Toward a Sustainable Future

Hyundai Heavy Industries | 2009 Environmental Report

HYUNDAI
HEAVY INDUSTRIES CO.,LTD.

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CEO`s Message

Hyundai Heavy Industries Co. Ltd. (HHI), as a global leader in heavy industries, has made a continuous effort to minimize environmental pollution and maximize resources and energy conservation to help provide a higher quality of life and more sustainable future.

HHI keeps clean production process through minimizing pollutant emissions in manufacturing processes. Especially, HHI positively participates in renewable energy business that takes the lead green industry.
HHI has also focused on the development of environmental technologies for eco- friendly products as eco- friendly ships, and high efficiency engines.
HHI accomplishes the company's social responsibility through actively responding to more complex environmental issues.

This report demonstrates HHI's environmental performances keeping pace with 'green growth' according to various environmental management strategies. We hope this report helps customer's better understanding HHI`s environmental management.

As a global leader in heavy industries, HHI recognizes that the environment is a key factor in global competitiveness. We promise to build sustainable future through continuous improvement of environmental performance.

Min Keh – sik
Vice Chairman & CEO/CTO

Choi Kil - seon
President & CEO

Company Overview

Company	HYUNDAI HEAVY INDUSTRIES Co., LTD.
CEO	Vice Chairman Min Keh-sik, President Choi Kil-seon
Work force	Number of employees- 25,000
Land area	Yard Capacity-5,940,000㎡
Establishment Date	1972. 3. 23
Address	1, Jeonha-Dong, Dong-Gu, Ulsan, Korea 682-792

Business divisions

Division	Major Products
Shipbuilding Division	Containership, LNG·LPG Carrier, Tanker, PC
Offshore & Engineering Division	FPSO, FPUs, TPLs, Fixed Platforms
Industrial Plant & Engineering Division	Oil & Gas Facilities, Power Plant
Engine & Machinery Division	Diesel Engines, HiMSEN Engines, Propeller, Diesel Power Plant, Robot
Electro Electric Systems Division	Transformers, Circuit Breakers, Switchgear Renewable Energy
Construction Equipment Division	Excavators, Wheel Loaders, Forklifts

Sales

Division	Sales (unit: billion won)	Portion(%)
Shipbuilding Division	9,085	46%
Offshore & Engineering Division	3,095	15%
Industrial Plant & Engineering Division	1,374	7%
Engine & Machinery Division	2,522	13%
Electro Electric Systems Division	1,924	10%
Construction Equipment Division	1,769	9%
Total	19,769	100%

Company History

1997	Acquired ISO-14001 certificate
2000	Developed Korea's first in-house marine diesel engine ("HiMSEN") Selected as the main contractor for Korea's next-generation submarine
2001	Delivered the world's largest FPSO (343,000DWT) Acquired OHSAS-18001 certificate
2002	HiMSEN engine named in "Korea's Top Ten New Technologies" Delivery of 1,000th ship
2003	`Chosen "The best workplace in Korea" Excavator selected as a "World-class Product" Advanced health care center completed
2004	Crankshaft selected as a "World-class product" World's largest (106.3ton) propeller produced
2005	Secured newbuilding order for ultra – large 10,000TEU containerships Hyundai 7-Series model of excavator selected as "World's Best Construction Equipment" by Construction Equipment magazine Awarded $7 Billion Export Tower Award
2006	Delivered 1,800 ton class submarine, "Son Wonil Ham" Received Korean Top-Class Enterprise Award for the fourth consecutive year
2007	Production of the world's most powerful marine diesel engine Received Korean Top-Class Enterprise Award for the fifth consecutive year Awarded $10 Billion Export Tower Award Selected as "The best workplace in Korea" by Hewit
2008	Awarded "The Best Industrial Relations Company" Completion of Solar Module & Cell Factory in Eumseong Organ donation campaign (participants: 15,315 employees-) Achieved 80 million bhp in marine engine production

Hyundai Heavy Industries always thinks environment and practices action first.

