



- Seoul HQ Lotte Tower, 395-67 Sindaeabang-dong, Dongjak-gu, Seoul, Korea [Postal code] 156-711
- Daedeok R&D center 24-1 Jang-dong, Yuseong-gu, Daejeon, Korea [Postal code] 305-726
- Yeosu Plant Petrochemical Complex, 172 Jangheung-dong, Yeosu City, Jeonnam Province, 555-805, South Korea
- Overseas Holdings
  - Jiaxing Hoseok Engineering Plastics Co., Ltd.
  - Hoseok Chemical Trade Co., Ltd.
  - Weifang Yaxing Letian[Lotte] Chemical Co, Ltd.
  - Overseas Subsidiaries : Beijing, Qingdao, Guangzhou, Hong Kong
  - Honam Overseas Holdings

# With...

HPC puts happy and healthy smile on your face.  
The Most Synchronized Corporation with Human Beings,  
it's the HPC.





**GRI Application Levels - "G3"**

Honam Petrochemical Corporation applied the G3 of Global Reporting Initiative(GRI) guidelines to prepare its "Sustainability Report 2007" and self-declared that this report conforms to 'Level A' according to the application level evaluation standards. Korea Foundation for Quality(KFQ) verified that this report corresponds to 'Level A' among the G3 application levels of GRI A, B and C.

\*Note : The '+' mark shown in the logo is to confirm a third party-verification for the self-declared application level.

Everywhere you turn,  
whether visible or invisible,  
there is HPC to share  
your joy and sorrow.

HPC smiles with  
you by safeguarding  
your happiness and health.

 Honam Petrochemical Corporation (hereinafter abbreviated as HPC)





#### **— The Purpose of the HPC Sustainability Report 2007**

This report was written in order to demonstrate HPC's business activities and the performance which will contribute to a sustainable development. The report delivers transparent and balanced information on HPC to help those concerned with the decision-making process. It contains activities and achievements of HPC Seoul HQ, its Daedeok R&D center and Yeosu Plant between January 1st and December 31st of 2007. Part of the report describes HPC performances in 2008 to help readers better understand. Note that overseas HPC offices have been ruled out, to be specified in the following report.

#### **— Principles for Reporting**

This report is based on the Sustainability Reporting Guidelines(G3) of GRI, referring to several international standards including the report analysis of world's most prominent companies and assessment standards of the financial sector.

#### **— Reliability of Report**

In order to improve the reliability of the report, KFQ, the third party has been involved to verify the authenticity on selected items. The verified items include all kinds of quantitative data and qualitative statements. This report is to be published annually.

#### **— Additional Information**

This report is published in English and Korean, and is accessible through a website [www.hpc.co.kr](http://www.hpc.co.kr).

# Sustainability Report 2007

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“A sustainable company leaping towards the world with the confidence of its stakeholders.”



On the occasion of the first publication of sustainability report 2007, I am grateful to our stakeholders who have been giving us unfailing support and encouragement at all times.

Embarking on the petrochemical business in 1976, HPC has been making significant progress since for the Korean petrochemical industry overcoming some internal and external management hardships. Now we got back on our feet again enough to proudly represent the nation's petrochemical industry.

We believe that HPC was able to come this far thanks to combined efforts of the employees, stakeholders and valued customers with their consistent trust and loyalty.

However, we will never settle in what we have achieved up to now. Banking on vast experience and skill from the past three decades, we are determined to present new horizons while constantly seeking profit-bearing businesses. The HPC Sustainability Report is duly anticipated to help us achieve our vision for a top-tier petrochemical company in Asia.

Today, companies are faced with increasing demand for new challenges in management at high level-changes to catch up with the speed of globalization. To meet the internal and external changes, Our employees are committed to reinforcing core businesses while exploring new fields. We will put in extra effort to build corporate capabilities for its continuous growth in the global market.

As a global leader, our mission towards the environment and society is clear and we will get involved in a wide range of environmental activities to reduce greenhouse gas emissions and energy consumption on a global level. Working closely with the government, concerned industries and associations we will roll up our sleeves and get on with the environmental issues. We are also striving to improve the safety and working environment of our employees and promote open-ended communications with our stakeholders.

Based on trust and credibility, HPC puts top priorities on customer value, environment and safety, common wealth of communities and the nation through ethics management. Pursuing ultimate happiness of mankind and quality life, we promise a company of "Century-lasting Sustainability" and hope to share our vision with you in the years to come.

August 20th, 2008  
President & CEO Chong, Bum-Shick

B. S. Chong



## HPC is committed to producing basic industrial materials to bring happiness to mankind.

Since establishment in 1976, HPC has come a long way presenting its highly sophisticated production line, state-of-the-art research facilities and exceptional technology. By strengthening its current businesses and investing intensively in growing industry for the next generation along with efficient management, HPC is determined to emerge as one of high-profile petrochemical companies in the world.

### 【 The HPC Profile 】

(Unit : Korean Won)

Name of the Company	Honam Petrochemical Corporation	Capital	159.3 billion
CEO	Chong, Bum-Shick	Sales revenue	2,255.3 billion
Year of Foundation	March 16, 1976	Total assets	3,587.3 billion
Number of Employees	1,010	Net profit	463.4 billion
Business Locations	Seoul HQ, Daedeok R&D center, Yeosu Plant		

### 【 Business Locations 】

\_ Seoul HQ : 395-67 Lotte Gwanak Tower, Shindaebang-dong, Dongjak-gu, Seoul, 156-711, South Korea

\_ Daedeok R&D center : 24-1 Jang-dong, Yooseong-gu, Daejeon Metropolitan City, 305-726, South Korea

\_ Yeosu Plant : Petrochemical Complex, 172 Jangheung-dong, Yeosu City, Jeonnam Province, 555-805, South Korea

\_ Overseas Holdings

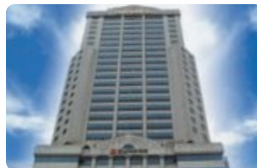
Jiaxing Hoseok Engineering Plastics Co., Ltd.

Hoseok Chemical Trade Co., Ltd.

Weifang Yaxing Letian(Lotte) Chemical Co, Ltd.

Overseas Subsidiaries : Beijing, Qingdao, Guangzhou, Hong Kong

Honam Overseas Holdings



Seoul HQ



Daedeok R&D center



Yeosu Plant



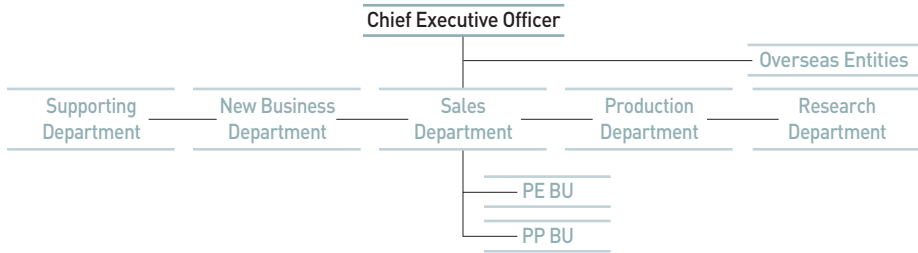




**[ HPC Organization ]**

The organization of HPC's business consists of two main sections; domestic section and overseas section. The domestic section is comprised of Seoul HQ(sales, new business and supporting groups), Daedeok R&D center and Yeosu plant(production) whereas overseas section is running in forms of branch offices and corporate entities.

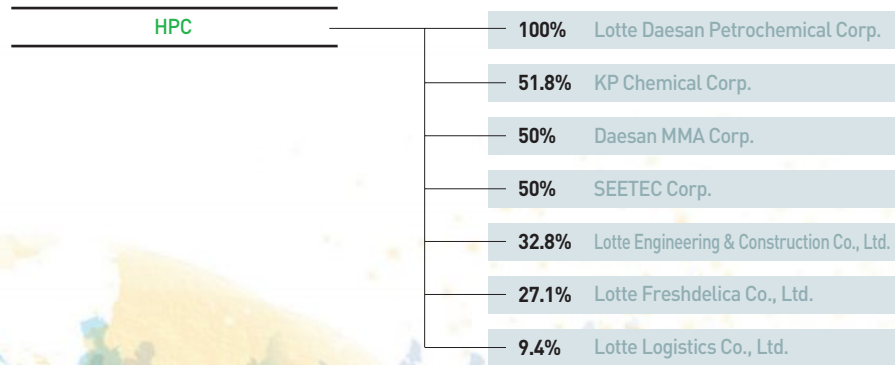
Each section of the organization is made of teams by their roles and enables clear communication within the company as well as prompt decision-making. As for flagship products, the sales division conducts a business-unit operation and commits sales to its subsidiaries maintaining consistency from production to sales in an optimal way, through which HPC can meet the customer needs in a more flexible manner. Meanwhile the plant segment keeps an organization that holds accountability in environment and safety management, and local community let alone production.



**[ HPC Affiliates ]**

As an affiliate of Lotte Group, HPC holds shares of chemical subsidiaries and related companies of Lotte Group.

Shareholdings in related companies



## 【 History 】

### 1970s

- 1976. 3 Founded
- 1979. 12 Construction of HDPE, PP, and MEG plants completed



### 1980s

- 1986. 6 Daedeok R&D center launched
- 1988. 4 Construction of HDPE plant II completed
- 1988. 11 Construction of PP plant II completed



### 1990s

- 1991. 5 Listed on Exchange, Construction of MEG plant II completed
- 1992. 4 Construction of Naphtha Cracking Center and BTX plant completed
- 1997. 6 Construction of third MEG plant completed
- 1998. 8 Construction of PET plant completed
- 1999. 6 Construction of third HDPE plant completed



### 2000s

- 2000. 3 Construction of EOA plant completed
- 2001. 6 Construction of MMA plant completed
- 2001. 11 Naphtha Cracking Center and BTX plant enlarged, construction of third PP plant completed
- 2003. 5 Equipped complex generating facilities
- 2003. 6 Jointly acquired Hyundai Petrochemical Co.
- 2004. 11 Acquired KP Chemical
- 2006. 7 Commercial Corporation of China (Hoseok Chemical Trade Co., Ltd.) launched
- 2006. 9 Daesan MMA(Joint Corporation) launched
- 2006. 10 Acquired Jiaxing Hoseok Engineering Plastics Co., Ltd. of China



## Principal Changes in 2007

### Honam Overseas Holdings launched(March 2007)

- \_ Overseas Corporation(in Hong Kong) with special purpose of investments in foreign countries(Joint business in Qatar)

### Daesan MMA increases capital to 45 billion Won in(March 2007)

- \_ Joint-venture for production and sales of MMA/PMMA
- \_ Joint-venture : Mitsubishi Rayon(Japan)
- \_ Investment Areas : Daesan Petrochemical Complex in Seosan, South Chungcheong province, Yeosu Petrochemical Complex in Yeosu, North Jeolla province
- \_ Estimated total investment : 250 billion Won(50% of additional HPC stake, 60 billion Won of capital investment)

### Signed Head of Agreement(HOA) joint-venture in Qatar(October 2007)

- \_ Construction project of Petrochemical Complex(Main products : PP, SM, PS etc.)
- \_ Joint-venture : Qatar Petroleum(State-owned oil company in Qatar)
- \_ Investment Areas : Mesaieed Industrial Complex, Qatar
- \_ Estimated total investment : 2,600 billion Won(30% of HPC stake, 390 billion Won of capital investment)



## “HPC presents a new future as a trustworthy company.”

HPC has grown into a sound enterprise in the domestic market that produces olefin petrochemicals like synthetic resin, chemicals and basic petroleum byproducts. For the past thirty years, HPC has played a central role in the nation's infrastructure and met the customer confidence. It is now transforming itself into a global company by actively launching new businesses with high values while strengthening the existing business.

### The international-scale Yeosu Plant succeeds in vertical systematization \_

Yeosu plant boasts its international-scale production base with 10 affiliated plants which produce raw and base materials of petrochemicals and products including 720,000 tons of ethylene, 370,000 tons of HDPE, 380,000 tons of PP and 400,000 tons of MEG through its naphtha cracking plant. The plant succeeded in vertical systematization from raw materials to products through continuous plant enlargements and business expansion. The HDPE, PP, MEG product lines have been claiming the top rank in occupancy of domestic market.

### HPC seeking sustainable growth based on stable revenue structure \_

HPC has seen its sales record turn into black since 1983 unfolding its business focused on strategic items alongside strong sales structure tailored to local market. Boosted by the whopping growth in the 1990s, HPC performed even better after the year 2000 to record 2 trillion Won of sales revenue in 2005.

### HPC transforms into a global enterprise \_

HPC took over the ownership of Hyundai Petrochemical Co.(Lotte Daesan Petrochemical Corp.) and KP Chemicals. Now it is determined to advance into the Middle East to build a petrochemical plant in Qatar as a joint venture with a Qatar state-owned company for the first time in Korea. In the meantime, HPC will join hands with Mitsubishi Rayon of Japan to produce MMA and PMMA, sign a contract with Asahi-kasei Chemical of Japan to acquire the technology of producing polycarbonate. By strengthening its platform for global business, HPC is envisioning to become one of the most outstanding chemical companies in the world.

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### \*About Petrochemical Industry

The petrochemical field belongs to a raw materials industry that produces synthetic resin, synthetic fiber and synthetic rubber for the related industries using petroleum products(Naphtha etc.) or natural gas. In inter-industrial links, the upstream of petrochemical is the refining business and the downstream includes plastic processing, fiber and fine chemical. Petrochemical products are essential to our daily life in a wide range from automobile, electric and electronics, fiber to paints and contribute further to the happiness of the humankind. The Korean petrochemical industry started off in 1973 with 100,000 tons of ethylene and has developed into the world's 5th largest industry boosted by the government support to develop heavy chemical industry alongside constant efforts from the industry, having the productivity of 6.9 million tons of ethylene as of late 2007. Furthermore, its importance in Korea's economy has constantly increased, occupying 5% of the total productivity of manufacturing industries and 7% of the total export. It became the nation's key industry and one of the nation's top 10 flagship along with the mobile and the semiconductor industries.

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## Vision and Value

“HPC keeps it up into the future to the world for the sake of human race.”

While strengthening competitiveness of its conventional business, HPC considers sustainable development and mission accomplishment as intrinsic values in the corporate management and is actively involved in the practice.

### 【 Vision of Sustainable Management 】



Back in 1976, HPC kicked off its downstream facilities like HDPE, PP and MEG as the Yeosu petrochemical complex was established. And now it has grown into the nation’s representative petrochemical company with consolidated efforts and concerns from employees, customers, stockholders, partners and the local community. The market trend is becoming a critical criterion for entrepreneurial environment and due to the industrial characteristics of raw materials the product demand is immensely influenced by global trends. The competition in the current petrochemical industry is expected to be more severe hit by soaring oil prices and increased facilities in Middle East and Asia. In order to actively tackle such changes in the business environment, HPC has set up future scenarios and is now seeking various strategies to achieve the corporate vision such as active overseas investment and consolidation with affiliates. Today’s achievement of HPC is attributed to its constant investment in an effort to raise the corporate value with its own financial resources. We are committed to helping the nation and local communities for the members’ happiness based on our ceaseless innovation and endeavor.

HPC is envisaging ‘the best petrochemical company in Asia’ exploring new horizons by the year 2014. This vision delivers the corporate determination to leap ahead not only in external aspects but also in internal capacity with world-class corporate culture. We believe that achieving the vision will play a leading role in the national development and the community while enhancing our stock value.

\_ To achieve the goal, HPC is planning

- 1) To strengthen competitiveness of the conventional petrochemical industry while building a solid platform for profit
- 2) To furnish the driving force for growth through overseas investment and new businesses
- 3) To reinforce internal capacity in order to ensure the execution ability.

The HPC vision embraces six main values toward its goals.

#### The Six Values of HPC Vision

##### Performance driven

- \_ Decision-making by stockholder value and performance
- \_ Thorough performance management based on just evaluation systems
- \_ Efforts to enhance productivity and efficiency

##### Embracing challenge

- \_ Challenge to new areas
- \_ Prompt decision-making and initiative drive
- \_ Challenge embracing attitude and group ambience

##### Innovation

- \_ Risk-taking attitude to try new things
- \_ Open-mind Open-mindedness toward new ideas
- \_ Constant craving for customer values

##### People focused

- \_ Systematic and powerful program for manpower
- \_ Corporate culture of encouraging employees and self-development
- \_ Initiative participation of leadership group

##### Teamwork based

- \_ Reciprocal collaboration of employees
- \_ Organizational and individual roles and responsibilities
- \_ Working environment to share ideas and input
- \_ Loyalty and pride in company

##### Environment caring

- \_ A group of people conscious with eco-friendliness
- \_ A company that complies with high safety standards

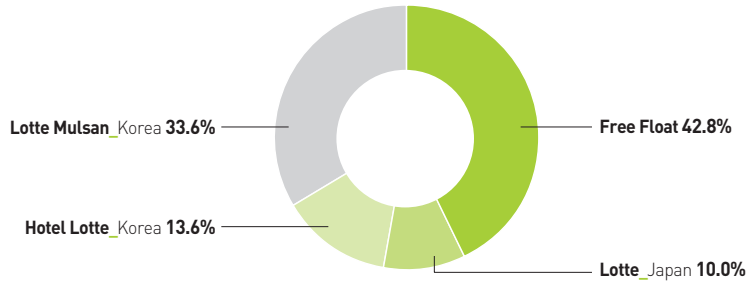


## Corporate Governance

### HPC is determined to perform “transparent business.”

HPC has been improving its corporate governance to promote activities of the board of directors and the committee of audit while protecting the stakeholders’ rights. Throughout HPC’s internal audit system, we try to eliminate any possible corruption pursuing integrity and transparency in our management and corporate culture.

The largest shareholder of HPC is Lotte Mulsan with 33.6% of stake. Other affiliates, Hotel Lotte has 13.6% and Lotte Japan has 10.0% of the company’s stake respectively.



### 【 Board of Directors 】

#### \_ 1) Organization

The board of directors of HPC comprises seven members, four of whom are outside directors. HPC runs an Outside Director Candidate Recommendation Committee with two directors each from in and outside the company whose duty is to recommend qualified and professional candidates for outside directors and the candidates are elected in general meeting by the board members.

By organizing the board with more than half of outside directors with expertise and independence, HPC seeks transparency in its decision-making for management while supporting the board members in the process of their execution of corporate affairs. This enhances the relationship between shareholders and other stakeholders from different areas.

#### \_ 2) Roles and Activities

The board of directors appoints chief executive director of HPC who becomes the chair of the board pursuant to the board policy.

The director, who becomes the audit target by way of the board or the committee of audit, reports the execution status of management to the board more than one times every three months and works hard for the increase of profits. HPC commissions the committee of audit executive office to assist the committee of audit (consisting of three independent directors) and does its best so that the board of directors the highest decision-making organization by i) recording present directors separately from absent directors and ii) stating pros and cons about an opinion and any oppositions when the minutes of the board of directors meeting are written.

HPC held the total number of eight board meetings in 2007, with an average attendance rate of outside directors at 93%.

## **[ Committee of Audit ]**

### **\_ 1) Organization**

HPC has organized an audit committee of which all three members are from outside to keep their activity objective and independent while ensuring integrity in management. All the auditors are appointed in general meeting of stockholders and their independence is guaranteed by the HPC policy.

The audit committee plays a vital role in evaluating business execution of directors, as well as preventative audit from the decision-making stage in the board of directors. Looking ahead, the committee is making efforts to meet the global high standards for the corporate governance.

### **\_ 2) Roles and Activities**

In 2007, the audit team implemented regular audit(quarterly audit, inventory audit, closing accounts audit), occasional audit(overseas branches and local entities, sales audit) and special audit. The auditor's report found not a single case of fraud and the duties were in due progress according to the rules. Preventative measures are readily available within the company to keep any kinds of mismanagement to a minimum. HPC's internal audit system is making a contribution to building solid and sound culture by preventing corruption beforehand.

- National contribution & product donation total for political parties, politicians and relevant organizations HPC has been continuously supporting relevant NGOs and citizen groups with their activities in hopes of making the society a better place to live. However, there is no record of donating to any political party, politician or relevant organization.

## **[ The Board's Self-evaluation Process on Performance ]**

### **\_ Corporate Social Responsibility**

HPC has been strengthening the platform for continuous growth to achieve the vision of becoming 'The best Asian petrochemical company'. The corporate responsibility for society is recognized as part of management activities and is reflected in the process of management decision-making.

### **\_ 1) Introduction of Compliance Program(CP)**

HPC has set up and is operating a compliance program which can help the company to prevent unfair collective actions or in-house trade-off that may occur. A manager for the Compliance Program was assigned in 2006 whose duties are to i) plan and implement the corporate Compliance Program, ii) supervise the corporate status of compliance and iii) to report the execution plans and results to the board of directors.

### **\_ 2) Coalition Funds between Large and Small/Mid-scale Enterprises**

Sharing the idea of coalition between large and small/mid-scale enterprises, HPC created coalition funds in 2007 to boost local petrochemical industry in its mid- and long-term development plans based on trust, which encompasses i) technical instruction, education and training, trust-building with manufacturers and ii) establishment and operation of technical advisory center or platform facilities for renewables.

### **\_ 3) Social Services**

Aiming to provide better social services in systematic ways, HPC has organized 'Social Contribution Consideration Committee' and organized a supporting system in each place of business. Activities of the committee involve i) creating funds and consideration for decision-making ii) studying service programs and approving the plan and iii) setting up self plans for each place of business and reporting of the results. HPC will deliberately take its social responsibilities for sustainable development spearheaded by the committee.





## 【 Stockholder 】

### \_ 1) Rights Protection

Pertinent laws and regulations like Commercial Law and Securities Exchange Act and corporate policy enable small stockholders to propose certain issues of their interest concerned to the directors or the board in general meeting. Small stockholders are also entitled to a number of rights like requesting for checking corporate accounts, calling for an extraordinary general meeting and dismissing directors.

### \_ 2) Public Information

HPC has set up executes internal disclosure regulations and fair disclosure directions by reflecting related ordinances such as the Securities Exchange Act, Monopoly Regulation and Fair Trade Act, etc, and disclosure regulations of Financial Supervisory Commission and Korea Exchange(KRX). In addition, we execute a fair disclosure control system by declaring accurately and rapidly and respecting the stockholders' rights, to know the information on main management matters as well as the regular reports such as business reports, quarterly half-yearly reports and other requested reports.

Message \_ Kim, Hwa-yong, Non-executive director and professor in School of Chemical & Biological Engineering, Seoul National University

## “The key to sustainable global company is clear 'communication' with people involved.”



In conformity with the policy, four out of seven members of the HPC board are outside directors. Outside directors including myself put forward objective and practical ideas in the process of planning the HPC's management strategies. I believe this kind of activities will lead us to deliver benefits to those involved with HPC. While working as one of the board members, I noticed that HPC took action starting from looking after its surroundings instead of declaring a big cause. Yeosu plant is a good showcase for this; kept clean at all times and maintained favorable relationship with local citizens. The current and former CEOs also took the chairman of Korea Responsible Care Association and are stretching their efforts to make a difference in the environment, safety and health activities of the Korean chemical industry for the better, going beyond the corporate scope. Out of consideration for this, I

have ascertained that HPC was treasuring the stakeholder values. The key to the growth of a sustainable company in the 21st Century is clear 'communications' among one another. Without communicating, it is hard to expect both survival and development. We need to put our heart and soul into it to get our message across. Based on economic growth, we need to give top priority to environment and those involved in HPC. This will provide us a competitive edge in this cut-throat battle of global market. Let's put our heads and soul together to bring a better tomorrow for HPC.



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## Risk Management

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### ‘Prevention is the best remedy’ is what we chant for our competitive edge

HPC carries out regular check-up on its workplaces to find out potential risks and reduce any possible loss. To reach the ultimate goal of accident-free workplace, HPC has been continuously working on safety-related activities such as raising safety awareness, ensuring the safety of processing and facility, securing safety at workplace and health management.

#### **【 Operation of Risk Management System 】**

\_ HPC recognized the importance of enterprise risk management early to enhance the corporate value and certainty of the environment. It helps locate internal and external risk factors beforehand to predict and control the impacts they may bring, dismiss uncertainty of business outcomes and enrich shareholder value.

#### **【 Risk Management 】**

- \_ 1) Business : Environmental changes of business are always considered in the process of setting up mid- and long-term strategies, in which the impacts on the company and business issues are constantly under research to be influenced in the corporate direction of conducting business.
- \_ 2) Internal Audit : Internal audit is promptly implemented for possible risks lurking behind the scene whereas strong follow-up measures are taken to prevent similar cases from recurring later on.
- \_ 3) Environment/ safety management : Each plant goes under scrutiny by a professional team which members check overall status of working environment and safety including compliance with relevant laws and regulations, possible risks and their counter measures. Voluntary environment and safety management is being settled by regular check-up on environment, safety and their management activities.
- \_ 4) Accident Prevention : Departments of Environment/Safety and Production are operating a Total Accident Prevention Center through which they detect possible risks early to take appropriate measures against them. The production department has a designated person for each facility for double-checking on the environment and safety whereas the Environment/Safety department has its patrol team take a tour around the plant's major facilities 24 hours a day, take special care for possible pollutant-generating areas caused by processing error, and cross-check with the Production Department for commissioning status of anti-pollution facilities.
- \_ 5) Construction and Management of Total Accident Prevention System : The Total Accident Prevention System is designed to renew old and scattered accident prevention facilities for more efficient, flexible, and reliable safety control. The Comprehensive Accident Prevention Center focuses on securing reliability on the equipment, mobility in case of disaster management, efficiency with integrated safety control, and emergency response network to reduce damage should any mishap occur.



## Stakeholders and Social Responsibilities of HPC

### “We will always think of the stakeholders First”

‘Relationship’ with stakeholders is vital to HPC and put in substantial efforts to clear communications with them considers the with diverse stockholders important above anything else, and puts out efforts for clear ‘understanding’. This is based on the unchanging idea that our small efforts makes this society more beautiful.

