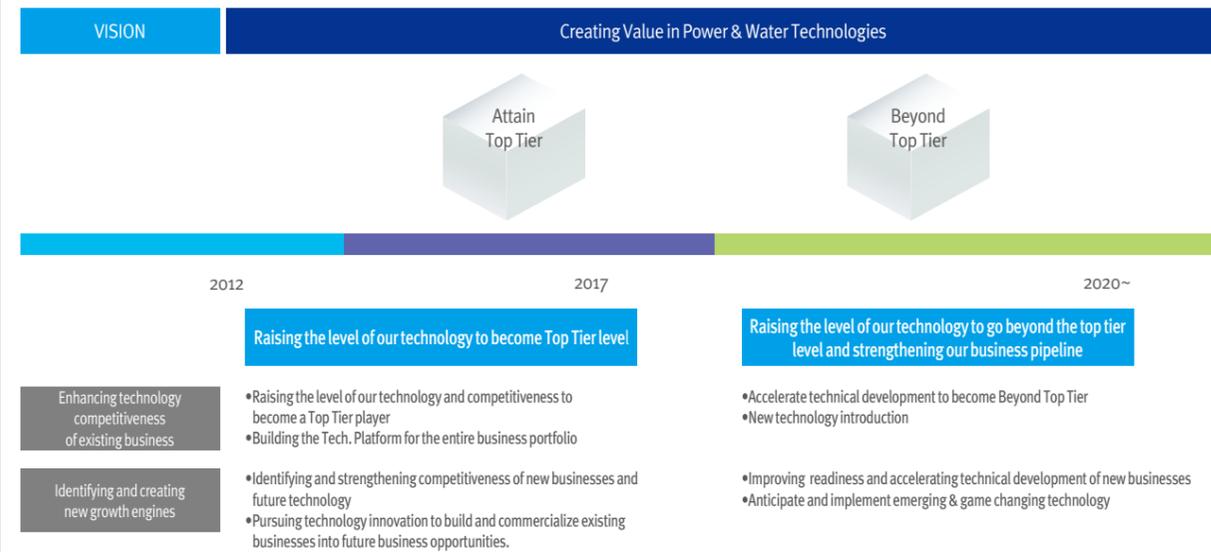
Whenever Doosan Heavy Industries & Construction considers a product for its consumers, it always considers how such a product will make a positive impact or have a positive influence on the people and the environment before it is produced. Doosan Heavy Industries & Construction believes that only when the consideration of the surrounding elements is incorporated into its management activities and combined with state-of-the-art technology will there be synergies created to generate great outcomes. The future is not set and we have the ability, using current technology, to control our destinies toward shaping a beautiful environment and prosperous society.



World Leading Technological Developments

[Approach]

Doosan Heavy Industries & Construction places the R&D centers of each division at the forefront of every process to both drive and direct development of technology with the customer at the heart of every decision. To this end, a Product & Technology COE (Center of Excellence) was built to create a Global R&D system. Becoming a leader requires not only the ability to improve and enhance existing businesses, but also creation of innovative new products that will become future growth engines and maximize the value of technology.



Doosan Heavy Industries & Construction continues to improve and strengthen management practices to enhance quality controls and reduce quality failures. To this end a Quality Academy was formed to increase the expertise of the quality management organization.

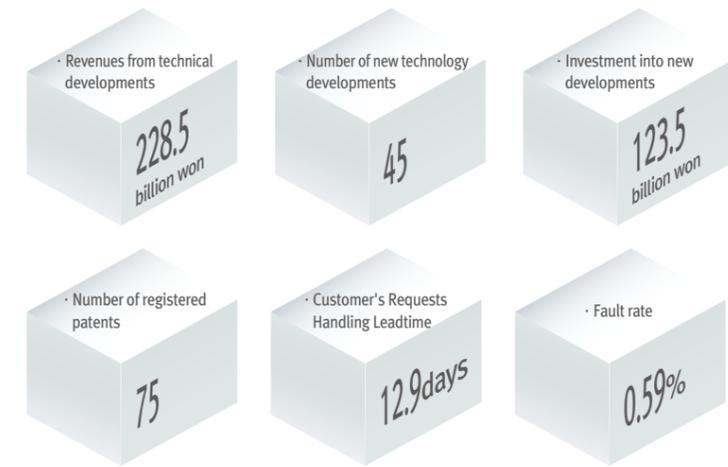
[2012 Results]

- Improved the steam turbine capacity
- Developed a Korean-made nuclear coolant pump
- Developed the IMCS (Integrated Monitoring Control System) for thermal power. Installed and tested the IMCS at the Tae-An Thermal Power Plant #1 and received their approval
- Developed low temperature casting for Ocean Plant
- Internalized RO preprocessing design technology
- Operated the Quality Academy to strengthen quality expertise of workers
- Built a data monitoring system to identify and minimize quality issues of its operations

[2013 Plan]

- Develop the expertise to reduce the operating time of coal-fired boilers
- Form a research database on the effect of water causticity on materials
- Discover a replacement for the Steam Generator
- Create an overall design for the 300MW IGCC plant
- Commercialization of USC thermal power
- Develop a nuclear steam generator heat transfer pipe
- Develop a 10 MIGD high volume seawater desalination facility
- Develop a work roll thermal roughing mill forge
- Develop a system with early risk detection and strengthen weaknesses from a customer viewpoint.
- Improve the transparency of quality failure costs, create plans and set targets for reduction of quality failures
- Improve the quality level of overseas sites and subsidiaries with relevant support

[Key Indicators]



[Stakeholder's Interview]



Mr. Yang Su Lim, Team Manager, Equipment Management TFT, Safety & Quality Group, KOMIPO

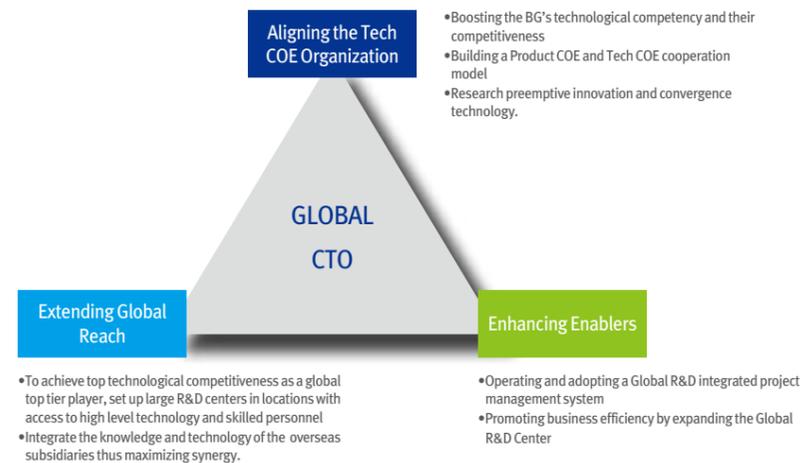
Doosan Heavy Industries & Construction has been able to win many projects over the years owing to its high technical expertise. However, in order to survive in this era of fierce competition, our customers are increasingly demanding even greater standards. Thus, Doosan Heavy Industries & Construction must continuously develop innovative new products and technology to maintain high customer satisfaction. Currently, Doosan Heavy Industries & Construction's customer service emphasizes fulfillment of customer needs, as well as providing products and technology well ahead of our competition to reach the highest level of customer satisfaction.

It is important that we provide excellent technology and quality assurance, as well as acquire a customer-centric supply network but in the field of heavy industries, this level of excellence can only be achieved by focusing on not just the final product but the smallest component as well. Thus, ensuring that a stringent and careful selection of suppliers is carried out is critical. In case certain suppliers require further development of their technology, Doosan Heavy Industries & Construction considers it their corporate responsibility to assist, train and coach these suppliers to raise their technological expertise and achieve shared growth. Through constant quality management with a focus on shared growth, Doosan Heavy Industries & Construction hopes to become the world's leading corporation.

Enhancing Technological Competitiveness

Building a Global R&D Operation System

Doosan Heavy Industries & Construction's current R&D vision is to establish a Global R&D system by 2020 through the creation and maximization of business synergies. To this end, Doosan Heavy Industries & Construction redefined the role of its Global CTO (currently Head of the Technology Research Institute). In order to provide a basis for production competitiveness in the market, the Global CTO is assigned with a concrete mission to contribute toward the growth of the company by taking the lead in introducing future technologies to the market. Doosan Heavy Industries & Construction is working together with its global subsidiary DPS(Doosan Power System) to strengthen the overseas R&D function by making the best use of its qualified employees and adopting advanced technology. Through the Global R&D operation system, the Global CTO seeks to integrate the total R&D pipeline and manage the technology portfolio effectively to ensure continuous technological development and maximize inter-division business synergy.



The Role of Technology COE

The role of Technology COE is to focus on and provide leadership in the development of technology of heavy industrial equipment and by adopting an integrated approach to the agenda items and roadmap, develop new innovative business strategies and technologies. Using the information acquired from development and the subsequent results, the Technology COE aims to empower the BGs to apply, enhance and maximize business synergy to boost technological competency and competitiveness.

Building an Enabling System

Global R&D Management System

In order to consolidate the company's global R&D Centers, an integrated management system was set up and adopted at the company. Firstly, by adopting a tool for managing common projects, a sense of unity was promoted among the R&D members. Secondly, by sharing a list of the projects executed and the project deliverables across the organization, overlapping investments were prevented and resources managed more efficiently. Finally, by launching a communication board to post the schedule of various works in progress, a forum was provided for exchanging ideas and sharing the schedule of technology developments.

Global R&D Management System Road Map



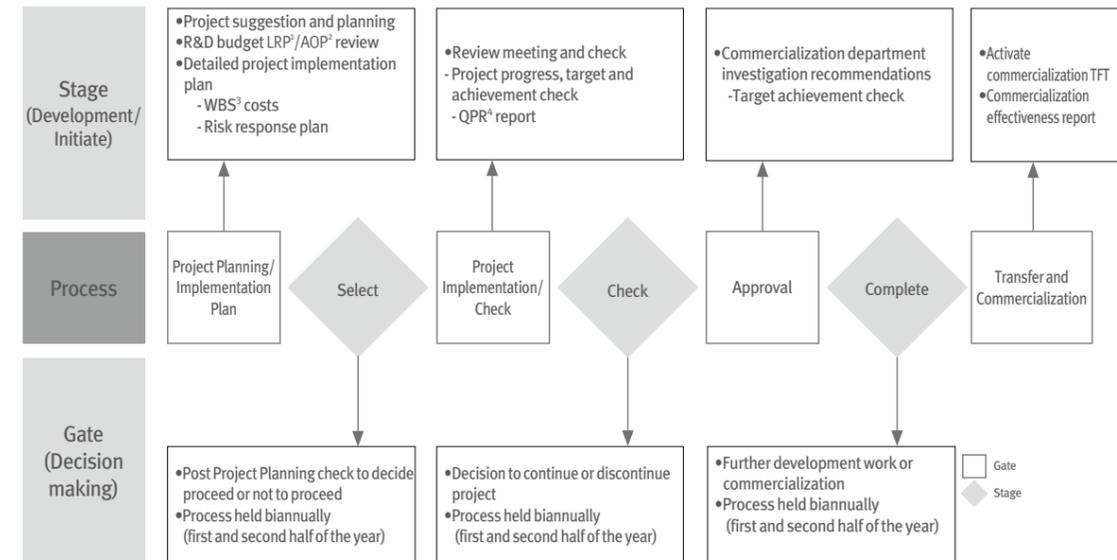
Optimal Technology Development Process

Identifying and analyzing existing and potential new business areas, markets and customers allows Doosan Heavy Industries & Construction to develop new business opportunities, outlining the direction and strategies in the medium and long term, leading to an optimum product development processes. Currently, a bi-annual meeting of the company-wide and BG new business committee takes place to evaluate the progress of existing tasks and discover new business opportunities.

To ensure every new product meets the needs of the business divisions and their respective visions, the PLM (Product Line Management) organization was formed to set and prioritize tasks for a quick response to front line divisions, leverage National Projects to identify opportunities for commercialization, and improve the products and services for the market.

All technological development is pursued in compliance with the regulatory rules, with the BG PLM teams in charge of product and technology development work related to existing businesses, whilst the R&D Center is in charge of the development of new products/technology which are identified as new growth engines. The New Business/Technology Committee evaluates and reviews the results of the projects and has this reflected into future development plans. The overall technological developments and results are managed online via DRMS (Doosan R&D Management System) and the final evaluation is recorded in a commercialization report and final report.

R&D Process



1. LRP : Long Range Plan / 2. AOP : Annual Operation Plan / 3. WBS : Work Breakdown Structure / 4. QPR : Quarterly Progress Review

R&D Investment and Outcomes

R&D Investment Amount

74% ▲

R&D Investment

In the existing business areas, the BG PLM teams are in charge of investments made in technological development of existing business areas, particularly improving the product performance and commercialize them for practical use, whilst the Technology R&D Center is focused on directing their technological development investments into work carried out with technology partners to develop new products and new businesses.

One particular accomplishment to take note of is the development of nuclear/thermal power plant technology, nuclear instrumentation & control system and nuclear reactor cooling pumps, which were all previously imported from overseas. Investments were made in successfully developing the technology and products locally. A system was designed to continually track, monitor and evaluate the performance of the products for five years after the development. To ensure the existing business area was able to develop technology steadily, a portion of the total investment fund was allocated to maintaining existing business. In 2012, to increase research and development, 123.5 billion won was invested, and to determine the effectiveness of this investment, the results will again be tracked and evaluated for a period of five years. Whilst maintaining competitiveness of existing products, R&D investment will be increased in 2013 to further promote the development of technology for new business opportunities identified through the mega trend analysis.

R&D Investment Amount

Year	Development Amount (billion won)
2010	71.0
2011	70.8
2012	123.5

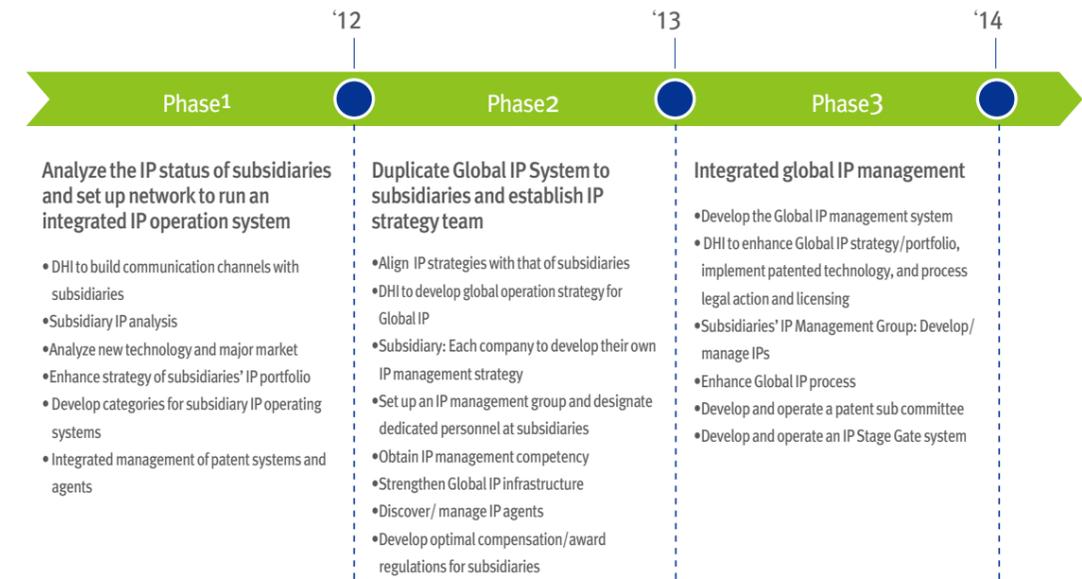
Research & Development Results

Doosan Heavy Industries & Construction participates in numerous state projects and thus, has a strong cooperation process in place with the government and state-run organizations (for example, with KEPCO). At the present time, Doosan Heavy Industries & Construction is participating in 29 state projects, including wind power and nuclear reactor cooling pump projects, and has completed 10 overseas technology cooperation projects together with various partners. In 2012, Doosan Heavy Industries & Construction completed 45 technology development projects which when commercialized generated 228.5 billion won of orders with a revenue value of 281.4 billion won and resulted in 10.6 billion won of production cost reductions.

