



2016

CORPORATE SOCIAL
RESPONSIBILITY REPORT



中国石化上海石油化工股份有限公司
SINOPEC SHANGHAI PETROCHEMICAL COMPANY LIMITED

(A joint stock limited company incorporated in the People's Republic of China)

Stock code: 00338 Hong Kong 600688 Shanghai



CORPORATE MISSION

To Provide Energy For Better Living

CORPORATE VISION

To Build A Domestically Advanced
and Globally First-Class Petrochemical
Company

CORPORATE CORE VALUE

People, Responsibility, Integrity,
Precision, Innovation, Shared Value

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Address by Chairman of Board



Under general situations that the global economic structure was still in the state of adjustment, the petrochemical industry in China has generally maintained stable operations over the past year, with main product consumption increased steadily and the benefit of oil refining improved. However, the factors that affect economic running of the petrochemical industry still existed, for example the investment was decreasing, new economic growth points were yet to be created and the whole industry still presented a tendency of bottom building and consolidation.

Sinopec Shanghai Petrochemical Company Limited (hereinafter referred to as "SPC") has taken corresponding measures to positively cope with the fierce situations of international oil price turbulence and fluctuations and increasingly grim market

competitions over the past year, attempting to be the pace setter of transformation and structural adjustment and striving to focus on safety & environment, production operations, elimination of hidden risk, and reduction of cost and expenses. As a result, SPC has successfully accomplished various production operation assignments, with a historical breakthrough achieved in our total profit. Thusly, a good beginning has been achieved for the Thirteenth Five-year Plan. In 2016, SPC achieved operation revenue of RMB77.894 billion throughout the year; totally paid tax revenue of RMB14.223 billion, ranked third among the top 100 enterprises in terms of payment of industry tax in Shanghai. SPC provided energy support and premium quality products to the society and achieved total volume of principal commodities of 11.4634 million ton throughout the year.

While endeavoring to improve the operation performance, SPC incorporated fulfillment of social responsibility into each link of the production operation activities, was committed to "returning to the society with the best", focused on intensifying management of social responsibility, persisted in giving play to the industrial advantages, and promoted joint development of enterprise and local authorities and win-win cooperation with various parties, thusly devoting ourselves to social development.

SPC attached more importance to credibility and standardization, practically implementing legal operations and credible operations, abiding by the philosophy that "each droplet of oil means commitment", firmly setting up the concept of establishing the enterprise with credibility, governing the enterprise with credibility and revitalizing the enterprise with credibility, thusly setting up a good brand image for SPC.

SPC attached more importance to the work safety and environmental protection. SPC acted on the green development concept in an all-round way, broke down and implemented the main responsibility of work safety, significantly carried out reduction of pollutant emissions and regional environmental protection, enhanced hazardous chemicals management and maintained zero record of major incident of work safety and environmental pollutions. As a result, throughout the year SPC's discharge of industrial waste water was decreased by 15.97% on a year-on-year basis that of COD by 6.18%, total discharge of ammonia nitrogen by 6.17%, total discharge of SO₂ by 9.74% and total discharge of NOx by 7.27%, thusly satisfactorily accomplishing the annual targets.

SPC attached more importance to innovation-driven development. Our intelligent plant construction has been successfully included into the national intelligent plant demonstration projects. SPC focused on research & development and marketing of high value-added new products. In total, 237.1 kt new products were developed and produced by SPC throughout the year. We applied for 55 patents and obtained 36 patent licenses.

SPC attached more importance to broad cooperation with all sectors of the society. We paid high attention to investors' relationship management and stressed protection of medium and small investors' rights and interests. SPC kept on making innovations to the contents and forms of the "public open day"

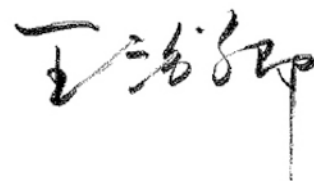
program and carried out extensive cooperation on environmental governance with surrounding regions. We persisted in common development of stakeholders of the supply chain, thusly forming a new pattern of win-win through cooperation.

SPC attached more importance to assuring employees' immediate interests, advocated the concept of "improving benefit for the company and increasing value for employees", and unblocked the routes for employees' development by providing an equal development platform of development for employees, thusly maintaining harmony and stability of corporate development environment.