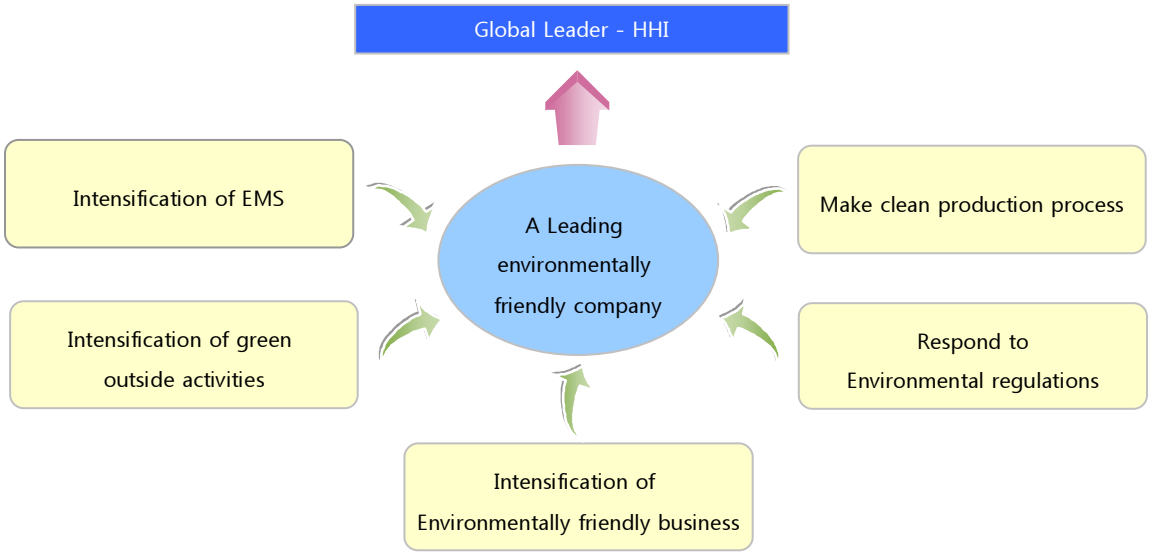
Environmental Management

Environmental Vision

1. Environmental Vision

HHI, as a global leader in heavy industries, practices environmental management and aims to promote the prestige of eco-friendly policies.
Subsequently, HHI positively drives forward environmental management as below.

◇ Direction of Environmental management



◇ Environmental Strategy

Strategy	Action Plan
Intensification of EMS	· Build systematic inspection system · Complement of environmental works manual · Strengthen environmental education
Respond to Environmental regulations	· Respond to climate change convention · Respond to global environmental regulations · Respond to Korean environmental regulations
Make clean production process	· Reduce material and energy use · Reduce waste and increase recycling · Operate most suitable pollution control facilities
Intensification of green outside activities	· Participate in environmental preservation activities and campaigns · Participate in Voluntary agreements · Disseminate environmental reports
Intensification of Environmentally friendly business	· Eco-products development · Enlarge renewable business

Environmental Management System

2. Environmental Management System

Since 1995, HHI has an environmental management system that meets ISO 14001 standards. Three levels of environmental management standards have been formulated: manual, procedures and sub-procedures.

We have obtained ISO-14001 certification which guarantees the clarity and objectivity of the EMS (Environmental Management System) from the certifying authority.
After receiving OHSAS-18001 certification, HHI currently operates HSE (Health, Safety and Environment) management systems as part of an integrated environmental and safety/health management system.

• HSE Management System Homepage

◇ HSE Policy

Hyundai Heavy Industries Co., Ltd. (HHI) aims to become a world-class heavy industries company enriching lives by recognizing the environment, health and safety as integral to humanity. We at HHI do hereby declare to sustain our performance and development of HSE policies to all parties concerned as follows:

▷ Positioning of Corporate Identity as Eco-friendly Company
- Continuous development of environmental pollution prevention and conservation technologies
- Positive observance of domestic and international laws, conventions and regulations

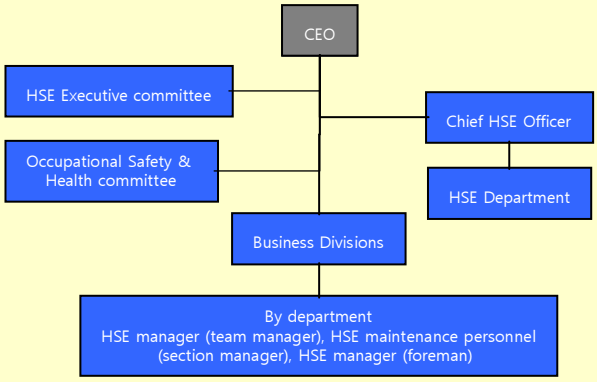
▷ Achievement of Accident-free Workplace
- Promotion of safety practice programs to prevent accidents
- Strict observance of work standards and regulations

▷ Promotion of all employees` health maintenance
- Active campaign of health programs against diseases
- Continuous improvements to create healthy and agreeable working environments

◇ HSE system organization

For efficient, systematic HSE management, our HSE organization consists of HSE Executive Committee and Occupational Safety & Health Committee, both under the supervision of the Chief Executive Officer connected each business division.

The HSE Department cohesively manages HSE management system and supports each business division under the charge of the Chief HSE Officer.



Environmental Audits

・ Internal environmental audits

3. Environmental Audits

HHI performs internal environmental audits every year to prevent environmental problems and potential environmental risks, and to inspect the relevance and validity of environmental management systems according to ISO 14001 certification.
In 2008, HHI carried out internal environmental audits in 122 departments, twenty one of which were recommended to take corrective measures due to nonconformity.

To maintain ISO 14001 certification and objective evaluation of EMS (environmental management system), HHI undergoes periodic audits or renewal audits from a certifying authority every year.
As for External Periodic Audits, 60 departments were inspected in 2008, six of which were recommend to take corrective measures due to nonconformity.
The number of nonconformity in 2008 showed a 40% decrease from last year. These improvements are due to efficiently implementing the HSE management system and the full cooperation of employees.