In addition, to ensure the continuous development of technology, constant effort will be made to increase patent applications and registrations, especially in new business technology fields, as acquiring patents is of critical importance. By using new business technology patent analysis, we made all efforts to reduce conflict risk and secure core patents, as well as strengthen our patent portfolio in 2012, and in doing so raise our level of patent competitiveness beyond the domestic heavy industry competitors.

IP (Intellectual Property) Portfolio

To strengthen the IP portfolio of Doosan Heavy Industries & Construction, including that of its overseas subsidiaries, the company established a supporting organization. Both internal and competitors' IP are analyzed to enhance the strategy, develop a system, and carry out R&D from which to determine and select related processes.



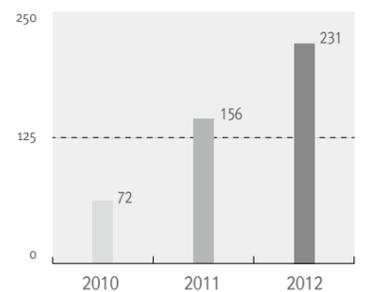
Patents Owned by Company in Korea & Overseas

Year	Applications	Registered
2010	121	72
2011	130	84
2012	109	75

Patent Status for New Business Technology

Year	Applications	Registered
2010	30	18
2011	64	41
2012	41	25

Accumulated Number of Patents (Korea and overseas)



Plant I&C (Instrumentation & Control) Development

Plant I&C is an essential system needed to ensure that plants are operated effectively, efficiently and optimally. Doosan Heavy Industries & Construction recognizes that "control systems" and "operator environments" are critical to a plant and are focusing on the research and development of high value adding businesses in this field. In 2012, the thermal power plant I&C system development project was carried out, leading to DCS product development and demonstration. This enabled the company to acquire top-tier products and significantly increased the company's competitiveness in securing new orders.

Development of Doosan Heavy Industries & Construction Plant I&C

'07 ~ '10		<p>Development of DCS for 500MW Thermal power plant</p> <ul style="list-style-type: none"> •Development period: Aug. 2007~Jul. 2011 (Approximately four years) •Developed the world's first single platform-type BTG integrated control system
'11		<p>Product manufacturing and FAT for project site</p> <ul style="list-style-type: none"> •Development & Review period: Jul. 2011~Aug. 2012 (Approximately one year) •Partnership with Korea Electric Power Research Institute(KEPRI) and Korea Western Power Company
'12		<p>Demonstration of Tae-An Thermal Power Plant No. 1</p> <ul style="list-style-type: none"> •Construction period: 2012.9.29~ 2012.11.27 (60 days) •Construction period reduced by 10% compared to previous domestic projects <p>1. Final Acceptance Test 2. Other power plant control system change project(2011.5)</p>

Doosan Heavy Industries & Construction Plant I&C

Plant I&C Overview	Product Component and Function
<p>A </p> <p>B </p> <p>C </p> <p>D </p> <p>E </p>	<p>A System Operator Environment¹</p> <ul style="list-style-type: none"> •EWS (Engineering Workstation Software) •HMI (Human Machine Interface) •Historian Server, Console <p>B Control System (DCS)²</p> <ul style="list-style-type: none"> •Equipment (boiler, steam turbine) operation control solution •The power platform model can also be used as a solution for water, oil and gas industries <p>C Wire & Cable</p> <ul style="list-style-type: none"> •Connective tools for onsite control system <p>D Measuring instruments (Sensors)</p> <ul style="list-style-type: none"> •Plant environment measurements (temperature, pressure) <p>E Actuator</p> <ul style="list-style-type: none"> •Plant equipment controls(valve, pump) <p>1.Operator Interface System 2.Distributed Control System</p>

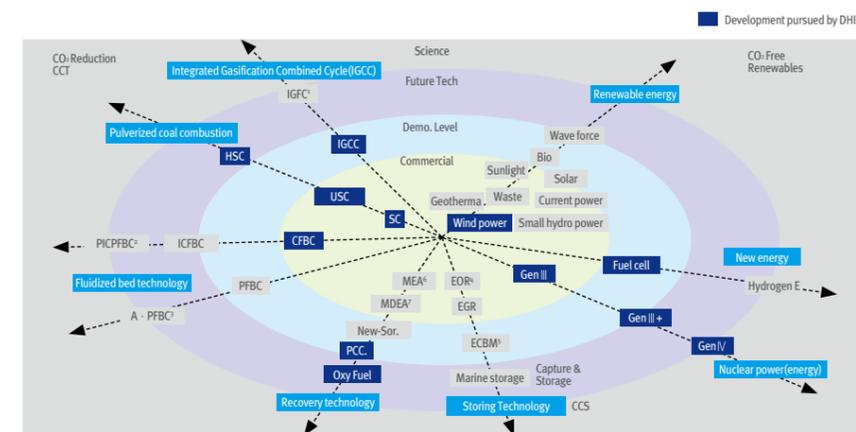
Green Growth and Future Technology Development

In order to fulfill its social responsibility as a company that provides electricity and water, which are the very foundation of society, Doosan Heavy Industries & Construction has reflected green energy development in its technology development policy and strategy from the IGCC Technology - the nation's first technology that produces electricity by converting coal into gas - to CCS Technology.

Doosan Heavy Industries & Construction is in the process of developing CCS low carbon, green growth technology, which is a technology involving the collecting and storing of carbon dioxide. It also signed an agreement on IGCC technology development with Korea Electric Power Research Institute (KEPRI) and Korea Western Power Company and is in the process of pushing forward technical development and building a demo-scale plant.

Whilst carrying forward development of new products to expand into new markets with technology we are also continuing simple improvement of existing products at the same time. The field of green growth technology in Doosan Heavy Industries & Construction can be divided into three areas: CO2 free technology; raising efficiency and CO2 reduction technology; and collecting and storing CO2 technology. We are playing a leading role in developing technologies related to all three of these fields.

Doosan Heavy Industries & Construction's Technology Development Areas Based on CO₂ Based Technology Trends

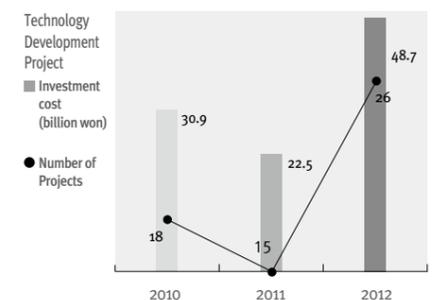


1. IGFC : integrated gasification fuel cell
2. PICFBC : pressurized internal circulating fluidized bed coal
3. A PFBC : advanced pressurized fluidized-bed combustion
4. EOR : enhanced oil recovery
5. ECBM : enhanced coal bed methane recovery
6. MEA : monoethanolamine
7. MDEA : methyldiethanolamine

Green technology development status

CO ₂ free technology	Renewable energy	-MFCF: Molten Carbonate Fuel Cell -3MW offshore wind power generation system
	CO ₂ free technology	-Superconducting electric power generation technology -Korea centric facility product technology APR1400 and I&C technology
	Nuclear power generation	-Manufacturing new generation nuclear technology of APR+: Advanced Power Reactor core instruments
Efficiency enhancing/ CO ₂ reduction technology	Pulverized coal combustion technology	-USC(Ultra Super Critical) generation technology -HSC(High Super Critical) generation technology
CO ₂ capture & storage technology	IGCC technology	-IGCC (Integrated Coal Gasification Combined Cycle)
	CO ₂ capture and storage technology	-PCC (Post Combustion Capture) -Oxygen Fuel Combustion
	CO ₂ capture and storage technology	-PCC (Post Combustion Capture) -Oxygen Fuel Combustion

Green technology development investment



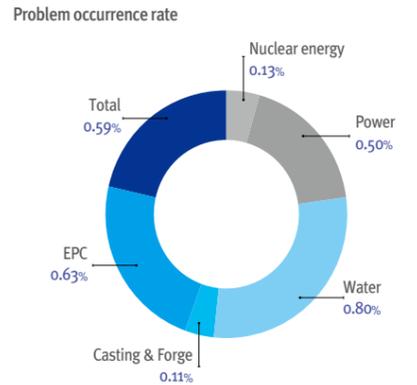
Quality Management for Customer Satisfaction

Quality Assurance System

Doosan Heavy Industries & Construction's quality policies focus on guaranteeing customers the required performance in the fields of power and water business and providing satisfactory engineering, production, construction work and services to customers. To this end, it is operating a structured quality assurance system that manages everything from bidding to the post-shipment follow-up services.

The quality assurance system consists of a quality assurance manual, work procedures and various instruction manuals that the organization and all the employees must abide by and in doing so, the company has received some 50 different types of certificates from international certification authorities. Its quality assurance system is evaluated by domestic and overseas customers, as well as regulators as perfectly satisfying global standards.

Doosan Heavy Industries & Construction will always maintain the world's best quality by constantly verifying and improving the system's effectiveness and performance.



*Total problem occurrence rate is derived by calculating the arithmetic mean of each area



Status Review of Quality Certificate Acquisition

Certificate Body	Certificate Type	Number
KEPIC(Korea Electric Power Industry Code)	Production : MN, SN, EN	7
	Construction : MN, SN, EN, MH	
ASME(The American Society of Mechanical Engineers) Nuclear	N, NPT, NS, N3, NA, Site NA, Site NPT	7
ASME Non-Nuclear	U, U2, S, A, PP, H, R	7
ISO(International Organization for Standardization)	9001: 3834-2, 14001	3
PED(Pressure Equipment Directive)	H, H1, Module	2
Others	OHSAS, Shipping Registers etc	25
Total		51

*Website for checking the acquisition of certificates : http://qam.doosanheavy.com:8090/html/hj_qam.asp

Product Liability

Doosan Heavy Industries & Construction makes an effort to manufacture products that can give customers the best satisfaction in terms of performance, maintenance and service. It also makes all-out efforts to deliver high-quality work in the production of its products, construction and project execution to ensure no failures occur, nor any need for post-delivery follow-up services. Since 2012, the company has adopted a corporate-wide quality innovation program called DQE(Doosan Quality Excellence) in order to reinforce the quality of its products. To achieve the company's vision in regards to quality assurance, the company's mission is defined as selection of customer satisfaction oriented values from the perspective of customer satisfaction and quality competitiveness. To fulfill these values, the company introduced '10 themes for improving a way of work' to bring a positive change to work practices and '12 action guides for improving behavior' to bring about change in the employees' behaviors. Furthermore, it laid the groundwork for quality reinforcement on a company-wide basis by suggesting goals for quality assurance.

Technology Support Service

Doosan Heavy Industries & Construction promotes customer satisfaction through a support system that helps to promptly respond back to customer complaints and requests relating to products and services. By continually evaluating the business process for cause analysis, measuring improvements, designing changes and reviewing work processes from installation to operation, the company is able to address customer complaints and claims effectively. In addition, by providing prompt feedback, secondary claims caused by processing delays or insufficient correction are prevented. To this end, customer response teams were set up to promptly arrive at sites to address customer dissatisfaction. In particular, a TFT composed of customer supporters and solution experts was formed to support customers in the winter/summer peak periods for electric power supply.

Customer Support Status

Index (numbers)	2010	2011	2012
Prompt on-site service delivery	13	12	72
Customer-prompted technology consulting	153	126	107
Technology consulting	4	10	16
Visits to client sites by executives	2	8	62

Providing Information for Customer Satisfaction

Before any changes are made to quality manuals and work procedures, Doosan Heavy Industries & Construction informs all interested parties such as customers, regulators, certificate authorities and stakeholders of the changes and obtains their approvals prior to those changes being made.

To ensure the information of all current and new technology is understood, Doosan Heavy Industries & Construction organizes periodic road shows and new business/product presentations to allow customer consultations and Q&A.

In addition, to sustain long-term relationships with its customers, Doosan Heavy Industries & Construction participates in domestic conferences and events abroad as well as providing research and reports that demonstrates Doosan Heavy Industries & Construction's competence.

Providing information and sharing activities

	2010	2011	2012
Technology support visits and client education seminars	13	31	22
Presentations in domestic and overseas conferences	9	16	17
Road Show and new product presentations	47	51	40



VOC home page status

Voice of Customer (VOC)

Doosan Heavy Industries & Construction is providing its customer support service through its Internet website. Doosan Heavy Industries & Construction collects technical service requests and implements Q&A through the Electric Power Group Customer Service Centre (EPG CSC), online "Contact us" and "MOT(Moment of Truth)". In addition, it can check the current state of receipts and handling status, making it possible to monitor the present condition of response to customers' requests.

Customer Service '12 action guides for improving behavior'	
Duty	Prevention
<ul style="list-style-type: none"> Understand customer's expectation, then act Think in customer's shoes Found quality issue, open it 	<ul style="list-style-type: none"> First time right Don't give/take the defects Clear problem prior to customer's request
Responsibility	Reaction
<ul style="list-style-type: none"> Work by quality procedure Check myself what I did Don't hide, never lie to customer 	<ul style="list-style-type: none"> Clear problem whether right or wrong Don't repeat colleagues' mistakes Keep the promise with customer

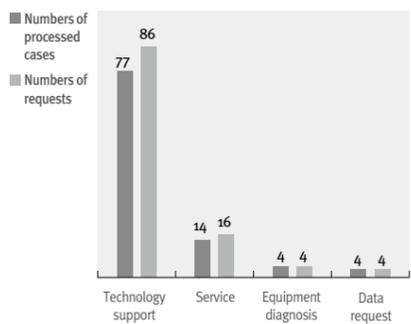
Doosan Heavy Industries & Construction replies back to customers' questions and service requests via its home page "Contact us" and such queries are directed to designated personnel to ensure a 100% response rate.

"Contact us" VOC status

Index	Number of Queries
Recruitment Information	2667
IR	28
PR	53
Product and service (Nuclear)	63
Product and service (Heat generated power)	338
Product and service (Water)	117
Product and service (Casting & Forging)	59
Product and service (Construction)	262
Product and service (Others)	193
Product and service (Related Sites)	28
Other	479
Total	4287

In 2012, Doosan Heavy Industries & Construction addressed 98 out of 108 cases (processing rate of approximately 90 percent) of VOC received by EPG CSC. Furthermore, it operates an onsite management system that can address the slightest of problems and its current status thus, enabling prompt responses and ensuring that every request or complaint is followed through to satisfaction. The company is endeavoring to effectively support customer service by setting a target for Customer's Requests Handling Leadtime each year.

"EPG CSC" VOC status

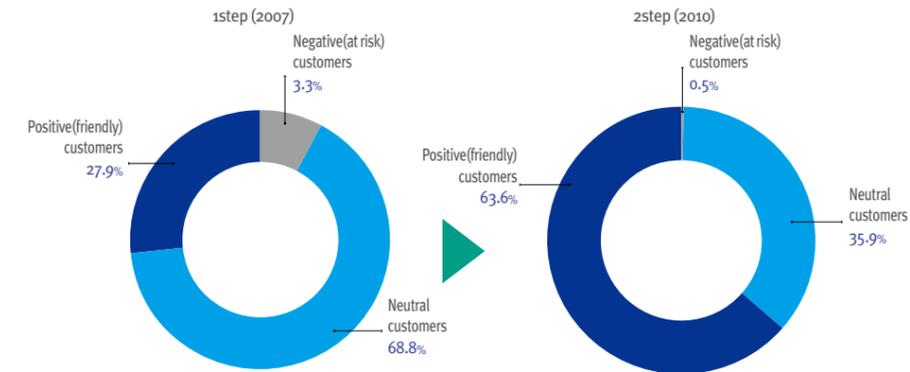


Customer Satisfaction Survey

Doosan Heavy Industries & Construction is implementing customer satisfaction surveys periodically by different areas and based on the results, the company identifies the top priority improvement tasks required and organizes plans to address each one. It also conducts a customer satisfaction survey every three years targeted at its clients in the power sector and based on the responses, builds a company-wide service innovation system. One outstanding example is the "RMS System" which monitors the operating data of power plants in real time and prevents problems from occurring through advance notification.