SPC's efforts and dedication were recognized by the society. In 2016, SPC was awarded with many titles of honors, including the best technological innovation breakthrough prize of the "12th Five-year Plan" in the national chemical fiber industry, news publicity model unit, "public open day" program demonstration unit and etc. SPC employee Lu Dingliang was awarded with the title of the first batch of craftsman in Shanghai. SPC scored 80 points in social responsibility development indicator at the second session of China (Shanghai) listed companies' corporate social responsibility summit meeting in 2016, thusly was honored with one of the six highest grade "Five-star Enterprise of Social Responsibilities".

The highest eminence is gained step by step. Look ahead into 2017, we will follow the objectives of "the Thirteenth Five-year Plan", unswervingly implement the development strategy of being "led by value, and driven by innovation, making overall arrangement of resources, open cooperation and green low carbon development", focus on improving the quality and benefit of development, refine the work measures and take the initiative to create new advantages of enterprise development, thusly building a satisfactory world class energy and chemical company.

While we look back the past, SPC's development is closely connected with all staff's joint efforts and endeavor, as well as with great support of all walks of the society. We sincerely appropriate all friends from all sectors of the society for their understanding, concern and support. Look ahead into the future, we will continue making unremitting endeavor to devote ourselves to realization of China Dream. We sincerely expect that all walks of the society can continue keeping a watchful eye on our updated dynamics. Let's join hands for a glorious future.



15 March 2017

2016 responsibility performance sheet



Economics

Indicators	Unit	2016	2015	2014
Total assets	Billion RMB	34.124	28.022	31.146
Operating revenue	Billion RMB	77.894	80.803	102.183
Total profit	Billion RMB	7.765	4.209	-0.914
Quantity of applications for invention patent	piece	55	53	53
Customer satisfaction	%	96.22	95.33	95.7
Spot check compliance rate of products	%	100	100	100
Online procurement rate	%	100	100	100
Direct supply from manufacturers	%	97.5	97.6	95.3
Contract performance rate	%	100	100	100
Ratio of suppliers obtaining ISO14000 environmental management system certification	%	38.61	34	30.46

Society

Indicators	Unit	2016	2015	2014
Total tax paid	Billion RMB	14.223	16.028	12.228
Coverage rate of anti-commercial bribery training	%	100	100	100
Proportion of informal employees	%	10.33	9.96	12.05
Proportion of female employees	%	26.47	27.6	28.92
Labor contract conclusion rate	%	100	100	100
Coverage rate of collective contract	%	100	100	100
Social insurance coverage rate	%	100	100	100
Proportion of female management staff	%	17.81	16.65	16.5
Incidence of occupational disease	%	0	0	0
Number of occupational safety and health trainees	person	8798	7258	7756
Coverage rate of physical examination	%	98.92	98.55	98.36
Input into relief of poverty-stricken employees	1,000 RMB	1500	1700	3700

Safety

Indicators	Unit	2016	2015	2014
Annual mortality rate of employees, work injuries	%	0	0	0
Annual percentage of employees' serious injuries	%	0	0	0
Number of major incidents of fire hazards and explosions	Pce.	0	0	0
Number of major incidents of environmental pollutions	Pce.	0	0	0
Number of major incidents of occupational hazards	Pce.	0	0	0
Major incidents of chemical spills	Pce.	0	0	0
Major traffic accidents	Pce.	0	0	0
Major liability incidents	Pce.	0	0	0
Mortality rate per million man-hours	%	0	0	0
Input into work safety	Million RMB	235.083	223.465	202.73

Environment

Indicators	Unit	2016	2015	2014
Total environmental investment	Million RMB	171.10	356.70	346.21
Comprehensive compliance rate of discharged waste water	%	100	100	100
Compliance rate of discharged waste gas	%	100	100	100
Appropriate disposal of solid wastes	%	100	100	100
Year-on-year change rate of COD discharge	%	-6.18	-0.69	-26.07
Year-on-year change rate of ammonia nitrogen discharge	%	-6.17	0.98	-14.81
Year-on-year change rate of SO ₂ discharge	%	-9.74	-4.08	-25.11
Year-on-year change rate of Nitrogen oxide discharge	%	-7.27	-9.63	-23.51
Year-on-year change rate of waste water discharge	%	-15.97	-4.00	-4.94
Year-on-year change rate of waste gas discharge	%	-2.88	-5.28	-6.35
Frequency (quantity) of major chemicals spills	time	0	0	0
Recycle rate of industrial water	%	97.38	97.38	97.30
Year-on-year water conservation (fresh water consumption)	KT	2240	750	3610
Comprehensive recycling volume of sludge	KT	15.3	20.6	21.3