DET NORSKE VERITAS
MANAGEMENT SYSTEM CERTIFICATE
HYUNDAI HEAVY INDUSTRIES CO., LTD.

・ IS0-14001 Certificate
DNV-QA


DET NORSKE VERITAS
MANAGEMENT SYSTEM CERTIFICATE
HYUNDAI HEAVY INDUSTIRES CO., LTD.

・ OSHAS-18001 Certificate
DNV-QA

Internal Audit Results
(Unit: Number of nonconformity)

2005	34
2006	38
2007	31
2008	21

External Periodic Audit Results
(Unit: Number of nonconformity)

2005	14
2006	14
2007	10
2008	6

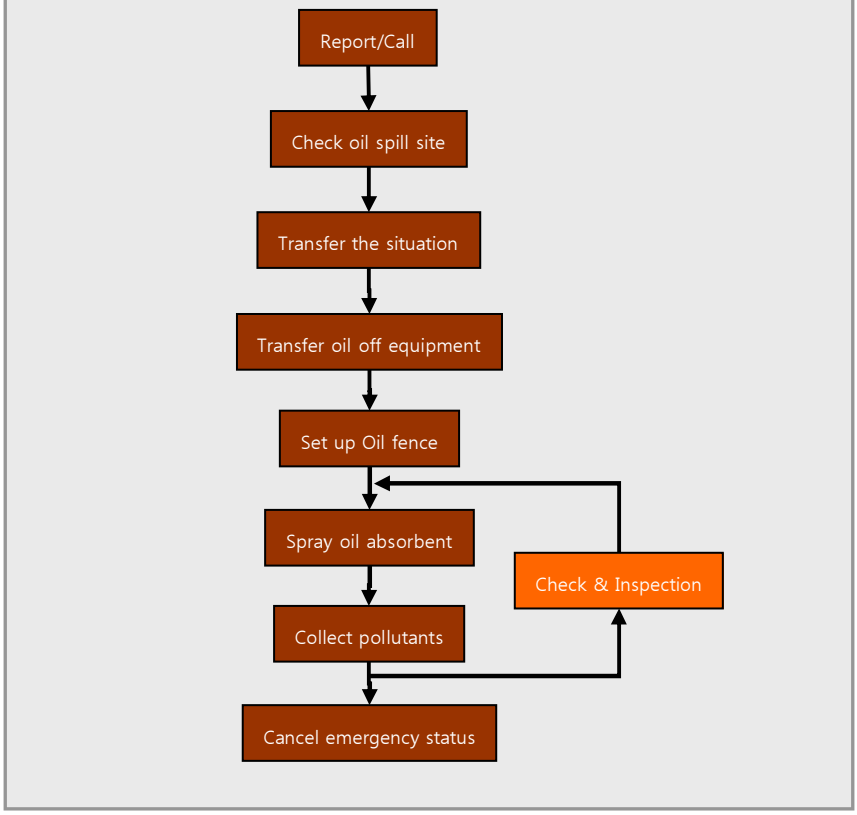
Environmental Emergency Response System

4. Environmental Emergency Response System

To prevent environmental pollution, HHI regularly carries out inspection activities in HHI`s yard.
HHI also regularly carries out environmental emergency response training to ensure a prompt response in case of an environmental emergency.
Through regular training, each department builds suitable emergency procedures responding to different environmental emergency situations.
We use employee feedback to discover weak points and problems in the training scenarios, then try to improve on those weak points.

HHI is located near the sea, so preventing pollution to that sea has always been a priority. We have strict rules about the operation of offshore facilities and ships.
We have safeguards against the disposal of oil, hazardous chemicals, and waste in the sea.

◇ Emergency measures of oil spill flow chart



· Environmental emergency response training

Environmental Education & Investment

5. Environmental Education

To raise the environmental awareness of employees and to foster their responsibility with regard to the environment, HHI continually provides environmental education programmes.

To minimize problems for and streamline the operation of pollution control facilities, a specific environmental education programme has been initiated for pollution control facility operators.

We promote employee's accessibility to environmental education information through its dissemination on the internal webpage.

Environmental engineers keep informed about internal and external environmental policies through professional environmental education, seminars and workshops.

• Environmental Education

6. Environmental Investment

HHI continually invests in clean production processes that minimize emissions of pollutants.

In 2008, HHI invested 1,130 hundred million won, a large increase from last year as a new painting shop was outfitted with facilities to reduce VOV emissions.

We continually take the lead in the protection of the environment through sustained environmental investment.

Cost of Environmental Investment

(Unit: million won)

2005	23,638
2006	14,190
2007	19,184
2008	113,051

• New Painting shop & New facility

Environmental Performance Evaluation

7 Environmental Performance Evaluation

HHI uses EPE (Environmental Performance Evaluation) method to continually improve environmental performance and make objective inspection standards.
According to ISO 14031 and GRI table, environmental performance indicators were selected for suitably measuring HHI's environmental performance. Each indicator was applied as a barometer of evaluation and weight.