*The survey is conducted every three years because it takes, on average, three years for a project to be completed given the nature of the business.

Loyal Customer Ratio



Positive(friendly) customers	Respondents who gave affirmative replies to all the questions relating to one's impression of the company. These are customers who are satisfied with the company's products and are willing to use the products and services continuously.
Neutral customers	Customers who are neither positive nor negative toward the company's products and services.
Negative(at risk) customers	Respondents who gave negative replies to all the questions relating to one's impression of the company. These are customers who have a negative perception of the company's products in general and who have no intention of using the products and services continuously

Customer's Requests Handling Leadtime

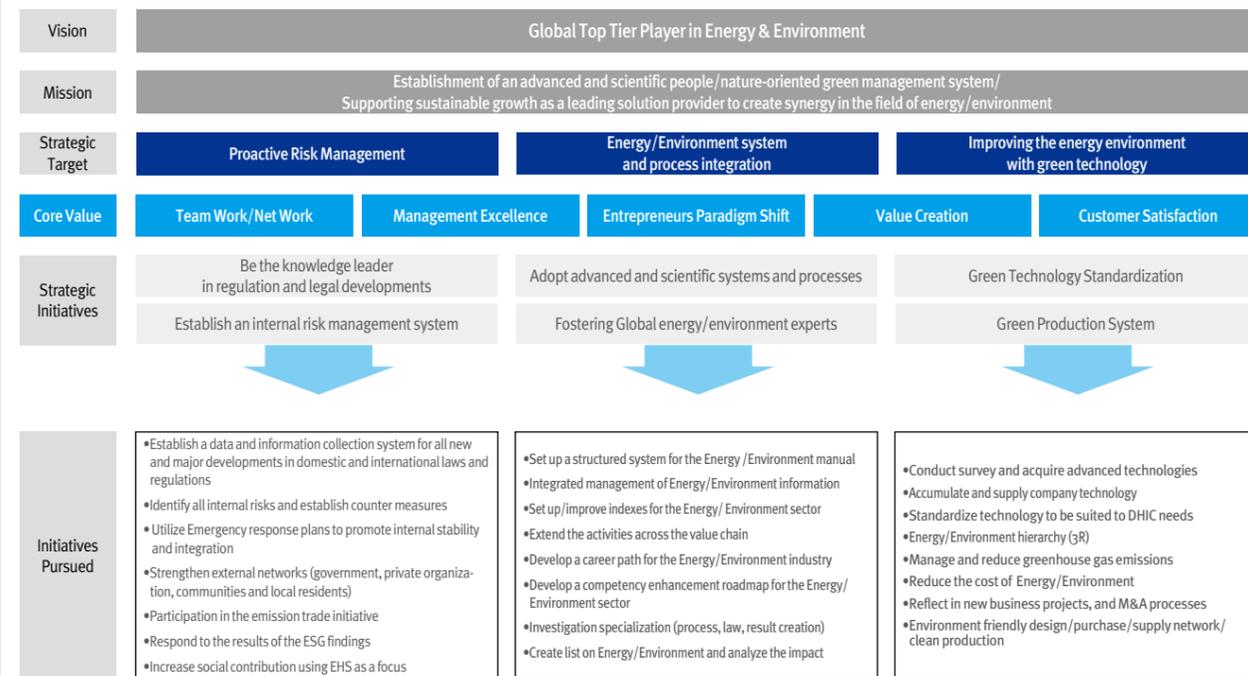


CSR Dimension 4 Green Management System

[Approach]

Doosan Heavy Industries & Construction operates a EHS-based green management system and endeavors to effectively respond to climate changes and industrial waste issues by actively recycling resources. In addition, the company is promoting its green management in systematic way by sending green management professionals to its overseas manufacturing sites. Doosan Heavy Industries & Construction is ready to move forward to emerge as a "Global top tier player in the Energy & Environment field" by establishing and implementing a mid-to-long-term green management roadmap.

Mid-to-Long-Term Roadmap



[2012 Results]

- Environment improvements to the casting process
- Improvement and implementation of energy efficient projects
- Integrated the EHS management system at Changwon Plant and construction sites
- Operated a variety of programs to improve environmental competency

[2013 Plan]

- Revising the EHS checklist and quantifying the EHS assessment result
- Implement the ESCO (Energy Service Company) project
- Pursue acquisition of awards/certification to promote image as a company practicing green management

[Key Indicators]



[Stakeholder Interview]



Sue Howells, Co-Chief Operating Officer, Global Operations, CDP

The number of investors requesting companies to disclose environmental data through CDP has consistently increased so that this year there are investors representing US\$87 trillion, that's more than half the world's invested capital and they are asking for corporate disclosures through CDP. These investors recognize that CDP helps to minimize risk and identify the cost savings and financial opportunities are created by measuring, managing and reducing impacts on the environment and natural resources. Over 4,100 companies globally now use CDP as a platform for delivering transparency and greater accountability to shareholders, customers and other stakeholders.

Doosan Heavy Industries & Construction is one of the few companies that have participated in CDP since it was first launched in Korea in 2008, and we greatly appreciate Doosan's effort for environmental disclosure. We believe that companies cannot manage what they do not measure, and disclosure is the first step towards better environmental management and action to create sustainable economies. By participating in CDP, Doosan has taken an important first step. CDP encourages Doosan to continue its environmental management efforts and to improve its CDP scores in order to achieve long-term business resilience.

Environmental Management System

Environmental Management System

Doosan Heavy Industries & Construction strives to minimize environmental impact resulting from its business activities based on the EHS Management System. To this end, the environment management activities are focused on identifying issues and constantly seeking improvements. In addition, an organization composed of professionals have been set up to systematically manage the environmental management system.

Promotion of Sustainable Green Management

Doosan Heavy Industries & Construction defines Green System Management as a method that addresses all environmental issues resulting from all levels of operation, from the use of resources to output as well as identifying and implementing practical solutions. Thus, Doosan Heavy Industries & Construction is able to minimize environmental effects by identifying environmental issues during the production process and their primary causes, simulating resulting impacts and implementing methods to monitor and control these causes.

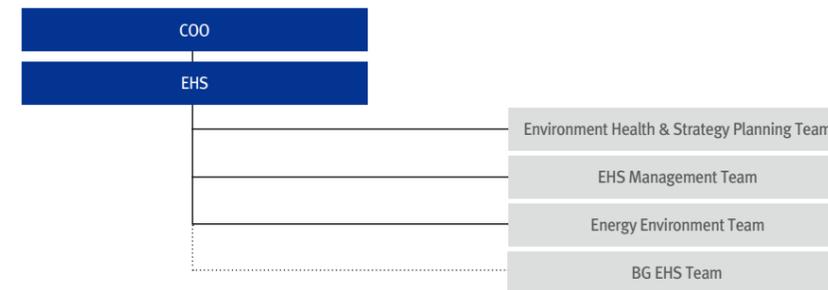
Doosan Heavy Industries & Construction has developed an environment material management system to meet their mid-to-long term goals by registering and managing all their hazardous materials in a system that registers the order, tracks its movement from its delivery to use and automatically measures its waste/emissions as well as a system that identifies potential hazards and has preventive measures in place to eliminate or minimize such dangers



Green Management Organization

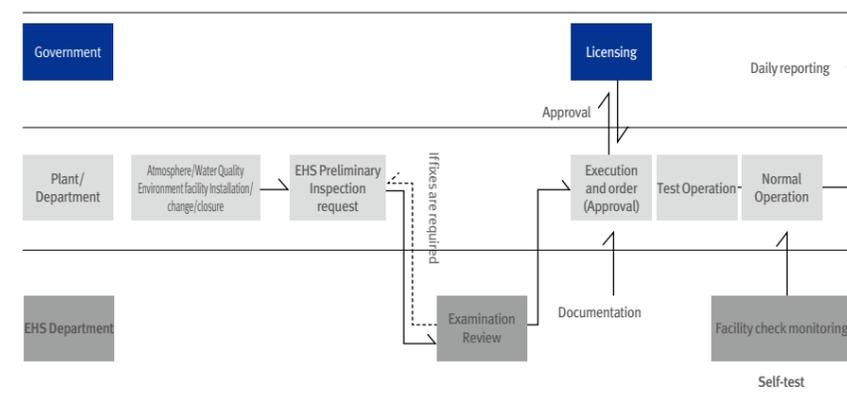
To ensure the promotion of green management at its overseas manufacturing sites, such as Vietnam, Romania and India, Doosan Heavy Industries & Construction has dispatched EHS experts to these regions to support the effective operation of the system.

Organization Chart



EHS Pre-screening Process

Doosan Heavy Industries & Construction is actively prevents serious environmental accidents caused by direct or indirect risk factors, from the stage of raw material production to supply, by identifying in advance environmental impact and conducting risk assessments. To achieve this, Doosan Heavy Industries & Construction has invested in the EHS process system to perform pre-assessments when facilities expansion projects are pursued to ensure legal risks and environmental hazards are examined and harmful elements are removed.



Resources Utilization and Management

Raw materials management

Approximately 95% of the raw materials used in the steelmaking process of Doosan Heavy Industries & Construction are scrap metal and there has been increased efforts to recycle waste metals, waste mold, waste oil and metal chips. As a result of these efforts, the recycling rate of recovered scrap metal reached 39.3% in 2012 and will continue to increase.

(Units: Tons)

Index	Usage of Raw materials (Main & Sub)	Recycled metal	Quantity of Steel
2010	249,305	95,262	220,032
2011	266,016	102,852	233,671
2012	237,298	93,301	218,185

Green Resources Management

Doosan Heavy Industries & Construction has ambitions of promoting a culture of effective waste management by adopting the practice of separate waste collection at its plants. By making such separation processes a part of its standard operations, the company hopes to ingrain the habit of recycling, as well as be a role model to others in the industry.

After the separation of the wastes, equipment such as rotating forklifts and dump trucks are used to handle the waste collectively in batches. In addition, the recycling process is continuously being improved by outsourcing the work to specialized recycling companies.

(Units: Tons)

Index		2010	2011	2012
Total Treatment	Total	72,264	75,275	67,838
	Special Purpose	5,598	5,266	4,559
	General	66,666	70,008	63,279
Landfills	Total	14,534	14,257	13,330
	Special Purpose	4,435	3,931	3,283
	General	10,098	10,325	10,047
Incineration	Total	2,044	2,196	2,045
	Special Purpose	469	567	639
	General	1,574	1,561	1,406
Recycling	Total	55,686	58,888	52,462
	Special Purpose	692	767	637
	General	54,993	68,120	51,825

Water Resources Management

Doosan Heavy Industries & Construction recognizes that water is an important resource in business management. To reduce water use in their sites and offices, adjustments in the water pressures were made and water-saving devices were installed. By lowering the water pressure in toilets resulted in an annual savings of 3,000 tons of water. In the future, steps will be taken for utilizing rainwater for landscaping and cleaning, separating high water-consumption processes and reuse the final processing water.

(Units: Tons)

Index	2010	2011	2012
Water Usage	1,280,634	1,469,199	1,400,744
Groundwater supply	4,702	3,748	2,910

Managing Environmentally Hazardous Materials

Process of Monitoring Hazardous Materials

Doosan Heavy Industries & Construction has installed a strict monitoring system from purchase to disposal of raw materials in order to minimize the use of hazardous chemicals that are harmful to people and the environment and eliminate outflow accidents. An automatic recognition system has been set up to identify hazardous materials during the procurement process, while material information is collected through the use of MSDS (Material Safety Data Sheet). The process has been set up to track any usage of such hazardous materials throughout the entire production process to allow prompt implementation of corrective measures.

System of Monitoring Hazardous Materials



Prevention System for Hazardous Materials

Doosan Heavy Industries & Construction installed preventive processes with accompanying user manuals for each storage/handling facilities, a waste collection system and wastewater treatment facilities to ensure and prevent accidental leakage of hazardous materials.

Environmentally hazardous materials monitoring process



Preventive Measures for Hazardous Material Leakages

Doosan Heavy Industries & Construction has established a system to identify all possible discharge and leaks of hazardous materials and have solutions in place to minimize the impacts in the event of occurrence. At the Changwon plant, an oil fence was built at the final dewatering outlet to prevent hazardous materials from mixing with the environment. Doosan Heavy Industries & Construction is continuously making all efforts to come up with methods to prevent leakages such as oil skimmers and grease interceptors.

Environmental Pollutant Management

Air Pollutants

Doosan Heavy Industries & Construction is managing its air pollutants in strict ways to satisfy their own standard (40% of permitted emission standard) which is already over the legal standard. The company is keeping their eye on 137 of air discharge and control facilities for air pollutant management. The company is also focus on facility which is more than 15 years as a "target management required" to keep their air pollutant management. In 2012, Doosan Heavy Industries & Construction identified 50 issues, immediately corrected them and educated the field workers on methods of investigation and how to manage the processes to ensure such effects are minimized.

Furthermore, Doosan Heavy Industries & Construction conducts regular cleaning of all facilities using various cleaning vehicles and vacuums to minimize dust scattering of outdoor working areas of the plants. It also invested KRW 360 million for the implementation of wave barriers inside the storage rooms, paving of floors, grease arrestor and automatic washing facility installations. This year, Doosan Heavy Industries & Construction is planning to invest an additional KRW 650 million for expansion of these control measures.

Water Pollutants

Doosan Heavy Industries & Construction is building a management system to minimize the damage from water pollutant emissions. The weekly average of 10 hours of physical and chemical treatment methods such as flocculation - sedimentation - filtration are performed on an average of 500 tons a day (the maximum processing capacity of 1,590 tons / day). The water from the final processing stage is managed to be within the 40% legal limit for 17 check items and in 21 locations there is 24-hour monitoring with a remote alarm system in place, all combined to function as an effective water pollution accident prevention program.

Water Pollutant Emissions

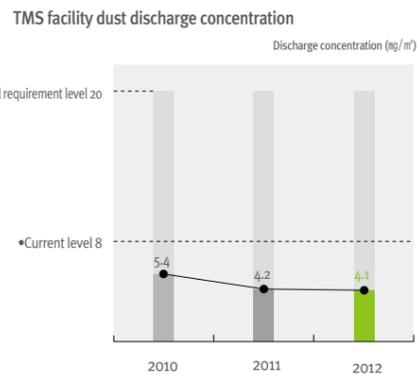
Index	COD	SS	N-H	Cr	Zn	Pb	Fe	T-N	T-P
2010	13.61	2.56	0.38	0.014	0.102	0.051	0.361	4.38	0
2011	11.67	1.72	0.44	0.077	0.217	0.052	0.242	11.44	0.015
2012	14.89	2.67	0.67	0.030	0.061	0.044	0.081	10.08	0.455

Wastewater and Handling Costs

Index	2010	2011	2012
Wastewater (tons)	281,618	276,145	202,598
Wastewater recycled (tons)	-	12,000	8,760

Soil contaminants

Doosan Heavy Industries & Construction conducts daily and annual environmental inspections in compliance with the Soil Environment Act. In 2012, 16 pollution tests for BTEX (benzene, toluene, ethylbenzene, xylene) and TPH (total petroleum based hydrocarbons) around oil storage tanks and piping areas showed all were below the legal guidelines. All operational facilities are managed by a daily check-list, whilst closed facilities are inspected once a year. Outdoor workshops and main drainage areas are also inspected daily. All outdoor storage of chemicals and hazardous wastes are subject to a thorough daily check and its findings are evaluated during EHS reviews.