HPC is having a great influence on many stakeholders. Therefore, we are improving by understanding the requirement of the stakeholders through diverse means of communication, and trying to maintain the win-win partnership.

Manifesting the stakeholders’ reasonable expectations and interests on sustainability and sustainable management, HPC implemented ‘Materiality Test’ of the stakeholders in March, 2008 which results have been reflected on the final report. The assessment called for extended participation of stakeholders in order for sustainable management along with a great deal of requirements on the corporate environment-friendly policies against water, air pollution and global warming. The result of the assessment provided opportunity to better understand HPC overall. What has been induced from the assessment report will play an important role in the process of strategic planning as well as sustainable management of HPC.

HPC defines the range of “stakeholders” as follows in terms of the corporate management activities.



Stake Target	Communication Channel
Customers	Personal visit(Frequently), customer satisfaction survey(once per year), customer invitation program(once per year) etc.
Suppliers	Foreign joint venture, foreign academic activities, market trend analysis, meetings (OPEC, APEC), site visit to suppliers, cooperative research, domestic/foreign academic activities, technical seminars etc.
Partner Companies	Partner company conference(informal gathering for discussion), inspection about processing on commission(once per half year), partner company inspection etc.
Government	Conference, forum, official documents, public hearing, personal visitation etc.
Employees and Executives	Wage negotiations, employee satisfaction research, grievance committee, joint labor-management conference, complaint management system, occupational safety & health committees, board(homepage, intranet), proposal system etc.
Stockholders	General meeting of stockholders, IR, public announcement, homepage etc.
Related Industry Allied Industry	Academy(meeting) participation, regular meeting, petrochemical safety management committee, environmental council, KRCC etc.
Local society and NGOs	Participation in conferences and meetings, plant visit program, informal gathering for discussion with local residents etc.

### 【 Materiality Test 】

\_ In order to draw social issues necessary for the priority management, HPC has developed and utilized the materiality test model.

#### \_ 1) Process

- Understanding of Stakeholders
- Understanding categories and issues of stakeholders
- Evaluate internal · external interest rate and Categorize them in grades(4 grades in total)
- Classified into grade which evaluated the influence, management possibility and management capacity of the items excluding the grade 4, the lowest grade in interest rate.
- Reorganize the issues and company's response strategies of grade 1 and state them in a report as the main issue.

#### \_ 2) Main issues in each section

- Economy : profit increase, market security, customer complaints, high quality, business development, technical innovation, risk response, allotment, business maintenance, management valuation
- Environment : quality of water, air, waste, poisonous substance, soil, climate change countermeasure, regulation observance, eco-friendly development
- Society : health, safety, social contribution, business ethics, local economy, public information, fair trade, local society collaboration, communication, welfare benefits, corporate culture, personnel management, employee safety, duty development

#### \_ 3) Reflection of Materiality Test Result

Material Issue	Clients	Suppliers	Partner companies	Government	Local Society NGOs	Employees	Stockholders	Related institutions of allied industry	Company's response
Profit increase	●	●	●			●	●		Cost reduction, import diversification
Customers' complaints		●							Customers' complaint settlement, Technical support
Risk response				●					Execution of emergency measure training
Business maintenance		●	●	●					Quality security, 'Customer-first' policy
Water quality					●	●			Strict water quality control, Control system investment
Atmosphere					●	●			Strict air quality control, Control system investment
Climate change countermeasure				●	●			●	Reduction activity of related substance, Energy reduction
regulation observance	●	●	●	●	●			●	Control of under legal limit
Safety				●	●	●		●	Reinforcement of safety control system
Social contribution					●				Win-win management through social contribution
Business ethics	●	●	●	●	●		●	●	Adoption of moral management
Fair trade	●	●	●	●	●		●	●	Observance of fair trade



## Sustainable Management Performances\_2006 & 2007 Main Performances

### Economic

#### 【 Transparency Increase 】

— More weight given to independent directors

Our company has organized the board of directors with more than half of them being independent directors to enhance transparency of decision making of the management. Also, we are trying to increase the profit of diverse stakeholders including shareholders by strengthening the supervising role of the directors against the work of administration.

#### 【 Profitability Increase 】

— Stable Financial Structure

We have achieved an improved management performance compared to last year in such a difficult environment due to depression caused by factors such as high oil prices and a fluctuating finance market.

Also, our company has the stable financial structure which is the highest standard in the industry, and we will steadily implement the growth strategies based on this.

#### 【 Excavation of Future Growth Power 】

— Promoting 'joint venture with Qatar'

— 'R&D' investment

— License registration

We are promoting the business after determining direct investment for a mid-east production facility for the first company in Korean petrochemical industry. The mid-east region, having abundant natural resources, including crude oil and natural gas, the petrochemical facility of this area has a far better cost competitiveness compared to other areas. Therefore, the Qatar joint venture will become the opportunity whereby HPC can progress one step further from the current status by ensuring competitive production facility utilizing low-cost raw material of the mid-east area and increasing the synergy effect.

In addition, we are proactively discovering new businesses based on steady investment into R&D and stimulating development of new technology.

### Environment

#### 【 Countering global issues 】

— Countering to the greenhouse gas regulation

— Eco-design introduction

— Introduction of environmental accounting

— TF team activity for energy reduction

— Activities to reduce pollutant exhaust

Based on the management guideline of "harmony between the nature and human being," HPC is trying to preserve nature by developing efficient environmental programs taking into consideration the environmental aspect in the process of every decision making and constantly implementing them. By introducing eco-design, HPC is actively factoring it into the plant design and expansion. Moreover, HPC introduced environment oriented accounting as a means to enhance effectiveness and performance of the investment made for the environment. By conducting diverse energy-reduction activities to reduce energy that is waste in all the areas, HPC is engaged in the activities to prevent earth warming.





### **【 Reinforcement of risk management 】**

- \_ Construction of Total Accident Prevention Center
- \_ Reaching zero accident rate

Our company developed and was operating the first Total Accident Prevention Center at the Yeosu Industrial Complex. In addition to optimizing reliability of the accident prevention equipment by developing the Total Accident Prevention Center, our company secured prompt accident handling system to minimize the damage in case of accident and to optimize accident management, and to increase effectiveness through integrated safety management. Thanks to the effort, our company is attaining zero accident rate, heading towards accident-free workplace.

## Society

### **【 Giving back to the society 】**

- \_ Matching grant, Woosuri system
- \_ Employees' participation in the volunteer activities

HPC operates a system that eliminates potential negative effect on the environment and society by evaluating the effect of new plant construction and expansion on the regional society. Going steps further, HPC is pursuing the activities to give back to the society since 2007 so that there are no marginalized people in the society including the members of the regional society and so that everyone can lead happy and affluent life. Our company introduced matching grant and Woosuri system to encourage all the employees to give back to the society as well as to promote the culture of donation in the society.

### **【 Selected as the company with outstanding labor-management culture 】**

- \_ Conferred with the award for the outstanding labor-management cooperation

HPC is maintaining peaceful and constructive labor-management relations with the labor and the management on the equal footing to guarantee company's management right and the labor union's labor right. As of the end of 2007, 65.8% of the employees were the members of the union. Thanks to the win-win relationship between the labor and the management for a long time, HPC was selected as the Company of New Labor-Management Culture in 2002 by the Ministry of Labor. In 2006, our company was awarded the Outstanding Award for Labor-Management Cooperation by the Korea Employers Federation. Likewise, this type of mature and stable labor-management relations is the foundation for the company's sustainable management.

### **【 Equal opportunity for all 】**

- \_ Increase in the number of women hired

HPC recognizes that securing competent human resources is crucial for sustainable management. Accordingly, our company hires through fair and transparent recruiting process. In particular, our company is striving to secure outstanding women. As a result, the number of women hired is increasing(35 in 2005, 48 in 2006 and 50 in 2007).

### **【 Win-win cooperation program 】**

- \_ Technical seminar for customers

HPC has company-wide customer support system to satisfy the customer, to grow along with the customer and to provide total service for the customer. In particular, HPC is pursuing after the win-win management, targeting companies that provide facility maintenance and repair services according to the characteristics of the petrochemical industry that urgently call for the network comprised of large, medium and small sized companies.



## \* With... Economy

HPC has walked only one way in silence for human's rich future.  
It has laid the economic foundation solidly to contribute to the national economic development.  
Based on valuable experiences and technology obtained from hard work in past,  
HPC will do its best for better future.

HPC offers honorable company with you.

- Promoting 'Joint venture with Qatar'
- Hold stable financial structure
- 'R&D' expenses increase
- Increase in actual results of license
- Construction of ERP





Promise for  
Purumi\* Economy

“Amid aggravating competition day to day across the world, all of the HPC employees are working collaboratively towards the same goal of becoming the best petrochemical company in Asia. We spare no effort in exploring new territory for sustainable growth while seeking transparency and profitability in our entrepreneurial management.

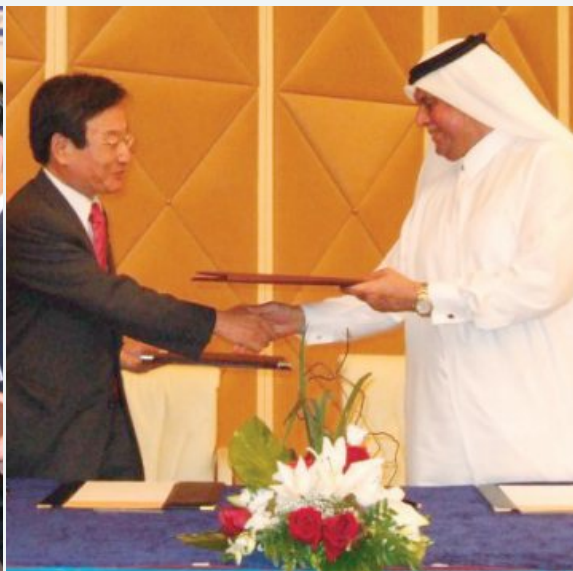
We are leading technology field by investing into R&D and creating high-value added business through M&A.

We are running today for the future with the mission that our each and every step will determine the fate of the company and the economy of Korea after 10 years.”



\*'Purumi' is a Korean term meaning 'Green'





**\*Winner of 'Idea Management' of Korea's Productivity Award**

\_ HPC has awarded the grand prize in 'Idea Management' in the 19<sup>th</sup> Republic of Korea Productivity Award(2006) by Korea Management Association. HPC has extensively contributed to the improvement of productivity by promoting steady innovative activity by introducing proposal system with QC work in 1980. Also, in 1998, it has implemented mileage system in which the score is accumulated according to the number of proposal and level of inspection through 'IDEA BANK,' the proposal management system developed inside the company to encourage the participation of every director and employee in proposal process. As a result of such effort, HPC has achieved the enhancement of productivity- 31 times more production than the beginning of 1979, sales per person increased more than 13 times.

**\*The first company in Korean petrochemical industry to advance into the Middle East**

\_ HPC has finalized its agreement of the basic agreement of joint venture contract(HOA, Heads of Agreements) to build petrochemical complex within Mesaieed Industrial Complex in Qatar with Intermediate Industry Holdings of Qatar(QP). In this joint venture contract basic agreement, our company has agreed to establish joint venture company with the share ratio of QP 70% and HPC 30%, and HPC is responsible for building plant and technology support. HPC has so far been promoting participation in the investment for building petrochemical plant in the Mid-east, and has advanced into the Mid-east for the first time among Korean petrochemical companies. It has laid the groundwork as a global company by enabling cost and market competitiveness through the investment.

**\*World's First Polymeric micro-needle molding technique**

\_ HPC Daedeok R&D Center has succeeded in the development of 'polymeric micro-needle molding technique' for the first time in the world. This enabled the mass-production of 'polymeric micro-needle' at a low cost to take place of the micro-needle made of metal or silicon. The polymeric micro-needle molding technique developed has the low manufacturing cost, and also, it can be manufactured in diverse shapes. Using this technology, HPC has developed 'polymeric micro-needle roller,' which is a disposable medical instrument used in plastic surgery made of ultra high-strength super engineering plastic material, and has received the permission and KGMP certification from the Korea Food and Drug Administration in September, 2007.



## New Business and Market Expansion

Highly positioned as Korea's representative company in the petrochemical industry, the national key industry, HPC is now advancing the preparation and investment to take a leap towards being the best Asian petrochemical company.

### \*Domestic Market

HPC is making an effort to heighten the competitiveness and reduce energy consumption through a continuous rational investment in new and existing equipments.

#### Honam Petrochemical Corp

Name of Investment (Investment Period)	Production Capacity (1000 ton/year)	Amount Invested (100 million won)	Amount Executed in 2007 (100 million won)	Purpose of Investment
Newly established PC plant (2006~2008)	65	2,400	1,547	<ul style="list-style-type: none"> <li>A product expected to show high demand all over the world with high physical characteristics such as transparency and strength etc</li> <li>New entry into the market of chemical product for special use</li> <li>Selected eco-friendly non-phosgene construction method and used CO<sub>2</sub> as raw material which contributed to greenhouse gas emission reduction</li> </ul>
Established EOA plant (2007~2008)	50	230	90	<ul style="list-style-type: none"> <li>Preparing for demand increase of products focused on Chinese market</li> <li>Reinforcement of fine chemistry field and creation of stable profits through expansion EO(ethylene oxide) derivative business</li> </ul>
Extension of naphtha cracking furnace (2006~2008)	Ethylene 30	140	101	<ul style="list-style-type: none"> <li>Equipment efficiency improvement by achieving process stabilization, utility, reduction of energy consumption etc</li> </ul>
Extension of HPEO (2006~2007)		70	47	<ul style="list-style-type: none"> <li>EO demand supply due to extension of PC and EOA plants</li> </ul>

#### Main Subsidiary Companies

Lotte Daesan Petrochemical Corporation<sup>1)</sup> is in the process of investing 670 billion Won for the extension of a production facility to enhance competitiveness through an economy of scale, which will be completed in 2008. If this extension is completed, the production facility of Lotte Daesan Petrochemical Corporation is expected to be the petrochemical complex with the best competitiveness in North-east Asia.

KP Chemical<sup>2)</sup> is working of the extension of Purified Isophthalic Acid(PIA) to be completed in 2008.



KP Chemical



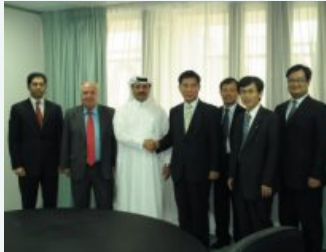
NC Plant



Daesan Plant

1) Lotte Daesan Petrochemical Corp.(former Hyundai Petrochemical Co., Ltd.) was acquired and merged by HPC in 2003 and locates in Daesan petrochemical industrial complex in Seosan Chungnam province.

2) KP Chemical Corp. was acquired by HPC in 2004 and locates in Ulsan.



Qatar Joint Venture Project

## \*Overseas Project

### \_ Qatar Joint Venture Project

HPC has determined to make direct investment into the production facility of the Mid-east for the first time as a Korea's petrochemical company. The Mid-east has abundant natural resources such as crude oil and natural gas, which provides it with a far better cost competitiveness of the petrochemical facility compared to other areas. Through Qatar joint venture project, HPC will also ensure cost competitive production facility utilizing low-cost raw material of the Mid-east, which will provide synergy effect along with conventional business. Therefore, HPC will be able to step further from the current position through this investment.

#### Project Outline

Project Scale	2600 billion won
Collaborative Partner	QP(Qatar Petroleum) Qatar governmental company
Stake of HPC	30%(QP 70%) HPC's investment expenses approximately 390 billion won
Construction Zone	Qatar Mesaieed Industrial Complex Industrial Complex for refined oil and petrochemical in Qatar
Main Program	MOU Contracting : December 2005 HOA Contracting : June 2007 Foundation of Joint Corporation : Second half of 2008 Commercial Production : 2012

Message \_ Oh, Seong-yeop, Planning Director

**“We forge into high-value added industries and overseas markets to keep the growth engine running.”**



Aligned with the corporate vision of ‘the best petrochemical company in Asia by 2014,’ HPC’s fresh plans and investments are geared to take the company to a new level. We spare no investment in our flagship business of petrochemical sector to strengthen its competitiveness. While expanding local facilities in the sector, we are also working on construction of a petrochemical complex in Qatar to cut down on production costs. More investment and marketing plans are underway to make inroads into bluechip markets overseas. Our efforts keep on going for potential growth in areas of PC and PMMA as well. With strategic plans for growth, we are pushing ahead to enhance our internal capacity through various innovative activities in management and strengthening R&D capability, fostering global manpower and boosting overseas marketing capacity. While the business implementation and local investment of 2007 are anticipated to bear fruit in 2008, overseas investment is also smooth sailing. In an effort to strengthen overseas marketing, HPC opened its corporate entity for sales in China in 2006 which has been stabilized for a year in 2007 and is now beginning to show tangible outcome out of the investment made. As to internal activities, HPC introduced a Performance Management System in 2006 which made a contribution to creating performance-oriented culture within the company while offering education programs to improve the employees’ language skills, work capability and foster global manpower needed for overseas business.



## Financial Performance

While the domestic economy has been shrunk by the influence of global depression, HPC still managed to accomplish remarkable growth in sales, operating income, and net income to boast its best industrial standard stable financial structure.

### \*Establishment of foundation of simultaneous growth along with society

HPC has distributed its profit to interested parties such as customers, shareholders, partner companies, and directors and employees as shown below after accomplishing improved performance compared to the previous year even in the middle of the difficult business environment due to depression in 2007. Our company with the best level of stable financial structure will steadily implement growth strategy based on this.

(Unit : 100 Million Won)

Title		2005	2006	2007
Stockholders - Investors	Total cash-dividend amount	319	239	319
Creditors	Interest	122	39	27
Customers	Sales-finished goods	10,346	10,044	9,730
	Sales-finished goods for export	10,697	11,671	12,723
Suppliers	Raw material purchase	14,026	15,828	17,126
	Out-side service charges	14	19	20
Employees	Wages	627	666	687
	Severance and retirement benefits	63	75	75
	Other employee benefits	65	77	88
	Pension	23	24	23
Society	Donation	17	46	51
Government	Tax	1,073	1,511	1,334
Government Support	Computation-based assignment support			9



Finance team



Domestic sales team

### Income Statement Summary

(Unit : 100 Million Won)

Title	2005	2006	2007
Sales	21,128	21,813	22,553
Operating profit	3,401	2,554	2,734
Recurring profit	6,145	5,319	5,960
Net profit	5,114	3,816	4,634

### Balance Sheet Summary

(Unit : 100 Million Won)

Title	2005	2006	2007	
Total assets	27,915	29,976	35,873	
	Current assets	9,377	9,432	10,038
	Fixed assets	18,538	20,545	25,835
Total liabilities	7,013	5,580	7,107	
	Current assets	5,460	3,311	4,174
	Fixed assets	1,553	2,270	2,933
Total equities	20,902	24,396	28,766	

### Stability Index

(Unit : %)

Title	2005	2006	2007
Liquidity ratio	171.8	284.9	240.5
Debt ratio	33.6	22.9	24.7
Debt to asset ratio	7.2		
To operating income, Interest coverage ratio	27.87	65.01	100.57

### Profitability Index

(Unit : %)

Title	2005	2006	2007
Operating income to sales ratio	16.1	11.7	12.1
Net profit to sales ratio	24.2	17.5	20.6
Net profit to total assets ratio	20.0	13.2	14.1
Return on equity	35.2	16.9	17.4
Operating cash flow to total assets ratio	15.0	10.5	10.7

### Growth Index & Activity Index

(Unit : %)

Title	2005	2006	2007
Sales growth	8.2	3.2	3.4
Operating income growth	-11.8	-24.9	7.0
Net profit growth	-4.5	-25.4	21.4
Total asset growth	20.4	7.4	19.7
Asset turnover ratio	0.83	0.75	0.68

Message \_ Lee, Dong-won, Accounting Team Director

### “Stable structure of finance’ is what boosts confidence of HPC.”



HPC was strong enough to endure the financial turmoil of IMF. Going through two merger and acquisition, HPC still remained stable to record zero in borrowing money. Although certain amount of borrowing is seen for consolidation next year, HPC will be able to pay it off by 2011 with success in its new business. The HPC's financial status in the black is attributed to its ability to catch up with the market flow and know-how on timely investment. With almost zero-failure when it comes to new business, return on investment is extremely high. Based on its financial balance, HPC will be able to look ahead into the future through our leading management and step up to join the global industry beyond Asia.

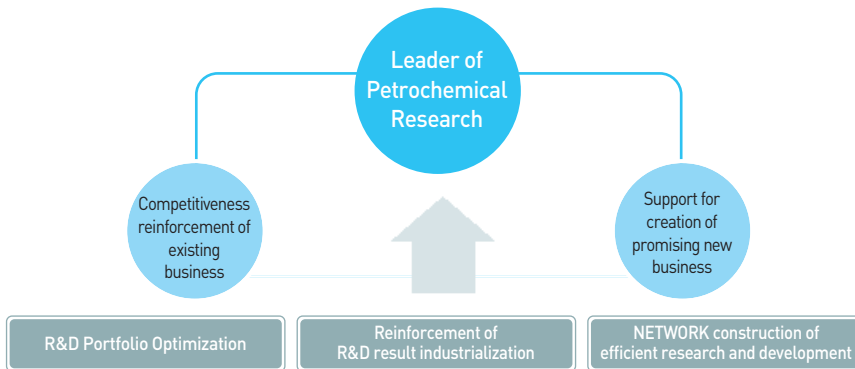


## R&D Field

HPC believes that the growth engine of future industry lies in 'Harmony between nature and human being,' not ceasing its effort to develop environment-friendly new products. It is particularly laying its groundwork as the best Asian petrochemical company by ensuring outstanding personnel and strengthening R&D support system.

Daedeok R&D Center is focusing on developing new product with the goal of R&D that shares its future with customers since its establishment in 1986. As a result, it is leading domestic petrochemical technology in the field related with catalyst for polymerization of polyolefine and various polyolefine new material and processing technologies. Also, based on the accumulated experience and knowledge, it is growing into the global general chemical company of the 21st century by extending and strengthening the research field such as development of new products, precision chemical · nano composite · environment · energy · electric and electronic material as well as enhancing support for research of the existing products.

### \*R&D Strategy



### \*Direction of Research and Development

#### — Increase of competitiveness in existing business

HPC makes every effort to assure the competitiveness of petrochemical product price and quality by market-oriented and its own technical development through the maximization of research outcome by selecting and focusing on research field in existing petrochemistry-focused business areas.

#### — Lead to create promising business in future

To assure technical expertise in new unexploited fields, HPC promotes advanced technology development and cooperation, joint development and strategic tie-up and expands and reinforces increasingly its research fields such as environment, energy, precision chemistry and information & electronic materials to excavate its future growth engines.

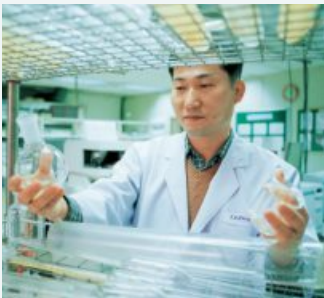
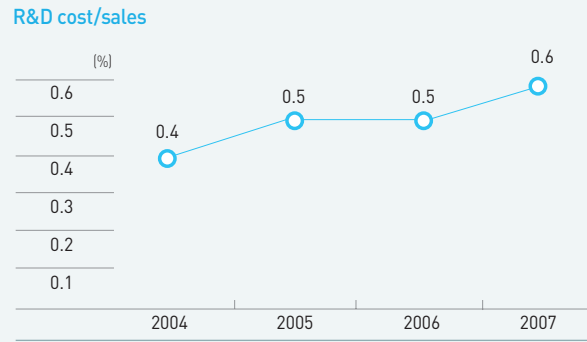
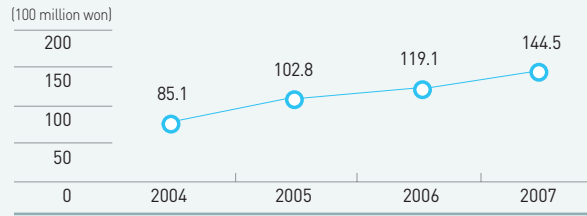
#### — Environmental-friendly product development

Based on its management guideline, which the harmony between nature and human, HPC not only develops effective environment programs and performs environment management activities continuously with consideration of environmental sides in all decision-making processes but also applies eco-design which analyzes and applies environmental features from product development stage to raw material purchase, production, use and waste stages, to make every effort to develop environmental-friendly products.

**\*Scale Expansion of Research Center**

To grow into a best chemical industry in Asia, HPC expands its research organizations, such as expansion of research center employees and new additional establishment of laboratories, and promotes re-improvement of its research-supporting system. In addition, for best research outcomes, it increases its R&D investment every year.

Title	2004	2005	2006	2007
R&D cost(100 million won)	85.1	102.8	119.1	144.5
Sales(100 million won)	19,521	21,128	21,813	22,553
R&D cost/sales(%)	0.4	0.5	0.5	0.6



**\*Securing competent persons**

To find and train competent persons, HPC has operated the 'Doctor Training Program' in association with KAIST. Every year, it supports a couple of people, and now ten students follow the doctor's course. In addition, in order to guarantee professional, excellent research staff in advance, HPC has offered scholarship to the students who are in doctor's courses at prominent universities in Korea so that they would work for HPC later. It plans to bring excellent R&D staff required by research centers not only in Korea but also from foreign countries. Under the goal to obtain R&D staff as many as double of current staff, HPC will guarantee excellent, competent persons.