◇ Environmental Performance Evaluation

Categories	Subcategories	Number of Indicators
Management Performance	EMS and Conformity	9
	Organization Management	4
	Environmental Cost	4
	Stakeholders Relationship	5
Operational Performance	Resource and Energy Consumption	7
	Air Emission	4
	Wastewater Discharge	6
	Waste Generation	3
Environmental Condition	Atmosphere Air Quality	4
	Inshore Seawater Quality	3

The average EPE results
(Unit: increase or decrease compared to 100 points at the base year 2000)

The average EPE (Environmental Performance Evaluation) results of 2008 show an 92% increase over the base year of 2000.

To measure environmental management performance, 22 performance indicators were created across 4 categories:
1) EMS (Environmental Management System) and conformity,
2) Organization management,
3) Environmental cost,
4) Stakeholders relationship.
The environmental cost category increased greatly compared to last year, due to the installation of new air pollutant reduction facility and painting shop, for reduction of VOC emissions.

The Management Performance results of EPE
(Unit: increase or decrease compared to 100 points at the base year 2000)

Environmental Performance Evaluation

To measure environmental operational performance, 20 performance indicators were created across 4 categories:

1) Resource and energy use,

2) Air emission management,

3) Wastewater management,

4) Waste management.

To evaluate operational performance quantitatively, operational indicators were derived from the total amount of steel use per year with consideration of the characteristics of the heavy industries.

Especially important is performance in the "Air Emission Management" category in 2008; 78% higher than in the base year of 2000.

Performance in the "Wastewater Discharge" category in 2008 was 80% higher than in the base year of 2000..

To evaluate environmental conditions, 7 environmental condition indicators were used. Inshore seawater quality and local atmosphere air quality were the main categories evaluated.

We will continually monitor the environmental quality of the local area, and continue our efforts to improve environmental conditions.

The Operational Performance results of EPE

(Unit: increase or decrease compared to 100 points at the base year 2000)

The Environmental Condition results of EPE

(Unit: increase or decrease compared to 100 points at the base year 2000)

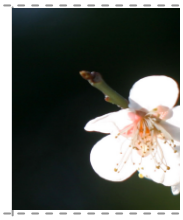
Hyundai Heavy Industries always

efforts to minimize our environmental traces

during business

Environmental Performances

Resource and Energy Conservation



1 Resource and Energy Conservation

To reduce environmental pollutant emissions, it is most important to use resources and energy efficiently.

HHI continually campaigns to improve energy efficiency of processes that use resources and energy as fuels, electricity, water etc.

Efficiency of resource and energy use increased but the total use of resources and energy has risen slightly compared to last year as business expanded and, production levels increased.

HHI recognizes the importance of energy management. To that end, short-and mid-term energy management programmes will be implemented. In addition, HHI will strengthen the energy-saving campaign.



• Resource and Energy Facility

Energy Use

(Unit: TOE/Yr)

2005	215,576
2006	252,551
2007	245,228
2008	268,077

Water Use

(Unit: ㎥/Yr)

2005	4,350,132
2006	4,049,584
2007	4,102,169
2008	4,536,135

Steel Use

(Unit: Ton/Yr)

2005	2,036,998
2006	2,251,100
2007	2,094,079
2008	2,608,743

Air Emissions

2 Air Emissions

To protect air quality, HHI uses suitable air pollution control equipment. We have set our own environmental air emissions standards, which are 50% stricter than the legal requirements.

SOx emissions have largely decreased because fuel of heating facilities was changed from heavy oil to LNG.

▷ Air pollution control equipment

HHI operates 265 air pollution control units in its yard. Air pollution control equipments include Bag-Filter, Scrubber, A/C Tower, RTO, Electric precipitator and SCR.

HHI reduces air pollutants through various methods. We regularly check the equipment to optimize operations, frequently replace obsolete equipment with new equipment and inspect existing equipment to continuously operate optimal air pollution control equipment.

• Air pollution control equipment

◎ RTO Facility

We additionally set up two RTO (Regenerative Thermal Oxidizer) facilities in 2008, at a cost of 300 million won, to treat THC emissions more efficiently.

These facilities' VOC removal efficiency is greater than 99 percent, therefore THC emissions have decreased dramatically.

The facilities heat combustion reuse rate of more than 95 percent also decreases fuel consumption.

• RTO Facility

Dust Emission

(Unit: Kg/Yr)

2005	91,752
2006	97,642
2007	76,291
2008	68,655

SOx Emission

(Unit: Kg/Yr)

2004	8,219
2005	347
2006	336
2007	348
2008	352

NOx Emission

(Unit: Kg/Yr)

2005	47,949
2006	51,927
2007	53,418
2008	53,386

Air Emissions

◎ Development multi-cyclone

During the shipbuilding process, dust generated in a confined space can cause problems.
HHI developed a multi-cyclone machine to compensate for the large size of the Bag-Filter and the inadequate ability of the Turbo-Fan duct collection system.
29 of these machines are installed in the Ulsan shipyard.