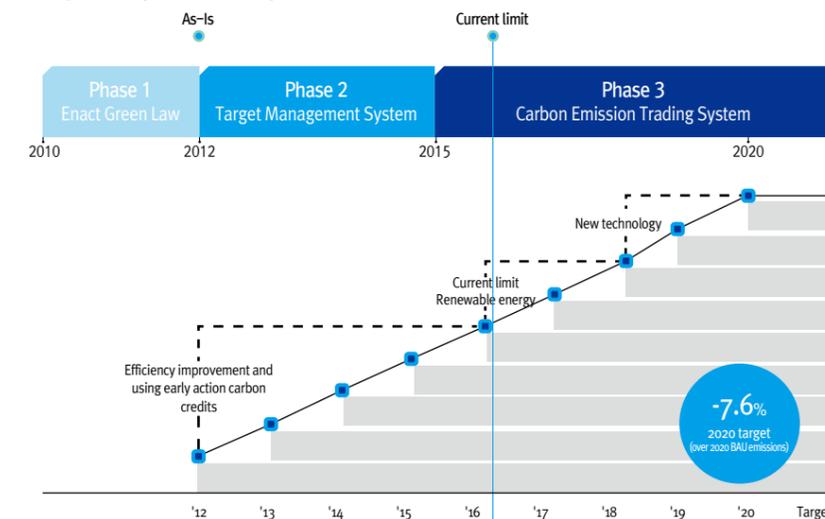


Responding to Climate Change

Strategies to Respond to Climate Change

Many countries limit emissions or impose carbon tax to strengthen regulations to curb greenhouse gas emissions. Doosan Heavy Industries & Construction has established a mid-to-long-term strategic roadmap for a new organization dedicated to promoting a positive response to climate change in phase specific goals. Doosan Heavy Industries & Construction plans to reduce greenhouse gases by 7.6% by 2020 (emission target of 403,000 tCO₂). To reach their greenhouse gas reduction goals, the company actively promotes activities that improve per-unit energy consumption such as improving consumption structure, fuel switching and introducing of new and renewable energy in the future.

Strategic Roadmap for Climate Change



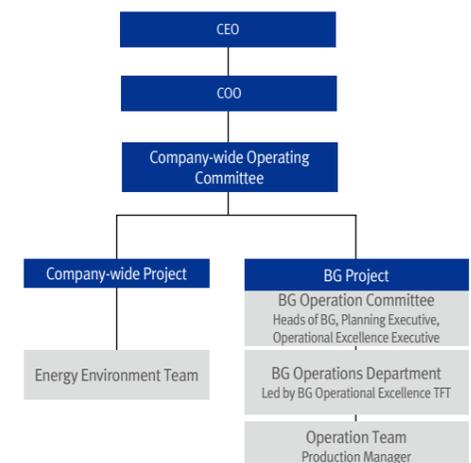
Organization Dedicated to Responding to Climate Change

Doosan Heavy Industries & Construction has organized a team dedicated to climate change with a defined role and corresponding tasks. Status reports on BG-level initiatives are made to the BG Operating Committee on a monthly basis, while corporate-wide initiatives that require decision-making are raised to the Company-wide Operating Committee. In addition, to encourage more strong response to climate changes, Doosan Heavy Industries & Construction has the emissions reduction performance included in the employees' MBO.

Role in the Organization and Operating Methods

Index	The role and responsibility
Energy Environment Team	Respond to the government policy and manage company-wide emission reduction
BG Operating Committee	Checks and determines the direction of the overall work in progress, identifies constraints and provides solutions
Operation Team	Collection and refinement of improvement ideas Implement the energy efficiency improvement activities Improve the effectiveness of performance monitoring

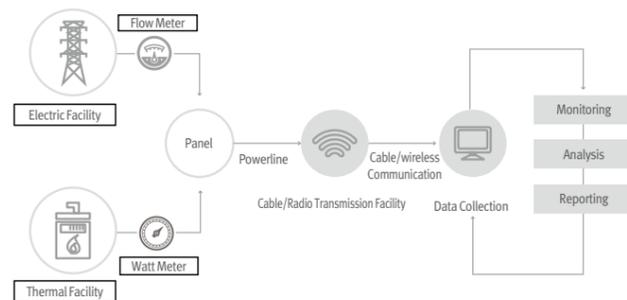
Organization Chart



Green Energy Monitoring System

Doosan Heavy Industries & Construction has operated Green Energy Management System (GEMS) to respond to climate change effectively. The system automatically measures and transmits via wired and wireless transmission devices the amount of electrical and thermal equipment usage. The company uses GEMS to collect data such as the amount of greenhouse gas emissions by each site, plant and equipment, and the analysis of results is then utilized in greenhouse gas reduction planning.

Green Energy Monitoring System Diagram



Action to Reduce Greenhouse Gas Emissions

Doosan Heavy Industries & Construction has organized an "Energy Efficiency Enhancing TFT" to invest in energy reduction processes and technologies, leading to maximum energy efficiency. Since its establishment, Doosan Heavy Industries & Construction has continuously addressed energy reduction to a point where it is no longer possible to attain further reduction from simply exchanging old equipment. To attain greater efficiency, it has had to implement strategic measures for energy efficiency through process innovations and quality improvements. The goal of Doosan Heavy Industries & Construction is to reduce approximately KRW 3 billion worth of energy use per year through improved operational methods. In 2013, through ESCO (Energy Service Company) activities, it has set a goal to save KRW 8 billion.

Energy Reduction Strategy

Level	Feasibility	Approach Method	Initiatives
Level 1	Immediately execution	1 Immediate execution through materialization of plan (ROI: less than one year)	<ul style="list-style-type: none"> Optimize furnace inner pressure and fuel efficiency Adopting inverter system to cooling water pump
Level 2	High feasibility	2 Analyze detailed investment in each level of economic feasibility (ROI: 2~4 years)	<ul style="list-style-type: none"> Heating furnace combustion Enhancing air system Recuperate burner High density oxygen combustion Crane generative braking power system
Level 3	Low feasibility	3 Promotion of work stability, possibility analysis execution (ROI: less than four years)	<ul style="list-style-type: none"> Electric degassing pump
Level 4	Low impact	4 Exclude technologies with low returns on investment and difficult to operate	<ul style="list-style-type: none"> Preheating the feeding iron and steel scrap to electric furnace

Outcome of Greenhouse Gas Reduction

Doosan Heavy Industries & Construction is making energy saving a way of life and complying with the new law for minimum and maximum internal temperature standards for its offices and factories. Practices of reducing the power loads during peak hours such as turning off high energy dependent equipment (e.g. furnaces), its outdoor advertising and even increasing the recovery rate of waste heat energy have been adopted at the company. In 2012, through its proactive greenhouse gas reduction activities, Doosan Heavy Industries & Construction reduced 8,368 tons of carbon dioxide and saved KRW 1.69 billion in energy costs.

Energy Consumption

Index	Unit	2010	2011	2012
Electricity	MWh/year	340,080	358,981	345,082
LNG	KNm ³ /year	46,506	47,829	45,428
B-B	kQ	1,909	536	-
Bio fuel.	kQ	9,618	9,730	7,865

Greenhouse Gas Emissions

Project	2010	2011	2012
Direct emissions (fuel)	153	135	123
Indirect emissions (electricity)	164	172	160
Mobile combustion	1	2	1
Process emissions	17	19	16
Greenhouse gas emissions (Total)	317	328	300

(unit :1000tCO₂)

Greenhouse gas emissions



Greenhouse gas reduction

Project	2011		2012	
	Reductions (tCO ₂)	Cost savings (100million won)	Reductions (tCO ₂)	Cost savings (100million won)
Thermal equipment improvements	628	-	109	0.5
Improving operational methods	1,980	2.1	7,882	15.5
Introduction of high-efficiency equipment	2,205	4.0	33	0.1
Combustion optimization	1,143	4.0	344	1.3
Total	5,956	10.4	8,368	16.9

Greenhouse gas reductions





Plaque awarded for selection as a Climate Competitiveness 'Best Company'

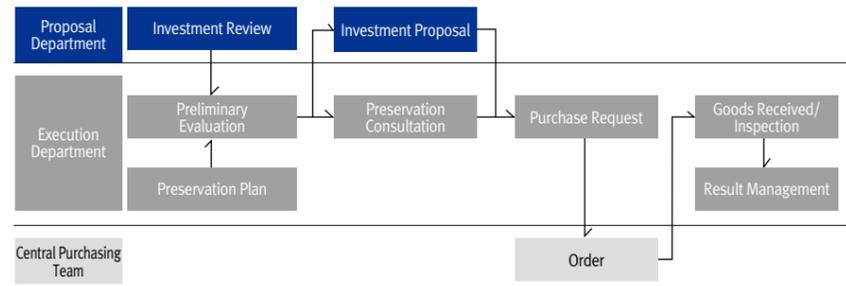
Participation in External Projects Concerning Climate Change

Doosan Heavy Industries & Construction has been participating in the CDP (Carbon Disclosure Project) since 2009. The CDP is a project carried out to assess the level of corporate response to climate change and to identify impacts and analyze the investments risks to the business from climate change. Doosan Heavy Industries & Construction has actively responded to the climate change as a global issue and has participated in the CDP on a voluntary basis from 2012 and has been selected by the Korean government as the "best company" in the machinery sector in terms of the Climate Change Competitiveness index.

Green Procurement

Doosan Heavy Industries & Construction, in their commitment to social responsibility, signed a voluntary agreement with the government to expand their purchasing of green and environmentally-friendly goods for production and construction. The green procurement guidelines have been established since 2011. By doing so, it enables the implementation of an ERP system and GEMS in conjunction with automatic monitoring that can provide information to improve processes. In addition, the process is being developed to enable selecting and purchasing of eco-friendly products from the beginning to improve operating results.

Green procurement process



* Doosan Heavy Industries & Construction eco-friendly products: Eco-mark certified products, energy saving Good Recycled Mark certified products and those goods with a reduction in hazardous substances and those that reduce waste.

Green Procurement Performance Review

	2011	2011	2012
Purchases (million won)	2,644	3,157	2,649

Biodiversity Conservation

Doosan Heavy Industries & Construction recognizes that the tidal wetlands in Masan Bay is a protected area and is committed to the preservation of the marine environment by continuously pushing for coastal and underwater cleanup activities. To reduce the impact on the outlet, Doosan Heavy Industries & Construction try to clean up their workplace and mountain of non-point source (twigs, weeds, sediments, etc).

Masan Bay Environmental Clean-up Activities

	2008	2009	2010	2011	2012
Collected (ton)	10	15	20	30	30
Number of participants (people)	100	80	100	150	180

Participants of environmental clean-up

20%▲

CSR Pillar 3

Building Partnership

Dimension 5. Shared Growth

Dimension 6. Social Contribution

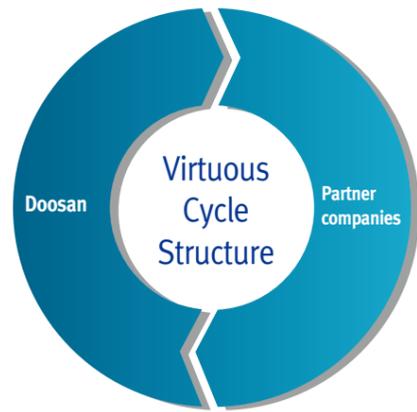
As trees grow well on lands with favorable soil condition, in order for Doosan Heavy Industries & Construction to grow, the environment around it needs to be healthy and eco-friendly. The ultimate goal of Doosan Heavy Industries & Construction is to not only achieve close relations with its partners in the production and manufacturing processes, but to also establish closer ties with the regional communities and business stakeholders.



CSR Dimension 5 Shared Growth

[Approach]

In order to strengthen their global competitiveness, Doosan Heavy Industries & Construction is working on their shared growth motto "virtuous cycle partnership with partner companies" and supporting their partner companies with various ways. Doosan Heavy Industries & Construction runs various programs to ensure essential competitiveness via supporting and strengthening of manufacturing competitiveness of partner companies, providing financial assistance to partner companies with essential skills but under financial duress, sharing experiences from both local and abroad sources, regular communication channels and promoting differentiation programs to develop beneficial and satisfactory relationships.



“Virtuous Partnership Leading to Shared Growth”

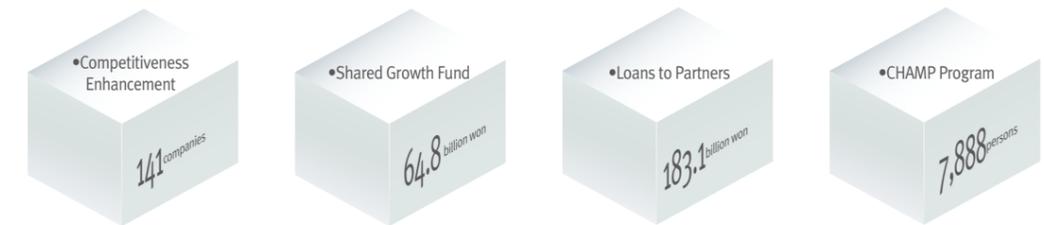
[2012 Results]

- Competitiveness and productivity growth support given to 141 companies from seven areas. Doosan Heavy Industries & Construction supported 17 partner companies in LM(Lean Manufacturing) area & 11 partner companies in DTC(Design To Cost) area
- Trained the total number 7,888 of man-days personnel from 116 companies to complete the Consortium for HRD(Human Resource Development) Ability Magnified Program(CHAMP)
- Promoted the benefit sharing project and successfully implemented the benefit sharing system into 20 companies
- Raised 64.8 billion won for the shared growth fund and directly allocated 4.8 billion won
- Recommended network loans of 152 billion won, supporting 183 billion won in total to corporate partners
- Worked together with and supported 14 partner companies to attend overseas exhibitions (Power Gen) and trade conferences

[2013 Plan]

- Tailoring competency-building programs for partners
- Additional raising of Shared Growth Fund and expanding the funding
- Increasing the rate of cash payments to subcontractors
- Strengthening activities to ensure fair trading and enhancing compliance to prevent illegal insider trading
- Improving a sense of shared growth by enhancing communication with subcontractors

[Key Indicators]



[Stakeholder Interview]



Interview with Mr. Kyung Hyo Jeoung, Chairman of Doosan Heavy Industries & Construction Corporate Partners Council and Kum Woo Industrial Machinery Co. Ltd.

Kum Woo Industrial Machinery has been working with the Power BG of Doosan Heavy Industries & Construction since 2000 and has been growing together continuously for the past 13 years. Our company has been a supplier for power plant, sea water desalination plant and steel structure businesses. Every time we view an industrial site we had a part in building, it fills us with pride.

Doosan Heavy Industries & Construction's corporate partner cooperative program can be characterized as supporting effective virtuous cycle features at its core. To this end, Doosan Heavy Industries & Construction's activities focus on laying the foundations to enable their corporate partners to improve their manufacturing processes, competitiveness and increase production, such as through productivity improvement (LM: Lean Manufacturing), design improvements (DTC: Design to Cost) and quality improvement initiatives. In addition, financial support is provided through its shared growth fund to those corporate partners with exceptional technical skills but who are underfunded or experiencing financial difficulties.

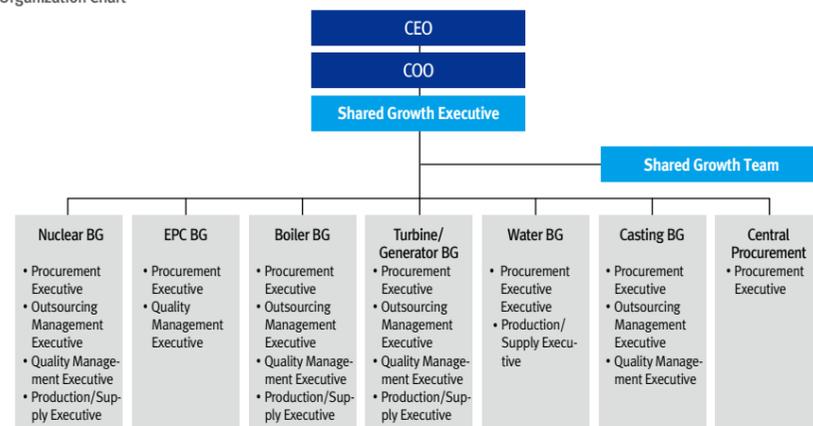
In 2011, Doosan Heavy Industries & Construction was instrumental in organizing some 200 corporate partners to form the Doosan Heavy Industries & Construction's Corporate Partners Association and in doing so, was able to vastly enhance communication with the member companies.

It is our hope that our corporate partners will try their utmost to boost quality and meet production deadlines to create the foundations for shared growth together with Doosan Heavy Industries & Construction, which in turn will enhance the overall competitive capabilities of our company that will allow us to win more contracts and provide more opportunities to grow and develop together as part of a virtuous cycle of partnership and cooperation.