**\*Activation of education for researchers**

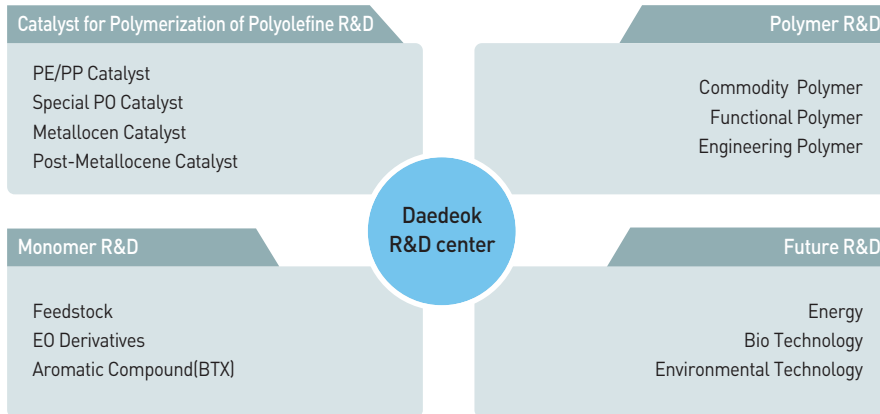
HPC lets researchers actively participate in domestic and foreign conferences so that they can raise their ability, understand up-to-date technology trends which are changing rapidly and acquire new technology and knowledge easily.

**\*Reinvigoration of tasks from the government and joint researches**

Not only to research government tasks by HPC's research center staff but also to maximize R&D outcomes, it performs joint researches with outside research institutes which have specialty per task. Promoting joint researches with foreign as well as domestic prominent research institutes, HPC plans to constructively find hi-tech projects and secure relevant basic technology, consequently to reinforce the research center's ability.



\*Main R&D fields



\*Main R&D outcome

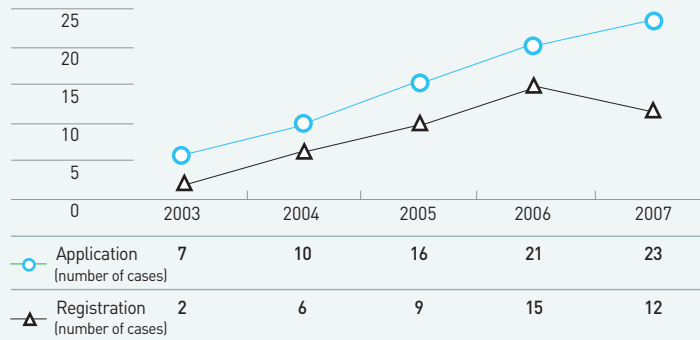
\_ New product development

Since established in 1986, HPC research center has concentrated its efforts on developing new products in various fields, leading domestic petrochemical technology and securing its position as a true center of R&D.

Main R&D product	Development contents and purposes	Remark(awards)
Adhesive resin(ADPOLY)	A modified polyolefin resin with polar stage introduction through graft copolymerization Used for multi-walled tube and sheet or adhesiveness	1993 IR Jang Young Shil Award of Science
Motor vehicle plastic fuel tanks Development of polyethylene resin(for PET)	SPORTAGE fuel tank of KIA Motors Developed and applied for the first time in Korea in 1995	1999 IR Jang Young Shil Award of Science 1999 the KT(Excellent Korean Technology) Mark
Highly active catalysts for HDPE polymerization	Succeeded in developing catalyst for preparing HDPE Independence of technology by replacing whole imported catalysts	
PIA(Purified Isophthalic Acid)	Used for raw materials of PET, UPR, PU, special paints or adhesiveness	2003 the World-Class Product award
PET resin	Used for food containers, heat-resistance, pressure-resistance or beer containers	2004 the World-Class Product award
PP resin for extrusion coating	Functional film used for the heat-adhesive layer, which is the inside of food packing	2004 the World-Class Product award
Motor vehicle TPO crash pad Micropellet for powder slush molding	Technique to compress and manufacture fine pellets which can be formed without pulverization process; i.e. automobile PSM, Roto molding, steel pipe coating etc.	2004 the KT Mark
Thermo-plastic elastomer (LOTTMER)	Used for automobile, household goods or watertight Patent registered in Korea, US, Europe, Japan and India	2005 the KT Mark
EVA Sheet	Used for raw materials of solar cells or hot melt adhesives	
PC resin	Environmental-friendly PC products with non-phosgene process	



### Actual Results of License



Message \_ Kim, Chang-gyu, Chief Researcher, HPC Daedeok R&D center

### “Daedeok R&D center is the driving force for HPC.”



With the goal of ‘R&D for the future and customers,’ we have been focusing our research on the development of new products : catalyst for polymerization of polyolefin, various new polyolefin products and processing technology leading the local market in the area. Based on our accumulated experience and knowledge, we upgrade our conventional products to enhance their competitiveness while expanding the research scope to high-value added products. In the meantime, we are in a constant search for a new business with core technology and are studying feasibility of M&A to jump into specialty areas which will be our driving force for the future.

At the moment, we are seeking development of high-value added products with diversification in the fields of EO, PC, and PMMA while their market expansion is underway. In an effort to get our feet wet in a new business area, we conduct research on how the issues of environment and energy will affect our products while setting up strategic plans for each item. Our research also involves exploring new business areas with prospective growth and developing products and materials that meet the requirements which will lay the groundwork for HPC to become a comprehensive chemical company in the world for the 21st Century.

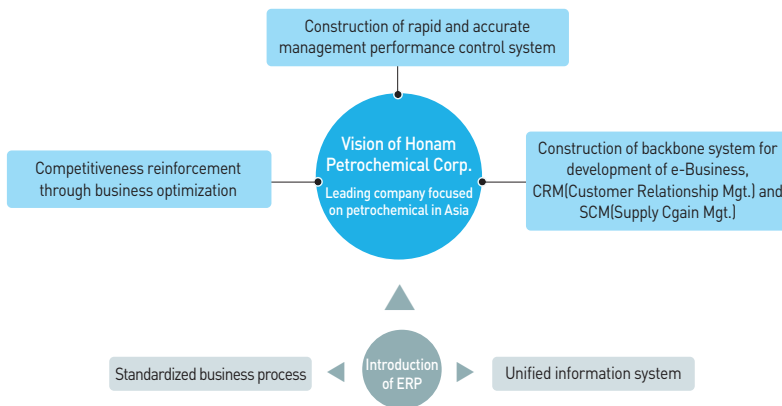


## Management Innovation

We are trying to develop into a better company without getting satisfied with the outcome of now, and HPC is implementing innovation in various fields to lay the groundwork for the future.

### \*Management innovation through construction of ERP

ERP is the abbreviation of 'Enterprise Resource Planning,' which is called total resource management. That is, the overall processes of the company such as production · sales · purchase · human resource · accounting are integrated into one system, which will be re-established for sharing information and speeding process of work. It is a management innovation method. If this is realized as information system, it is called ERP system. Particularly, ERP system connects and manages the company's major business process through integration by utilizing the standardized Master Data. It is the 'total integration information system,' which has its goal on maximization of efficiency of total process by allowing sharing of the overall information of the company. The goal our company is willing to achieve through ERP system is ▲Introduction of work process standardized as world-best standard. ▲Realization of integrated information system which applies advanced information technology ▲Establishment of infrastructure necessary for accomplishing the vision of HPC such as improvement of management efficiency and persistent improvement.

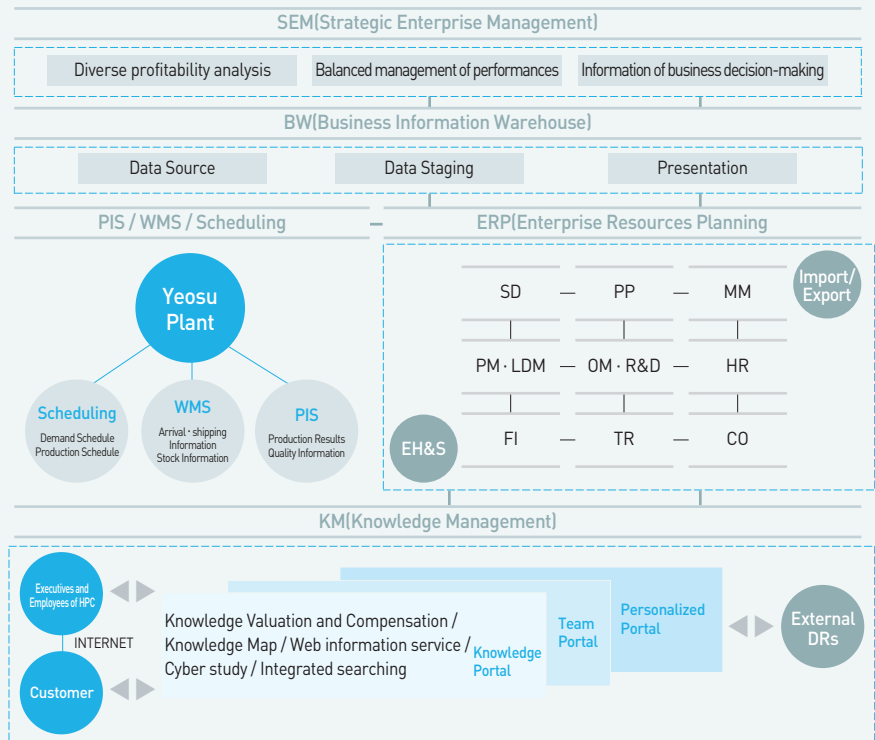


Extended ERP	<b>SEM</b>
	_ Management performance[EVA, CF, KPI] monitoring
	_ Value management : Accomplishment Monitor, Scenario Modeling
_ Stakeholder management, combined financial statement	
<b>BW</b>	
_ Data Warehouse for analysis	

ERP	<b>R/3</b>		
	Human Resource Development	Management Accounting	Purchasing Material
	Research & Development	Financial Accounts	Business Distribution
	Quality · Environment · Safety	Production Control	Equipment Control

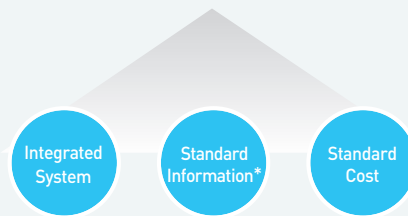


Standard information system



The actual meaning of ERP establishment can be summarized into innovatively increasing the level of efficiency of every trading process and management information on the base of standard cost and standard information precisely defined.

- Usefulness of information can be enhanced and remote sharing is available by the use of single system.
- Accuracy of information is enhanced via simultaneous indication of amount and price.
- Provision of performance and profitability analysis information is available by products and segments.
- Remote tracking of data is available, and provision of effective analysis and various information.

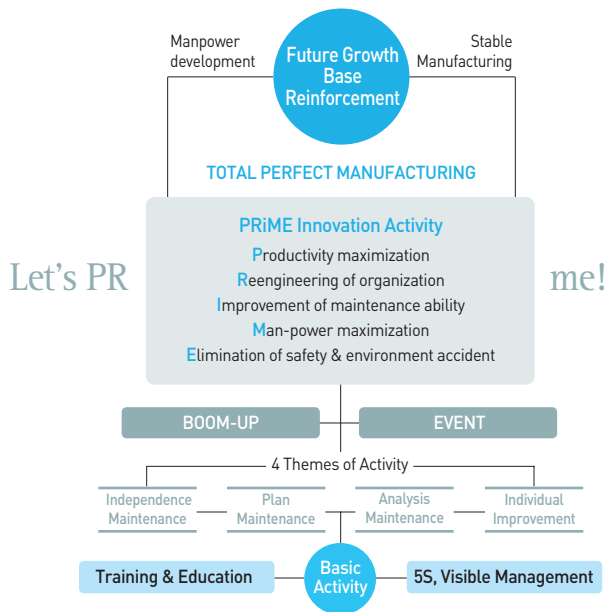


\* As for material master, the connection and accuracy by function can be enhanced by defining the functions of approximately 180 fields.



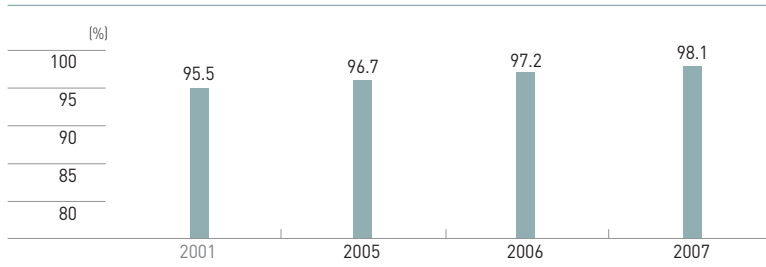
\*Production Innovation

Through the TPM activity executed under the name of PRiME for constitutional change, productivity improvement and reinforcement of basis for future growth, we are meeting stakeholders' demand and laying the foundation for sustainable growth.

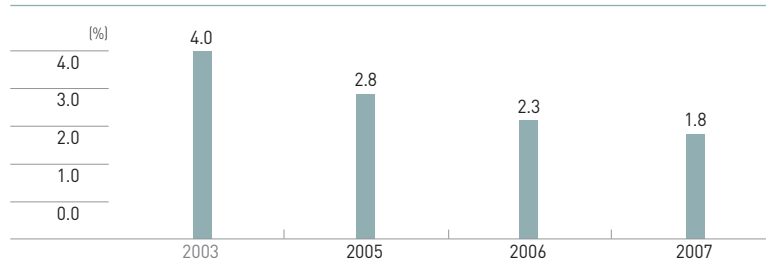


'PRiME' activity

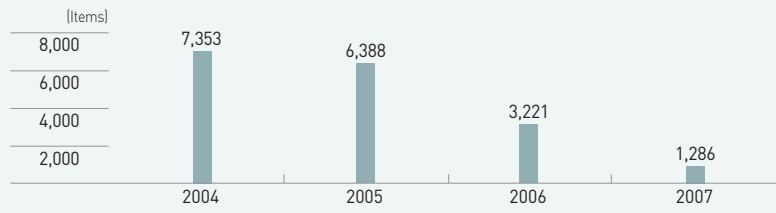
Rate of Operation



Nonstandardized product rate



### Number of fault cases

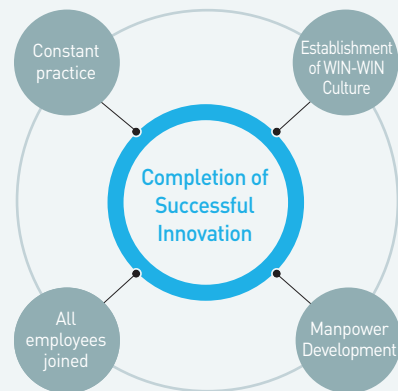


Before 'PRiME' activity



After 'PRiME' activity

The most major activities are those of shift workers of production department. Their roles are to be born again as 'the operator who can take care of all sorts of matters related with facility' who can cope with simple effect by oneself as well as stable operation to guard the plant. Also, we are ultimately pursuing zero defect by implementing the activity of minimizing analysis error by preserving the analysis method more efficiently and improving the problem of analysis instrument in relation to the analysis process of the Production Technology R&D Center. In addition, as the activity being carried out centered on the official work department, we are trying to minimize the maintenance after event, and are eventually pursuing zero defect by systemizing so that every maintenance activity can be implemented according to the plan.





## Global Talent Development

Understanding well that the essential factor to lead the globalization era is nothing but ‘human resource,’ HPC prepares various programs and actively promotes them to foster all employees to globally competent persons.

\_ HPC is running various programs for discovering and fostering people in order to acquire expert knowledge, fostering overseas expert, and the improvement of foreign language ability with the recognition that fostering people is essential to steadily grow in this rapidly changing global atmosphere.

Through such programs, HPC has laid the groundwork to become the best Asian petrochemical company by the year 2014, and furthermore, it is building the foundation to survive as the company which is capable of sustainable management.

### \*Learning Professional Knowledge

\_ HPC is commissioning training to the outside professional institutes so that its staff could acquire expert knowledge. Employees are acquiring expert knowledge of finance, taxation, human resources, labor, sales, bond, logistics, petrochemical, and process field from outside professional training institutes. This is to enhance the competitiveness of the overall company by fostering employees into expert personnel. The expert knowledge acquired in such way is distributed to each department so that every employee can share and enhance the efficiency of the work. Particularly, the production department’s own OJT training , which deals with the processing field, is being carried out systematically, and as a result, the annual output of one person of HPC (2007) records approximately 6,730 tons. This is the output of global standard. The fact that our company is showing such outstanding production ability in the process industry of petrochemical is the supporting evidence which shows that it has the foundation of the capacity as the company for sustainable management. The employees of HPC, especially the R&D personnel, understand the trend of world technology acquiring the new technology and knowledge comprehensively by participating in domestic and overseas conferences. This is the proactive activity of HPC to enable sustainable management by coping with the changing management environment. HPC has managed its own MBS course for executives and directors. Management professors of Korea’s famous universities have provided the customized course lecturing for 3 months about human resources, labor, finance, accounting, strategy, marketing, and organizational management, and 38 in total have completed the course. The trainees are utilizing expert knowledge that they have learned through this course to run each organization to enhance the performance. The MBA course for executives and directors is a meaningful and important education in a sense that it fosters next generation manager in advance.



Foreign language education



MBA education

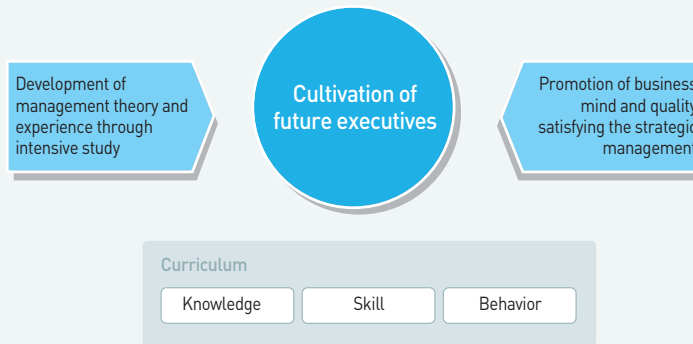
### \*MBA Program

- \_ Necessity
- \_ Goal



- Establishment of clear business vision
- Radical business reform and promotion of strong corporate culture
- Reinforcement of essential capacity and service quality improvement

Needs of the specialized education program for managers



Execution of Education

- Period : 2006.03~2007.12
- Degree : 4 degrees
- Place : College of Management of Seoul National University
- Number of people completed : 84(86 from Lotte Petrochemical Corp.)

\*International experts upbringing

HPC, which is also fostering overseas expert, is sending 2 monitoring personnel to the joint venture company in China to foster them as Chinese regional expert. The dispatched personnel not only enhance Chinese language ability but also broaden the understanding of a different culture and monitor the local circumstances. That is, it is operated as the program to meet the future growth strategy. This is a part of the endeavor to accomplish the vision of HPC, which is looking forward to 10 trillion Won in 2014. As the weight of Chinese market is increasing every day, fostering outstanding personnel to cope with global management environment is gaining its importance more than anything else.

\*Improvement of foreign language ability

HPC is operating 5-months global language course to enhance foreign language ability that is an absolute necessity for jumping onto the level of global enterprise. For 3 months, the trainees are living inside the university in Korea to get focus training to enhance basic foreign language ability, and for 2 months, their basic capability as the outstanding global personnel is being strengthened through increasing the understanding of a different culture as well as foreign language capability in the local area by commissioning the training to the overseas training institute. There has been 5 global language courses so far since 2005, and currently, total of 27 outstanding personnel are playing the role as the driving force for constant pursuit of the growth engine areas such as new business and overseas marketing after completing the course.



Cyber foreign language education



In-house instructor training course

\*Talent hunt and upbringing

HPC has held 'The Fourth Frontier Festival for Exploring Chemistry' under the slogan 'The Future's Dream Made with Chemistry' to discover and foster future chemists and to increase interest in chemistry in daily lives. The festival assigns the high school students of Korea the assignment to be explored that are related to chemistry such as environment · energy, life and so on to each team to research and give a presentation in the finals, which gives them the opportunity to discover new ideas and have interest in chemistry and the attitude to explore. Also, HPC is strenuously enhancing the capability of employees and executives by carrying out around 360 cyber education courses for language, leadership, marketing, finance · accounting, and computer as well as providing hierarchical education to the directors according to their roles and positions.



## \* With... Environment

There is nothing more rewarding than safeguarding our neighbors, the country and the planet.  
And we are glad to be part of it.  
Believing that our paramount concern for environment will end up boosting productivity,  
we will always think of environmental resources.

We will keep ourselves clean at all times.



- Introduction of eco-design
- Introduction of environmental accounting
- Responding to greenhouse gas restriction
- TF team activity for energy reduction
- Efforts to reduce pollutant exhaust
- Construction of Total Accident Prevention Center
- Attainment of Zero Accident Rate





Promise for  
Purumi Environment

“Our employees look at the other side of being a petrochemical company and are aware of the corporate identity as an environment-friendly organization. This awareness was initiated from our unflinching faith that any company cannot rule out the great environmental issue.

Not just settling on compliance with set regulations on environment, HPC is spreading its tentacles all over environment and safety covering the issues of air, water quality, soil and noise. These efforts make what used to be only dream come true. In the pond full of water emitted from chemical plant, there live carps and the surrounding of the plant are modified into Eco Park where local residents use it as the rest area.”



\*“Reducing CO<sub>2</sub>, the main cause of global warming”

\_ Major companies including HPC and Yeosu industrial complex are embarking on the reduction of CO<sub>2</sub> that causes global warming. Companies and Yeosu City have held Yeosu National Industrial Complex Companies CO<sub>2</sub> Autonomous Conference to prevent global warming and create environment-friendly industrial complex. Recycling of resources and improvement of facility, establishment of greenhouse gas emission, establishment of goal of the autonomous reduction of greenhouse gas, greenhouse gas emission trade system, and demonstration project as well as the efficient use of fuel in the workplace to reduce greenhouse gas were to be implemented for the autonomous cooperation. Along with this, establishment of the foundation of efficient implementation of greenhouse gas reduction such as CDM(Clean Development Mechanism), reduction of greenhouse gas, consistent promotion of education and advertising on Climatic Change Convention, and joint effort with Yeosu City to systematically and politically reduce the industrial CO<sub>2</sub> was to be made.

\*‘Eco-friendly business’ with partners

\_ HPC, one of the representative petrochemical companies of Korea, is also one of the companies which are doing their best in environmental investment. In August 1998, an investment of 2 billion won was made for the facility to reduce volatile organic chemical substance by more than 95%. Along with this, environment-prioritized management is running the business which lets its subcontractors comply with the environmental management policy of HPC with the recognition that all of the subcontractors should participate together for the characteristics of petrochemical business which is vertically hierarchical.

\*‘Plant safety’ ensured in advance

\_ HPC Yeosu Plant is intensifying the periodical inspection activity of the corresponding department and production department to identify the potential risk of environment & safety area. To realize ‘zero accident workplace’ which is the ultimate goal of safety management, the safety management activity is being implemented with center on ▲safety awareness improvement activity ▲ensuring processing/facility safety ▲ensuring safety at workplace ▲health management. Particularly, for enhancement of safety awareness, the inside expert is being fostered through derivation of unsafe factor of the workplace through autonomous safety inspection activity and implementation of enhancement activity, and continuous training.





RC

HPC is steadily improving and developing environment, health & safety management system by participating in RC activity proactively, which has positioned itself as the significant issue of domestic and international society.

\*RC campaign

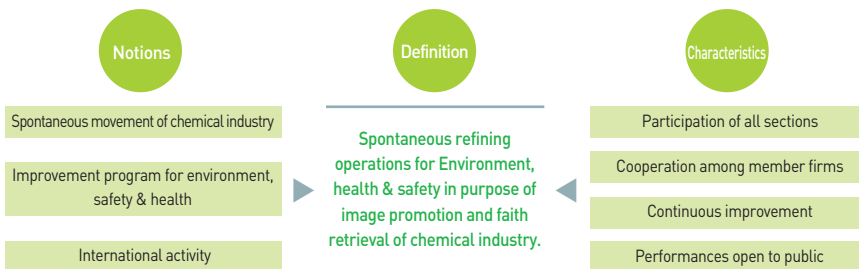
| Internal activities |

- RC codes for all employees
- Operating RC T.F.T.
- Publicity and education site operation
- RC Workshop
- RC self-assessment operation

| External activities |

- Support Enjoy the Exciting World of Chemistry
- Chemistry Exploration Frontier Festival
- RC Academy instructors
- Chemical accident prevention center

HPC has acquired the environment management system ISO 14001 and safety & health management system KOSHA 18001 certification by establishing environment, health & safety management system which is based on RC(Responsible Care). It is also constantly improving environment, health & safety management system by promoting voluntary agreement(VA). Particularly, we prepare detailed method of implementation and detailed improvement plan to accomplish the environment, health & safety policy and environment, health & safety goal providing education to all employees. HPC is constantly improving and developing environment, health & safety management system by reporting to the chief executive of the workplace the result of evaluation after periodical internal and external Audit of the implementation of environment, health & safety management system.



Moreover, to figure out whether or not the observance of the overall requirement of RC and efficient implementation are being done, the standard is voluntarily diagnosed and evaluated to be reflected actively in environment, safety and health management in accordance with 6 RC codes which are employees' safety & health, process safety, pollution prevention, community awareness & emergency response, distribution, product stewardship since 2004 according to evaluation standard to reflect on the improvement goal.



Responsible Care®

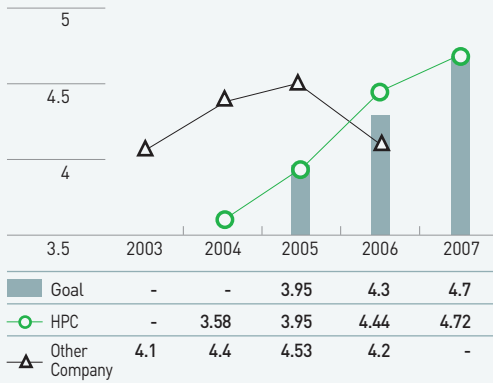
The atom part stands for chemicals, deep yellow color is for safety and affluence, two hands are for carefulness and protection, which are critical in the chemical industry, and the green color indicates environment and nature.