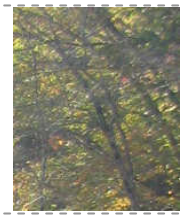
• Multi-cyclone

▷ Voluntary VOC reduction Agreements

Activities associated with shipbuilding result in the release of VOCs into the atmosphere. VOCs from painting operations are the most significant emissions from our manufacturing facilities.
HHI has entered into a "Voluntary Agreement to Reduce VOCs by 5-30 percent in the Shipbuilding Industry" with the Ministry of Environment and 8 Shipbuilding companies in November 2007.
This agreement will help create a cleaner environment and improve local resident's health.
According to the voluntary agreement, HHI will invest 120 billion won to install air pollution control equipment, eco-paint development, install spray pumps etc over five years. (2007~2011)..
HHI will reduce VOC emissions by 30.1% by 2011 (base year 2006)

• Voluntary Agreement to Reduce VOCs by 5-30 percent in the shipbuilding Industry"

Climate Change



3 Climate Change

Climate change has become the most important global issue.
Global climate change trends indicate that Korea is an important greenhouse gas emissions country, and Korea is expected to be included in the Annex-1 group of countries for the second commitment period of 2013.
The Korea government has legislated for 'Green Growth' that is related to a reduction of greenhouse gas emissions.
For these reasons, HHI recognizes the growing need to take action and to prepare countermeasures for climate change.
Also HHI recognizes climate change is an opportunity, not a crisis, and will continue to invest in the renewable energy business as an eco-friendly business.

▣ Greenhouse Gas Emissions

Greenhouse Gas Emissions
(Unit: tCO2e/Yr)

2006	696,223
2007	743,746
2008	827,542

Greenhouse Gas Emissions (Basic unit)`
(Unit: tCO2e/Sales(ten billion won))

2006	553
2007	483
2008	419

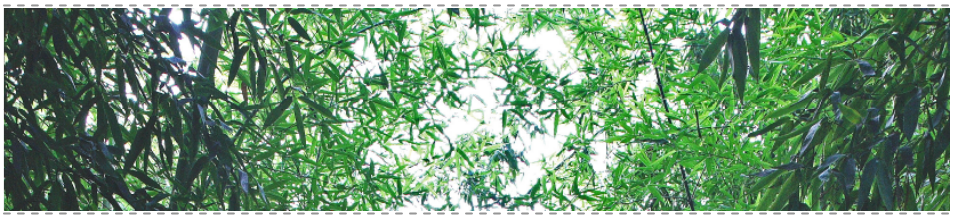
HHI's greenhouse gas emissions amounted to 827,542 tons in 2008. Scope1 amounts were 458,068 tons and scope2 amounts were 369,474 tons.
Calculation boundary is all facilities in HHI's Ulsan Yard. Calculation standards are the amounts of fuel used.
Greenhouse gas emissions increased over last year due to an increase in production. The main sources of emissions are electricity use and heating facilities. Electricity accounts for 45 percent of total greenhouse gas emissions.
HHI controls greenhouse gas emissions through the `Voluntary Agreement to Conserve Energy and Reduce Greenhouse Gas Emissions` with the Korea Energy Management Corporation.
HHI will continue to reduce greenhouse gas emissions through improved manufacturing processes and the reduction of energy use.

◇ Greenhouse Gas Emissions Factors distribution

	2006	2007	2008
Scope- 1	49%	55%	55%
Scope- 2	51%	45%	45%

Scope- 1: Stationary combustion, Module combustion, Emissions of process
Scope- 2: Purchasing electricity, Purchasing Steam

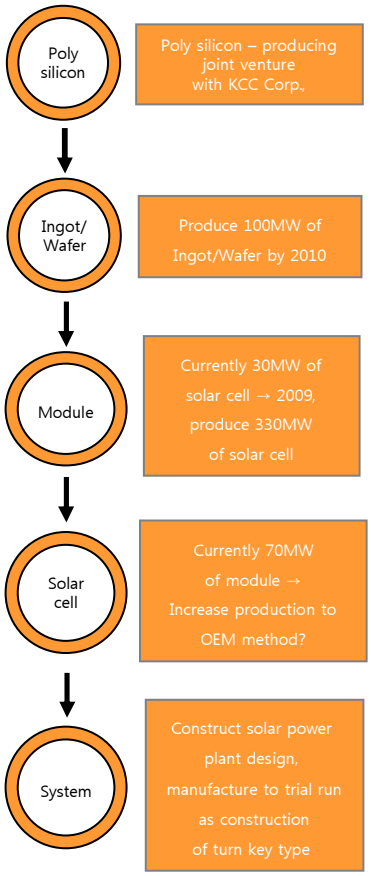
・"Voluntary Agreement to Conserve Energy and Reduce Greenhouse gas emissions"



Climate Change

・Solar cell Factory

※ Total solar energy solutions



▣ Renewable Energy business

The renewable energy business is closely connected with 'Low Carbon Green Growth'.