Shared Growth Philosophy

The “virtuous cycle partnership” is a shared growth philosophy developed by Doosan Heavy Industries & Construction -a system that promotes the idea of extending their business management practices to include suppliers with the goal of increasing the efficiency of the entire process of production and thus further strengthening the relationship. To this end in 2010 a task force under the supervision of the COO was formed to outline the road map, action plan and responsibilities for the operation of the CP (Compliance Program). The result of this vigorous effort to promote the process of accompanied growth was recognized and in September 2012, the President of Korea presented Doosan Heavy Industries & Construction with the industrial service award. In addition, Doosan Heavy Industries & Construction received a satisfaction grade by Commission on Shared Growth for Large and Small Companies in 2012 shared growth index evaluation.

Organization Chart



Partners Competitiveness Enhancement Program

Doosan Heavy Industries & Construction promotes activities which leverage their accumulated knowledge, innovative management techniques and technology to be shared and used as a support platform for its business partners, so that they may achieve global competitiveness.

The primary goal of the program is to build a long-term partnership with competitive companies that include encompassing partners into its quality management system and utilization of their state-of-the art technology. Doosan Heavy Industries & Construction and their partners recognize the competition in their industry is fiercer than any other industries and thus, in order to survive, it must strive for significant improvements in seven major areas – productivity improvement (LM), design improvement (DTC), quality assurance, quality improvement, production technology, environment health safety (EHS) and work-environment improvement. In 2011 Doosan Heavy Industries & Construction underwent a process of selecting suitable and compatible companies and is providing tailored empowerment programs to these 141 companies with plans to continue similar activities in the future.

In addition, Doosan Heavy Industries & Construction established the Consortium for HRD(Human Resource Development) Ability Magnified Program(CHAMP) to provide partners with essential training. Especially in the area of technical training. Doosan Heavy Industries & Construction is the only company to continuously offer the technology to resolve problems quickly and proactively help in responding to the changing environment. This activity was recognized when Doosan Heavy Industries & Construction was awarded in two of the three categories in the “Best Practice” contest in 2012 and the program that was instrumental in winning the award was used to provide job training for 116 companies for a total number of 7,888 man-days.

•Agreement of Contract for Benefit Sharing System Implementation

In June 2012, Doosan Heavy industries & Construction signed an agreement for the benefit sharing system with the Ministry of Knowledge Economy (Current Ministry of Trade, Industry and Energy). According to the agreement, Doosan Heavy Industries & Construction must devise together with its partner companies some mutually-beneficial joint initiatives and signing a contract from early on. If the partners are able to successfully accomplish the initiatives, Doosan Heavy Industries & Construction shares the benefits through numerous ways, such as giving cash compensation, signing a long-term contract, and increasing the orders. In 2012, there were 20 companies that agreed to participate in the benefit sharing system. In 2013, Doosan Heavy Industries & Construction intends to continuously promote the benefit sharing system at a wider level.

Financial Support

•Shared Growth Fund / Network Loans

Doosan Heavy Industries & Construction provides financial support to its partner companies to help them with stabilization of their businesses. An agreement for cooperation with the Export-Import Bank was made in February of 2012 and in June of the same year, an agreement was signed with the Industrial Bank of Korea to provide its affiliates with financial support amounting to 30.8 billion won, leading to a win-win situation for both sides. This amount will build on the 34 billion won that was already committed in 2011 with Korea Development Bank, making the funding a total of 64.8 billion won. With the shared growth funds available at lower than market rates, Doosan Heavy Industries & Construction partners can have access to fund capital expenditures and operations easier and with more flexibility. In addition, In December 2009, Doosan Heavy Industries & Construction and Industrial Bank of Korea made an agreement of Cooperative Corporate Loan by which partner companies can get a loan up to maximum 80% of contract amount with pre-paid type. This agreement helps the company to help all the partner companies that need funding for production and operation. The lending money supports 183.1 billion won to the partner companies until 2012. In 2013, the assistance will be expanded more to enhance practical financial help for the partners.

Shared Growth Fund

64.8 billion Won

Supporting Entry into Overseas markets

Doosan Heavy Industries & Construction assists its corporate partners to obtain access to overseas market projects by extending their experience and knowledge of application procedures, document preparation and other administrative processes to enable them to participate in the global markets. In 2012, Doosan Heavy Industries & Construction assisted 124 corporate partners in 169 PQs (Pre-Qualification) for various overseas projects and assisted 11 corporate partners to become sub-contractors for overseas construction projects. In addition, site tours were arranged for the partners to Doosan Vina and the Gheco One Plant in Thailand, and assistance provided on participating in the Power Gen exhibitions(Power-Gen Asia(October 3, 2012 ~ October 5, 2012 in Bangkok, Thailand) & Power-Gen International (December 11, 2012 ~ December 15, 2012 in Orlando, USA)),one of the power industry's major exhibitions and a great opportunity to broaden their overseas exports business.

Enhanced Communications

Doosan Heavy Industries & Construction supports seamless communication with its corporate partners and this can be achieved by regular communication activities and support programs. Doosan Heavy Industries & Construction Corporate Partners Association was formed in April 2011 with the agenda to have one AGM and quarterly forums to provide an opportunity for its participants to share their successes as well as their failures with other members. On February 8, 2012, the AGM was held at the Changwon Plant and 210 corporate partners participated. At this meeting, Consortium for HRD(Human Resource Development) Ability Magnified Program(CHAMP) and shared growth plan for 2012 was announced. In addition, an award was presented to the corporate partners for “best practice partner” and “excellent partner” amongst other entertainments.

Furthermore, to ensure partners receive regular feedback, it established the Win-Win Call Centre where any queries not resolved were to have a response within 24 hours. The types of queries include corporate partner registration, inquires about the shared growth program, competitive issue counseling, financial support, job training consortium inquiries, fair trade issues and complaints. Through various resources such as the company website, e-Sourcing web tool, private consultations (080-069-5000), fax and email, both inquiries as well as complaints can be filed whilst protecting the identity of the person filing the inquiry or complaint. a dedicated website was opened (partner.doosanheavy.com) to support a medium for effective communications with corporate partners.

In 2012, Doosan Heavy Industries & Construction distributed school books to 1,207 children of corporate partner employees enhancing their educational experience. In addition, to extend their support, vaccinations were provided for the H1N1 virus to their corporate partners and their families as well as operating a cinema for their use.

Shared Growth: Visits to Corporate Partner Sites

The management of Doosan Heavy Industries & Construction realizes their corporate partners are essential to future growth. To this end, they support and foster close working relationships via open communications, feedback and seek to help them overcome difficulties by making regular visits to the partners' sites.

On September 13, 2012, President Key Sun Han, Shared Growth executive Sang Gyu Lee and Nuclear Planning director In Koo Kang visited the sites of the Nuclear BG partners, Power MNC Co. Ltd. and Kyung Sung Electric Co. Ltd. During the visit they listened to the comments and opinions of the partners' employees from the floor staff member to top management. In addition to a detailed tour of the site, they exchanged future cooperation plans on shared growth.

Power MNC Co. Ltd. is Doosan Heavy Industries & Construction's nuclear fuel handling facility supplier whilst Kyung Sung Electric is Doosan's nuclear fuel storage supplier. In 2011 and 2012, Doosan Heavy Industries & Construction provided both companies with competitiveness-strengthening support for productivity increasing activities.

President Key Sun Han emphasized, "It is vital that Doosan Heavy Industries & Construction and its corporate partners secure quality products, reduce failure costs and achieve quality stability by using appropriate levels of technology."

In a bid to enhance its cooperation system, Doosan Heavy Industries & Construction intends to continue with its regular visits to the partner sites to encourage dialogue and shared growth with its partners.



Compliance Program

The Compliance Program (CP) is a voluntary compliance system and code of conduct which aims at enhancing fair trade in order to comply with the applicable laws. The primary role of the Compliance Program is to set a standard to prevent unfair or illegal activities. Doosan Heavy Industries & Construction introduced their Compliance Program in 2004 with the goal of establishing a code of conduct by selecting representative compliance executives within each BG who ensures their managers, corporate compliance officers do not violate the relevant laws and regulations as well as promoting team growth in accordance with the seven core elements of fair trade rule compliance. In January 2013, the CEO urged companies to commit to fair trade practices and to willing adopt a company-wide compliance program. Doosan Heavy Industries & Construction provides various educational programs related to fair trade as well, and has a monitoring system in place. The status is checked on a quarterly basis and outstanding examples are presented and shared at the fair trade self compliance forum. In addition, self-compliance activities and the operating status are presented to the Board of Directors as quarterly reports. As a result, in April 2013, at the 12th "Fair Trading Day" the Shared Growth Team General Manager Mun Jo Jang was awarded the Fair Trade Commission Award by the Chairman of the Commission.

Practices for Compliance Program

•Fair Trade Agreement and Introduction of Compliance Program

Doosan Heavy Industries & Construction, in conjunction with its corporate partners, aims to continually promote the fair trade culture and in 2012, the company signed an agreement with 210 companies to adopt shared growth and fair trade practices. To assist with the compliance, Doosan Heavy Industries & Construction supports the expansion of the CP program, provides onsite consulting to review and confirm the companies that are in compliance with the CP.

•Expanding Fair Trade Education

Furthermore, to make the CP an everyday practice for the corporate partners, Doosan Heavy Industries & Construction provided education and training programs. The training curriculum includes classroom education, specified education, online education etc. In particular, in 2012, the company increased their educational activities by providing training to 132 new employees, as well as specialized training to their employees and managers. The special topics included subjects such as sub-contracting law, unfair insider trading, international cartel illegality to reduce the risks of such incidents from occurring. In 2013, the CP was reinforced and added into the orientation program for all new employees and also incorporated into a comprehensive training program for the purchasing department. In addition, a dedicated person was appointed within the Shared Growth team to establish a mid- to long-term road map for the CP and implement the objectives.

•Unfair Trading Actions Reporting System

Doosan Heavy Industries & Construction has set up a division to enforce the CP by enabling employees and corporate partners to lodge a complaint in case unfair trade practices occurred, such as collusion bidding, insider trading and abuse of positions. When a complaint is lodged, a group with the Shared Growth team investigates the claim and gives a response within 24 hours of their findings and suggests appropriate actions. Doosan Heavy Industries & Construction ensures that the identity of the person filing the complaint is kept confidential and ensures they do not suffer any disadvantage due to the lodging of the complaint. The company has a limited number of staff members who already signed confidentiality agreements assigned to managing such complaints, and these people are strictly prohibited from disclosing the identity of the people or revealing the content of the reports.

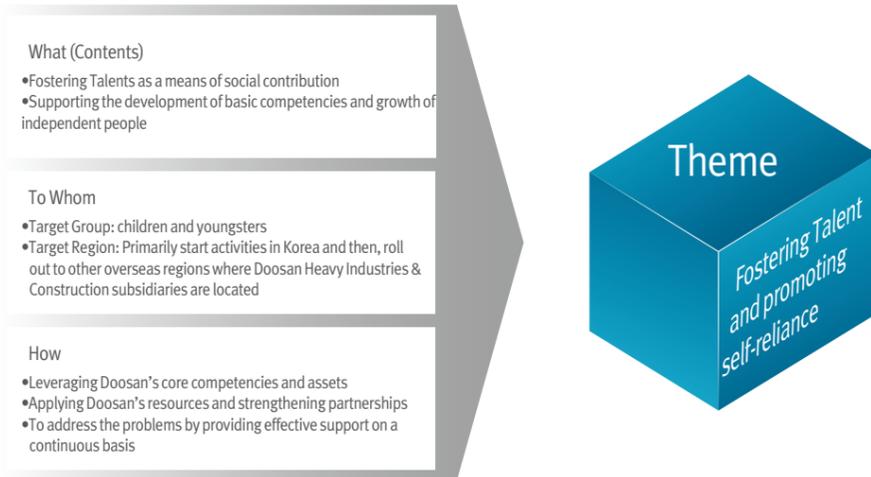
2012 Fair Trade Training (number of staff)



CSR Dimension 6 Social contribution

[Approach]

Doosan Heavy Industries & Construction is committed to the development and growth of people as this represents its corporate social contribution philosophy. Effective community service requires a deep understanding of what the community-specific issues are and a professional and systematic approach to addressing those issues by forming CSR partnerships to ensure activities are carried out progressively and continuously. Doosan Heavy Industries & Construction aims to leverage its competencies to make a positive contribution to the communities both at home and abroad, including the overseas markets such as Vietnam, India and Europe.



[2012 Results]

- Regional Talent Growth Support
 - Donated a development fund of 300 million won to the Changwon High School of Science, organized volunteer activities with the school and held a training seminar led by the executives for the students
 - Operated support programs for the gifted and talented students in the region Helped 56 youngsters in getting admitted early to top universities (such as Seoul National University, KAIST, Pohang University of Science and Technology)
 - Operated the "Doosan Class" and industrial exchange programs: with four meister high schools, specialized high schools. (100 students)
- Promoting volunteer work among employees
 - Increased of participants by 26% (1,020 persons) and increase of volunteer service work hours by 34% (5,685 hours)
- Joint social contribution activities with local communities: special volunteer service for typhoon
 - affected areas, bulk purchasing of fallen fruits and expanding social programs in alignment with the "One Company, Six Rural Communities" program
- Strengthening global social contribution activities
 - donating desalination facilities to An Binh Island in Vietnam, establishing medical facilities and commencing social contribution programs in India, etc
- Commendation Awards
 - 2012 Korea "Sharing Award" presented by the Minister of Health and Welfare
 - 2012 Community Service Award presented to Doosan Heavy Industries & Construction's Social Volunteer by the Governor of Gyeongsangnam-do

[2013 Plan]

- Establishing the CSR vision and strategy
- Enhancement of corporate social contribution programs
 - Operating specialized programs for local childcare centers: promoting education, culture, arts and physical education, etc. curriculums to promote growth of children
 - Promoting volunteer work under various themes: science field trips, helping out with farming activities, sports activities, etc.
- Expansion of programs supporting the local community
 - Doosan Family Culture Festival "Happy Sharing, Happy Together" : invitation to children of underprivileged and multi-cultural families
 - Continuous support of programs and activities focusing on fostering exceptional talents and children from underprivileged families
 - Expansion of ties with farming communities

[Key Indicators]



[Stakeholder Interview]



Yong Woo Lee, Society Director, Federation of Korean Industries

There are two directions that can be taken by a company for effective social contribution activities. Due to the characteristics of the business, there are two different benefits for recipient companies – internally and externally. In other words, a stance of corporate social contribution is highly effective in significantly and favorably improving the external image of a company but also becomes an effective tool for building a positive internal corporate culture. The corporate social contributions of Doosan Heavy Industries & Construction have a deep significance in the latter sense. As the company is not in a business that produces consumer goods, their corporate social contribution produces different effects than that created by other companies. Thus, it is rather difficult to determine the direction of corporate social contributions than such consumer goods companies.

Nevertheless, I want to point out the significance and their core values as a company and their efforts with their corporate social contributions. They overcame the limitations of their business products by focusing on "growth and self-reliance of competent people." Eventually, the continued values and the activities of corporate social contributions will have great implications in sustaining the well-being of people and fostering talents.

If you look at the programs, including both the domestic and overseas programs, there is a substantially large number of voluntary work being carried out by corporate volunteers. All the programs are unified under a common banner of "People are the future," helping the whole group retain focus in their work. The pride and confidence that such activities inspire in their participating staff is one of the major benefits gained by the company.

Finally, in recent years, the company has been shedding light on the role of managerial activities in terms of meaningful corporate social contribution and their effects. It is thought that commercialization of appropriate/optimal technologies or development of eco-friendly techniques are the basis of what companies can do as their corporate social contribution. It is worth noting the fact that "desalination" business is related to corporate social contributions. There is a necessity to increase the connection between the two since the direct company activities themselves could have important functions in the communities of the future. At the same time, having "talent-sharing" of corporate personnel included as part of its voluntary services is also expected to be one of the major directions and values for corporate social contributions.