Company Profile

Located in Jinshanwei, Jinshan District, Shanghai, Sinopec Shanghai Petrochemical Company Limited (hereinafter referred to as "SPC" or "the Company") is one of the largest comprehensive petrochemical enterprises with integration of refining and chemical industry in China. As an important base for development of modern petroleum and chemical industry in China, SPC owns independent utilities and environmental protection system as well as associated transportation facilities, including ocean transport, inland waterway channels, railway transportation and highway transportation. SPC's predecessor is Shanghai Petrochemical Complex founded in 1972. SPC got listed on the stock market in Shanghai, Hong Kong and New York as one of the first batch of pilot enterprises transformed into joint stock enterprises in 1993. At present, the total stock capital of SPC is 10.8 billion shares, in which China Petroleum & Chemical Corporation has 5.46 billion A shares, accounting for 50.56% of the total stock capital. There are 7.305 billion (A shares) domestic RMB ordinary shares, accounting for 67.64% of the total stock capital and 3.495 billion foreign shares (H shares) listed on overseas stock market, accounting for 32.36% of the total stock capital.

Presently, SPC's products cover four major varieties, including the oil refining products, chemical products, plastics and synthetic resin and synthetic fiber, of which the oil refining products include gasoline, diesel, jet fuels, LPG and etc.; chemical products include ethylene, propylene, butadiene, pure benzene, p-xylene, PTA, ethylene glycol, ethylene oxide, vinyl acetate, and etc.; synthetic resin and synthetic polymer products include polyethylene, polypropylene, polyester, polyvinyl alcohol and etc.; synthetic fiber products include acrylic fibers, polyester staple fiber, polyester filament yarn and etc. SPC considers East China region, one of the rapidest economic development regions within China, as its main product market, and positively develops overseas market. In 2016, SPC has complied with the "comply or explain" provisions set out in the Environmental, Social and Governance Reporting Guide set out in Appendix 27 to the Rules Governance the Listing within Securities on its Stock Exchange of Hong Kong Limited.



Development strategy

SPC positively carried out the development concept of “innovation, coordination, green, open, and sharing”, unswervingly implemented the development strategy of being led by value driven by innovation, making overall arrangement of resources, open and cooperation, and green low carbon development”, adhered to the enterprise mission of “To provide energy for better living”, followed the national general development strategy and industrial layout strategy, gave equal consideration to

both low cost and differentiation, laid equal stress on large-scale and refinement, placed particular emphasis on low cost and large scale in upstream layout and high added-value and refinement in downstream layout, gave full play to SPC’s advantages of broad product chains and products which are diversified and close to market. SPC was committed to becoming an enterprise satisfactory to people, a world-class enterprise and a green and high-efficient energy & chemical enterprise.

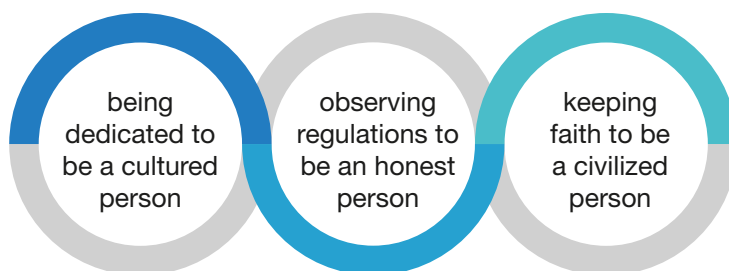
Corporate culture

Considering “Jinshan Spirit” of “Entrepreneurship, Pragmatism, Solidarity, Dedication” as the spiritual ties to rally and motivate all staffs, inheriting the work philosophy of “challenging the advanced, performing fine management” and adhering to the cultural gene of not being constraint of by enclosure, carrying no historical mental burden, seeking no excuses and being brave to shoulder responsibilities, SPC pushed forward sustained innovations and efficiency improvement; With the pioneering spirit of being vigilant in peace time and struggling for realization of objectives, with the realistic style of advocating

science and innovation, with the enterprising consciousness of seeking perfection and striving to be the best and the concept of harmony of serving the society and benefiting the employees, SPC pushed forward continuous creation of excellence; By practicing the occupational code of “being dedicated to be a cultured person, observing regulations to be a honest person and keeping faith to be a civilized person”, SPC guided staffs and employees to enjoy working and live a healthy life, and realize self-value in satisfying the enterprise and others for mutual benefit and win-win purpose.