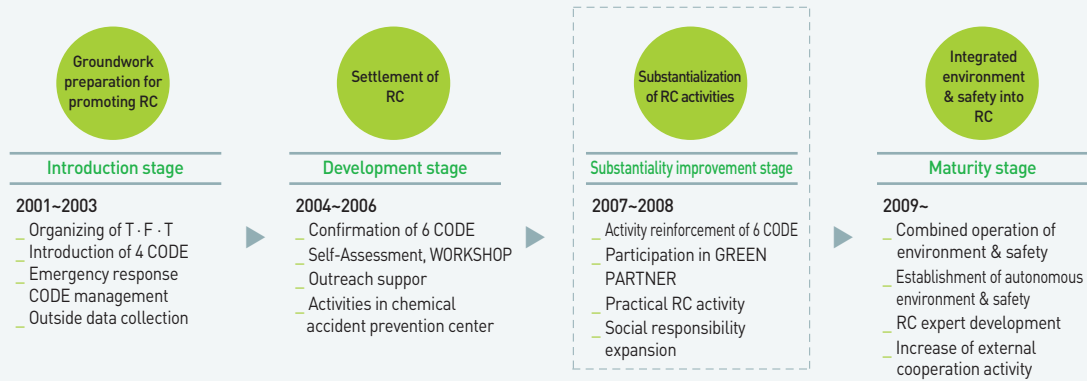
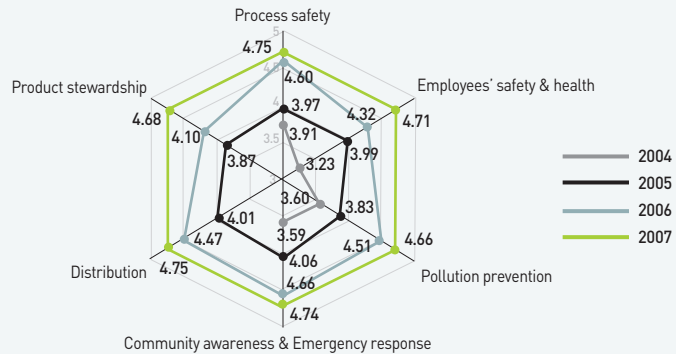
Enjoy the Exciting World of Chemistry



Chemistry Exploration Frontier Festival



\* The numerical value of other companies provided by KRCC is the average value of the petrochemical industry.



Our company has designated year 2004 as the year of RC implementation, and has contributed by far to settle RC in short time period and enhance the implementation activities of environment, safety & health. Externally, we are working as the directors of Korea RC Conference to coordinate conditions to upgrade the level of environment, health & safety of small and medium companies to that of large companies, and we are also strengthening ties with local community. Also, we are enthusiastically putting our effort towards the development of Korea's environment, health & safety activities beyond the boundary of the company, collecting RC-related trends which are being implemented in Korea and overseas.

Message \_ Lee, Hong-yeol, HPC Executive Plant Manager

### "It is the Yeosu Plant that gives HPC a competitive edge."



The petrochemical sector is the one of the representative process industries in which the well-established relationship with interested parties is particularly crucial. Improving the areas of environment, safety, health, and energy is especially what decides the success or failure of the industry. In the line of the concept, Yeosu plant has introduced 'PRiME' in 2005 under which the workers are divided into 62 small groups to take part in the 'PRiME' activities for improvement of their working environment. As a result, the plant turned clean enough to be reminded of a park, bringing down the malfunctioning rate of facilities with zero-accidents. The outcome was officially proved to be excellent and has been benchmarked from local and overseas companies and the pride of workers grew along the way. We are very keen to hear what the community has to say by way of diverse channels like Plant Managers' Council our labor-management relationship remains reciprocal based on 'partnership'. As the origin of HPC, Yeosu plant is determined to become a workplace second-to-none when compared with other plants overseas in productivity and communication with community.



## Environment Management

HPC is putting so much effort to preserve the nature that the management strategy is even 'environment management'. We are practicing the environmental goal of the company with one heart and one will on top of steadily developing programs for this.

### \*Environmental Management Standard

Based on its management motto 'Harmony between nature and human being,' HPC is trying to preserve nature by developing efficient environmental programs taking into consideration the environmental aspect in the process of every decision making and constantly implementing them.

#### HONAM PETROCHEMICAL CORP

- Consider environment as part of the decision-making process and be aware of changing circumstances to properly respond to them.
- Observe every relevant regulation and if possible, make a higher level of achievement required by the regulations.
- Continue to monitor the company's influence on the environment based on management assessment and environmental management system and build a documented system for sustainable development.
- Set yearly goals and objectives to develop and perform effective environmental programs.
- Avoid waste of resources and energy and conserve resources.
- Make company-wide efforts to reduce waste.
- Curb pollutant effluent from production processes as much as possible.
- Introduce LCA(Life Cycle Assessment) concept to reduce influence on environment from product design manufacturing, use and disposal.
- Seek collaboration with partner companies and suppliers in harmonizing environmental principles.
- Offer all employees education and training continuously to perform tasks that are safe, efficient and friendly to the environment.
- Cooperate with all stakeholders to achieve environmental goals and promote communication with them.

March 23, 2007

President & CEO **Chong, Bum Shick**

**"We do not burn Petroleum"**



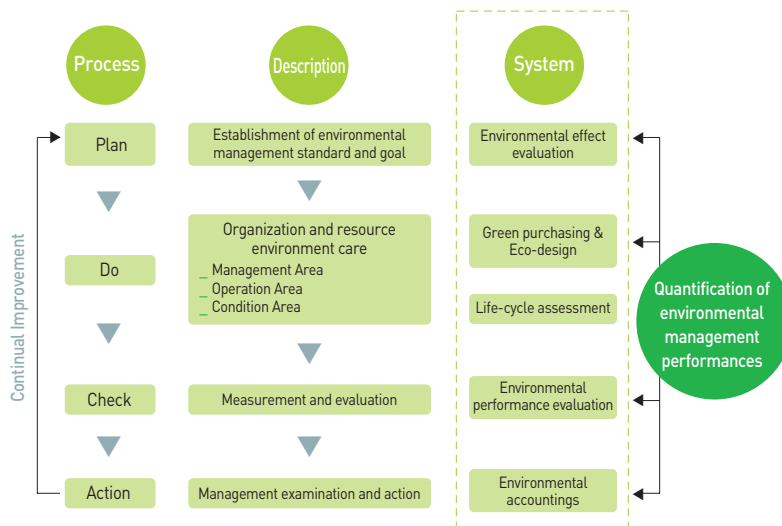
Clean-up activities on World Environment Day



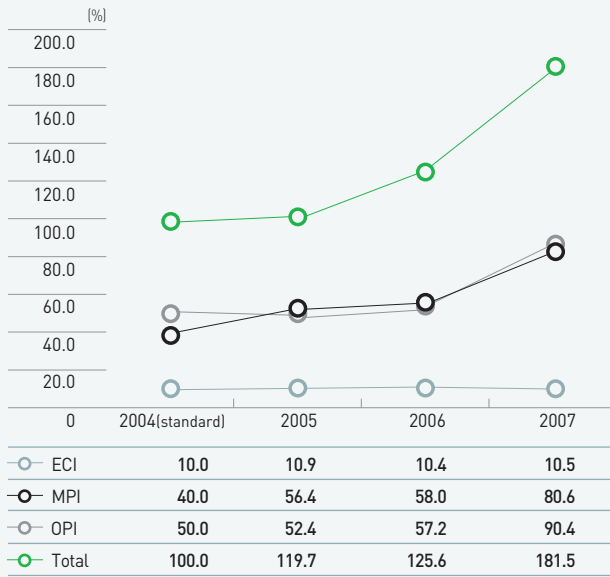
Inspection of plant environment

### \*Environment management strategy

HPC constructs and operates systematic environmental management system and controls a substantial environmental management system by operating under PDCA cycle.



HPC has introduced eco-design for the operation of the environment-friendly factory, reflecting it on the design and extension of the factory. We measure, analyze, and evaluate the performance generated through diverse environmental management activities to utilize the result of management decision making for constant enhancement of the environmental performance. Also, the result of environmental performance evaluation is being utilized as the objective examination tool of the environmental management activity. Particularly, to enhance the communication between strategic environmental management and the interested parties, an environmental performance evaluation system has been established which can evaluate diverse environmental activities with objective and comprehensive environmental performance. With this evaluation system, the optimum detailed index is selected of which the evaluation criteria and significance are developed to indicate the environmental performance as the overall index so that the enhancement and deterioration of major environmental performance and environmental performance for detailed index can be readily examined.



Indicator	Management Performance Indicator (MPI)	
	01 Environmental management system	Environmental management system observance according to ISO conditions
	02 Legislation observance	Basic responsibility observance through performance of environment regulation
	03 Operation of environment-friendly management techniques	Corporate value improvement and internal force reinforcement through introduction of advanced environmental management techniques
	04 Relation with local society	Company's performance of social responsibilities through regional development and improvement of relation with residents
Operational Performance Indicator (OPI)	01 Inputs	Improvement activity for efficient use and cost reduction of raw materials and energy
	02 Outputs	Efforts and performances for reduction of pollutant substance and production of eco-friendly products
Environmental Conditions Indicator (ECI)	01 Environmental pollution in surrounding areas	Future control target of pollutant substance by understanding environmental pollution in surrounding areas

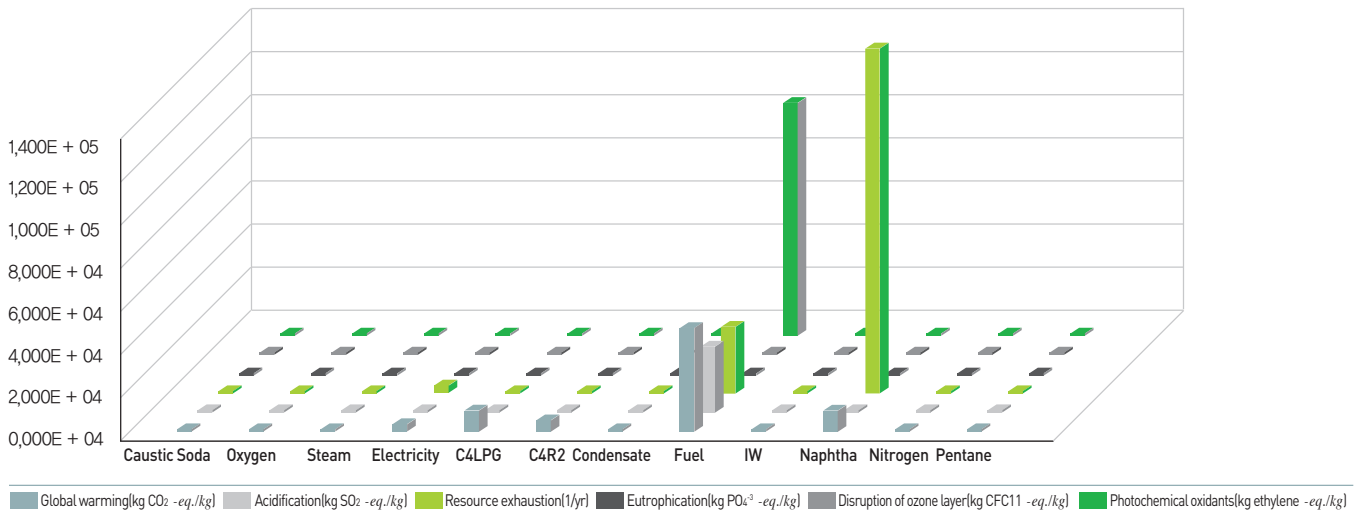
HPC has introduced the environmental accounting as a measure for enhancing the efficiency of the environmental investment and its performance. In order to reduce the negative environmental effect caused by diverse management activity, we are providing information to be reflected on management decision making as well as determining and measuring the environmental cost to be properly distributed.



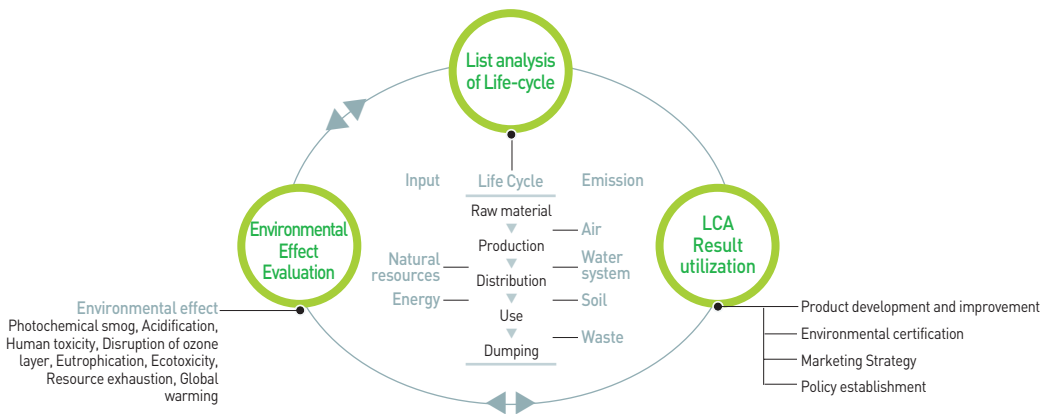
After treatment activity	Prevention activity	Stakeholder activity	Legal response and restoration activity
<b>After treatment activity expenses</b>	<b>EMS operating expenses</b>	<b>External cooperation activity expenses</b>	<b>Legal response expenses</b>
- In-house facility operating expenses	- EMS certification related matters	- Environmental group supporting expenses	- Allotment · Taxes
- Consignment transaction expenses	- Educational program expenses	- Regional cooperation expenses	- Fine
- Other expenses	- Environmental effect measurement · examination expenses		
	<b>Resource saving and recycling activity expenses</b>	<b>Other related activity expenses</b>	<b>Environment restoration activity expenses</b>
	- In-house facility operating expenses	- Off-site nature conservation and tree-planting expenses	- Indemnity · Court costs
	- Consignment transaction expenses	- Environment commercial · Environment report publishing expenses	- Insurance due
	- Energy saving		- Other expenses
	- Climate change countermeasure expenses		
	- Distribution improvement expenses		
	<b>Research and development expenses</b>		
	- Work improvement expenses		
	- Product improvement expenses		
	<b>Other</b>		
	- Tree-planting expenses in workplace		



HPC has introduced LCA as the tool for developing environment-friendly product since 2006 to be implemented in every plant. We put our efforts to reduce environmental burden of the products by analyzing and evaluating the environmental effect caused by the input and the emission of natural resources and energy used during the entire process, from the acquisition of raw materials of the product to the final dumping. This will be utilized as the preliminary data for the environmental results program certification.



According to the LCA analysis, we can confirm that the contribution of fuel to environmental factors is large. Accordingly, recognizing that facilities and technology using minimum fuel is the most suitable measure, HPC has currently operated the control organization to save energy and expanded improvement activities after setting as KPI, in order to improve those environmental impacts positively. HPC will analyze any issuing environmental factors sufficiently to make responses to reduce environmental impacts. Also, it will do various endeavors in advance such as application of technology which improves the productivity and raises the facility efficiency.



With the management principal based on 'Harmony between nature and human being,' HPC considers environmental aspects in all decision-making process and endeavors to protect the nature by continuous development and execution of efficient environmental program.

## Energy control and response to climate change

As well as reducing the greenhouse gas emission through energy saving, HPC is constructing a system that is able to respond to the climate change agreement.

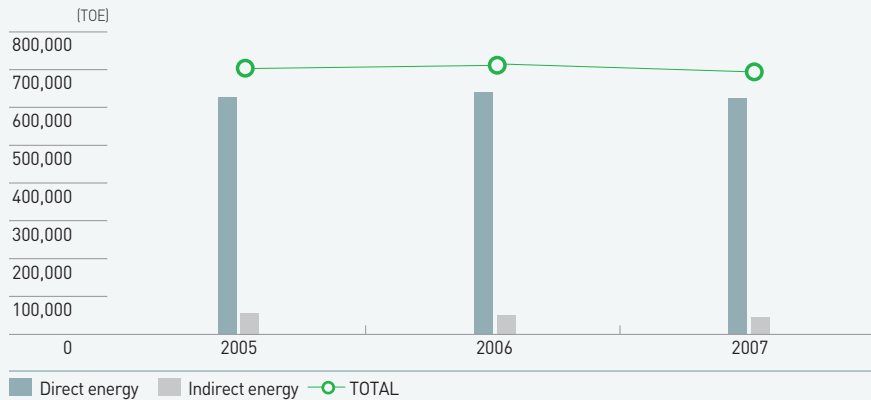


Agreement to reduce chemical emissions

### \*Energy Consumption and Energy Reduction Activity

HPC has selected and managed the energy reducing activity as the first priority management assignment to realize the management which is not restricted in any situation of energy environment change inside and outside Korea. Energy management has its goal in minimizing the risk of environmental pollution and reducing cost by maximizing the efficiency of environment-friendly production process management and energy use.

#### Energy consumption



In each workplace, new technology through which energy can be saved will be adopted through the activity of energy reducing TF team, and production process improvement and complement activities are being carried out by bench-marking the exemplary cases of other companies. Also, as a result of constantly operating energy reducing TF team to encourage energy saving mind, the unit of energy use has been being reduced every year.



#### Main promotion matters

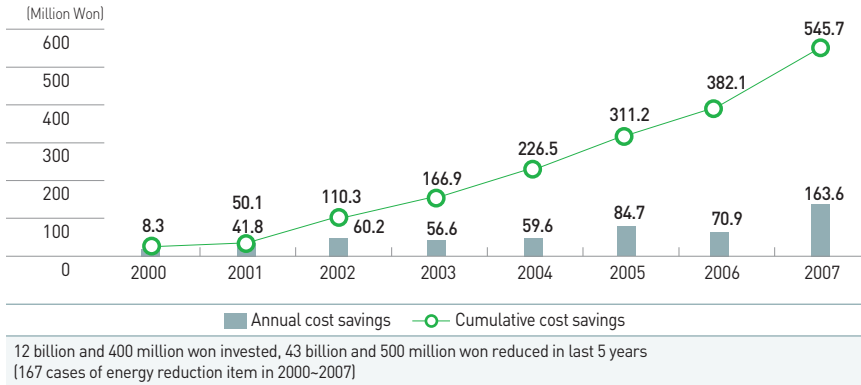
- Energy reduction T.F. Team activity
- Promoting energy reduction by introduction of Advanced Process Control etc.
- Introduction of energy management system

\* Since the energy used by HPC Seoul HQ and Daedeok R&D center is negligible, it is excluded from the data.





We are working hard to construct an eco-friendly production line and maximize the added value of energy use by reducing energy consumption through process innovation.



Furthermore, we are executing several activities to reduce energy use and are making sure that there is no energy loss in every section at the same time. Also, we are operating prevention activities against global warming.

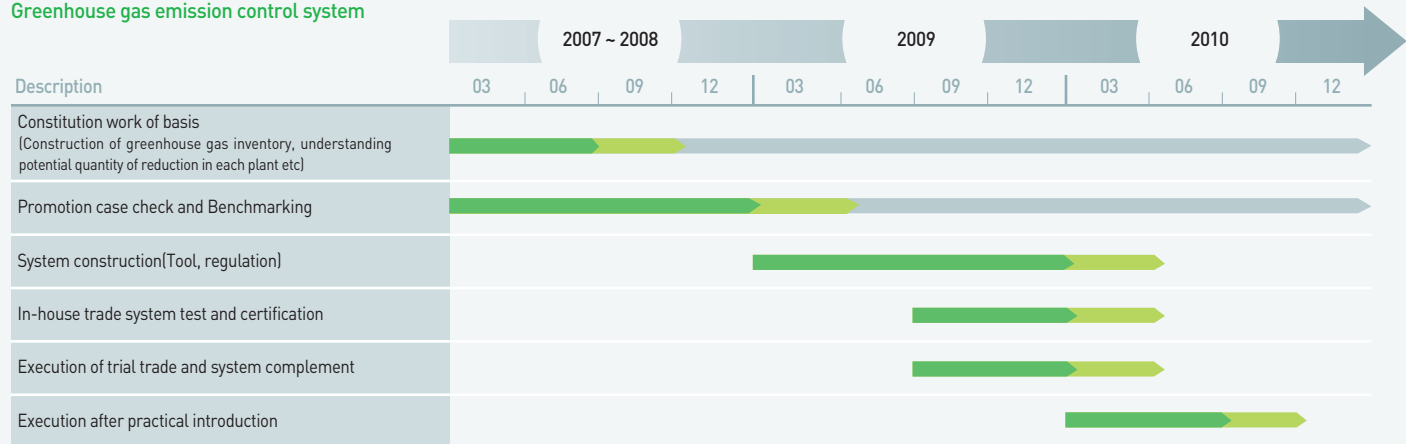
- Voluntary agreement participation
- Finding energy reduction ITEM through ESCO business and energy check performance
- Inspection of energy reduction site(theme)
- Energy reduction T.F.TEAM activity
- Information and new technique exchange among workplaces with similar process
- Slogan and poster design contest for energy reduction
- Execution of 'carday'(5days)
- Night energy reduction in public facilities of company house
- Developing energy checker(development of experts)
- Energy reduction in offices
- Direct load control and summer load control contract(Korea Electric Power Corporation)
- High efficiency stabilizer of 32W and LAMP replacement

**\*Greenhouse gas emission control**

As the world is being reorganized into the social structure in which the environment and economy cannot be separated, it is inevitable to reorganize into the structure which uses the resource and energy in an environment-friendly way for sustainable development in the future. Particularly, while climatic change is being accelerated due to greenhouse gas, the countermeasure and adaptation strategies according to climatic change are emerging as the core factors of the competition.

To create a systematic greenhouse gas management system, we are coping with Climatic Change Convention in mid- and long-term, through total inventory establishment, business plan establishment and improvement, analysis of potential amount, and management of greenhouse gas step by step. Also, to prepare for Post-Kyoto system, we are planning to manage greenhouse gas thoroughly by introducing the Inside Company Emission Right Trade System as a part of the responsibilities of the company.

**Greenhouse gas emission control system**



\* Schedule above can be altered according to climatic change policies inside and outside Korea and plant condition

First of all, HPC has estimated the amount of greenhouse gas emitted on the base of direct greenhouse emission(Domain 1), energy indirect greenhouse gas emission(Domain 2), and other indirect greenhouse gas emission(Domain 3) which are the boundary of operation established in WRI GHG Protocol and ISO 14064-1 in 2006.

Direct GHG emission(Domain 1) indicates the amount of greenhouse gas emitted from stationary combustion emission source such as boiler and incinerator, mobile combustion emission source such as automobile and forklift, process emission source through the chemical reaction in the process, and from fugitive emission source. Indirect GHG emission(Domain 2) indicates the amount of greenhouse gas emitted from the use of electricity, steam, and heat which were purchased by the company from external sources. Other indirect greenhouse gas emission(Domain 3) indicates the indirect greenhouse gas emission other than other indirect emission generated by introduction of energy(electricity, heat).

In addition to 3 domains, HPC is also managing greenhouse gas emission which belongs to the corresponding boundary by including part of optional information suggested by GHG Protocol of WRI within the boundary of operation.



HPC's discharged Item by scope

Operational boundary	Discharged Item
Scope 1(Direct GHG emission)	<ul style="list-style-type: none"> <li>_ GHG emission from stationary combustion</li> <li>_ GHG emission from mobile combustion</li> <li>_ GHG emission in the sector of industrial process</li> <li>_ Fugitive GHG emission</li> </ul>
Scope 2(Indirect GHG emission)	<ul style="list-style-type: none"> <li>_ GHG emission from use of imported electricity power</li> <li>_ GHG emission from use of imported steam</li> </ul>
Scope 3(Other indirect GHG emission)	<ul style="list-style-type: none"> <li>_ GHG emission from sales of imported electricity power</li> </ul>
Optional Information	<ul style="list-style-type: none"> <li>_ GHG emission from use of unrestricted fugitive GHG</li> <li>_ GHG emission from sales of producing steam</li> </ul>

• Construction of greenhouse gas inventory

Emission per material(Materials specified by the Kyoto Protocol) (Unit : CO<sub>2</sub> TON/year)

Title	2004	2005	2006
CO <sub>2</sub>	1,710,325	1,772,401	1,807,191
CH <sub>4</sub>	2	1	0
N <sub>2</sub> O	6	6	7
HFCs	-	-	-
CFCs	-	-	-
SF <sub>6</sub>	-	-	-
Total	1,710,333	1,772,409	1,807,198

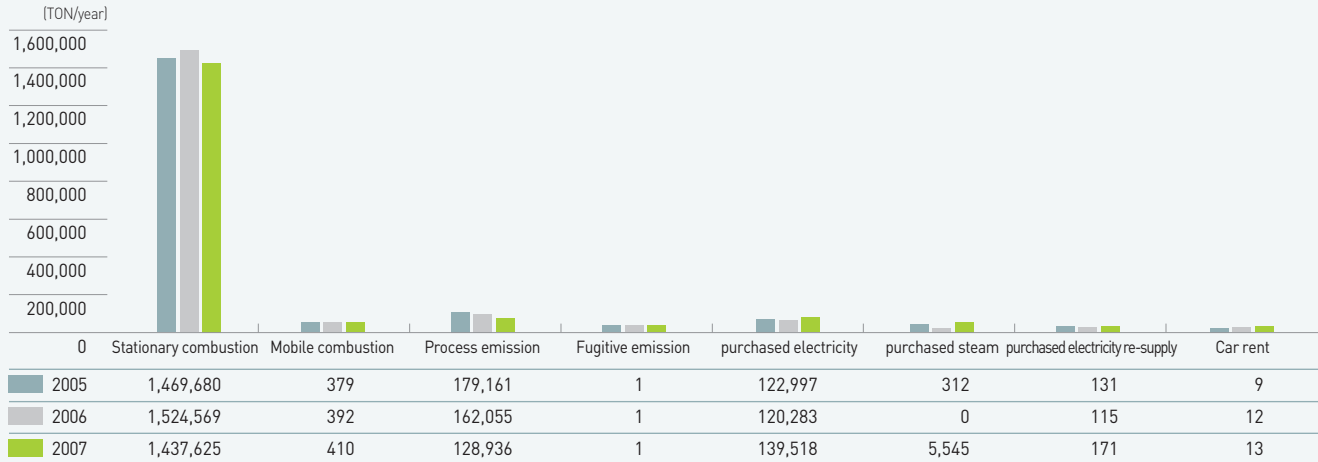
Emission trend (Unit : CO<sub>2</sub> TON/year)

Title	Stationary combustion	Process emission	Imported electricity
Direct greenhouse gas emission	82.7%	10.0%	-
Indirect greenhouse gas emission (purchase electricity - steam)	-	-	7.3%

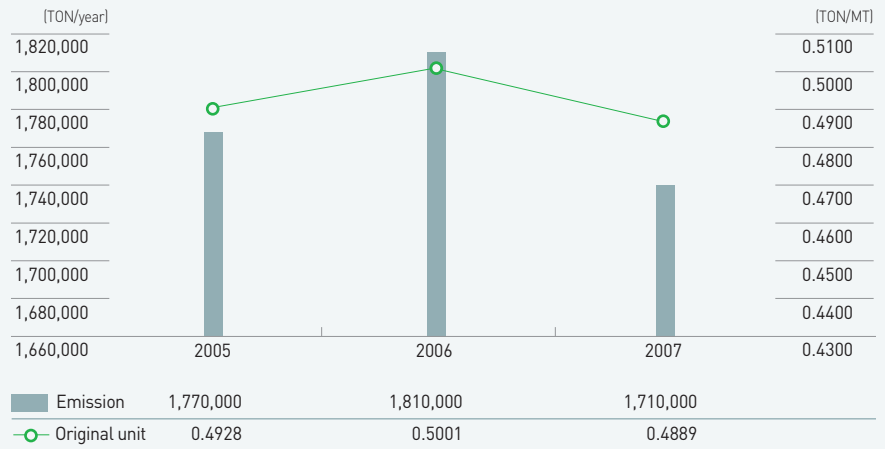
Since the data was verified in 2007, the emission in 2007 is not included. It will be included in the next year's report.