Main Social Contribution Activities

Social Contribution System

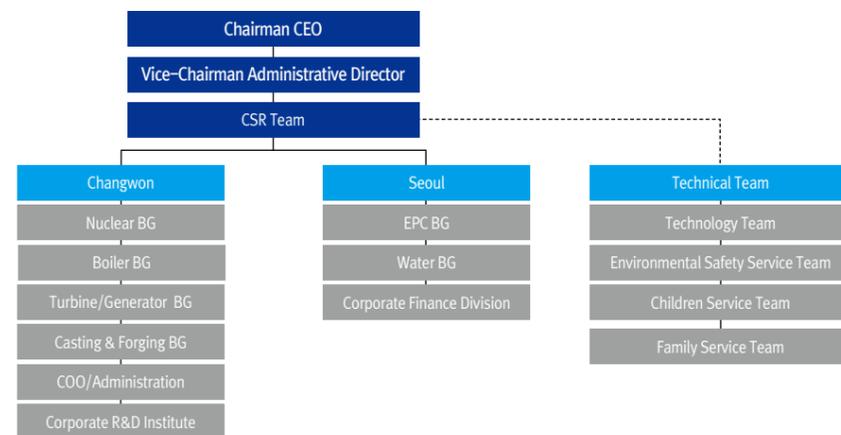
The fundamental focus of the social contribution system of Doosan Heavy Industries & Construction is to actively foster individual talent and provide such talents the opportunity to bud and grow with the goal of becoming self-reliant. The corporate society volunteer service, comprising 95% of its workers, encouraged everyone to participate in various community centric and global projects. In addition, by utilizing its core competencies and key competitiveness within their corporate social contributions, Doosan is doing its best to inspire and encourage local communities by being a loyal corporate citizen.

Doosan Heavy Industries & Construction supports underprivileged children and youth as well as low-income families under their theme of fostering self-reliance. It provides support to high schools, universities and scholarships for students of low-income families to enhance educational opportunities. In addition, it also operates a diverse range of supporting activities in the areas of culture and art, providing national disaster relief fund, donation of a seawater desalinization plant in Vietnam and enabling interchange of business among rural communities.

In order to perform their social contribution activities more effectively, the company has set up a social contribution fund by matching a grant and deposit of a certain amount withdrawn from the employee's monthly salary. In 2012, despite the difficult economic times, with the support of its staff, the fund increased by 7% compared to the previous year.

As a result of these social contribution activities, Doosan Heavy Industries & Construction won the grand prize at the business awards ceremony for the business investment category in Vietnam in 2011, the grand prize from the Minister for Public Administration and Security and the National Grand Prize award for sharing in Korea from the Ministry of Health & Welfare in 2012. In the future, Doosan Heavy Industries & Construction will continue to proactively promote voluntary participation within its workforce, both locally and abroad.

Organization Chart of the Voluntary Services Group



Corporate Social Contribution-Related Awards

Award year	Organizer	Award status
2010.12.01	Governor of Gyeongsangnam-do	Award for assisting a neighborhood in need.
2011.9.19	Gyeongsangnam-do Social Welfare Council	Gyeongsangnam-do social welfare award
2011.10.26	KOTRA	Grand Prize Vietnam investment promotion CSR, Corporate category
2011.12.05	Minister of Public Administration and Security	Award for the promotion of the Volunteer culture
2012.5.22	Governor of Gyeongsangnam-do	Promoting conservation of Biodiversity and biological resources
2012.10.25	Minister of Health & Welfare	2012Korea sharing award

Social Contribution Fund Support Status



Human Growth and Self-Reliance

As an extension of their social contribution focus, Doosan Heavy Industries & Construction creates tailored programs to assist those selected talents to strengthen and enhance their growth. In addition, support is also extended to those underprivileged or disadvantaged.

Theme	Activities Details	Activities Description	
Supporting growth of strong independent people	Support for nurturing qualified employee	- Sisterhood relationship with ChangWon High School of Science - Managing Industry-academic cooperation for Doosan community	
	Support for children of low-income families	- Sisterhood relationship with 70 Child welfare facilities - Special field trips for children of low-income families & provision of learning aid books - Scholarships & funding of learning academy costs	
	Support for low-income families	- Regular sponsorship for low income families - Providing gift boxes	
	Volunteer activities by Employees	- 9 Society volunteer group & 4 Professional volunteer group - Infra for Society volunteer supporting	
Joint Activities with Local Communities	Doosan Family Culture Festival	- Holding Drawing contests & Essay contests	
	Doosan Family Music Festival	- Holding a concert for the Family of Partner companies & Kids from welfare facilities	
	Supporting farming communities	- Supporting countryside farmers - Mass purchasing of local fruits - Opening a market for direct trading of Korean cows	
	Underwater cleaning activity	- Underwater cleaning activity for Masan bay	
Global social contribution activities	Support for emigrant women	- Arranging company tour & invitations to movie theater - Kimchi-making event	
	Medical services	- Operating cleft lip surgery for free - Operating cataract surgery for senior citizen - Ly son Island Medical service	
		Vietnam	Doosan Heavy Industries & Construction-Chung-Ang University medical center consortium - Sending medical professionals & Organizing medical service squad
		Beyond Summer camp	- Establishing lectures for general study & leadership
	India	Donation of desalination facility to An Binh Island	- Donation of desalination facility to Anbin Island
		School Day event & Wish Tree	- Supporting small business owners - Funding tuition for children suffering from extreme poverty
	Thailand	Equipment donation	- Donation school equipments to local elementary schools

Supporting of Underprivileged Children and Youth

Doosan Heavy Industries & Construction set up sisterhood relationships with 70 child welfare institutions, including community childcare centers, providing funding to operate specialized programs and support to foster self-reliance in children. It also provided activities and opportunities for 1,500 children and youths to experience programs involving culture, fine arts and other creative endeavors to assist them on growing up more balanced socially. To enhance students' learning ability, the company donated approximately 6,700 reference books from Doosan Dong-A every semester. In addition, it operates the "matching fund programs" to assist those students from low-income families with excellent academic results throughout their junior and senior high school years, by helping them get institutional scholarships and providing support to elementary and junior high school students on their after school activities.

Fostering Gifted and Talented Students in the Region

As part of its program to fostering talented students in the region, Doosan Heavy Industries & Construction set up sisterhood relations with the Changwon High School of Science in 2011. It has made a contribution of 300 million won for scholarships, R&E activities, etc. It also organizes industry field trips, special seminars held by company executives and talent sharing workshops. As a result, 56 students who participated in these activities gained early admissions to schools such as Seoul National University, KAIST, POSTECH etc. The school was also the biggest winner of the 4th Science Olympiad. In 2011, Doosan Heavy Industries & Construction formed an education-industrial exchange programs with four meister high schools, alternative schools and four specialized colleges and commenced operation of the "Doosan Class" to provide customized training for the company. These classes included talent and expertise-sharing classes whereby the personnel recognized as masters/experts in their field shared their experiences and skills with students to enhance the quality of their education.



Number of Employee Volunteer

Index	2010	2011	2012	Total
Social welfare	379	2,686	3,050	6,115
Talent sharing	105	113	389	606
Community	245	746	1,283	2,274
Environmental safety	448	420	263	1,131
Total	1,177	3,965	4,985	10,127

Employee Volunteer Hours

Index	2010	2011	2012	Total
Social welfare	1,255	11,172	13,433	25,860
Talent sharing	522	704	1,053	2,279
Community	1,228	3,494	7,086	11,808
Environmental safety	645	1,498	903	3,046
Total	3,650	16,868	22,475	42,993

•Supporting Low-Income Groups

Various types of financial support were provided to nearby and local areas such as supplementary living allowances, improvements to the local environments of rural communities, purchasing of agricultural products, installation of fire detectors, emergency relief for the damage caused by a typhoon and deliveries of “Dasarang” (meaning comprehensive love) gift boxes with living essentials to approximately 1,000 households.

•Employees Volunteer Activities

Within the City of Seoul and Changwon there are nine social volunteer centers and four specialized volunteer corps who regularly, once a month, participate in various volunteer activities. These corps have sisterhood relations with 70 child welfare centers to support the education and self-reliance of children, as well as ties with other facilities such as senior welfare facilities, single mother centers, disability facilities, asylums and numerous other social welfare facilities. In 2012, a total of 22,475 hours were volunteered by 4,985 employees to participate in various activities. Doosan Heavy Industries & Construction, to promote volunteer participation, introduced the paid leave system where employees can work as a volunteer during work hours with the company’s permission and still get paid during this time. In addition, Doosan Heavy Industries & Construction introduced the society service management system. Employees who volunteer come under this management whereby they are compensated for travel and other expenses related to the volunteer activity as well as insurance coverage during the period and outstanding volunteers are given awards for excellence.

Community-based Volunteer Activities

•Doosan Family Cultural Festival

Started in May 2002, to coincide with the Korean Family Month, Doosan Heavy Industries and Construction invites its employees and their children to attend the festival with various activities and events such as sketching and writing contests with the aim of encouraging and bolstering the dreams and hopes of the children. In 2012, approximately 150 child from various regional children centers and orphanages were invited to attend the festival.

•Doosan Family Music Festival

Since 2005, together with employees, the local residents and their families get together and participate in Doosan Family Music Festival, a representative local community program hosted by the company. Using the region’s prominent culture as the lead, the festival showcases a variety of performances from classical to pop music. In 2012, the company invited the families of their corporate partners, as well as approximately 200 children from the local child welfare centers.

•One Company-Six Villages Program (volunteer work in farming communities)

The company has sisterhood relations with six rural communities for each of their subsidiaries in the Gyeongnam province including the Misan village in Haman. Each volunteer service involves assisting these areas with activities such as picking persimmon fruits, pruning grape vines and purchasing the local region’s famous produce, such as dried persimmons and kiwi, as well as inviting the people of these communities to the company. In particular, on 20 September 2012, Doosan’s foundation day, approximately 300 employees instead of taking the day off formed a special team to assist and restore the areas affected by the typhoon “Sanba” and bulk-purchased various fallen fruits, such as apples and pears. They then distributed them to other company staff. Doosan Heavy Industries and Construction also set up a meat market to allow struggling cattle farmers to sell their meat directly to the company employees.



•Supporting Immigrant Women

Doosan Heavy Industries & Construction invited migrant women residing in rural areas who may not yet be familiar with Korean culture and organized field trips, cinema outings, train and boat trips, home repairs and other support activities with the goal of assisting them in settling into life in rural Korea. In 2012, Doosan Heavy Industries & Construction invited 30 multicultural housewives and together with their volunteers used 2,000 cabbages to make kimchi. This was then distributed to 250 places that included sisterhood childcare centers, seniors living alone, multicultural families and underprivileged households. As a dual point, this activity was aimed at assisting multicultural families to better understand Korean culture.

•Water Purifying Activities

In June 2012, on “Sea Day,” 200 Doosan Heavy Industries & Construction volunteers joined with 100 other volunteer corps to form a 300-strong group to collect refuse along the coastline of the City of ChangWon Gwisan-dong near Masan Bay. Doosan Heavy Industries & Construction also donated their heavy machinery such as dump trucks, excavators and waste collection vehicles for the day and together collected 30 tons of refuse that included garbage such as waste, tires, rubbish and waste arising from fishing activities that was disposed of or post processed. The cleanup operation was on a large scale partly due to the largest voluntary participation of employees and such high rate of participation will likely continue for future cleanup operations.

Global Social Contribution

Vietnam

•Medical Services

Doosan Vina, the Vietnam subsidiary of Doosan Heavy Industries & Construction, has been supporting free operations for those with cleft lips, palate patients and cataract surgeries for seniors since July 2009. They also signed an MOU with the Vietnamese QuangNgai provincial government and have been in a partnership with the Chung-Ang university medical center. Also, every summer Doosan Vina dispatches a medical volunteer corps to various places which in 2012 was the Ly Son Island. The medical facilities in the region are very substandard and as a result many residents cannot receive the necessary care when they need it. Thus, Doosan Vina’s objective is to provide free medical assistance where and when it is needed and by doing so, truly make social contributions. In addition, it donates nutrients for children up to age five, medicines for local residents, surgical devices for cataract surgeries and devices for physical therapy.

•“Q Health Project” Pursued Jointly by Doosan Heavy Industries & Construction and Chung-Ang University Hospital

In July 2012, Doosan Vina was selected by KOICA as the Q-health provider and signed a MOU with Quang Nam Seong Central General and Hospital Hue University Hospital. The objective of Q-health is to enhance and improve the competency of the medical personnel in the central Vietnam area. Thus, the healthcare service program is to be initiated in 2012 for five years. To this end, Doosan Vina and the medical staff of Chung-Ang University Hospital in Korea plans to form a team to dispatch to Vietnam to provide much needed healthcare services as well as form a network of entities in Korea to support this team.





•**Beyond Summer Camp**

In 2012, for the first time Vietnam honors students were invited to South Korea for a period of 3 weeks to attend classes at the Chung-Ang University in areas such leadership, Korean languages and liberal arts. Through this program Doosan Heavy Industries & Construction is able to enhance its image and at the same time provide an opportunity to discover outstanding talent that can be fostered with a wide variety of custom programs to develop leaders of the future.

•**Donation of Seawater Desalination Facility to An Binh Island**

Doosan Heavy Industries & Construction is actively promoting the core competency of their social contribution program in the Angkor Wat area in Cambodia and in 2006 donated water purification equipment to enhance the quality of life. In 2007, the company built and donated a desalination plant on the Dokdo Island In 2012, in An Binh Island, a saltwater desalination plant was also donated. All these areas have little to no ground water supply and thus, always have a shortage of drinking water supply throughout the year. With these facilities, these regions are now capable of producing up to 100 tons of drinking water, which effectively helps them solve the water shortage problem. These activities are outstanding examples of connecting the company’s desalination skills with corporate social contribution programs.

India

DPSI, the subsidiary in India, replicates the activities by forming a sisterhood relationship with a primary school in Guargaon and participates in various school programs such as ‘School Day Event’ and ‘Wish Tree’ designed to improve and enhance the learning environment as well as providing financial support for tuition of students from poor families.

Thailand

After construction of the Gheco-One thermal power plant in Thailand, Doosan Heavy Industries & Construction played a huge role in creating an educational environment for low-income family students by donating 300 items of cleaned and repaired office equipment, which were used at the development site to the Watnasa Elementary School and Satthatapong Elementary School.