Professional Norms



Corporate governance

Since the reform of joint-stock system in June 1993, as the core and basis of SPC governance and regulations, SPC Articles of Association have successively undergone multiple amendments in accordance with the continuously revised contents of such laws and regulations as the Rules Governing the Listing of Securities on the Stock Exchange of Hong Kong Limited and the Rules Governing the Listing of Securities on Shanghai Stock Exchange as well as the Corporate Law, the Securities Law, the Code of Corporate Governance for Listed Companies, Comments on Standardization of the Shareholders' Meeting of Listed Companies and Guidelines for Articles of Incorporation of Listed Companies. Centering on the Articles of Association, SPC has gradually established and improved related rules of procedure and the detailed implementing rules, thusly forming a corporate governance regulatory system with complete structure and effective implementation, which have become the guidance for standardized corporate operations.



Shareholders' general meeting

In total held 2 sessions of shareholders' general meeting in 2016



Board of directors

In total held 6 board meetings, 5 sessions of BOD special committee meeting in 2016



Board of supervisors

In total held 6 sessions of the board of supervisors meeting in 2016

Articles of Association of SPC

Rules of Procedure for SPC shareholders' meeting

Rules of Procedure for SPC BOD

Rules of Procedure for SPC Board of Supervisors

Rules of Procedure for SPC BOD Audit Committee

Rules of Procedure for SPC BOD Compensation and Appraisal Assessment Committee

Rules of Procedure for SPC Nominating Committee

SPC Independent Director Working System

SPC Handbook of Internal Control

Responsibility Management

SPC built the corporate social responsibility management framework in accordance with the triple bottom lines principle and the theory of social responsibility management and performed the corporate social responsibility in such six aspects as the responsibility strategy, responsibility governance, responsibility incorporation, responsibility performance, responsibility communication and responsibility capability in an all-round way.

Responsibility strategy

SPC incorporated the performance of corporate social responsibility into the development strategy, considered “develop enterprise, contributing to the state, returning to shareholders, serving the society and benefiting employees” as the enterprise objectives and “credibility and standardization, cooperation for win-win” as the operation philosophy to promote the corporate innovative development, green development and low carbon development. In the meantime, SPC worked out the targets of Thirteenth Five-year Plan and annual development for the corporate social responsibility and established the process-and-value maximization-based performance assessment system based on maximization of process and value to facilitate realization of the corporate social responsibility targets.

Responsibility governance

SPC kept on improving the mechanism of management system for corporate social responsibility, perfecting the management framework consisting of a corporate social responsibility steering group, in which the chairman of the board acts as the group leader and directors of all departments concerned work as the group members, and an implementation level undertaken by various function departments. SPC continuously improved various rules and regulations on corporate social responsibilities, incorporated the corporate social responsibility system into production operation management system and ensured implementation of the corporate social responsibility strategy. SPC's corporate social responsibility steering group conducted overall design of the framework for social responsibility management process, identified the strategy process, core process and key supporting process, sorted out the higher and lower level of various business processes and their mutual relationships and defined the medium-term and long-term management optimization targets and directions.

Work mechanism of corporate social responsibility (CSR)



Responsibility Incorporation

SPC implemented the strategy of “Seven Major Incorporations” by incorporating the corporate social responsibility with strategic decision-making, routine management, investors’ relationship management, crisis management, green supply chain, employee management and co-construction of community.



Incorporate with safety management

In the activity titled “I diagnose the safety” developed by SPC, all staffs tried their best to find out the major risks on the post and set up the safety concept of identifying major risks, eliminating major hidden risks and avoiding serious incident, thusly improving all-staff safety capability control level. SPC Advocated post compatible safety operation skills. A set of effective safety supervision and management mechanism were in place to ensure SPC’s stable operations.