HHI views renewable energy as an opportunity for great growth and is a driving force in green technology

◇ Solar power business

HHI entered the solar power business in 2005, producing 20MW of solar modules, and received a $60 million contract to provide a solar power facility in Europe that same year.

HHI also relocated photovoltaic cell and module manufacturing operations from Ulsan to Eumseong during 2007, manufacturing 30MW of solar cells and 70MW of photovoltaic modules.

HHI is constructing its second solar cell-producing plant, in Eum-seong, Korea.

When fully operational the new plant will increase annual capacity from 30MW to 330MW by 2009.

As poly silicon production is an essential raw material in the production of solar cell, HHI set up a joint venture with KCC Corp. in March 2008 that manufactures poly silicon.

By 2010 HHI intends to manufacture 100MW ingot/wafers, thus becoming a total provider of solar energy solutions from poly silicon to ingot/wafers, solar cells, modules and systems.

◇ Wind power business

HHI begins Wind power business.

The wind power business is being adopted at a rapid pace worldwide as nations seek to enhance their energy independence and reduce carbon emissions.

HHI builds Korea's largest manufacturing plant for wind-power generators in Gunsan.

HHI will invest 105.7 billion won (about US$76 million) to construct the plant, which is to be completed by September 2009 and start manufacturing 1.65 MW wind-power generators this year. This will increase annual production to 400MW

HHI is the leading player in the manufacture of generators, transformers and circuit breakers, all core parts of wind power systems.

Water Quality

Wastewater Discharge
(Unit: ㎥/Yr)

2005	40,203
2006	35,500
2007	29,070
2008	15,086

COD in Effluents
(Unit: ㎎/L)

Legal standard	120.0
HHI standard	60.0
2007	21.5
2008	20.1

SS in Effluents
(Unit: ㎎/L)

Legal standard	120.0
HHI standard	60.0
2007	3.37
2008	3.52

Zn in Effluents
(Unit: ㎎/L)

Legal standard	5.00
HHI standard	2.50
2007	0.54
2008	0.72

T-P in Effluents
(Unit: ㎎/L)

Legal standard	8.00
HHI standard	4.00
2007	0.55
2008	0.44

4. Wastewater and Sewage Treatment

HHI treats factory wastewater in wastewater treatment facilities operated by the yard or by technical wastewater treatment companies. Sewage is sent to a sewage treatment plant.

▣ Wastewater Treatment

HHI operates three wastewater treatment facilities within the Ulsan yard.
HHI continually reduces wastewater through wastewater reuse and improved production processes. Wastewater was reduced by 48% from the year before leading to the closure of one superfluous wastewater treatment facility.
HHI water pollutant standards are 50% stricter than legal requirements.
We also carry out water analysis twice a month to monitor effluent discharges.

• Wastewater Treatment Facility

▣ Sewage Treatment

HHI completed construction of `Vacuum Sewerage System` in 2008 for sewage generated in the shipyard.
Vacuum sewerage system uses the QVA-VAC technique that consists of vacuum pipelines. Through this system, all sewage will be sent to the Bang-eo-jin sewage treatment plant operated by Ulsan metropolis.

• Vacuum Sewerage System

Waste Management

5. Waste Management

HHI has been attempting to minimize waste generation through reducing the usage of raw materials by continuously improving efficiency of resources that make efforts to reuse or recycle waste.

Efforts to improve recycling have resulted in an increase of wastes recycling from 50.3% to 53.3%, with hazardous waste recycling rate increasing by 7% more than two years ago.

HHI will continue to reduce resource use and improve waste recycling.

▣ Waste treatment method

HHI has established an eco-friendly separate collection system at waste generation places. We carry out a primary separate collection in the product process and secondary separate collection in the resource recycling shop.

Separated wastes are treated at in-house facilities or by waste treatment and recycling contractors.

Inspections of wastes treatment and recycling contractors' facilities are carried out to prevent illegal waste treatment.

HHI recycles 100 percent of recyclable waste through separate collection.

◎ Distribution of Waste treatment method

Recycling	Incineration	Landfill
53.30%	38.70%	8.00%

・Wastewater Treatment and Storage Facility

◇ Waste Manifest System

HHI continually monitors every stage from waste generation to final waste disposal, in real-time via the `Waste Manifest System' This ensures that all waste is lawfully and transparently disposed.

General Waste Generation
(Unit: Ton/Yr)

Hazardous Waste Generation
(Unit: Ton/Yr)

Hazardous Waste Recycling rate
(Unit: %)

All Waste Recycling rate
(Unit: %)

Waste Management

· Waste Incineration Plant

◇ Waste Incineration Plant

HHI has operated a waste incineration plant since 1996.