Appendix

- CSR Achievements
- Independent Assurance Report
- GRI Index & ISO26000 Index
- Awards and Membership
- Thanks to you

CSR Achievements

Economic Achievements

Category	Unit	2010(K-IFRS)	2011(K-IFRS)	2012(K-IFRS)	
Economic achievements	Sales	millions of won	7,928,868	8,495,506	9,627,184
	Income	millions of won	515,766	569,632	594,839
	Net income	millions of won	1,362,500	261,695	(205,979)
Financial information	Total assets	millions of won	16,977,142	13,589,169	13,524,414
	Total liabilities	millions of won	11,800,938	8,792,241	9,014,834
	Total capital	millions of won	5,176,204	4,796,928	4,509,580
Credit rating	Corporate bonds	A+	A+	A+	
Future growth drivers	R&D	millions of won	148,067	144,090	177,272
	R&D/sales ratio	%	1.87	1.70	1.84
Shareholder value	Earnings per share	won	13,937	3,063	2,313
	Dividends per share	won	750	750	750

Environment Achievements

Category	Unit	2010	2011	2012	
Total energy usage					
All	Energy usage	TJ	5,666	5,862	5,613
	Fuel usage	TJ	2,508	2,538	2,301
	Electricity usage	TJ	3,158	3,324	3,312
Headquarters	Energy usage	TJ	5,576	5,755	5,501
	Fuel usage	TJ	2,491	2,521	2,291
	Electricity usage	TJ	3,085	3,234	3,210
Seoul Office	Energy usage	TJ	42	39	44
	Fuel usage	TJ	6	5	6
	Electricity usage	TJ	36	34	38
Daedeok R&D Center	Energy usage	TJ	39	58	55
	Fuel usage	TJ	2	4	2
	Electricity usage	TJ	37	54	53
Suji DC Center	Energy usage	TJ	7	7	10
	Fuel usage	TJ	7	6	2
	Electricity usage	TJ	-	1	8
Hapcheon Training Center	Energy usage	TJ	2	3	3
	Fuel usage	TJ	2	2	-
	Electricity usage	TJ	-	1	3

Category	Unit	2010	2011	2012	
Greenhouse gas emissions					
All	Total emissions	T/CO ₂ e	316,972	327,690	300,068
	Direct emissions	T/CO ₂ e	152,753	155,102	139,115
	Indirect emissions	T/CO ₂ e	164,219	172,588	160,953
Headquarters	Total emissions	T/CO ₂ e	312,075	322,009	294,521
	Direct emissions	T/CO ₂ e	152,234	154,472	138,616
	Indirect emissions	T/CO ₂ e	159,841	167,537	155,905
Seoul Office	Total emissions	T/CO ₂ e	2,269	2,087	2,187
	Direct emissions	T/CO ₂ e	365	316	316
	Indirect emissions	T/CO ₂ e	1,904	1,771	1,871
Daedeok R&D Center	Total emissions	T/CO ₂ e	2,071	2,032	2,693
	Direct emissions	T/CO ₂ e	109	223	106
	Indirect emissions	T/CO ₂ e	1,962	2,809	2,587
Suji DC Center	Total emissions	T/CO ₂ e	177	175	480
	Direct emissions	T/CO ₂ e	45	50	25
	Indirect emissions	T/CO ₂ e	-	125	455
Hapcheon Training Center	Total emissions	T/CO ₂ e	177	175	187
	Direct emissions	T/CO ₂ e	45	50	52
	Indirect emissions	T/CO ₂ e	-	125	135
Greenhouse gas reductions	1,000T/CO ₂ e	10	7	8	
Resources Utilization and Management					
Raw material management	Iron recovery (recycled)	tons	95,262	102,852	94,224
	Scrap/alloy iron	tons	134,092	144,956	127,183
	Quicklime	tons	9,872	10,764	9,296
	Fluorite/ lump coal	tons	10,079	7,444	6,595
Water resource management	Water usage	tons	1,280,634	1,471,376	1,400,744
	Groundwater usage	tons	4,702	3,748	2,910
Wastewater generation	Wastewater generation	tons	281,618	276,145	202,598
	Recycled wastewater	tons	-	12,000	8,760
Waste treatment	Total waste treatment	tons	72,264	75,275	67,838
	Controlled wastes	tons	5,598	5,266	4,559
	General wastes	tons	66,666	70,008	63,279
Landfill	Total	tons	14,534	14,257	13,330
	Controlled wastes	tons	4,435	3,931	3,283
	General wastes	tons	10,098	10,325	10,047
Incineration	Total	tons	2,044	2,196	2,045
	Controlled wastes	tons	469	567	639
	General wastes	tons	1,574	1,561	1,406
Recycled	Total	tons	55,686	58,888	52,462
	Controlled wastes	tons	692	767	637
	General wastes	tons	54,993	68,120	51,825

Category	Unit	2010	2011	2012	
Environmental quality management					
Environmental law violations	number of sanctions imposed	number	-	-	
	Monetary penalties	millions of won	-	-	
Atmospheric environment management	Flue-dust concentration of electric arc furnace dust collector	mg/m ³	5.4	4.2	4.1
	Flue-dust concentration of foundry sand facilities	mg/m ³	10.20	10.31	11.06
	Flue-dust concentration of descaling facilities	mg/m ³	11.20	10.85	8.79
	Flue-dust concentration of grinding facilities	mg/m ³	12.10	11.26	11.18
	Flue-THC of coating facilities	ppm	13.47	13.65	17.99
Water environment management	COD	mg/L	14	12	15
	SS	mg/L	3	2	3
	T-N	mg/L	4	10	10
	T-P	mg/L	-	-	-
	n-hexane	mg/L	-	-	1
	Cr	mg/L	-	-	-
	Zn	mg/L	-	-	-
	Pb	mg/L	-	-	-
Fe	mg/L	-	-	-	
Environmental conservation	Spending	millions of won	10	10	10
Green purchasing					
Eco-label items ,GR label items	Total Purchased Amount	millions of won	31,441	32,336	31,009
Energy reduction items, Toxic material reduction items and waste reduction items	Green purchasing Amount	millions of won	2,644	3,715	2,649
	Green purchasing rate	%	8.41	11.49	8.54

Sociality Achievements

Category	Unit	2010	2011	2012	
Corporate governance	Board of directors participation rate	%	86.1	83.3	85.2
	Outside board member participation rate	%	86.7	82.3	89.8
Sexual harassment prevention education	Executive participants	no. of employees	-	149	-
	Team leader participants	no. of employees	405	454	387
	Team member participants	no. of employees	5,564	5,762	5,818
Employee diversity	All employees	no. of employees	7,633	8,252	8,715
	Korea	no. of employees	6,847	7,531	7,922
	Overseas	no. of employees	786	721	793
	Locally hired employees	no. of employees	-	10,370	11,289
	Office	no. of employees	5,319	5,921	6,302
	Technical	no. of employees	2,314	2,331	2,413
	Permanent	no. of employees	6,393	6,792	7,270
	Contract	no. of employees	1,240	1,460	1,445
	Male	no. of employees	7,149	7,714	8,161
	Female	no. of employees	484	538	554
Disabled	no. of employees	196	206	199	
Seniors	no. of employees	434	653	795	

Category	Unit	2010	2011	2012	
Minority employees	Women	%	6.34	6.52	6.36
	Disabled	%	2.57	2.50	2.28
	Seniors	%	5.69	7.91	9.12
Childcare and maternity leave	Employees who used childcare leave	no. of employees	4	5	8
	Return to work rate	%	100	100	100
	Employees who used maternity leave	no. of employees	11	10	16
	Return to work rate	%	91	70	81
Labor relations communication	Number of eligible employees	no. of employees	3,610	3,941	4,405
	Number of members	no. of employees	2,165	2,278	2,315
	Labor union membership	%	60.0	57.8	52.6
Job stability	Average number of years worked	year	13.2	12.5	10.8
	Turnover rate	%	2.2	1.9	1.1
Accidents	Employees	number	16	9	12
Accident frequency	Employees	%	0.24	0.16	0.20
	Partner companies	%	0.15	0.13	0.06
Fatal accidents	Employees	number	1	-	1
	Partner companies	number	1	1	2
Support for partner companies	Shared Growth Fund	100 millions won	-	340	648
	Network loan	100 millions won	1,200	1,350	1,520
Social service activities	Social contribution investment	millions won	18,407	19,635	14,275
	Total hours of employee volunteering	hour	3,650	16,868	22,475
Reporting on breaches by type	Online	number of reports filed	-	-	2
	Offline	number of reports filed	7	12	10
Disciplinary Action	Warning/Reprimand	number	6	3	2
	Suspension	number	1	2	3
	Resignation/Dismissal	number	7	12	7
Regulatory compliance	Number of legal and regulatory violations	number	-	-	-

Independent Assurance Statement

The Business Institute for Sustainable Development(BISD), led by the Korean Chamber of Commerce & Industry(KCCI), was commissioned by Doosan Heavy Industries & Construction to perform the assurance engagement of the '2012 Doosan Heavy Industries & Construction Integrated Report'(the 'Report' hereafter) and presents its conclusions as follows.

Purpose

This assurance statement aims to verify if this report contains any significant errors or prejudices and to present the conclusions through an independent assurance engagement of the issues and performance regarding the sustainability management conducted at Doosan Heavy Industries & Construction.

Responsibility and Independence

In order to establish more specific plan related to the value and vision of Doosan Heavy Industries & Construction and provide the performance in a transparent manner, this report integrates financial and non-financial data, and the responsibility related to the preparation of this report lies with Doosan Heavy Industries & Construction. In conducting the assurance engagement of this report and presenting assurance conclusions, BISD has no interest in any business operations of Doosan Heavy Industries & Construction that aim to generate profits other than serving as a third-party assurance provider in a bid to maintain its independence and autonomy.

Assurance Standards and Limitations

BISD performed the assurance engagement in consideration of the three accountability principles of AA1000AS(2008)(inclusivity, materiality and responsiveness), reporting principles proposed by the Global Reporting Initiative(GRI) G3.1 guidelines and 7 issues of ISO26000. The scope of the assurance was limited to the performance in 2012, and therefore excludes any data before 2012. In conducting the assurance engagement, physical inspections were made of the Head Office located in Changwon out of Doosan Heavy Industries & Construction's business sites in Korea and abroad and online data was not included in the assurance scope. Furthermore, GHG data that has already been verified from another third-party organization was excluded from the assurance engagement.

Major Assurance Procedures

BISD did not participate in stakeholder activities and assured this report through the review of the interviews conducted of Doosan Heavy Industries & Construction employees, as well as related documents provided by Doosan Heavy Industries & Construction. Major assurance procedures undertaken are as follows:

- Review the application of Doosan Heavy Industries & Construction's internal sustainability reporting standards
- Review the data contained in the Korean version of the Report as well as the process of gathering such data
- Review the report content, corporate policies and systems related to the materiality test and material issues
- Verify that the financial data were correctly derived from the Company's audited consolidated financial statements.
- Interview employees in charge of sustainability management operations, report preparation and editing(Head Office)

Opinions

BISD performed the assurance engagement in accordance with the procedures described in this assurance statement and the Report was modified when and if deemed necessary. BISD is not aware of any significant errors in this Report as a result of its assurance engagement. The opinions of BISD produced as a result of its assurance engagement and in consideration of the AA1000APS accountability standards, are explained below.

• Inclusivity

Does Doosan Heavy Industries & Construction adhere to the principle of stakeholder engagement in order to ensure a responsible and strategic response in advancing sustainability management?

- Doosan Heavy Industries & Construction is gathering major concerns and opinions from shareholders, customers, employees, suppliers and local communities through diverse stakeholder communication channels.
- BISD is not aware of any significant stakeholder groups that were omitted from the process of gathering sustainability management issues through Doosan Heavy Industries & Construction's stakeholder communication channels.

• Materiality

Does Doosan Heavy Industries & Construction include material issues that affect stakeholders in the entire spectrum of sustainability management in this Report?

- Doosan Heavy Industries & Construction used the materiality test process to finalize major sustainability management issues.
- Doosan Heavy Industries & Construction identified major issues through a separate process of gathering opinions on stakeholder expectations(by stakeholder group) as part of the materiality test process.
- BISD is not aware of any significant issues that were omitted from the materiality test process.

• Responsiveness

Does Doosan Heavy Industries & Construction appropriately respond to stakeholder issues?

- Doosan Heavy Industries & Construction ensures that major sustainability management issues that were identified through the materiality test process are reflected in the key performance indicators in relevant segments so as to appropriately address the issues that interest stakeholders.
- BISD is not aware of any violations of the principle of responsiveness in Doosan Heavy Industries & Construction's response to major sustainability management issues or of sustainability management performance that is described in this Report from the perspective of materiality.

Recommendations

The Business Institute of Sustainable Development presents the following recommendations within the scope that they do not affect the verification results:

- Publishing an annual report in the form of integrated reporting by Doosan Heavy Industries & Construction is considered very significant. The fact that the company has taken the lead in introducing integrated reporting will pave the way not only for providing financial achievements, but also non-financial value and achievements to stakeholders in a transparent manner. However, it should be noted that there is room for improvement in the latest report has in terms of connectivity and linkages among important achievements. In particular, it is recommended that concerning reporting requiring detailed or additional explanation Web notifications should be actively utilized to help the reader to obtain additional information through online links. Moreover, it would be useful to enhance readability by utilizing graphs and infographics.
- With respect to involvement of stakeholders, it is considered that if Doosan Heavy Industries & Construction reports not only channels through which it communicates with stakeholders, but also how often and on what topics the company communicates with them and to what extent stakeholders are involved in the communication, it would be a way to ascertain the level and authenticity of communication between the company and its stakeholders.
- Concerning CSR Strategies, it is recommended that Doosan Heavy Industries & Construction sets more concrete objectives each year, while implementing and evaluating them to create a virtuous cycle. At the same time, it is also recommended that the company present objectives for the post-reporting period to help stakeholders monitor the growth of Doosan Heavy Industries & Construction on an ongoing basis.
- Regarding the content of the report, it is recommended that the topicality of the report should be enhanced by focusing on activities taking place during the reporting period. When an annual report is published, the report content of the previous year may be mentioned to facilitate the explanation of business activities of the reporting year. However, it is not recommended that the report content of the previous year replace achievements or activities of the current reporting year.

2013. 7
President of BISD
Tae Jin Park



GRI G3.1 & ISO26000 Index

Reported ● Reported in part ◐ Unreported ○ Not applicable N/A

G3.1	Description	ISO26000	Page	Application Level	
Profile Disclosure					
Strategy and Analysis	1.1 Statement from the most senior decision-maker of the organization	6.2	2~3	●	
	1.2 Description of key impacts, risks, and opportunities.	6.2	Throughout the report	●	
Organizational Profile	2.1 Name of the organization.	-	6~7	●	
	2.2 Primary brands, products, and/or services.	-	6~7	●	
	2.3 Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures	6.2	6~7	●	
	2.4 Location of organization's headquarters.	-	6~7	●	
	2.5 Number of countries where the organization operates, and names of countries with operations or that are specifically relevant to the sustainability issues covered in the report.	-	6~7	●	
	2.6 Nature of ownership and legal form	-	6~7	●	
	2.7 Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	-	6~7	●	
	2.8 Scale of the reporting organization.	-	6~7	●	
	2.9 Significant changes during the reporting period regarding size, structure, or ownership.	-	58	●	
	2.10 Awards received in the reporting period.	-	127	●	
Report Parameters	3.1 Reporting period for information provided.	-	About this report	●	
	3.2 Date of most recent previous report	-	About this report	●	
	3.3 Reporting cycle	-	About this report	●	
	3.4 Contact point for questions regarding the report or its contents.	-	About this report	●	
	3.5 Process for defining report content.(deciding a priority, understand of expected the persons concerned)	-	18~19	●	
	3.6 Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers)	-	About this report	●	
	3.7 State any specific limitations on the scope or boundary of the report	-	About this report	●	
	3.8 Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	-	About this report	●	
	3.9 Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report.	-	About this report	●	
	3.10 Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for N/A First report	-	About this report	●	
	3.11 Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	-	-	N/A	
	3.12 GRI Checklist	-	124~126	●	
	3.13 Policy and current practice with regard to seeking external assurance for the report.	7.5.3	122~123	●	
	Governance, Commitments, and Engagement	4.1 Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	6.2	20~21	●
		4.2 Indicate whether the Chair of the highest governance body is also an executive officer.	6.2	20~21	●
		4.3 For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	6.2	20~21	●
		4.4 Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	6.2	20~21	●
4.5 Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).		6.2	20~21	●	
4.6 Processes in place for the highest governance body to ensure conflicts of interest are avoided.		6.2	20~21	●	
4.7 Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.		6.2	20~21	●	
4.8 Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.		6.2	4~5	●	
4.9 Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.		6.2	21	●	
4.10 Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.		6.2	21	●	
4.11 Explanation of whether and how the precautionary approach or principle is addressed by the organization.		6.2	19	●	
4.12 Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.		6.2	58	●	
4.13 Memberships in associations (such as industry associations) and/or national/international advocacy		6.2	127	●	
4.14 List of stakeholder groups engaged by the organization.		6.2	18	●	
4.15 Basis for identification and selection of stakeholders with whom to engage.		6.2	18	●	
4.16 Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.		6.2	18	●	
4.17 Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.		6.2	18~19	●	