\*GHG emission of HPC's Yeosu plant in 2005~2007

Direct and indirect GHG emission



Total emission of direct/indirect greenhouse gas



Also, HPC is working to register in the greenhouse gas reduction project of Energy Management Corporation of Korea and CDM project of United Nations Framework Convention on Climate Change(UNFCCC) by comprehensively considering the policies and trends inside and outside Korea and developing greenhouse gas reduction project to cope with Climatic Change Convention on the base of inventory establishment.



United Nations Framework Convention on Climate Change-related promotions

[Unit : CO<sub>2</sub> TON/year]

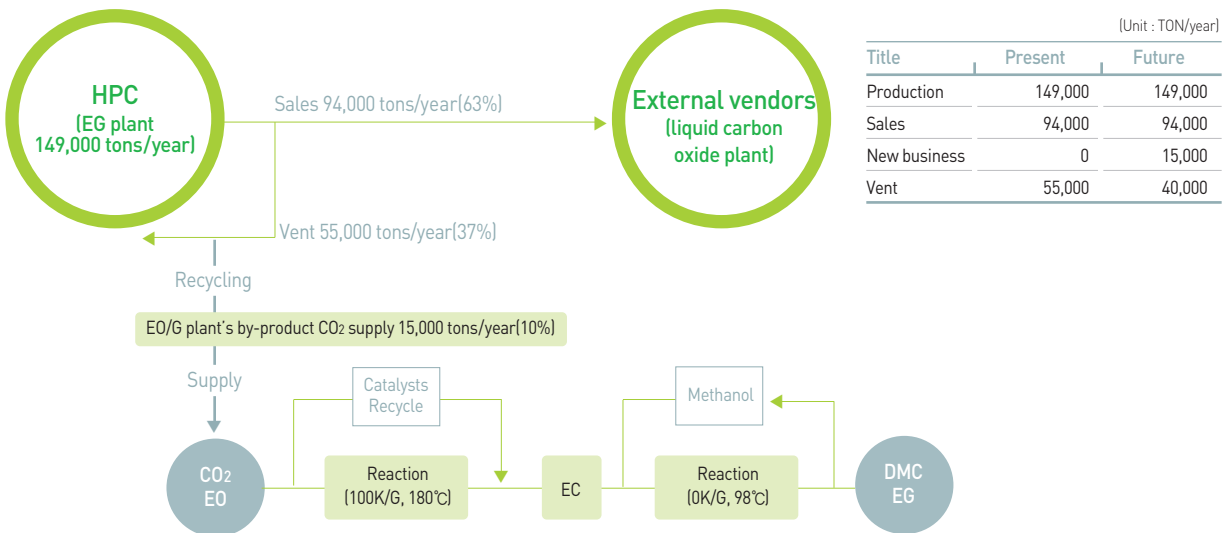
Title	Description	Promotion Schedule					
		1999-2004	2005	2006	2007	2008	2009
Energy Reduction Activity	Promotion of VA contract Energy Reduction Business	[Green bar spanning 1999-2004, 2005, 2006, 2007, 2008, 2009]					
Construction of Inventory	2004 : 1,710,000 2005 : 1,770,000 2006 : 1,810,000	[Green bar spanning 2005, 2006, 2007, 2008, 2009]					
Reduction registration Business	2007 : 7cases registered(33,600) 2008 : 5cases registered(25,000)	[Green bar spanning 2007, 2008, 2009]					
Promotion of CDM <sup>3)</sup> business examination	CO <sub>2</sub> recycling in PC plant(15,000)	[Green bar spanning 2008, 2009]					
In-company GHG emissions trading scheme	Utilization of Inventory Construction (Introduction of trading scheme)	[Green bar spanning 2009]					

\* Schedule above can be altered according to plant condition

\*Promotion of CDM business examination - CO<sub>2</sub> recycling in PC plant

\_ PC plant is an environmental-friendly plant using CO<sub>2</sub>, which is known as a global warming material.

Promotion task : Promotion of CDM business(CO<sub>2</sub>) recycling



3) CDM : Clean Development Mechanism

**“It is time to organize a specialized group and foster professionals in environmental safety.”**



HPC had an accident a few years ago and the painful memory keeps reminding us how crucial environmental safety is at the workplace. Being aware of the importance, HPC is dedicated to keeping the workplace safe more than any other issues. In 2007, chemical plants in the Yeosu Industrial Complex went under scrutiny in a coalition of industry and government in which the environmental management of the HPC plant turned out to be in the best condition and it also had a higher score in treatment of air, water quality and wastes than other plants. In perspective of scale and sustainability, I would like HPC to be more concerned about environmental policy in its managerial process. To be more specific, it would need a macroscopic goal, systematic organization and constructive action towards environmental policy. That is, organizing a professional group on environment and safety policy while fostering high-caliber experts. This applies to the whole plants in the Yeosu Industrial Complex and I will be looking forward to initiative moves taken by HPC.

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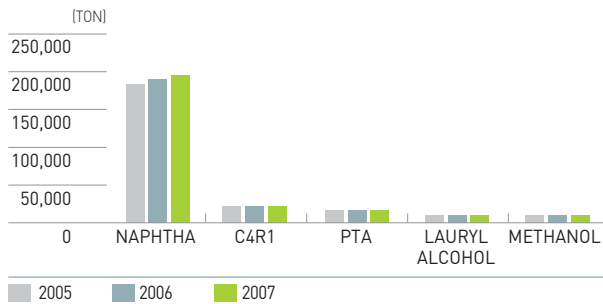
## Use of resources

HPC is reducing the generation of waste and wastewater by using environment-friendly resources as much as possible and efficiently using the resources such as water. Particularly, we are thoroughly managing hazardous chemical substances so that even the smallest accident would not occur.

HPC, the representative company leading petrochemical industry, uses environment-friendly resources as much as possible to efficiently use the resource in the environment-friendly process to reduce pollutants such as hazardous chemical substance which has negative influence on the environment. The usage of Naphtha, the major resource of HPC, had not been fluctuating from 2004 to 2007, but the basic unit is progressively improving. Even though this industry requires a lot of water, we are getting the stable supply of water from nearby Ju-am dam. The usage is similar from 2005 to 2007, but the basic unit of water(usage of water per output of product) is being improved.

### \*Material usage on weight and volume standards

#### Material usage

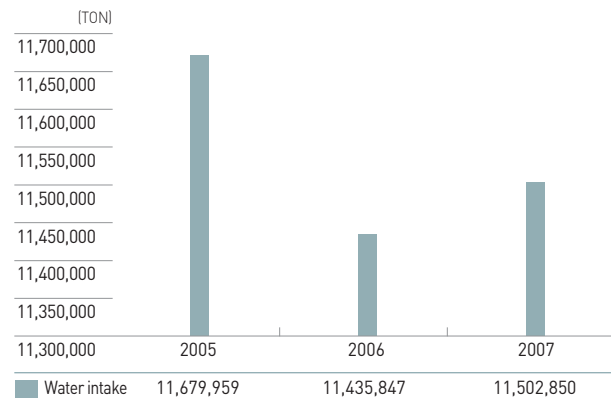


Due to the particularity of petrochemical industry, none of the materials used are recycled.

### \*Water intake from each supplier

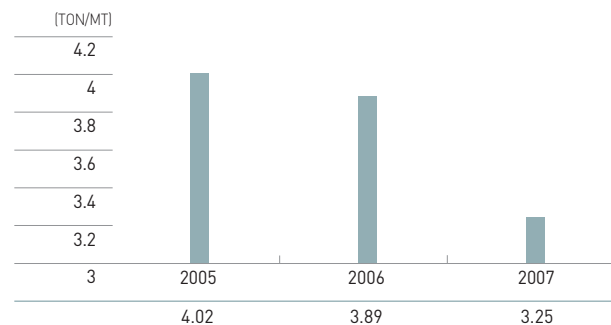
Supplier : Juam Dam

#### Water intake from each year



### \*Quantity of water used per production output of unit product

#### Quantity of water used per production output of product



The source of water which has a vast impact on production is Ju-am dam, of which the amount of water is abundant which does not get affected by supply for commercial use except for urgent drought season. Except for general field of petrochemical industry, there is no water that is reused and recycled in the process.

**\*Environmental goal for efficient usage of resources**

HPC is implementing recycle of the resources, reduction of wastewater, New Clean-Up activity, and the environmental overhaul moving toward the reduction of air pollutant to preserve natural eco system. We have introduced the automatic air/water quality monitoring system which operates 24 hours.

**Reduction of wastewater and waste**

In April 2007, real-name system for waste has been introduced so that the waste is taken care of at the origin of the waste, where the individuals are also working towards this system to reduce waste by improving process and to maximize recycling. Also, wastewater is being reduced in diverse ways by separating unpolluted water which is generated with rain and recycling blow-down water in steam drum of naphtha cracking furnace.



Recycling blow-down water in steam drum of naphtha cracking furnace for the use of coolant(Apr 2002, 240 T/D)

**Efforts to reduce air pollutant substance emission**

- Installation of 2 VOC incinerator of 96% treatment efficiency (1st : Sept 1998, 2nd : Dec 2003)
- Combined power generation facilities, installation of nitrous oxide reducing equipment in boiler(Oct. 2002)
- Dehydrator replacement to reduce water-content of sludge in wastewater disposal center(SWT : Oct. 2001, WWT : May 2003)
- PUMP SEAL replacement for leak control of VOC (SINGLE → DOUBLE, Oct. 2001)
- VOC SAMPLING SYSTEM improvement(Mar. 2005)

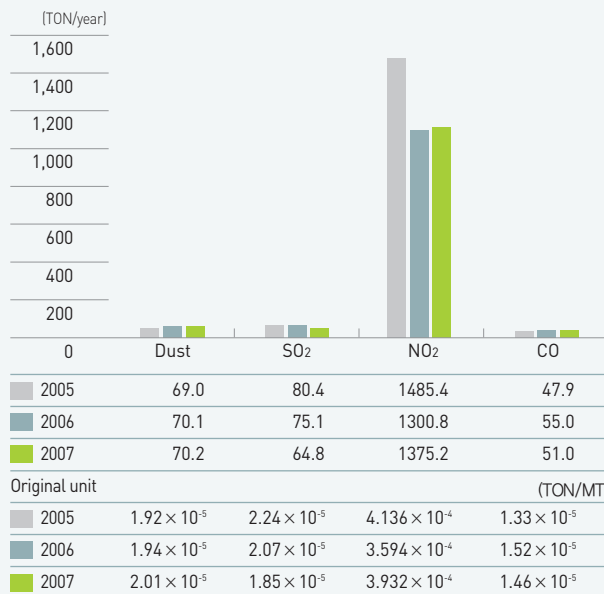
**\*Achievement in each section**

**Environmental management achievement**

**Air**

In HPC, the air pollutant is reduced from the origin of generation, and the generated pollutant is treated via optimum prevention facility so that the emission is minimized. The prevention facility is operated in optimum condition after periodical inspection according to the inspection list for each facility. Particularly, TMS is furnished in major outlets to measure the concentration of air pollutant real-time to transmit to TMS control center of the environment management industrial complex. The non-point pollution sources use portable detector so that leakage can be checked periodically, and if any problem is found in the production equipment, it can be immediately repaired and replaced to primarily prevent the emission of the pollutant. It is managed within 30% of the permitted emission standard. In addition, we have replaced the Freon refrigerant of refrigerator with new refrigerant(Oct. 2007) to substitute whole Freon gas(CFC-12), a gas with high ozone destruction index.(R11 → R22)

**Pollutant substance emission**



\* The emission in 2007 somewhat increased due to the plant shutdown(one month).





• Water Quality

When wastewater is generated, HPC first treats it to send to the terminal treatment center of the industrial complex. As the output has increased continuously, wastewater treatment facility was newly built in the plant 2 by the investment of 5.5 billion won in 2008, and the wastewater generated is being reduced annually by more than 100 thousand m<sup>3</sup> through the activity of circles (PRiME) and improvement of facility.

Particularly, when it rains, the rain wastewater is completely separated to reduce the amount of wastewater by blocking the inflow of rain water. The automatic measuring device is installed in the rainwater gutter to monitor it real-time, and in case of leakage of pollutant, expansion of water pollution is prevented by using retrieval pump. Also, by recycling blow-down water in steam drum of naphtha cracking furnace, the usage of the original water has been decreased by more than two million m<sup>3</sup> annually(Apr. 2002).

Due to new establishment and extension of plants, wastewater is on an increasing trend, but 77% of all wastes are recycled as of December, 2007 by thoroughly separating the increased wastes and continuously improving production processes.

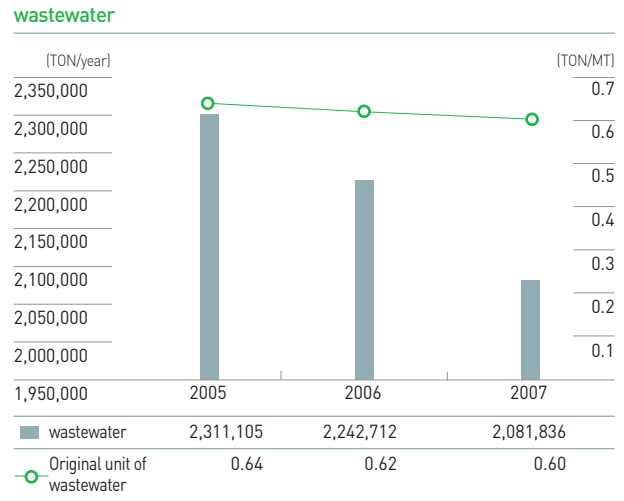
\* Equipment Improvement

- \_ Reduced summer spray water consumption with additional installation of cooler in granulation process(600,000 m<sup>3</sup>/year)
- \_ Steam Condensate through rainwater drain in process Area (26,000 m<sup>3</sup>/year)
- \_ Reduced consumption rate of process water used for make-up with installation of screen mesh in granulation process(44,000 m<sup>3</sup>/year)
- \_ Recovery of sludge thickener with supernatant raw water in clean water plant(7,000m<sup>3</sup>/year)

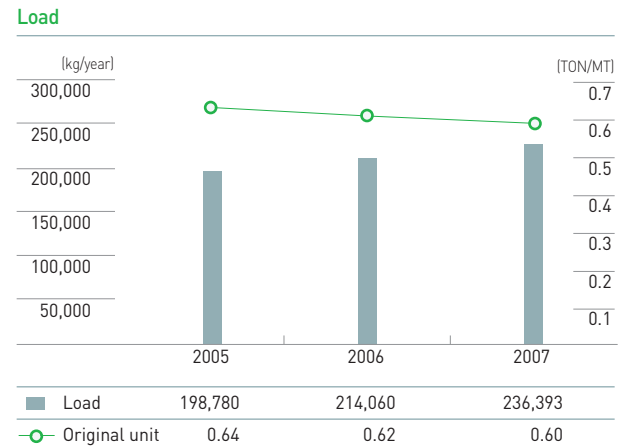
\* Rainwater drain monitoring system construction

- \_ Installation spot : 1st Plant S1, S2, S3
- \_ Amount invested : 140 million won

\* Wastewater by year

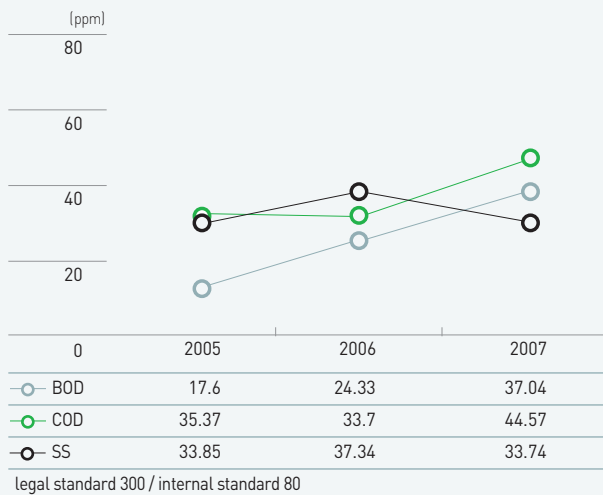


\* Load by year



\* Concentrations of wastewater by year

Concentrations of wastewater



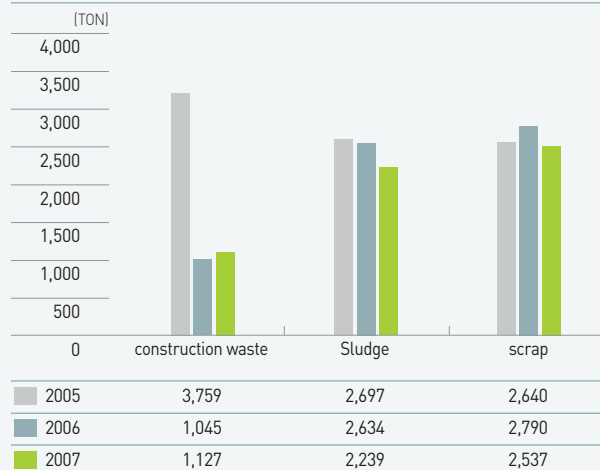
\* Actual numerical value from each year is the average value

Although the concentrations of BOD and COD increase because the loading increases every year due to reduced wastewater by year, the SS concentration of discharged wastewater is standstill, resulting from stable operation of the biological treatment system of the wastewater treatment facility.

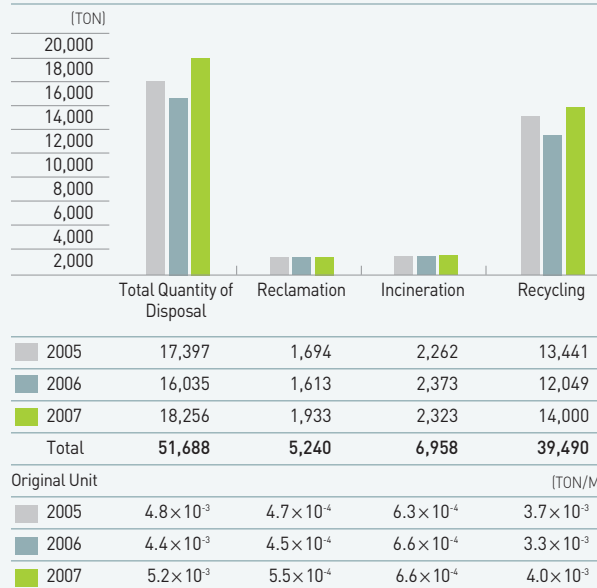
• Wastes

The rate of recycling is maximized by improving the process of the origin of waste and changing the raw/sub materials and even the packing material into the recyclable material. Waste drums and waste pallets are recycled through recycling-special companies. We are also trying to find the solution to recycle the waste that is the by-product of the process, and are constantly trying to turn the waste into the resource. Particularly, we have introduced the real-name system for the waste so that each individual is responsible for the waste from the origin of the waste to reduce the amount.

Wastes by main items



Wastes by year





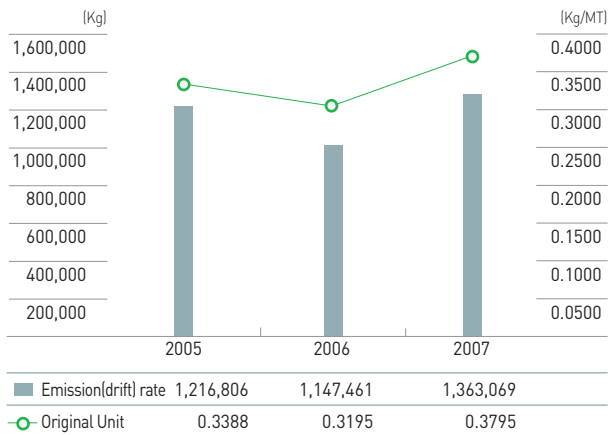
\*Wastes by others

• Harmful chemical substances

HPC concluded the 'Voluntary Chemical Waste Discharge Reduction Agreement(30/50 Program)' with the Ministry of Environment in May 2005 and does its best to reduce as much as possible the emission rate of dangerous chemical substances discharged into the environment. With investment(about 8.7 billion won) into incinerators, condensers and retrieval facilities, it investigates all sources periodically and keeps repairing leak sources.

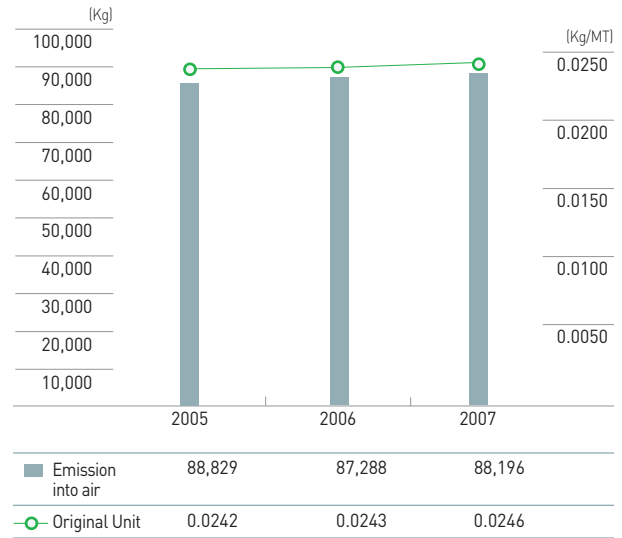
HPC has the complete control throughout the stock process of hazardous chemical substance to discarding stage. Leak-detection system and blocking device are installed in the storage facility to take control of leakage and periodical training for proper maintenance of the systems is given to the persons in charge. In addition, protection equipment for emergency situation are checked every month for their conditions, and the emergency training is implemented periodically to prepare for leakage as a part of the hazardous chemical substance management system.

Harmful chemical substances(All)



\* The emission in 2007 somewhat increased due to the plant shutdown [one month].

Harmful chemical substances(discharged into air)



\* The emission in 2007 somewhat increased due to the plant shutdown[one month].

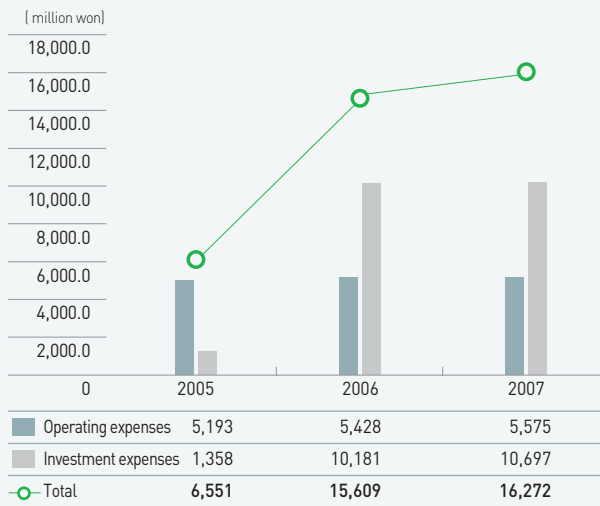
- Soil

HPC controls the complete process throughout the installation of the facility to be managed against soil pollution to discard after use according to the internal management guideline. To especially prevent the pollutant from soaking into the soil, the floor on which the facility is located will be covered by concrete and it will be water-proof treated. In order to prevent expansion onto the ground, prevention facilities such as discharge wall has been installed. The condition is periodically checked to prevent soil pollution from leakage. Such an effort has brought the positive result of the soil around the overall facilities of the workplace including the amount less than the legally allowed amount after inspection of the soil pollution according to Soil Environment Conservation Act. In addition, when the site personnel are implementing all maintenance work, they always pay close attention by using scientific method carrying out the overhaul for soil and underground water to conserve soil environment.

### Environment Financial Performances

- Environmental Investment by year

#### Environmental Investment by year



- Environmental Investment by section

#### Environmental Investment by section(2007)





## Performances in other fields

After all executives and employees have tried very hard to prevent environmental accident, we are maintaining 'zero environmental accident workplace' for more than 10 years since 1997.