Specification of Facility

-Incineration type: Stoker Type

-Incineration facility: Incinerator (200ton/day×2machines), waste heat boiler (29.5ton/day×2machines)

-Air pollution control equipment: Electric precipitator, Scrubber, SCR

-Wastewater treatment plant: physical and chemical method

-Stack height: 100M

· Facilities of Wastewater Incineration Plant

▷ Concentration of Incineration plant discharge gas

Item	Legal Standard	2006	2007	2008
CO	50	7	3.6	1.0
NOx	80	37.3	47.7	48.0
HCL	30	0.6	0.0	1.0
DUST	30	5.6	5.2	8.0

Soil Management

6 Soil Management

HHI's soil contamination facility follows strict soil pollution management procedures. 62 soil contamination management facilities are located within HHI`s Ulsan yard.
The soil contamination management facility helps prevent tank leakage. HHI uses various soil pollution control equipment, including corrosion inhibitors, drainage and leakage measuring instruments.
All facilities regularly check for soil pollution by technical measurement institution.

◇ Table) Result of Soil pollution inspection (2008)

1) BTEX detection

Point	Standard (mg/kg)		Total of BTEX detection (mg/kg)
	Regulation1	Regulation2	
1	80	200	Not Detection (Less than 0.5)
2	80	200	Not Detection (Less than 0.5)
3	80	200	Not Detection (Less than 0.5)

2) TPH detection

Point	Standard (mg/kg)		Total of BTEX detection (mg/kg)
	Regulation1	Regulation2	
1	2000	5000	Not Detection (Less than 0.5)
2	2000	5000	Not Detection (Less than 0.5)
3	2000	5000	Not Detection (Less than 0.5)
4	2000	5000	Not Detection (Less than 0.5)
5	2000	5000	Not Detection (Less than 0.5)
6	2000	5000	Not Detection (Less than 0.5)
7	2000	5000	Not Detection (Less than 0.5)
8	2000	5000	Not Detection (Less than 0.5)
9	2000	5000	Not Detection (Less than 0.5)

· Soil contamination facility

Chemical Management

7 Chemical Management

• MSDS Post

HHI strictly controls chemical use for the protection of the environment and the safety of employees.

HHI follows strict procedures with regard to chemicals from storage to use to disposal by conducting periodic inspections of all relevant facilities to prevent chemical spills. HHI has also prepared emergency equipment and procedures in case of a chemical spill.

MSDS (Material Safety Data Sheet) for the safe handling of toxic chemicals, are prepared in relevant facilities, and regular training is provided for all personnel involved in the handling of toxic chemicals.

HHI separately controls hazardous chemicals, such as cryolite, hydrogen chloride, nitric acid and sodium hydroxide.

In an effort to reduce hazardous chemical use, the amount of hazardous chemicals used was decreased by 40% compared to last year.

◇ REACH (Registration, Evaluation and Authorization of Chemicals)

The EU promulgated the REACH regulations, which took effect from of June 1, 2007, affecting companies exporting to the EU.

HHI exports products to the EU market such as ships, transformers and excavators. These products are closely connected with 'Notification' in details of REACH regulation. Because these products are not that substance and preparation but that article.

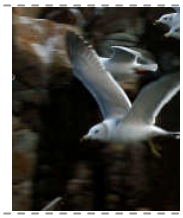
In cases where the regulations do apply, HHI is prepared to fully comply with the regulations and will continue to monitor changes in environmental regulations.

Hazardous Chemical Use

(Unit: Ton/Yr)

2005	121.38
2006	132.05
2007	44.13
2008	24.39

Eco-friendly products



8 Eco-friendly products

◇ DFDE System

• LNG Carrier using DFDE System

HHI developed the first Korean Dual-Fuel Diesel-Electric (DFDE) propulsion system for LNG carriers in 2007.

The DFDE propulsion system uses either oil or gas, depending on the situation, thus improving fuel efficiency. This system was regarded as eco-friendly because it uses an electric motor, not a steam turbine, the traditional propulsion system for LNG carriers.

Using the DFDE system, BP's LNG carrier 'British Emerald' improves fuel efficiency by 10 percent and produces 25 percent less CO2 emissions. The ship saves 40 tons of fuel per day, compared to traditional propulsion systems, at 20 knots.

◇ Thrust Fin

• Thrust Fin

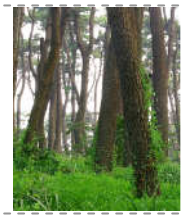
HHI developed the world's first Thrust Fin, delivering the first 8,600TEU containership equipped with a Thrust Fin to Hapag Lloyd.

The Thrust Fin is an airfoil-shaped device that is attached to the rudder behind the propeller, maximizing thrust force. It produces thrust from the rotational flow, with the theory of lift generation in aeronautics applied to its design.

A large containership consumes approximately 300 tons of fuel per day. If it is equipped with a Thrust Fin, the annual savings in fuel expenses could total $2.4 million. With an average ship lifetime of 25 years, this amounts to $60 million in savings per ship.

Obviously, emissions of air pollutants as SOx, NOx and greenhouse gases (CO2) are decreased.

Safety & Health



9 Safety & Health Activity

HHI considers employee safety to be most important value. Therefore, HHI has various programmes in place for the accomplishment of zero accidents in work sites. Also HHI provides promotes various health programmes for employees such as musculoskeletal disorders prevention programme, cardio-vascular disorders prevention programme, prohibition of smoking clinic etc.