G3.1	Description	ISO26000	Page	Application Level
Economic Performance Indicators				
6~9, 12~13				
Economic achievements	EC1 Direct economic value generated and distributed.	6.8/6.8.3/6.8.7/6.8.9	10~11	●
	EC2 Financial implications and other risks and opportunities for the organization's activities due to climate change.	6.5.5	99~101	●
	EC3 Coverage of the organization's retirement benefit plan obligations including a pension supporting range.	6.5.5	59	●
	EC4 Significant financial assistance received from government.	-	-	○
	EC5 Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.	6.4.4/6.8	-	○
	EC6 Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	6.6.6/6.8/6.8.5/6.8.7	-	○
	EC7 Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	6.8/6.8.5/6.8.7	47~48	◐
	EC8 Understanding and describing significant indirect economic impacts, including the extent of impacts.	6.3.9/6.8/6.8.3/6.8.4/6.8.5/6.8.6/6.8.7/6.8.8/6.8.9	47~50,110~116	●
	EC9 Understanding and describing significant indirect economic impacts, including the extent of impacts.	6.3.9/6.6.6/6.6.7/6.7.8/6.8/6.8.5/6.8.6/6.8.7/6.8.9	28~32	●
Environmental Performance Indicators				
92~95				
Raw materials	EN1 Materials used by weight or volume.	6.5/6.5.4	96, 119	●
	EN2 Percentage of materials used that are recycled input materials.	6.5/6.5.4	96, 119	●
	EN3 Direct energy consumption by primary energy source.	6.5/6.5.4	100~101, 118	●
	EN4 Indirect energy consumption by primary source.	6.5/6.5.4	100~101, 118	●
Energy	EN5 Energy saved due to conservation and efficiency improvements.	6.5/6.5.4	100~101	●
	EN6 Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	6.5/6.5.4	100~101, 118	●
	EN7 Initiatives to reduce indirect energy consumption and reductions achieved.	6.5/6.5.4	100~101, 118	●
Water	EN8 Total water withdrawal by source.	6.5/6.5.4	96, 119	●
	EN9 Water sources significantly affected by withdrawal of water.	6.5/6.5.4	96, 115	●
	EN10 Percentage and total volume of water recycled and reused.	6.5/6.5.4	98, 119	●
Biodiversity	EN11 Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	6.5/6.5.6	-	○
	EN12 Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	6.5/6.5.6	102	◐
	EN13 Habitats protected or restored.	6.5/6.5.6	-	○
	EN14 Strategies, current actions, and future plans for managing impacts on biodiversity.	6.5/6.5.6	102	◐
	EN15 Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	6.5/6.5.6	-	○
Air emissions, water emissions and wastes	EN16 Total direct and indirect greenhouse gas emissions by weight.	6.5/6.5.5	101, 119	●
	EN17 Other relevant indirect greenhouse gas emissions by weight.	6.5/6.5.5	101, 119	●
	EN18 Initiatives to reduce greenhouse gas emissions and reductions achieved.	6.5/6.5.5	99~101	●
	EN19 Emissions of ozone-depleting substances by weight.	6.5/6.5.3	-	N/A
	EN20 NOx, SOx, and other significant air emissions by type and weight.	6.5/6.5.3	98	◐
	EN21 Total water discharge by quality and destination.	6.5/6.5.3	96, 120	●
	EN22 Total weight of waste by type and disposal method.	6.5/6.5.3	96	●
	EN23 Total number and volume of significant spills.	6.5/6.5.3	-	N/A
	EN24 Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally. Identify, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	6.5/6.5.4/6.5.6	102	◐
	EN25 Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	6.5/6.5.4/6.6.6/6.7.5	28~32	◐
Regulatory compliance	EN26 Percentage of products sold and their packaging materials that are reclaimed by category.	6.5/6.5.4/6.7.5	-	N/A
	EN28 Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	6.5	120	●
Transportation and handling	EN29 Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	6.5/6.5.4/6.6.6	101	◐
	All EN30 Total environmental protection expenditures and investments by type.	6.5	102, 120	◐
Labor Practices and Decent Work				
56~59, 70~72				
Employment	LA1 Total workforce by employment type, employment contract, and region, broken down by gender.	6.4/6.4.3	57, 120	●
	LA2 Total number and rate of new employee hires and employee turnover by age group, gender, and region.	6.4/6.4.3	57, 121	◐
	LA3 Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	6.4/6.4.3/6.4.4	59~60	●
Labor relations	LA4 Percentage of employees covered by collective bargaining agreements.	6.4/6.4.3/6.4.4/6.4.5/6.3.10	58, 121	●
	LA5 Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	6.4/6.4.3/6.4.4/6.4.5	58~59	●
Occupational health and safety	LA6 Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	6.4/6.4.6	58	◐
	LA7 Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender.	6.4/6.4.6	73, 121	●
	LA8 Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	6.4/6.4.6/6.8/6.8.3/6.8.4/6.8.8	75~76	●
Education and training	LA9 Health and safety topics covered in formal agreements with trade unions.	6.4/6.4.6	58	◐
	LA10 Average hours of training per year per employee by gender, and by employee category.	6.4/6.4.7	64	◐
	LA11 Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	6.4/6.4.7/6.8.5	58~59	●
	LA12 Percentage of employees receiving regular performance and career development reviews, by gender.	6.4/6.4.7	65	◐

Awards and Memberships

G3.1	Description	ISO26000	Page	Application Level	
Diversity and equal opportunity	LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	6.3.7/6.3.10/6.4/6.4.3	20~21, 121	●
	LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	6.3.7/6.3.10/6.4/6.4.3/6.4.4	57	●
	LA15	Return to work and retention rates after parental leave, by gender.	6.3.7/6.3.10/6.4.4	120~121	●
Human Rights Performance Indicators				56~59	
Investment and procurement practices	HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.	6.3/6.3.3/6.3.5/6.6.6	58	●
	HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken.	6.3/6.3.3/6.3.5/6.4.3/6.6.6	22	●
	HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	6.3/6.3.5	22~23, 120	●
Anti-discriminatory	HR4	Total number of incidents of discrimination and corrective actions taken.	6.3/6.3.6/6.3.7/6.3.10/6.4.3	57	None
Freedom of unionization and collective bargaining	HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	6.2/6.3.3/6.3.4/6.3.5/6.3.8/6.3.10/6.4.3/6.4.5	-	○
Child labor	HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	6.3/6.3.3/6.3.4/6.3.5/6.3.7/6.3.10	57~58	●
Forced labor	HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	6.3/6.3.3/6.3.4/6.3.5/6.3.7/6.3.10	57~58	●
Security practices	HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	6.3/6.3.5/6.4.3/6.6.6	-	○
Indigenous rights	HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	6.3/6.3.6/6.3.7/6.3.8/6.6.7	-	○
Evaluation	HR10	HR10 Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.	6.3.6/6.3.9/6.3.10	-	○
Improvements	HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms.	6.3.6/6.3.9/6.3.10	-	○
Society				22~23, 110~112	
Local community	SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	6.3.9/6.8/6.8.5/6.8.7/6.6.7	110~116	●
Corruption	SO2	Percentage and total number of business units analyzed for risks related to corruption.	6.6/6.6.3	22~23	●
	SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	6.6/6.6.3	22~23, 120~121	●
	SO4	Actions taken in response to incidents of corruption.	6.6/6.6.3	120~121	●
Public policy	SO5	Public policy positions and participation in public policy development and lobbying.	6.6/6.6.4/6.8.3	-	○
	SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	6.6/6.6.4/6.8.3	-	○
Economically harmful activities	SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	6.6/6.6.5/6.6.7	-	○
Legal compliance	SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	6.6/6.6.7/6.8.7	120~121	●
Local community	SO9	Operations with significant potential or actual negative impacts on local communities.	6.3.9/6.8/6.8.5/6.8.7	-	○
	SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	6.3.8	-	○
Product Responsibility				80~83	
Customer health and safety	PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	6.3.9/6.6.6/6.7/6.7.4/6.7.5	88~91	●
	PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	6.3.9/6.6.6/6.7/6.7.4/6.7.5	-	○
Product/Service labeling	PR3	Type of product and service information required by procedures and percentage of significant products and services subject to such information requirements.	6.7/6.7.3/6.7.4/6.7.5/6.7.6/6.7.9	88~91	●
	PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	6.7/6.7.3/6.7.4/6.7.5/6.7.6/6.7.9	-	○
	PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	6.7/6.7.4/6.7.5/6.7.6/6.7.8/6.7.9	88~91	●
Marketing Communications	PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	6.7/6.7.3/6.7.6/6.7.9	107~109	●
	PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	6.7/6.7.3/6.7.6/6.7.9	107~109	●
Customer personal information	PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	6.7/6.7.7	-	○
Regulatory compliance	PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	6.7/6.7.6	-	○

Corporate Awards

No	Name of Award	Organizer	Date of Award	Order/Class
1	Mercury Awards Best of Advertising	MerComm, Inc.	2012.03.22	
2	New Quality Management Awards	Korea Foundation for Quality	2012.05.23	Grand Prize
3	Grand Prize, 2012 Transparent Management Awards	Five major economic organizations in Korea, including Korea Employers Federation	2013.02.01	This Year's Company for Management Transparency Awards
4	ESG Assessment Awards	Corporate Governance Service	2013.06.21	

Individual Awards

No	Name of Awards	Organizer	Date of Award	Recipient	Order/Class
1	Silver Tower Order of Industrial Service Merit (for Contribution to National Industrial Development)	President	2012.04.30	Seo Jeong-cheol	Medal
2	Contribution to the Development of the Electric Power Industry through Yecheon Pumped-storage Power Plant Project	Minister of Knowledge Economy	2012.05.24	Yang Hee-ryong	Minister of Knowledge Economy Commendation
3	Contribution to Industrial Development through Development of Occupational Capabilities	President	2012.09.03	Kim Moon-saeng	Industrial Service Medal
4	Computer Aided Manufacturing	Minister of Employment and Labor	2012.09.03	Byeon Jeom-yong	Master Craftsman of Korea
5	Meritorious Service Award for Development of Superior Capital Goods	President	2012.09.11	Lee Jeong-hoon	Presidential Commendation
6	Contribution to Shared Growth for Large and Small-and Medium-sized Enterprises	President	2012.09.27	Han Keysun	Industrial Service Medal
7	Contribution to Development of Components for Turbine Generators for Ultra Super-Critical Power Plants	Minister of Education, Science and Technology	2012.10.15	Kang Seong-tae	IR52 Jang Young Sil Awards
8	Contribution to Development of Components for Turbine Generators for Ultra Super-Critical Power Plants	Minister of Education, Science and Technology	2012.10.15	Kim Min-soo	IR52 Jang Young Sil Awards
9	Contribution to Development of Components for Turbine Generators for Ultra Super-Critical Power Plants	Minister of Education, Science and Technology	2012.10.15	Song Young-seok	IR52 Jang Young Sil Awards
10	Korea Sharing Awards	Minister of Health and Welfare	2012.10.25	Choi Geun-cheol	Minister Award
11	New Technology Application Promotion Contest	Minister of Knowledge Economy	2012.11.14	Jeong Seok-hwan	Minister Award
12	Quality Management Innovation Commendation	Prime Minister	2012.11.21	Kim Yong-hee	Prime Minister Award
13	Quality Master Craftsman	Minister of Knowledge Economy	2012.11.21	Song Seong-ho	Quality Master Craftsman
14	National Quality Control Circle Competition, Gold Medal	Prime Minister	2012.11.21	Kwon Cheol-oh	Prime Minister Award
15	Technology Development and Demonstration for Performance Improvement of Large Steam Turbines for Boryeong Thermal Power Plant No.6	Minister of Knowledge Economy	2012.11.23	Kim Gi-hyeon	Minister of Knowledge Economy Commendation
16	49 th Trade Day Commendation in Plant Export	Prime Minister	2012.12.05	Lee Joo-ho	Prime Minister Award
17	Tin Tower Order of Industrial Service Merit (49 th Trade Day, Overseas Sojourner Employees)	President	2012.12.05	Baek Nak-young	Medal
18	49 th Trade Day Commendation in World-class Product Export	President	2012.12.05	Song Se-cheol	Presidential Commendation
19	49 th Trade Day	Minister of Knowledge Economy	2012.12.05	Park Seong-jin	Minister of Knowledge Economy Commendation
20	3 rd Nuclear Energy Day (Commendation in Completion of New Gori Power Plant #1,2)	Minister of Knowledge Economy	2012.12.27	Kim Chang-han	Minister of Knowledge Economy Commendation
21	3 rd Nuclear Energy Day Awards (Bronze Tower Order of Industrial Service Merit in Promotion of the Nuclear Energy Industry)	President	2012.12.27	Kim Gook-heon,	Medal
22	3 rd Nuclear Energy Day Awards (Commendation in Development of Core Technology in Nuclear Energy Generation)	Minister of Knowledge Economy	2012.12.27	Lee Seong-jin	Minister of Knowledge Economy Commendation
23	3 rd Nuclear Energy Day (Bronze Tower Order of Industrial Service Merit in Completion of New Gori Power Plant #1,2)	President	2012.12.27	Kim Sang-jin	Medal
24	3 rd Nuclear Energy Day Awards (Commendation in Development of the Nuclear Energy Industry)	Minister of Knowledge Economy	2012.12.27	Lee Sang-hoon	Minister of Knowledge Economy Commendation
25	3 rd Nuclear Energy Day Awards (Commendation in Development of the Nuclear Energy Industry)	Minister of Knowledge Economy	2012.12.27	Kim Ji-hyeon	Minister of Knowledge Economy Commendation
26	3 rd Nuclear Energy Day Awards (Commendation in Development of Core Technology in Nuclear Energy Generation)	Minister of Knowledge Economy	2012.12.27	Choo Seong-min	Minister of Knowledge Economy Commendation
27	3 rd Nuclear Energy Day Awards (Commendation in Completion of New Gori Power Plant #1,2)	President	2012.12.27	Hwang Yeong-jun	Presidential Commendation
28	3 rd Nuclear Energy Day (Commendation in Completion of New Wolsong Power Plant #1)	Minister of Knowledge Economy	2012.12.27	Choi Hun-seok	Minister of Knowledge Economy Commendation
29	3 rd Nuclear Energy Day Awards (Commendation in Completion of New Gori Power Plant #1,2)	President	2012.12.27	Kim Deuk-han	Presidential Commendation
30	3 rd Nuclear Energy Day Awards (Commendation in Development of the Nuclear Energy Industry)	Prime Minister	2012.12.27	Ko Gyeong-baek	Prime Minister Award
31	3 rd Nuclear Energy Day Awards (Commendation in Completion of New Gori Power Plant #1,2)	Minister of Knowledge Economy	2012.12.27	Han Seong-bong	Minister of Knowledge Economy Commendation
32	3 rd Nuclear Energy Day Awards (Industrial Service Medal in Development of the Nuclear Energy Industry)	President	2012.12.27	Park Hwa-gyu	Industrial Service Medal
33	Commendation for Support for the Nuclear Security Summit	Prime Minister	2012.12.31	Baek Jin-seung	Prime Minister Award

Memberships

Construction Environment Management Council	Business Institute for Sustainable Development	Korea International Trade Association	Korea Nuclear Energy Qualification Association
Gyeongnam Employers Federation	Changwon Chamber of Commerce and Industry	Korea Radioisotope Association	Korea Atomic Industrial Forum
Gyeongsangnam-do Region Defense Industry Security Council	Wind Power Industry Council	Korea Defense Industry Association	Korea Academy of Nuclear Safety
Gyeongsangnam-do Region Industrial Security Council	Plant Engineering Council	Korea Principal Engineers Association	Korea Electrical Contractors Association
Korean Medical Association	Korean Carbon Capture and Storage Association	Korea Industrial Technology Association	Korea Railway Electrical Technology Association
Korean Nurses Association Gyeongsangnam-do Nurses Association	Korea Federation of Construction Contractors	Korea Listed Companies' Association	Korea Electric Engineers Association
Construction Association of Korea	Korea Construction New-Technology Association	Korea Facility Maintenance Council	Korea Information Communication Contractors Association
Korea Mechanical Construction Contractors Association	Korea Society for Construction Quality	Korea Fire Safety Association	Korea Industries Confederation for Commercialization of Superconductivity
Korean Red Cross	Korea Association of Standards & Testing Organizations	Korean Standards Association	Korea Project Management Association
Korea Electric Association	Fair Competition Federation	Korea Fire Safety Construction Association	Korea Plant Industries Association
Korea Specialty Contractors Association	Korea Federation of Science and Technology Societies	Korea New & Renewable Energy Association	Korea Fusion Industry & Technology Association
Korea Housing Builders Association	Korean Customs Logistics Association	Korea Energy Council	Korea Chemicals Management Association
Federation of Korean Industries	Korea Association of Machinery Industry	Korea Engineering & Consulting Association	International Contractors Association of Korea
Korea Industrial Corporate Health Council	Korea Management Association	Korea Engineers Club	Korea Environmental Engineering Association
Korea Electricity power-New Technology Association	Korea Coating Experts Society	Women in Nuclear Korea	Korea Environmental Preservation Association

Thanks to you

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