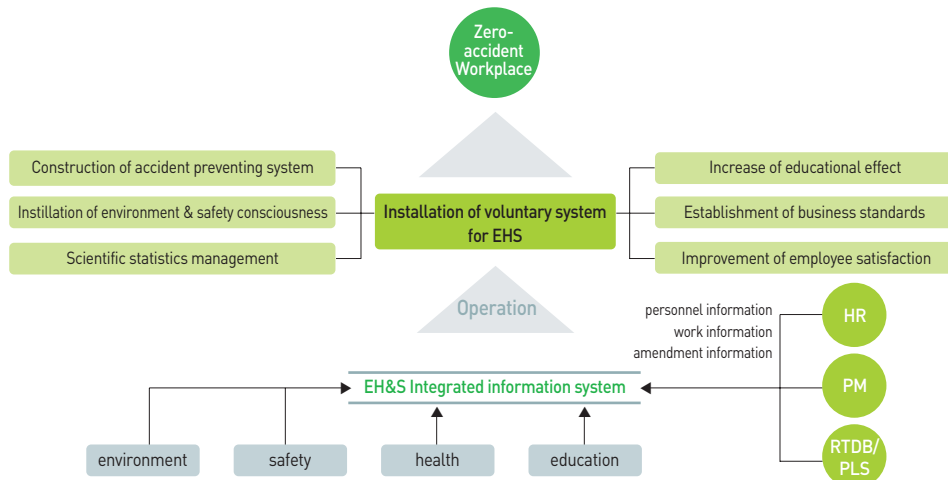
### \*Emergency Response

\_ Environment & safety department and production department are implementing inspection activity periodically to find out the potential risk of environment & safety areas. In production department, environment & safety accidents are prevented by designating personnel for each facility and managing, and in the environment & safety department, the environment & safety patrol team patrols the major facility 24 hours to concentrate on the inspection and management of the areas where emission of the pollutant can occur due to process trouble. In addition, the environment & safety department and production department are cross-checking the operation condition of the environmental pollution prevention facility. As a result, there had been no emergency accident for 3 years from 2005 to 2007. Despite this, we are doing our best to minimize the influence on the environment by trying to come up with the solution for emergency.

\_ Installation and operation of environment alarm equipment program TMS(Tele-Monitoring System)  
Major air pollution prevention facility and wastewater treatment site within the workplace are checked of their no-error operation, and the concentration of pollutant emitted is checked real-time to prevent unexpected environmental accident. To this end, TMS is installed in the major outlet to efficiently manage the prevention facility. The concentration of emitted pollutant is recorded automatically, and when it exceeds the standard, alarm will sound to take measure in the early stage. The measurement data of the major outlet is transmitted online to major public offices through TMS control center of the environmental management industrial complex.

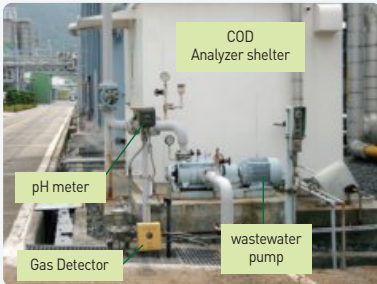
\_ Establishment of EHS system  
HPC has established the information system to manage in an integrative way the information of the environment, health & safety that is distributed within the company. EH&S system is the infrastructure for establishing advanced environment & safety management system based on the autonomous environment, health & safety management settled through the comprehensive management of EHS work and standardization to ensure competitiveness by efficiently performing environment-friendly management strategy.

\_ Prevention activities against environmental accidents



We are constantly implementing investment for facilities to reduce the emission of environmental pollutant. We are implementing the monitoring activity for emission point by introducing TMS, which is the automatic measuring facility for air pollutant emission and monitoring system for water quality, and are trying to prevent environment accidents by periodically inspecting and providing education by organizing environmental inspection team in each department.

- Accident preventing activities and countermeasure system



### Environment care activities

Title	Discharged Item	Frequency	Activists
Inspection group activities	Theme check of environment&safety	1 per month	Employees from environment department
	Employee collaboration for environment & safety check	1 per quarter year	Executives of the plant, department managers, labor union
	environment & safety examination group	1 per week	8 department chiefs and section chiefs
	Special inspection group	Periodical repair	Employees from environment department
Self-check by department	Open Ditch inspection	Every day	Employees from each department
	Patrol for foul odor		
Clean plant movement (New Clean-Up movement)	General cleaning of plant	Every week	All employees of the plant
Observation for watercourse pollution	Patrol for water course of plant wastewater	Every 4 hours	Employees from environment department and production department

### Operation of Open Ditch water pollution Monitoring System

Installation of monitoring system for preventing environmental accident(2004)
Location : 3 locations in 1st plant
Installed items : pH, COD Analyzer, thermometer, gas detector, retrieval pump, blocking gate
When exceeding the configured level, alarm is sent to the PC of the person in charge via early alarm system.

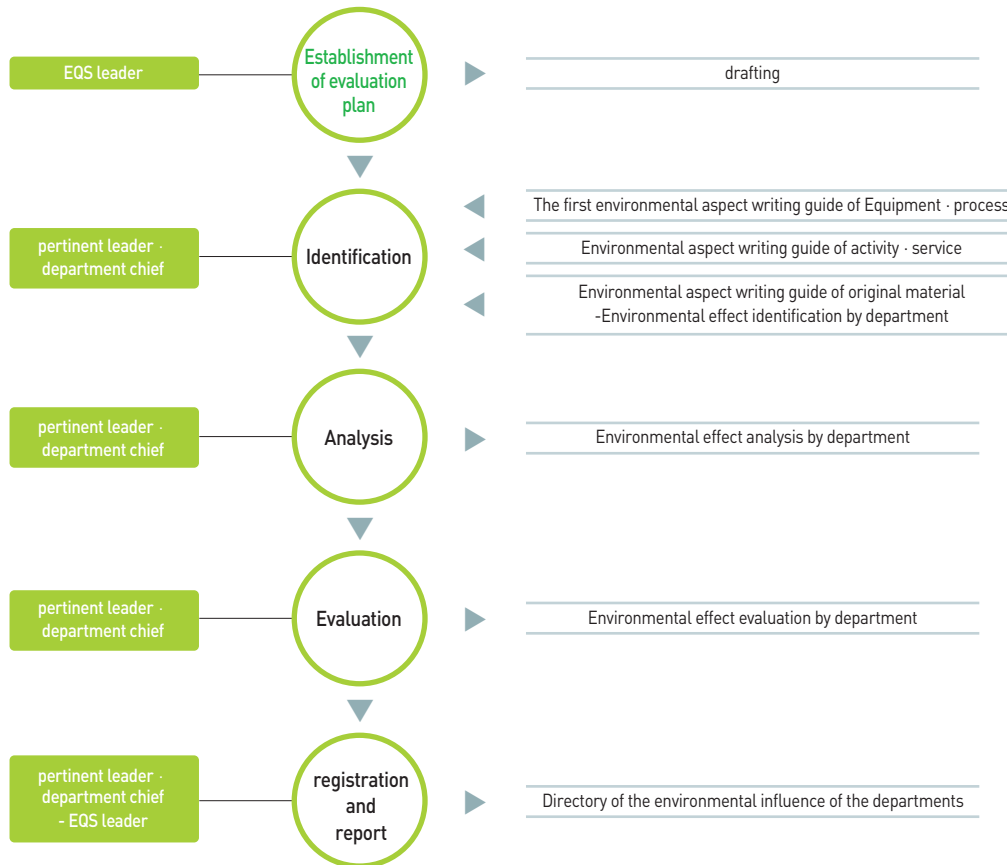
Management of significant influence on the environment caused by transportation of product and raw material, and movement of executives and employees

HPC is periodically carrying out the environmental impact evaluation against all factories. The environmental influence is minimized by predicting and analyzing the overall environmental influence caused by the production activity of the product of this company, and the significance of the environmental influential factor is evaluated to be managed according to priority order.

### Protection of Ecosystem

HPC is participating in Convention on Biological Diversity which is prepared for protection of the species on the earth, and is periodically implementing the environmental influence evaluation against every plant.

- 1) Promotion of balance between development and maintaining
- 2) Efficient redistribution and utilization of the resource by deriving priority of environmental influence evaluation
- 3) Policy of EMS, Utilization of primary data of establishing the environmental goal and detailed goal
- 4) Utilize as the base line for EMS inspection
- 5) Measurement of the organization's environmental management performance



Although it is not the place where animals or plants in danger of extinction live or where the biodiversity value is high, it is the air preservation special measure area designated by the government. Considering this local specialty, HPC numerates and monitors ecosystem changes periodically through environmental performance evaluation and does its best with special interest in environment protection. In addition, through all sorts of improvement activities for saving water resource facing the reality of Korea, which was classified to be the country of insufficient water by UN, the usage efficiency of water resource has been improved. The source of supply of the workplace is not a Ramsar site, so the use of water resource does not have a significant impact on the environment. On the other hand, since most of the products are sold after being packed in bags, the generation of waste packing material cannot be avoided. According to this, our effort to reduce waste packing material and optimize product transportation is also being carried out.

Observance of law

HPC has never been fined or administratively restricted by infringing environmental law. After 1997, we have been realizing zero-environmental accident workplace. This is the result of steadily implementing the accident prevention activity through managing the area with potentiality of the environmental accident through complete environmental management system(EMS) and installing CCTV. Particularly, environment-friendly management activity is being implemented continuously through the environmental overhaul, the inspection via department, hygienic activity within the plant, and all-time monitoring of pollution of the stream.

## Zero-accident & Health Promotion

We are making a great effort to make sure there are no accident as well as employee injury. 'Worker's health equals company's health'. This is the spirit of HPC.

HPC is fully committed to building an Zero-accident work environment to fulfill its social responsibility and continue sustainable development on the back of strong leadership of the CEO along with proactive and voluntary participation from the employees. We practice 'Safety Environmental Management Standard' to reach the goal.

### Safety Environmental Management Standard

- Safety is the most important factor in our decision making and activities.
- Be fully aware of all manufacturing processes. Set emergency plans and continue to provide education and training for accident prevention and safety.
- Perform regular safety and risk review on the production processes.
- Set yearly safety goals to develop effective safety programs, invest in and carry out them.
- Build safety management system as important part of the management system and require all executives and employees to observe regulations and safety rules.
- Designate a CEO's agent to secure safety management system and supply of resources. Perform regular assessment for safety.
- Aim at an integrated management system by harmonizing environment, quality, and safety management.

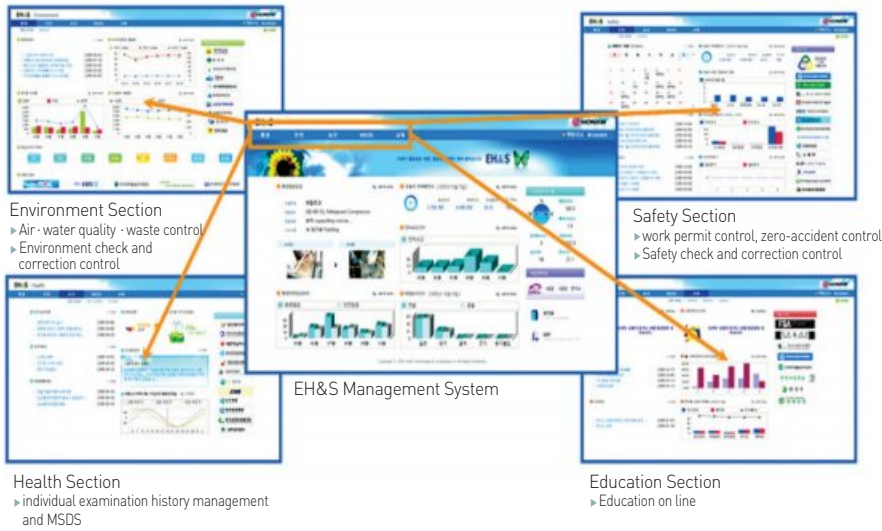
Also, to realize the zero-accident workplace, which is the ultimate goal of the safety management, activities such as safety awareness improvement activity, ensuring process/facility safety, ensuring safety at workplace, and health management are strenuously being carried out. In order to increase detailed safety awareness, we are finding out unsafe factors and improving these through autonomous safety inspection activity. We are also trying to foster inside expert through continuous education and training. In order to ensure the stability of process and facility, we are executing the cost that is input to the facility and safety area with first priority, and they are complemented/expanded every year. Total Accident Prevention Center having come into Yeosu industrial complex is also the result of such an effort. To ensure the safety at workplace, complete observance of the work permission process, enactment and revision of work standard and management of subcontractor's safety activities are under progress. In addition, we are implementing enhancement of work environment, health examination and management after event according to the regulation by awareness that the health of the employees is the health of the company.







Also, we have established and operated the information system(EH&S) to provide EH&S information to all employees. This system is being used for efficient management of the environment, safety & health, being composed of the environment, safety, health, and education sectors.

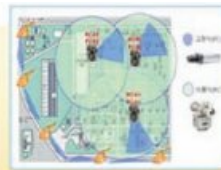


\*Construction and operation of total accident prevention system

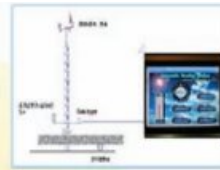
We built a total accident prevention system to renew old and scattered accident prevention facilities in order to secure more efficient, flexible, and reliable safety control.



Gas leakage detector



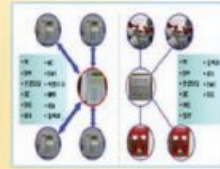
Field monitoring(CCTV) devices



Weather measuring equipment



Automatic fire detector



Emergency phone equipment/  
Air-Horn equipment



Fire pump detector



Monitoring systems for  
water for fire fighting



Automatic log indicator for zero accident

— The center maximizes reliability of accident prevention equipment and accident control capacity, raises efficiency with integrated safety control, and secures a rapid emergency response network.  
The total accident prevention center raised public awareness on HPC's efforts to lead safety control in the petrochemical industry.

\* **Promotion of zero accident movement and potential risk discovery activity**

— HPC Yeosu Plant is promoting zero accident movement in which the business owner and employees participate together based on the spirit of respect for human being for employees. Our company has quantitatively indicated the performance of safety & health through zero accident movement, prevented industrial accident by encouraging employees' safety awareness, and in addition, constantly developed activities to make the workplace of which environment is suitable for work.

— Accordingly, we are trying to implement 'the principle of Heinrich,' which says that hundreds of near misses by carelessness and potential risks need to be found and improved in order to prevent single major accident. As a result of having found the case of near misses and potential risks by using the environment, health & safety information system(EH&S), which can be shared by all employees, in 2007, 3,915 cases were found, which is equivalent to 5.7 cases per person.

— As a result of promoting such zero accident movement, there has been no accident involving people or material from October, 2003 to May 2008(4 years and 8 months, 1,684 days), setting the record of 7.10 million man hour of no accident. Our company has carried out rewarding event every 1 million man hour according to the rewarding regulation of the company's zero accident movement to encourage the safety awareness of the employees and maintain stable productivity.



Accident rate by year

The data and graph which shows the comparison of accident rate of the entire domestic industry and chemical product businesses from 2004 to 2006 to quantitatively compare the result of promoting HPC's zero accident movement are shown below. During this period, there has been not a single accident, and even in 2007, the accident rate was zero.

Accident rate assessment

- Overall accident rate in Korea, Chemical product manufacturing industries, HPC

Title		2004	2005	2006	2007
Overall accident rate in Korea	Number of workers	10,473,090	11,059,193	11,688,797	12,528,879
	Number of industrial injured workers	88,874	85,411	89,910	90,147
	accident rate(%)	0.85	0.77	0.77	0.72
Chemical product manufacturing industries	Number of workers	268,710	276,429	279,855	286,457
	Number of industrial injured workers	2,993	3,071	3,002	2,189
	accident rate(%)	1.11	1.11	1.07	0.98
Honam Petrochemical Corporation	Number of workers	698	685	679	685
	Number of industrial injured workers	0	0	0	0
	accident rate(%)	0.00	0.00	0.00	0.00

\* Basis : Industrial accident applied by Industrial Accident Compensation Insurance Act,  
accident rate(%) = Number of industrial injured workers/ Number of workers x 100

Accident rate by year



Environment & safety seminar



CPR competition



Firefighting training

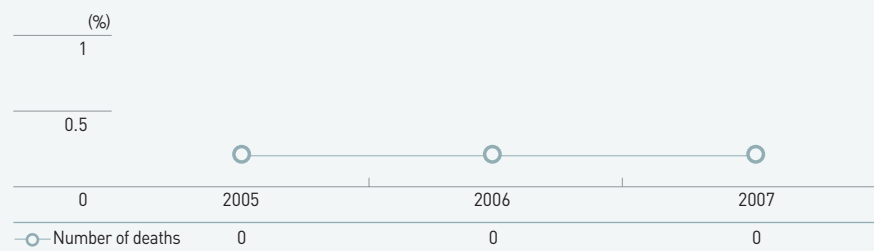
In addition, HPC achieved zeros in the injury rate, occupational diseases rate, lost day rate and absentee rate, which are important measures in aspect of workers' morale and productivity, for three consecutive years.

### Calculated graph of Injury rate, Occupational diseases rate, lost day rate, Absentee rate

Title		2005	2006	2007	Calculation basis
Injury rate (IR)	Total working hours	1,873,517	1,520,827	1,517,642	= (Total number of injury cases/ Total working hours) × 200,000
	Total number of injury cases	0	0	0	
	Injury rate	0	0	0	
Occupational diseases rate (ODR)	Total working hours	1,873,517	1,520,827	1,517,642	= (Total number of occupational diseases/ Total working hours) × 200,000
	Total number of occupational diseases	0	0	0	
	Occupational diseases rate	0	0	0	
Lost day rate (LDR)	Total working hours	1,873,517	1,520,827	1,517,642	= (Total number of day lost/ Total working hours) × 200,000
	Total number of day lost	0	0	0	
	Lost day rate	0	0	0	
Absentee rate (AR)	Total number of manpower days	252,580	252,215	253,675	= (Total number of absent day/ Total number of manpower days) × 200,000
	Total number of absent day	0	0	0	
	Absentee rate	0	0	0	

\* Basis : Yeosu plant of HPC, industrial accidents

### Injury rate, Occupational diseases rate, lost day rate, Absentee rate





### \*Safety awareness enhancement activities

Honam Petrochemical Corp provides our employees and the workers of our partners with education on safety and health required by the Occupational Safety and Health Act, and special training for 39 dangerous occupations including those that may lead to lack of oxygen. We also offer education on basic safety rules to newly employed workers and supervisors, and workers of partner companies. Especially in order to promote educational effect, all of Honam Petrochemical Corp. employees are taking full advantage of online education programs based on EH&S system, field education, and person-to-person education programs.

In addition to regular education programs, we also provide fire-extinguishing drills, joint fire fighting training with neighboring companies and fire station, and first aid training programs. We offer first aid training programs so that spouses of employees can be prepared for emergency situations of employees' families.



Fire-extinguishing drills



Joint fire fighting training



First aid training



\* **Voluntary prevention activity against improper factors**

\_ HPC is periodically implementing many activities including the site patrol activity to promptly cope with even small changes by periodically inspecting the working area of their own, Soild-2007 inspection to discover improper factors of hazardous material storing facility and all sorts of fire prevention facility as well as the workplace, and safety & environment inspection team activity composed of the personnel from the departments which discovers and improves the potential risk. In particular, the result of the safe environment inspection team activity is sent to all factories to apply the safety management result of other departments on their own departments, and every plant is implementing improvement activities for discovered potential risk.

\_ Labor-management collaborated safety inspection in which the executive plant manager and the chairman of labor union who collectively manage safety & health participate and outside piping inspection of the external area of the plant are also being implemented. In case a long-term/large-scale work is required within the plant such as routine maintenance and new project, the Watch Man who completed construction safety experience education manages the safety work in the workplace.

\* **Systemization of preventive inspection for equipment safety**

\_ To ensure field equipment safety, a new inspection technique called RBI(Risk Based Inspection) is introduced in work fields to evaluate and calculate the risk level of each equipment, and perform an inspection based on the result.

**Construction of RBI(Risk Based Inspection)**



\_ In addition, we are making sure of safe operation of equipments by actively promoting CUI(Corrosion Under Insulation) and performing continuous inspection for all the equipments that are difficult to check.



### Application of CUI(Corrosion Under Insulation)

• Inspection program for the equipments that are difficult to check and inspect



Dismantlement of facilities' insulation



Inspection(nondestructive testing)

CUI



Repair/Restoration



Result arrangement/Plan settlement

### \*Promoting workers' health

\_ HPC offers general medical examination and special medical examination periodically and provides medical supplies before occupational diseases occur. In addition, it provides follow-up services such as health consultation and education. If necessary, it prepares for people to have medical treatment through secondary clinics. Also, HPC offers general hospital-level complete physical examination to all employees every year to prevent not only occupational diseases but also general ones.

\_ Its Health Center has testing equipment of vascular disorders such as blood pressure, blood sugar and cholesterol and provides health and follow-up services. Also, it utilizes physical therapy equipment, foot massager, low-frequency therapy equipment etc. to provide physical therapy services.



Gym - Yeosu plant

\*Program to prevent occupational diseases

\_ HPC applies a preventive/control program to prevent musculoskeletal disorders. The program examines workers' symptoms by connecting primary harmful factor survey, 3-D model and details of symptoms by means of ergonomic precision evaluation tools suitable for workplace situation and provides precise musculoskeletal disorder diagnosis of medical expert system. As a part of workplace improvement activities, HPC has improved work conditions and provided a variety of protective devices, to maintain business places without musculoskeletal disorders. Under the goal of all employees' non-smoking, HPC provides stop-smoking aids as well as anti-smoking education by professional instructors and stop-smoking acupuncture services by medical specialists. It also actively expands no smoking activities such as smoking area permit and no smoking campaign. Besides, introducing health fitness and aerobic class, it controls all people to work with best condition through sufficient stretching exercises before starting daily work.



\*Health control together with workers' families and local society

\_ HPC is responsible not only for its workers' health but also for their families' health. To prevent diseases of workers' spouses, it offers general hospital-level complete physical examination to their sponsors and equips physical training center, swimming pool, tennis court and golf club under the recognition that 'workers' and their families' health is the company's sources'. Especially, HPC opens these facilities to the local society, running the culture where people can work and exercise together.





\* Purumi's Day at Work of Yeosu Plant

# EVERY DAY CLEAN PLANT

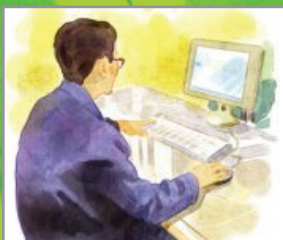
It is hard to imagine Purumi's life in Yeosu Plant without thinking of environment and safety from getting to and off work. They punch in earlier than others and take patrol around the plant for checking by bike to save energy personally. Cleaning neighboring the village and seashores are part of their important tasks. Starting with arranging surroundings, they never neglect treating various pollutants discharged from the plant and study for specialized knowledge. Here is a Purumi's day in Yeosu Plant, who works hard to practice environment-wise in his daily life and make a safe workplace.

For clean environment  
Punching in  
30 minutes earlier



I get to work 30 minutes earlier than others. 30 minutes in the morning can be considered a long time. The first thing I do at work is to check yesterday's operation status and special matters on PC and check my e-mails that have arrived overnight. After then, I start putting the desk in order. Arranging articles in the order of frequency increases usability and cleans surroundings. Arrangement is a small practice but a good habit to make environment clean. Everybody thinks environment protection is something hard and difficult. But, if you pay a little more attention to surrounding environment, you may get a big effect, and that is what I think about environment protection.

In pursuit of clean environment  
Grabbing any news  
on environment



I check the Internet news and other environment-related news from morning. I arrange the articles in an easy way so that I can better understand the environment, which I had considered somewhat difficult, as part of my daily life. I do my best to catch up with the latest environmental information and deliver it correctly. Also, I collect various news and environment & safety information real-time basis through the HPC information systems[EKP, EHS etc.]. I will do my best to be able to control and supervise any work in any place at any time through this, to keep the environment and the region safe and updated with advanced information.



Clink, clink~

## Bicycle patrol

On foot and by bike



I walk a short distance within the premise of the plant and take the bicycle if it is a bit far. I know driving is faster and easier, but whenever I think about environment, I naturally opt for a bike. When I ride, I look around production facilities and surrounding area to check the arrangement status. We can keep the environment greener with our self-confidence and endeavor on clean environment.

Always picnic-like lunch break

## Being one with nature

Environmental improvement with trees



Lunch break is always a pleasant time for everybody, but workers in Yeosu plant have more blessed with the beautiful landscape the cafeteria provides in front of the plant. The green surroundings with trees and fountain make us feel like being in a park, forgetting about the work. Planting many trees in the plant creates a park in the place. Whenever we plant, the environment of the city is getting cleaner.

At the Seashore

## A good reason to visit the island-

Volunteering



It is not enough to only keep my own town clean. HPC extends its efforts as a step forward from internal management of environment to actively take part in local activities to save environment. In addition to cleaning seashores, HPC continuously offers villages in need of help volunteering such as house repair(mending roof, boiler, floor, sink replacement, wallpaping, wall repairing).





Basic arrangement of life  
**Green campaign goes swooshing**  
Making a habit of arrangement and check-up



Arrangement is the basic of our plant life. We conduct daily check-up on waterways to keep them clean, wipe off dust from facilities and machines exposed to outside, and paint rusty parts. We also wipe dust off every instrument board which informs the temperature, pressure or operation status of the facility and keep it neat at all times. Making a habit of arrangement and inspection results in less facility failure rate and allows easy checking of products stacked up in warehouses to provide better quality products to customers.

TMS  
**Environmental activity-1**  
Minimization of air pollutant emissions



By installing a Tele-monitoring System(TMS) on chimneys which monitors pollutants generated from boilers and dynamotors for plant operation in real-time, we minimize emission of air pollutants. Installing a catalyst reductor at dynamotors reduces nitrogen oxides generated during combustion and converts them into nitrogen and water when combined with ammonia, before releasing to the air, consequently minimizing air pollution. Any atmospheric pollutants leaked out of storage tanks and wastewater treatment facilities are collected to be incinerated and preserve clean environment.

Wastewater incinerator  
**Environmental activity-2**  
The best way to water quality improvement

Some of wastewater generated in the process of product manufacturing is treated in the wastewater incinerator. HPC operates physical and chemical treatment facilities as well as biological treatment facilities where pure oxygen-activated sludge process is applied, to improve quality of wastewater. HPC has installed water quality pollution-monitoring & measurement devices(PH, COD, temperature etc.) at the entries of effluent gates to ensure uncontaminated water is discharged to the sea via waterways.