· Safety Learning Center

◇ Safety Learning Center

HHI manages the Safety Learning Center for more effective safety education.

The Safety Learning Center is composed of 3 floors inside block center and virtual reality demonstration center.

The center focuses on experiential education using real-life workplace situations. These lessons have been found be much more beneficial to workers than the traditional classroom safety lessons.

In 2008, about 18,000 workers, including sub-contracted employees, are expected to be trained.

The training programme includes virtual safety experiences programme, safe operation of cranes and other equipment, various types of anti-falling device and their operation, confined space safety regulations, knowledge of personal protective equipment, etc.

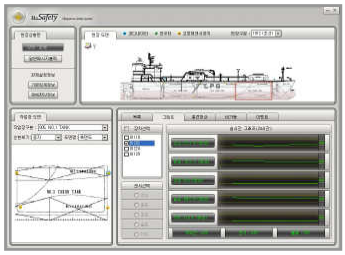
· Safety Training

◇ U-Safety

The "U-Safety" system is 'ubiquitous safety industrial space' that detects sources of possible accidents in shipbuilding work places as fire, explosion, worker's suffocation and falling unconscious.

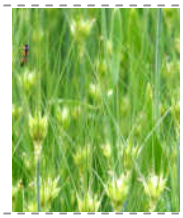
Early detection sensors detect toxic gases, spark, and concentration of THC etc in real time and then transmit data to a unified control center.

Using this system, HHI looks forward to a reduction in workplace accidents. Currently, some ships are in the testing phase of this system.



· U-Safety system

Safety & Health



◇ HEMP

HHI manages an in-house musculoskeletal disorders prevention programme. The musculoskeletal disorders prevention programme aims to reduce and eventually eliminate ergonomic risks existing in the workplace, and to make a more healthful and comfortable working environment.

This programme contains 'Continuous Self-check Prevention Programme' and 'real-time monitoring throughout the computerized system'.

◇ Operate Medical Facility

HHI aims to promote all employees'health and happy life by providing workers with high quality medical services in the medical center established in 2003.

HHI also provides a 'return to work' rehabilitation programme. These medical facilities enable workers to receive early diagnosis and treatment of musculoskeletal disorders.

· Medical Center

▷ **Medical Facility**

Classification	Name	Facility state	Staff
Medical Center	In-Plant hospital	Patient clinic, treatment room, Injection room, ECG room, etc	Doctors:4 Nurses:8
	Physical therapy Room	About 90 Treatment facilities	Physical therapists:3, Nurses:2
	Rehabilitation Room	About 45 Treatment facilities	Physical therapists:1, Fitness therapists:1
	Health promotion room	Body composition analysis and Physical strength test	Nurses:1
Yard	Local infirmaries	Treatment room	Nurses:8

· Medical Services

For a sustainable future,

HHI has remarkably grown with

Regional society during 35 years

Social Relationship

Environmental Quality of Community

4-1 Environmental Quality of Community

HHI is located in Bangeojin, Ulsan, along the southeast coast of Korea, and we make efforts to protect the local environment.

HHI continually monitors the environment of the local community. Monitoring results show that seawater quality has been maintained and that the local air quality has been gradually improving.

To prevent sea pollution, HHI has divided the adjacent sea into 20 areas for "Sea Pollution Prevention Management". HHI has been implementing regular emergency contingency drills and prevention activities in case of sea and air pollution emergencies

PM-10 Concentration in the Local Atmosphere
(Unit: ㎍/㎥)

Standard (24hr)	100.0
2006	40.4
2007	63.7
2008	51.0

NO2 Concentration in the Local Atmosphere
(Unit: PPM)

Standard (24hr)	0.060
2006	0.012
2007	0.012
2008	0.019

SO2 Concentration in the Local Atmosphere
(Unit: PPM)

Standard (24hr)	0.050
2006	0.006
2007	0.008
2008	0.011

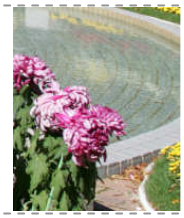
Average COD of Seawater
(Unit: ㎎/L)

Standard (Grade 2)	2.00
2006	1.25
2007	2.01
2008	1.70

Average DO of Seawater
(Unit: ㎎/L)

Standard (Grade 2)	5.00
2006	8.50
2007	8.30
2008	10.1

Environmental Conservation Activities



4-2 Environmental Conservation Activities

HHI recognizes enough responsibility of environment conservation by company.
We have implemented various environmental conservation activities such as forest, stream, and sea preservation, and held environmental campaigns to help improve our community.
HHI will continue to increase environmental conservation activities

1. One Company, One Region Cleaning Campaign
In regards to the environment, HHI has maintained cooperative relations with the government over a long time through the "One Company, One Region Cleaning Campaign". HHI carries out cleaning campaign ten times in year.

2. Voluntary Environmental Preservation Activities
Many clubs and associations exist within HHI. These clubs and associations conduct environmental conservation activities at least once a month.

• One Company, One Region Cleaning Campaign

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