Comprehensive wastes storage  
**Environmental activity-3**  
Reclamation, incineration, recycling

Wastes separated thoroughly from their sources are collected by waste-exclusive vehicles every day and classified and stored by type, by characteristics and by purpose in the complex waste storage area. The classified and stored wastes are reclaimed, incinerated or recycled depending on type by outside companies.



Expert education

## New Clean-up activities

Productivity improvement



HPC offers education on each machine with facility improvement activities to enhance efficiency in using them while arranging production facilities and surroundings. Coping with the rapidly changing era, HPC supports competent persons and enhance the efficiency of facilities to make serial operation available and raise productivity. It also keeps surrounding environment clean for safe operation.

Those who have dreams are happy

## Dreams come true

Productivity improvement



HPC puts top priorities on environment and safety. Based on the creation of rich future and its principles, HPC will be making every effort to be able to synchronize the local community. HPC's step towards safeguarding environment and safety is full of energy as always.



The Purumi of HPC will keep at it to make  
the world greener and better for all of us to live.



## \* With... Society

A smile appears upon our lips.  
The promise to make a cheerful workplace,  
The promise to provide good service,  
And the promise to be a ray of light in this society come together and give us a bright smile.

We promise to be a happy companion.



- Expansion of woman's employment
- Winner of the capital-labor conciliation award
- Customer invitation technical seminar
- Introduction of matching grant and Woosuri system



Promise for  
Purumi Society

“HPC does not save its energy to take care of less privileged place of this society. Among various social contribution activities, interaction with fishing villages is the part that is externally approved of its result. Fishing village experience activity, cleaning coastal area, large-scale local volunteering activity, experiential study of the children of Nakdo - we are implementing various effort to activate interaction between the urban area and fishing village. We also try to build corporate culture where executives and employees become one. Award of excellence in cooperation between labor and management proves the effort of HPC. We are trying to do our best for customers through customer satisfaction management, and through win-win cooperation program, we are trying to find the measure to survive together with the subcontractor to implement it. All of the executives and employees of HPC are doing their best to fulfill the social responsibility of the company from the perspectives and positions of their own.”



**\*Seminar with Vietnamese customers invited**

— HPC has held the seminar for customers in Ho chi Minh and Hanoi, Vietnam. The event was held to increase understanding of our company through providing corporate PR and introducing the product to the customers of Vietnam, which will grow into the replacing market of Polyethylene and Polypropylene of China, and to build reliability on constant market expansion in the future. This seminar which was held for the first time as a Korean petrochemical company was successful by the participation of the majority of the Vietnamese Polypropylene Homo Coating processing companies and Yarn processing companies.



**\*Participating in voluntary work in Taean**

— The women's association of HPC Yeosu Plant has volunteered in Tae-an Peninsula, which was struck by the serious damage after the leakage of crude oil on December 26th, 2007. 40 members who participated in this volunteer activity left Yeosu at 5 a.m. to arrive at Hak-am-po Beach and work without a break until 3 p.m., removing the oil from rocks and sand. Jeong, Seung-hui, the vice president who participated in volunteer activity said "I am proud thinking that drops of 42 members' sweat have helped Tae-an Peninsula to find its own looks in a short time period" adding "I wish the beautiful West Coast finds its original beauty as soon as possible."

**\*2007 Sports day of Seoul HQ and research centers**

— HPC has had the field day by collaboration of the head quarter and R&D institute on the playground of Daedeok R&D Institute. This field day was held to encourage cooperative mind among employees and increase the physical strength of the executives and employees of HQ R&D and Daesan MMA. Approximately 400 executives and employees played various games such as soccer, kickball, and tug of war, and had a pleasant time through various recreation activities including talent contest. Also, there was the drawing with some lucky winner session with generous prizes including flight ticket to Southeast Asia. This provided the opportunity to promote unity among employees through various programs, and to strengthen our goal to make the best Asian petrochemical company.



## Management for Employees

HPC, promoting 'company for employees,' not 'employees for company,' is trying to create the best working environment. As a result, despite the rate of 65.8% of the entire employees signed up for labor union, there has not been a single labor dispute.

Having recognized the essentiality of ensuring outstanding personnel for sustainable management, HPC recruits new employees through the fair open process.

With special interest in employing female personnel, the number of female personnel is steadily increasing from 35 in 2005 to 48 in 2006, and to 50 in 2007. There is no risk of children labor since the children labor is primarily blocked from the stage of recruiting for the characteristics of the industrial structure. Also, legal labor union has been formed, and since the payment standard of allowance for working on holidays and at night time is indicated, there is no risk of forced labor. Also, our company protects the legality of the third right of labor that is ensured in the law, and when the company wants to change the working condition of the member of labor union, it negotiates with the labor union. In addition, since our company has a relatively high standard of wage rate compared to the minimum wage designated by law, we implement internal examination to keep the minimum wage by law. Furthermore, in case of overseas business site, we contribute to the local economy by hiring local people through the open process.

### \*Personnel Status

The total number of executives and employees of HPC is 1,010 as of the end of 2007, including 224 in the HQ(Seoul and other branches), 101 in Daejeon R&D Institute, 685 in Yeosu Plant, and 960 being male and 50 female. By age, there are 120 in their 20s, 319 in 30s, 456 in 40s, and 115 over 50s.

#### Personnel Status by Region

[At present 2007.12.31]

Title	Personnel Status by Region			Total
	Head office(Seoul)	R&D center(Daejeon)	Plant(Yeosu)	
Men	188	98	674	960
Women	36	3	11	50
Total	224	101	685	1,010

#### Personnel Status by Age

[At present 2007.12.31]

Title	Personnel Status by Age				Total
	20's	30's	40's	50's	
Men	76	313	456	115	960
Women	44	6			50
Total	120	319	456	115	1,010

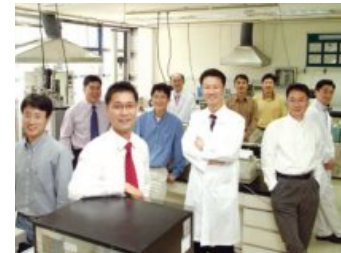
#### Employment Status by Year

[At present 2007.12.31]

Title	Employment Status by Year			Total
	2005	2006	2007	
Men	78	56	47	181
Women	16	15	12	43
Total	94	71	59	224



Head office(Seoul)



R&D center(Daejeon)



Yeosu plant



— This personnel structure clearly shows the particularity of petrochemical industry where men in their 30's · 40's form the central axis and many workers are located in production field to operate the plant for 24 hours.

#### Retiree Status by Region

(Based on 2007)

Title	Retiree Status by Region			Total
	Head office(Seoul)	R&D center(Daejeon)	Plant(Yeosu)	
Men	6	1	23	30
Women	8	2		10
Total	14	3	23	40

#### Retiree Status by Age

(Based on 2007)

Title	Retiree Status by Age				Total
	20's	30's	40's	50's	
Men	9	5		16	30
Women	8	2			10
Total	17	7		16	40

— In 2007, total of 40 people retired, showing a very low retiring rate of 4%. By age distribution, 17 in 20s, 7 in 30s, and 16 in 50s(including retiring people at retirement age) have retired. By gender, 30 male and 10 female have retired, and by region, 14 from HQ, 3 from R&D, 23 from the plant have retired from HPC. This represents a very stable structure of the organization, which becomes the driving force of steady generation of performance.

#### \* Preventing discrimination

— HPC does not discriminate against people by religion, gender, and so on. This anti-discrimination policy is reflected on the overall system throughout recruiting process to retiring. Also, HPC is preventing the occurrence of discriminative cases in advance by enhancing the basic awareness level about human rights by implementing various activities including Education session for preventing sexual harassment which is provided to all employees every year.

#### \* Corruption prevention

— HPC prevents its money-handling department's risks to be exposed to illegal transaction or corruption in advance through regular circular appointment. HPC discloses any illegal transactions and corruptions and takes precautionary actions through internal audits including periodic, non-periodic, and special audits. In 2007, it reinforced its monitoring activities against illegal transactions and corruptions through non-periodic audits over foreign branches, foreign corporations and all sales departments. In addition, in order to reinforce its workers' ethics, HPC has offered ethics education as a mandatory course since 2002, and as of the end of 2007, 904(90%) executives completed the course.



Win-Win relationship between capitals and labors

#### \* Win-Win relationship between capitals and labors

— HPC is maintaining peaceful and constructive labor-management relationship by ensuring the management right of the company and the right of labor of the labor union at equal standing with labor and management. The number of employees to whom collective bargaining is applied is 757 among 1,010 as of the end of 2007, which is 75%, and among them, the employees who signed up for labor union are 498, which shows 65.8% of signup rate. The labor-management relationship of steady win-win does not show a single case of labor dispute ever since the establishment of labor union(May, 1980). As a result, HPC was designated as 'the company of new labor-management culture' by the Ministry of Labor Affairs, and it received the 'excellence award of labor-management cooperation' from Korea Employers Federation in 2006. Such a mature and stable labor-management relationship has become the foundation for sustainable management of the company. HPC is doing its best to share the information for improving the overall management and workplace environment and for continuous improvement of employees' safety and health through Labor-management conference or Occupational Safety & health Committee, where the same number of each party participates every quarter. In particular, at the time of stock holders' meeting,



the representative from the union labor participates in the meeting to understand the performance of management and future business plan to ensure and maintain diverse channels to share with all employees. HPC is carrying out the overseas industry training every year to ensure adaptability for rapidly changing external environment and to form global mind, and by operating all sorts of welfare facilities such as a gym, playground, indoor pool, cultural event hall(lecture hall), and restaurant and so on inside the company house of approximately 142,000m<sup>2</sup> so that employees can take care of their health and enjoy sound leisure time. Also, as a part of the organization activation program, through activities such as field day, beer day, and movie-viewing event, the opportunities are provided where employees can be united, allowing the chance for inter-communication between members.

### \*Welfare System

HPC is also fully aware of the significance of the role of executives and employees who are the only internal interested party in the sustainable management of the company. Based on such awareness, through various programs such as education system, welfare system, and reward system for enhancing capability, executives and employees are provided with the opportunity to realize themselves and to strengthen the competitiveness of the company.

To enhance the quality of lives of the employees, on top of the support of medical fee, we are operating diverse welfare systems including general medical checkup, signing up for group accidental insurance, support of children's school tuition fee, support of company house, provision of leave and supporting money for all sorts of congratulations and condolences, award of holidays and prizes for long-term employment, support of hobby club, support of housing, and support of condo membership. HPC applies basic benefits to all employees such as 4 insurance and retirement fund, and according to the law, to support the life after retirement, 50% of National Pension Fund is being paid by the company.

Under the education system including social class education, job training, knowledge training and special education, HPC offers education continuously to improve all executives' and employees' ability. To meet all executives' and employees' desire for linguistic knowledge and self-development, HPC operates language-learning cost supporting system. Our company has implemented the average of 92 hours of training per each employee, and we are operating the system of temporary retirement from office for 3 months before retirement for people retiring at retirement age. This reflects our will to provide them with time to prepare for life after retirement so that the high quality of life can be maintained.

Regular performance and experience evaluation is implemented 1~2 times every year against every employee, and promotion and incentives are determined according to the result of evaluation. There is a difference in salary according to the position, performance, and work, but for the equivalent performance of the equivalent work, there is no discrimination of salary between male and female employees.



Company house provide



Company house indoor pool

#### Message \_ Hwang, Dong-woon, Chairperson of HPC Labor Union

### “Understanding and communication kept 32 years free of labor-management disputes.”



For the past 32 years, HPC has been making enormous efforts towards the same goal and communication under the shared awareness of a 'community of destiny' which enabled an agreeable relationship between labor and management without any disputes in history. In an effort for an open-end discussion, labor and management personnel hold regular meetings make room for opinions from each party. The management opens up the corporate status of management to employees while sharing vision with them, based on which each individual does his or her share of duty within the company. If we look at things from a point of view beyond the relationship of employer and employee, we would be able to resolve any risks or threats. Due to the accident a few years ago, if not characteristics of the industry, HPC is most concerned about the 'safety' issue and introduced high-tech systems to keep the plant clean and safe along with state-of-the-art technology. On the same note, HPC offers substantial benefits to the employees thanks to bilateral cooperation between management and labor. Members of the HPC Labor Union are doing what they can to make their workplace worth-working and rewarding. This will pay off We will keep on and acknowledged by the community and role model poster child of other companies.

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## Management for partner companies

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HPC is creating win-win culture by supporting management production technology to subcontractors and by developing the technology along with them.



Lotte Aluminum Co., Ltd.

Petrochemical industry is an industry that produces and supplies raw material to automobile industries, electric and electronic industries, and plastic processing industries and so on. Therefore, in the upstream, there are large companies which supply major raw materials, small and medium companies which supply additives and catalyst, and small and medium companies which support the maintenance of the facilities of the company. For downstream, there are large companies such as Hyundai Motors and small and medium companies which are suppliers of electric and electronic companies such as Samsung electronics. That is, for win-win management between large, medium, and small companies, this is the industry that requires organic relationship and communication and support between large companies and small medium companies. With such recognition, HPC is promoting win-win management against large, medium, and small customers and facility maintenance supporting companies.

### \*Technical Supports for Management and Production

Customer oriented technical support

HPC has total customer support system with the goal of providing total service for customers, providing quick feedback to the request of the customer, derive the generation of customer value, providing satisfaction to the customer growing with them.

- Cooperation for Product conversion

In late 1990s, a small/medium company manufacturing rice wine bottle was losing its business due to decreasing demand of rice wine. We transferred our new technology and provided R&D support, and the company transformed into an A-rated small/medium company with expertise in processing medical container with sales of 3.1 billion Won in 2006.

- Technical supports for Foundation

We have also provided the overall technology of the material and formation about functional special film to the company opening its business to advance into the field of film manufacturing. The company succeeded in its early business, taking up 50% of the overall sales in 2007.

- Joint Technical Development

We have developed in collaboration with a company various packaging containers such as Non-PVC multi-layer polyolefine liquid bag product and disposable multi-layer rice container which do not have the impact of environmental hormone for the first time in Korea. Non-PVC liquid bag product recorded sales of 4 billion Won in 2006, and multi-layer rice container recorded sales of 7 billion Won in 2006.

### \*Training

Technical Seminar of Customer Visit and Invitation

We carry out processed technology and product education to site employees in order to improve production technology, also providing them of leading company's trend and latest technology so they can have the opportunity to advance to a new field. Moreover, we are holding a processed technology seminar to minor enterprise representatives and employees introducing theory in every molding field and latest foreign molding technique.

Quality and Production Support of Minor Enterprise

We contribute to improve the quality by analyzing customer's product properties throughout the year, and maintaining the best status of productivity by visiting customer's company to repair and prevent the damage of outworn equipment and executing safety education to prevent accidents.



Technical Seminar of Customer Invitation

### \*Human rights

Although extra articles or clauses relevant to human rights protection are not examined during discussing on joint venture agreements with domestic or foreign companies, HPC always respects every country's Labour Law in the contract.



## Management for Customers

Honam Petrochemical Corp. is producing eco-friendly and harmless products in order to practice customer satisfactory management and doing its best to protect the customers' private information.

Honam Petrochemical Corp. is trying consistently for customer satisfaction, open and aboveboard management, and sustainable company growth. Especially HPC has grasped every major country's environmental regulation such as United Nations Framework Convention on Climate Change and applied to all products research and development trying its best to produce harmless and eco-friendly products. RoHS(Restriction of Hazardous Substance), ELV(End of Life Vehicle), WEEE(Waste Electrical and Electronic Equipment) are already completed and put into efficient management systematically which led to no point out in year 2007. In REACH(Registration, Evaluation, Authorization & Restriction of Chemicals) which started June 2007, HPC had a grip of EU import products and registration making the greatest profit possible by doing so.

### \*Fair Trade

HPC has been corrected four times by Fair Trade Commission. Accordingly, HPC knows that unfair trade is a major threat to management and introduced CP/Compliance Program to reinforce law-abiding system making transparent management into reality.

#### CP/Compliance Program

CP/Compliance Program is an internal law-abiding system in order for the company to abide the fair trade law by itself making employees to bring up a standard by education and excluding the possibility of breaking the law through the process of reporting to the board about their management result.

#### Operation Performances

After introducing CP on December 2006, HPC has put a lot of effort to 'early settlement and practice of CP' during year 2007. HPC has set operation plans for CP and reported to the CEO and was inspected semiannually. Moreover, a fair trade education was held more than three times and requested legal advice from inside and out more than fifty times. In 2007, there is no violation case reported against the marketing communication-related observance program and its rules.

#### Operation Performances of CP in 2007

The number of in-house examination of fair trade\_2 times

The number of fair trade education\_3 times

The number of legal council of fair trade\_51 times

#### • Nomination of fair trade compliance manager

In order to operate CP neutrally the board has appointed a manager who is doing his best to abide the fair trade law.

#### • Writing employee's pledge

To maximize the CP effect, the CEO has put his will to the company's website and all the employees have made a pledge they will abide the fair trade law.



Fair trade education



Descriptions of Product in relation to PL

- In the firm Checkup of fair trade of fair trade  
HPC is working hard to strengthen its competitiveness and prevent damage of law violation by having a self audit on main business sectors.
- Fair trade-related education  
Fair trade manual has been made and distributed and all business employees must finish a month of cyber education to inspect fair trade act violation by themselves.
- Legal council of fair trade  
HPC is cutting off all the possibility of violating the law by receiving an inspection from a fair trade specialist about every business.

**\*Product labeling**

For domestic demand, according to Occupational Health and Safety Act and Toxic Chemicals Control Act HPC puts an instruction label to product's case and cover, also for exported items HPC puts all the necessary information provided by the exported country's law on the labeling in order to prevent any accident that can come out from delivery and handling. There is not a single example which happened from a missing warning sign or wrong information, also no customer has ever mishandled our product.

**\*Preparation activity for product liability(PL)**

In order to act effectively to customers' demand concerning liability of manufactured products, HPC has joined manufactured product liability insurance and all MSDS is able to be inquired through the company's intra-net. Also manufactured product liability regulation is made and operated to prevent expansion of damage after an accident. As a result, there was not a single case of violating law of both foreign and domestic about product liability. The board of directors monitor PL reports every second month to reflect them in the management.

**\*Privacy protection**

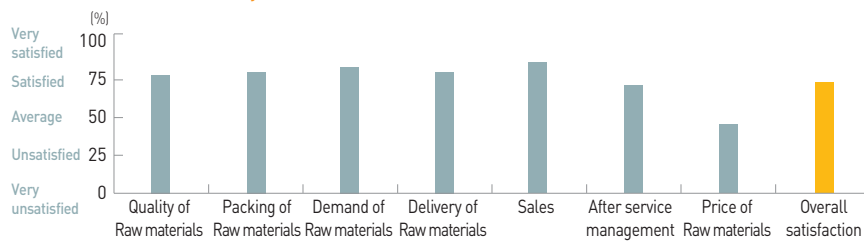
Protecting customers' privacy is one of the concerning issues in a company's policy or country's regulation. Accordingly, HPC puts a great emphasis on the protection of customers' privacy and has made a policy on operating customers' privacy. There is also a team which takes care of any complaints against private information, and HPC is operating a technical and management measure in order for private information not to be lost, stolen, leaked, changed, or damaged.



### \*Customer satisfaction survey

HPC is executing customer satisfactory survey periodically for improvement of quality, recognizing customer's request, and effective customer management. This is to recover customer's faith by processing customer's dissatisfaction quickly as possible. Also the survey result is fully applied to production, quality management, technical support, and sales activity. One of the recent problems were increasing material prices, and it was due to increasing oil prices and we are trying our best to lower it by saving energy.

#### Customer satisfaction survey result in 2007



#### Customer satisfaction survey process



HPC has gone through the preparation stage of data collection in 2001 which led to devoting itself to the construction of filing system and standard settlement and spread out various preparation activities for PL.

- Classified PL related documents and adjusted the preservation term into 15 years
- Subscribed to PL insurance
- Understanding the contracts on purchasing and sales & collecting cases of PL related contracts
- Arrangement of the company's MSDS to make them possible to be searched on company's intranet
- Publicity on education

Also HPC is doing its best to restore customer's trust and confidence by dealing with customers' complaints and improve the cause for the complaints so that they don't reoccur. Especially HPC has a customer support system which goal is to correspond quickly to customer's request, create customer value, satisfy the customers, develop with the customers and give total service to the customers.

## Management for local society

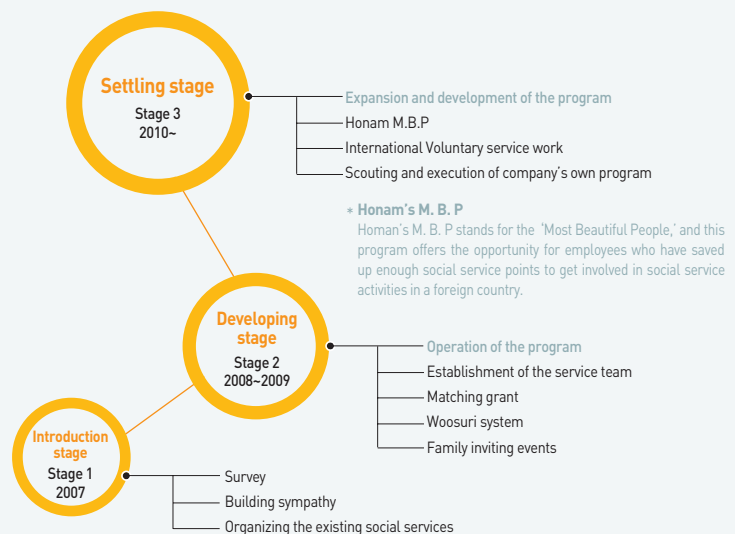
In order to carry out the role of 'business citizen' who makes a happy society, HPC is leading all employees to contribution activities and processing a variety of donations.

### \*Cases of infringements of local residents' rights and relevant actions

Yeosu National Industrial Complex is the largest petrochemical complex in Korea, built in the era in which national economic development was considered on the front burner. Largely contributing to the national economic development, the plants have been newly established and enlarged. Due to the crowded industrial facilities, however, various kinds of environmental pollutions and safety problems have raised, resulting in numerous friction with local residents. Especially, environmental pollution problems and frequent safety accidents occurred in Yeosu National Industrial Complex had been issued not only in Korea but also in the world. To solve these problems, every company has largely invested in replacing old facilities and installing environmental pollution-preventive facilities continuously to reduce the friction with local residents gradually. In addition, as the society changes, each company has listened to local residents' difficulties and solved them in order to obtain harmony with local society. With these, HPC has offered scholarship to local schools, supported sports competition and undernourished children and sponsored parties in honor of the aged and tours for the aged. Besides, HPC has comforted local residents and actively sponsored events inspiring joy and energy for life by creating jobs or holding local events.

### \*Summary of social contribution activity

To create a peaceful future for mankind, HPC is doing its role to be a business citizen. In order to do so, it is operating a system which evaluates from the beginning of a plant construction how it affects the nearby community and prevents both environmental and social bad influences. Every year through an environmental evaluation we minimize the environmental effect. Also in order for all people to live a happy life, HPC has been promoting a society contribution activity since 2007. Especially in 2008, HPC created a Service team which does not make it just a one time activity but a continuous act. Contribution activity has been divided into society welfare, voluntary service, education scholarship, and environmental culture activity which made it much more strategic and systematic. Moreover, HPC is expanding its contribution atmosphere by adopting matching grant and Woosuri(ignore fractions) system.





\*Social service program



※ Matching Grant and Woosuri system

Every employee from CEO to a minor clerk work towards a contribution fund. Especially with our matching grant system; where an employee contributes into the fund and the company must match the amount of the employee, and Woosuri system; is where all the money from salary under a thousand won, goes into the contribution. These are HPC's contribution activity which all employees participate in.

Message \_ Kwon Hyuk-se, Permanent Co-chairman of Yeosu citizens association

“A social contribution team is sought for more systematic activities.”



HPC is actively involved in making contributions for local communities. Our neighbors are very appreciative of HPC's setting out part of its employees' private land for the use of public parking lot in downtown. Not only that, HPC takes the initiative in a wide range of activities proposed by civil society groups which hit me mind-boggling.

I would like to suggest that HPC form a social contribution team if it looks far ahead into the future in terms of corporate development.

Today, entrepreneurial social involvement is becoming more of a mandatory issue rather than a matter of choice. As things stand, more professional and continuous activities are required from companies. Going beyond the conventional way of contribution, I hope that HPC plans more systematic programs for a longer period of time. At the same time, I look forward to HPC's contribution to Yeosu for its development by donating a certain percentage of the corporate profits.



— Social Welfare

- Overall Social activities for the areas lagging behind in development

HPC service team is connected to the community's Ssangbong welfare center and helping out old people, poor people, young family heads of home repairs, hair-cut, taking pictures, prevention of epidemics, and painting.

Year	Target region	Details	Number of participants	Expenses
Feb. 2005	Sangam Village	Building love-house	19 people	5million won
Oct. 2006	Songdo Jamae Village	Installation of electricity and 7 other services	49 people	7million and 100 thousand won
Jun. 2007	Shinduk Village	Papering, floor paper replacement and 6 other services	32 people	7million and 30 thousand won

- Free acupuncture & moxibustion for the health of residents

As the world is changing the method is changing also. Especially, volunteers are giving free health service to the community due to the increased interest in health. It is known to increase the recognition of the company with the help of employees' voluntary participation.

Year	Sites	Number of volunteer workers	Number of recipients	Expenses
Oct. 2005	SSangbong social welfare center	3 associations 72 people	1,059 people	6 million won
Jun. 2006	SSangbong social welfare center	30 people	300 people	1million 900 thousand won
Aug. 2007	Yeosu Heunggook stadium	4 associations 140 people	2,640 people	14 million won

- Sisterhood among 1 company, 1 farm and 1 fishing village

Connected with farming and fishing villages which are relatively more difficult due to FTA, HPC is helping out its community.

Not only employees help out in the villages, but also they help out old and poor people carrying out interchange of giving.





#### 1 company 1 farm village

- ① Background of Sisterhood affiliation \_ Submerged village near Juam Dam, the source of industrial water for Yeosu national industrial complex
- ② Date of sisterhood affiliation \_ 1994. 9. 17
- ③ Number of household \_ 48 households
- ④ Means of living \_ Farming 100%(self-sufficiency)

#### 1 company 1 fishing village

- ① Background of Sisterhood affiliation \_ 1 company 1 fishing village sisterhood was concluded under the supervision of Yeosu Regional Maritime Affairs & Fisheries Office
- ② Date of sisterhood affiliation \_ 2006. 6. 8
- ③ Number of household \_ 100 households
- ④ Means of living \_ Fishing 100%(self-sufficiency)

#### Year-end social services

Every winter HPC gives winter items and financial support to the connected village and social welfare center. Especially on the last days, HPC summarizes all the contributions made and open a special event. It is our heart to always be with our community.



Volunteer work

- Delivering 'love rice' and supports for nursing centers and rehabilitation centers

HPC's volunteering team holds a variety of welfare services every May. 'Love rice' delivery is one of them. Employees save up their premium of innovation activities throughout the year to purchase rice and subsidiary foods, and deliver them personally, in pairs, to the elderly living alone, the handicapped, the poor, and head of households of young families, so that the employees can experience their life and environment. HPC will keep on practicing these activities and take the initiative in making a better world where alienated classes can live together.

Year	Target Region	Supporting Materials	Supported Household	Remark
Jan. 2005	Undernourished children, parentless children, the disabled with spinal handicap in Down elementary school	Financial support	-	3.2 million won
Sept. 2005	Seongshim nursery school, Somang nursing home	Material support	-	2.5 million won
Jan. 2006	Hanryeo-dong and 3 other areas in Yeosu	Rice, ramyeon, kimchi	80 households	4.26 million won
Apr. 2006	Seongshim nursery school, Heumang rehabilitation center	Facility repair, material support	-	3 million won
May. 2007	Gook-dong and 5 other areas in Yeosu	Rice, ramyeon	120 households	10 million won
Sept. 2007	Seongshim nursery school, Heumang rehabilitation center	Facility repair, material support	-	6 million won

- Happiness sharers' love bazaar

The 'Love bazaar' organized by HPC women's association is where they make profit out of their homemade foods and donated products, and give it to the Beautiful Store. Some money is used to purchase some items to be donated to social welfare centers.

- Making Kimchi

Employees' group of HPC makes its own kimchi with the organic vegetables cultivated from the company's own garden and delivers them to the aged, juveniles living alone, and the poor.





Education - Scholarship

- Secondhand PC donation to social welfare centers

Social welfare center can be weak to information due to its poverty. So HPC contributes old PCs to them so they can efficiently recycle its supplies.

- Field trip to Seoul for children of Nakdo

Every year HPC gives Nak-do children a chance to experience Seoul. For three days they experience the Blue House, IMAX theater in the 63 building, Cheong-gye stream, Kyung-bok Palace, and Lotte World the world's biggest indoor theme park.

Year	Target school	Number of participants	Schedule	Expenses
May. 2005	Song branch school of Sora elementary school Yeosan branch school of Anil elementary school, Nangdo middle school	37(the whole school)	2 nights 3 days	14 million won
Sept. 2007	Yeosan middle and high school in Keumohdo	42(the whole school)	2 nights 3 days	11 million won



- Field trip to Yeosu national industrial complex

Due to the government's policy to grow heavy and chemical industry, Yeosu is Korea's largest chemical industry. It is focusing on developing new items for future. HPC is contributing greatly to education by letting the children study by observing its plant.

- Enjoy the Exciting World of Chemistry 2007

HPC held 'Enjoy the Exciting World of Chemistry'. It is one of contributing programs organized by Korea Responsible Care Council and it is held annually to nurture future scientists. HPC spares no effort to support events held in Yeosu, consequently contributing to revitalizing education in the local society.

- On-the-spot study in the 4th Chemistry Exploration Frontier Festival

HPC held 'The 4th Chemistry Exploration Frontier Festival' in 2007. With the slogan 'Dream the future with chemistry,' it is a festival for future scientists with an interest in chemistry and creativity. This event, intended for high school students, had 615 teams(2 students + instructor per team)from 150 high schools throughout the nation participate. Among them, 40 teams qualified for the finals. They conducted their research for 3 months and presented the result.



**Environmental and cultural activities**

As part of the community development program, HPC, with the participation of all of their employees, will take the initiative to make a fine environment to live in through activities like cleaning up the environment surrounding tourist attractions and nature conservation campaign.

- 4 major cleanliness movement in Yeosu for Yeosu World Fair in 2012

The International Exposition 2012 will be held in Yeosu City. For the successful holding of the Expo, HPC is leading 'The brand new hope, Yeosu Clean Up Project'. All the employees are taking part spontaneously to do their part in making a more beautiful and clean Yeosu. HPC plans to continue these activities steadily.

- Tree-planting event

HPC hopes for a successful holding of the 2012 Yeosu Expo and is beautifying the scenery around the Expo. HPC is sure that the effort our staff and their families are putting into make Yeosu beautiful will be paid off soon.

- Volunteer work in Tae-an Peninsula for removing oil spill

HPC's contributors made a great effort on Tae-an peninsula cleaning off the oil on rocks and silts. All employees participated with a mind for preserving our beautiful nature and environment were delighted during the voluntary service. All employees in HPC think that these services not only help others, but also help our own character grow and bring out our potential.

**Local economy section**

To revitalize the local economy, HPC keeps promoting local purchase of materials such as machinery equipment. Here, 'local' means Yeosu where the plant is located, and raw materials are excluded.

**Purchase ratio per HPC's undertaking(Based on amount)**

Title	2005	2006	2007
Yeosu(Materials)	21%	21%	34%
Seoul(Purchase)	79%	79%	66%
Total	100%	100%	100%

HPC is looking forward to contribute in diverse ways in order to cope with community as it goes on to building new factories in order to become the best Asian petrochemical company.



Subscription to Associations and Groups, Prizes, Rewards, and Certifications

\*ISO 9001 Quality Management System



\*ISO 14001 Environmental Management System



\*KOSHA 18001 Occupational Health & Safety Management System



\*ISO/TS 16949 Quality Management in Automotive Field



- 1995 Acquired ISO 9001 Certificate
- 1996 Self-declaration of safe management(Safety/Health)
- 1999 Acquired ISO 14001 Certificate
- 2000 Acquired KOSHA 18001 Certificate
- 2000 Volunteer agreement for energy saving and greenhouse gas emission reduction
- 2003 Won the Excellence Award in manufacturing category of Korean Green Management Excellence Awards
- 2004 Acquired the World Class Product Certificate
- 2005 Won the Top Prize in manufacturing category of the Environmental-friendly Management Awards
- 2006 Won the Excellence Award in the Korean Labor-Management Cooperation Awards
- 2006 Won the Top Prize in manufacturing category of the Korea Productivity Awards
- 2007 Acquired ISO/TS 16949 Certificates
- 2007 Won the Official Commendation by the Prime Minister for revitalizing interchanging between cities and sea villages

— Affiliated Societies and National · International Associations

Name	Year of Affiliation
Korean Tax Association	1974
Federation of Korean Industries	1975
Korea International Trade Association(ID : HPCPLAN Passwod : HONAM)	1978
Korea Petrochemical Industry Association	1978
① NCC and PO Council	
② Environment & Safety Board	
③ Korea Responsible Care Association	
Korea Employers Federation	1984
Korea Industrial Technology Association	1984
Korea Institute of Chemical Engineers	1984
The Polymer Society of Korea	1986
Korea Management Association	1987
Korea Specialty Chemical Industry Association	1987
Korea Productivity Center	1988
Federation of Korean Industries(Korea Economic Research Institute)	1989
Korea Surfactant and Adhesive Industry Cooperative	1989
Korea Listed Companies Auditor	1991
Korea Listed Companies Association	1991
Federation of Korean Industries(International Management Institute)	1999
ASIA BUSINESS COUNCIL	2000
EPCA	2005
Korea-Japan Economic Association	2005
Korea Chemical Industry Council	2005
Korea Fair Competition Federation	2006
Seoul Chamber of Commerce & Industry	2006
Incorporated Association Korea Engineering Club	2007
Surplus Management	2007



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## Ethics management

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### \* Article 1. Customer

- \_ Customer is the basis of the existence of the company. All decision making and business activities of the company are based on customer interests, and the company aims to create values for and serve its customers.
- \_ The company shall be honest with customers, listen to customer's opinions and honor promises to customers.
- \_ Customer information shall not be used for any purposes other than what is agreed to by the customer in advance.

### \* Article 2. Shareholder

- \_ All executives and employees shall devote themselves to increase share value with sound management practices based on creativity and innovation.
- \_ All rules and principles of business management shall be complied with, and transparency shall be maintained.
- \_ The management shall sincerely listen to fair opinions of small shareholders.

### \* Article 3. Executives & Employees

- \_ Executives and employees shall comply with not only all positive laws, but also social norms and high ethical standards, to maintain the company's reputation and individual dignity, and gain respect and trust from colleagues and partners.
- \_ Executives and employees shall have a sense of duty, and actively and creatively contribute to the company with a challenging spirit, innovation and cooperation.
- \_ Executives and employees shall receive fair compensation, based on capabilities and performance, regardless of unofficial human ties, academic backgrounds or gender.
- \_ Executives and employees shall not use company properties for private purpose, and shall not disclose information acquired during business processes.
- \_ Employees shall not provide gifts to each other, or engage in loans or joint liability on loans. Employees shall not act rudely to each other, and shall prevent sexual harassment in workplaces, in order to create a favorable working environment.
- \_ Executives and employees shall live up to social responsibilities. They shall actively respond to all opportunities and crises, and set examples of compliance with global standards for business operation.
- \_ The company shall recognize the dignity and value of all individuals, and endeavor to promote a positive working environment.

### \* Article 4. Partner

- \_ All partners shall be provided with equal opportunities, and excellent goods and services shall be traded at fair prices for mutual interests.
- \_ The company shall not exploit its advantageous position to make unfair claims, or to receive inappropriate treatment or bribes.
- \_ The company shall explain to partners the intentions and principles of this code of conduct, and urge them to comply with it.

### \* Article 5. Nation & Society

- \_ The company shall respect the values of the nation and society, and shall abide by relevant laws and regulations. The company also shall contribute to national development by creating social wealth and promote the quality of lives, through sound business activities that can develop the company itself.
- \_ The company shall not engage in politics.
- \_ The company shall make efforts in protecting the environment and natural resources, by developing and selling environmentally-friendly products, recycling waste, conserving materials and carrying out educational programs.
- \_ The company shall promote the safety of community, customers and employees, and provide education and training for preventing accidents.



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## Verification Statement

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### \*Introduction

\_ Korean Foundation for Quality(hereinafter 'KFQ') has been engaged by HPC to independently verify its 2007 Sustainability Report(hereinafter 'Report'). The compilation of the Report is the responsibility of the HPC management and KFQ's responsibility is to express our opinion on the Report based on the verification scope agreed.

### \*Independence of Verification

\_ KFQ has no conflict of interest with HPC in terms of profit generation-related activities except providing third party verification service on the report. And we do not have any biased opinion on HPC's stakeholders.

### \*Criteria of Verification

\_ KFQ have conducted verification in accordance with the 'AA 1000 Assurance Standard(AA 1000 AS)' published by Accountability in 2003. AA 1000 AS requires that 3 principles such as Materiality, Completeness and Responsiveness, thus the Report were assessed by these principles. And KFQ also applied '2006 GRI Sustainability Reporting Guideline(hereinafter GRI Guideline) as a verification criteria which HPC adopted to their '2007 Sustainability Report'.

### \*Verification Scope and Procedure

\_ KFQ's verification was focused on the data and information of their sustainability management activities and performance at the Seoul Head Quarter, Yeosu Plant and Daedeok R&D center as agreed verification scope with the HONAM PETEROCHEMICAL CORPORATION.

\_ Verification has planned and undertaken to achieve reasonable assurance whether there is any material error or misrepresentation in the Report. Also KFQ has verified credibility of the Report contents and effectiveness of the internal process systems for preparing the Report according to the following steps :

#### Desk review

\_ We have performed GAP analysis of the key issues and performance data described in the Report against GRI Guideline and information acquired through internet and media survey.

And we have planned on-site assessment to assess credibility of the sustainability management activities and performance data described in the Report.

\_ Financial performance in the Report have crosschecked with audited '2007 Financial Statement of HPC'.

#### On-site Assessment/Verification

\_ We have visited the Seoul Head Quarter, Yeosu Plant and Daedeok R&D center to assess accuracy of the information and performance data in the report and effectiveness of the data management system and/or process of preparing the report.

\_ Based on the sampling principle after due consideration of information materiality, we have examined relevant documents to sustainability management activities and its performance, and interviewed personnel in charge of reported sustainability activities to gather evidences.



#### Resolution of findings

- \_ We have discussed the issues found during the procedures above, and reviewed the final version of the Report again to check the correction and reflection of the founded facts by HPC.
- \_ Then, GAP analysis against the GRI guideline was conducted again on the final Report to make our conclusion to the Application Level of the GRI Guideline.

#### \*Consideration and Limitation

- \_ Accuracy and completeness of performance data reported in the Report are subject to inherent limitations due to their nature and the methodology used determining, calculating and estimating such data.

#### \*Conclusion/Opinion

- \_ Based on our review, KFQ have obtained reasonable basis to express the conclusion on the Report are below :

1. HPC has met the conditions for application level A+ in the '2006 Sustainability Reporting Guideline'.
2. HPC has the process to identify and understand their activities, performance, concerns and issues rose by stakeholders, and have disclosed their effort, and performance regarding to identify material issues properly.
3. HPC has implemented internal system to generate, gather and analysis information and data on the Report to make public available.

- \_ In conclusion, KFQ has not found that there is any material error or misrepresentation in the report.

#### \*Recommendation

- \_ We recommend that HONAM PETROCHEMICAL CORPORATION needs to strengthen organization and to implement systematic reporting process for improving compilation of sustainability report.
- \_ Develop performance indicators with reference to the 'Sustainability Reporting Guidelines(G3)' and analyze the performance in all aspects of sustainability continuously. Also various efforts and performance related to sustainability management should be further reported with a balanced view.
- \_ Mechanism for stakeholders engagement and materiality assessment should be established. And integrate this mechanism into HPC's business decision-making process.

August 30th, 2008

CEO Jae Ryong Kim

Korean Foundation for Quality(KFQ)



## GRI G3 Content Index and GRI Application level

Reporting level ●: Reported ◐: Partially reported ○: Not reported N/A: Not available : Corresponding to Core Index

GRI Index No.	GRI Index details	Page	Reporting level
<b>Strategy and analysis</b>			
1.1	Statement from the most senior decision-maker of the organization	7	●
1.2	Description of key impacts, risks, and opportunities	14	●
<b>Organizational profile</b>			
2.1	Name of the organization	9	●
2.2	Primary brands, products, and/or services	11, 13, 34	●
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures	10	●
2.4	Location of organization's headquarters	9	●
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report	9	●
2.6	Nature of ownership and legal form	10, 16	●
2.7	Markets served(including geographic breakdown, sectors served, and types of customers/beneficiaries)	9, 11, 13	●
2.8	Scale of the reporting organization	9, 16, 30	●
2.9	Significant changes during the reporting period regarding size, structure, or ownership	11	●
2.10	Awards received in the reporting period	99	●
<b>Report parameters</b>			
<b>• Report profile</b>			
3.1	Reporting period for information provided(e.g. fiscal / calendar year)	4(title page)	●
3.2	Date of most recent previous report(if any)	N/A	N/A
3.3	Reporting cycle(annual, biennial, etc.)	4(title page)	●
3.4	Contact point for questions regarding the report or its contents	109	●
<b>• Reporting and boundary</b>			
3.5	Process for defining report content	20, 21	●
3.6	Boundary of the report(e.g. countries, divisions, subsidiaries, leased facility, joint venture, suppliers) ※ Additional guide : Refer to the GRI Boundary Protocol.	4 (title page)	●
3.7	State any specific limitations on the scope or boundary of the report ※ Description on scope : Refer to Completeness Principles.	4 (title page)	●
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	4(title page), 28	●
3.9	Data measurement techniques and the bases of calculations	21, 49, 71	◐
3.10	Explanation of the effect of any statements of information provided in earlier reports, and the reasons for -such re-statement(e.g. explanation on merger & acquisition, base year & period change, business characteristics and measurement method)	N/A	N/A
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report	N/A	N/A
<b>• GRI calculating table</b>			
3.12	Table identifying the location of the Standard Disclosures in the report	103	●
<b>• Verification</b>			
3.13	Policy and current practice with regard to seeking external assurance for the report	4(title page)	●
<b>Governance, commitments and engagement</b>			
<b>• Report profile</b>			
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	16	●
4.2	Indicate whether the Chair of the highest governance body is also an executive officer(In case of an executive, the role within the board of directors and the reason to be nominated to the chairman shall be stated)	16, 17	●



Reporting level : Reported : Partially reported : Not reported N/A : Not available : Corresponding to Core Index

	GRI Index No.	GRI Index details	Page	Reporting level	
• Report profile	4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members	16, 17		
	4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	16, 17		
	4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives, and the organization's performance(including social and environmental performance)	16, 17		
	4.6	Process in place for the highest governance body to ensure conflicts of interest are avoided	17		
	4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics	16		
	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	14, 15, 48, 100		
	4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance	16, 17		
	4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance	17		
	• Commitments for external initiative	4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization	49, 65, 66	
		4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses	46, 52, 62	
4.13		Memberships in association advocacy organizations in which the organization	99		
• Stakeholder engagement	4.14	List of stakeholder groups engaged by the organization	20		
	4.15	Basis for identification and selection of stakeholders with whom to engage	20		
	4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group	20		
	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	21		
<b>Economic Approach &amp; Performance Indicators</b>					
		DMA(Disclosures on Management Approach)	28-31		
• Side : Economic performance	EC1	Direct economic value generated and distributed, including revenues, operating costs, employees compensations, donations and other community investment, retained earnings, and payments to capital providers and governments	30, 31		
	EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	51-56		
	EC3	Coverage of the organization's defined benefit plan obligations	86		
	EC4	Significant financial assistance received from government	30, 33		
• Side : Market status	EC5	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation	84		
	EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation	97		
	EC7	Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation Senior manager ratio	84		
• Side : Indirect economic effect	EC8	Development and impact of infrastructure investment and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement	91-97		
	EC9	Understanding and describing significant indirect economic impact, including the extent of impacts	29		
<b>Environmental Performance Indicators</b>					
		DMA(Disclosures on Management Approach)	46, 48		
• Side : Materials	EN1	Materials used by weight or volume	58		
	EN2	Percentage of materials used that are recycled input materials	58		

Reporting level ● : Reported ◐ : Partially reported ○ : Not reported N/A : Not available ■ : Corresponding to Core Index

	GRI Index No.	GRI Index details	Page	Reporting level	
• Side : Energy	EN3	Direct energy consumption by primary energy source	51	●	
	EN4	Indirect energy consumption by primary source	51	●	
	EN5	Energy saved due to conservation and efficiency improvements	51, 52	●	
	EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives	51, 52	●	
	EN7	Initiatives to reduce indirect energy consumption and reductions achieved	51, 52	●	
	• Side : Water	EN8	Total water withdrawal by source	58	●
		EN9	Water sources significantly affected by withdrawal of water	58	●
EN10		Percentage and total volume of water recycled and reused	58	●	
• 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	66	◐	
	EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	66	●	
	EN13	Habitats protected or restored	N/A	N/A	
	EN14	Strategies, current actions, and future plans for managing impacts on biodiversity	65	◐	
	EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	N/A	N/A	
• Side : Substances emitted to the air, Wastewater and wastes	EN16	Total direct and indirect greenhouse gas emissions by weight	55	●	
	EN17	Other relevant indirect greenhouse gas emissions by weight	55	●	
	EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved	56	●	
	EN19	Emissions of ozone-depleting substances by weight	59	●	
	EN20	NOx, SOx, and other significant air emissions by type and weight	59	●	
	EN21	Total water discharge by quality and destination	60, 61	●	
	EN22	Total weight of waste by type and disposal method	61, 62	●	
	EN23	Total number and volume of significant spills	62	●	
	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	N/A	N/A	
	EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	60	◐	
• Side : Product and service	EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	34, 48-50	●	
	EN27	Percentage of products sold and their packaging materials that are reclaimed by category	61	◐	
• Side : Law observance	EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	66	●	
• Side : Transport	EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization;s operations, and transporting members of the workforce	65, 66	●	
• Side : All	EN30	Total environmental protection expenditures and investments by type	63	●	
<b>Labor Practice &amp; Decent Work Performance Indicators (Social)</b>					
		DMA(Disclosures on Management Approach)	84	●	
• Side : Employment	LA1	Total workforce by employment type, employment contract, and region	84	◐	
	LA2	Total number and rate of employee turnover by age group, gender, and region	85	●	
	LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations	86	●	
• Side : Labor-management relationship	LA4	Percentage of employees covered by collective bargaining agreements	85	●	
	LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements	85, 86	◐	
• Side : 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	85	●	



Reporting level ● : Reported ◐ : Partially reported ○ : Not reported N/A : Not available ■ : Corresponding to Core Index

	GRI Index No.	GRI Index details	Page	Reporting level
• Side : Occupational health and safety	LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region	70, 71	●
	LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases	74, 75	●
	LA9	Health and safety topics covered in formal agreements with trade unions	85, 86	◐
• Side : Education & training	LA10	Average hours of training per year per employee by employee category	86	●
	LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	86	●
	LA12	Percentage of employees receiving regular performance and career development reviews	86	●
• Side : Diversity and equal opportunity	LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity	16, 84	●
	LA14	Ratio of basic salary of men to women by employee category	84, 85, 86	●
<b>Human rights performance indicators</b>				
<b>(Social)</b>				
		DMA(Disclosures on Management Approach)	84	◐
• Side : Investment and procurement practices	HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening	87	●
	HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken	87	◐
	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	86	●
• Side : No discrimination	HR4	Total number of incidents of discrimination and actions taken	85	●
• Side : Freedom for association and collective bargaining	HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights	85, 86	●
• Side : Child labor	HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor	84	●
• Side : Forced labor	HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor	84, 85	●
• Side : 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	85, 86	◐
• Side : Local residents' rights	HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	91	●
<b>Social performance indicators</b>				
<b>(Social)</b>				
		DMA(Disclosures on Management Approach)	16, 17, 84, 88, 91, 100	●
• Side : Local society	S01	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting	65, 91, 97	●
	S02	Percentage and total number of business units analyzed for risks related to corruption	17, 88	●
	S03	Percentage of employees trained in organization's anti-corruption policies and procedures	88	●
	S04	Actions taken in response to incidents of corruption	88	●
	S05	Public policy positions and participation in public policy development and lobbying	20, 88, 99	◐
• Side : corruption	S06	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country	17	●
• Side : Public policy	S07	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	88	●
• Side : Law observance	S08	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	88	●

Reporting Level : Reported : Partially reported : Not reported N/A : Not available : Corresponding to Core Index

GRI Index No.	GRI Index details	Page	Reporting Level
<b>Product Responsibility Performance Indicators (Social)</b>			
	DMA(Disclosures on Management Approach)	88	
• Side : Customer's 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	32, 34, 48, 50	
	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	89	
• Side : Product and service labeling	PR3 Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements	89	
	PR4 Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	89	
• Side : Marketing communication	PR5 Practices related to customer satisfaction, including results of surveys measuring customer satisfaction	90	
	PR6 Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship	88	
	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	88	
• Side : Customer's private information protection	PR8 Total number of substantiated complaints regarding breaches of customer privacy and loss of customer data	89	
• Side : Law observance	PR9 Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	89	

**\*GRI Application Levels Table**

Report application level		C	C+	B	B+	A	A+
Standard disclosures	G3 Profile Disclosures	Report on : 1.1, 2.1-2.10, 3.1-3.8, 3.10-3.12 4.1-4.4, 4.14-4.15	Report Externally Assured	Report on : Report on all criteria listed for Level C plus : 1.2, 3.9, 3.13, 4.5-4.13, 4.16-4.17	Report Externally Assured	Report on : Same as requirement for Level B	Report Externally Assured
	G3 Management Approach Disclosures	Not Required		Not Required		Management Approach Disclosures for each Indicator Category	
	G3 Performance indicators and additional indicators by industry	Report on a minimum of 10 Performance Indicators, including at least one from each of : social, economic, and environment.		Report on a minimum of 20 Performance Indicators, at least one from each of : economic, environment, human rights, labor, society, product responsibility.		Respond on each core G3 and Sector Supplement indicator with due regard to the materiality Principle by either : a) reporting on the indicator or b) explaining the reason for its omission.	



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## Questionnaire

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### 1 \_ Check the group to which you belong.

- ① Stakeholder      ② Investor      ③ Customer      ④ Partner  
⑤ NGO Local resident or NGO      ⑥ Government body      ⑦ Association      ⑧ Academic circle  
⑨ Mass media      ⑩ Employees of HPC      ⑪ Other{      }
- 

### 2 \_ By what means do you know about HPC's sustainability report?

- ① Homepage  
② Mass media(Newspaper · Magazine)  
③ IR Seminar, Exhibition, IR  
④ Employees of HPC  
⑤ Other{      }
- 

### 3 \_ Which was the most interesting part for you in this report?

- ① Report summary      ② Sustainable management section      ③ Economy section      ④ Environment section  
⑤ Society section      ⑥ Appendix      ⑦ Specific page{      }
- 

### 4 \_ Which part do you think needs complement?

- ① Report summary      ② Sustainable management section      ③ Economy section      ④ Environment section  
⑤ Society section      ⑥ Appendix      ⑦ Specific page{      }
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#### Additional information

- Please contact us as below for information or opinion on HPC's sustainability management and relevant reports.
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