Responsibility Performance

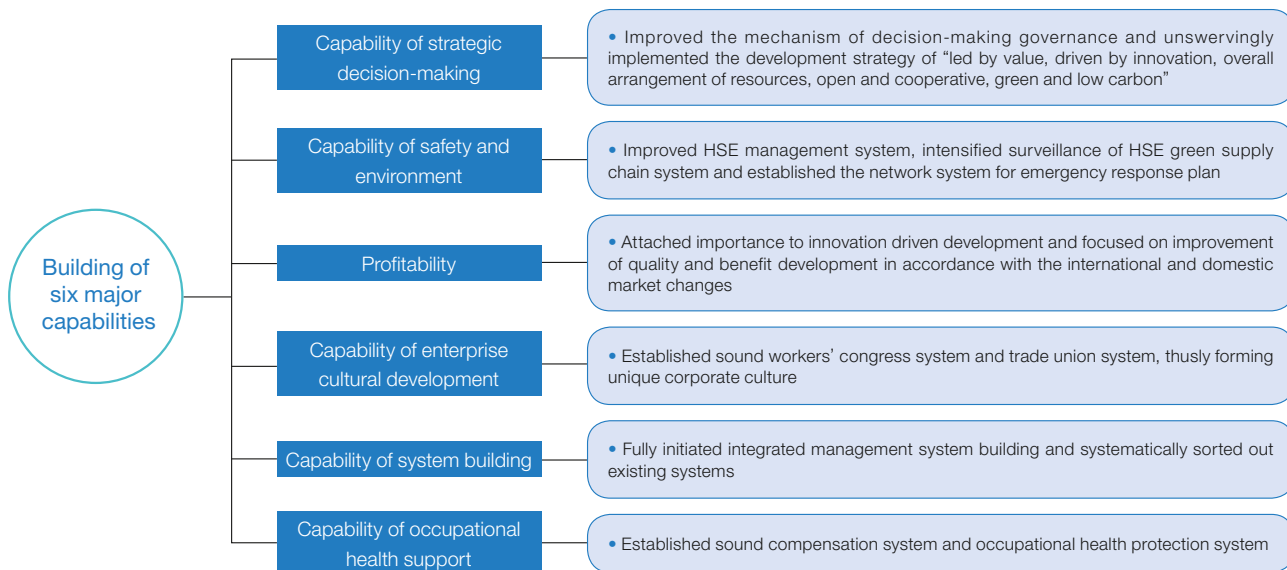
SPC incorporated the advantages of advanced corporate social responsibility criteria both at home and abroad and prepared the corporate social responsibility assessment indicator system in combination with our own industrial characteristics. Besides, SPC kept on improving the assessment indicator system and performance management system through PDCA management mode.

SPC scored over 80 points in social responsibility development indicator at the second session of China (Shanghai) listed companies’ corporate social responsibility summit meeting in 2016, and thus was honored with one of the six highest grade “Five-star Enterprise of Social Responsibilities”.



Responsibility capability

SPC carried out building of “Six Major Capabilities of Responsibility” to improve the corporate responsibility management capability level by focusing on such six aspects as strategic decision-making, safety and environment, profitability, enterprise cultural development, system building and occupational health protection.



Communication of responsibilities

Stakeholders include governments, shareholders, customers, suppliers, employees and communities. Stakeholders' participation and support are the important momentum for SPC's robust growth and sustainable development. Through establishment of diversified CSR communication channels, including such traditional media as official website, Xinjinshan Weekly, SPC TV Station, SPC Mobile Phone Newspaper, SPC online, Jinshan Business Management Magazine and

etc. as well as new media like WeChat, Micro-blog and etc. as well as the communication ways like the Public Open Day and corporate social responsibility report, SPC released the progress of CSR related system building and implementation to the stakeholders, listened to appeals from all parties and accepted reasonable recommendations, thus establishing the relationship of win-win cooperation of mutual support and mutual benefit.



Communication ways

- Policy guidance
- Supervision and inspection
- Special subject exchange
- Routine exchange

Communication ways

- Shareholders' meeting
- Corporate announcements
- Regular reports
- Investors' exchange

Communication ways

- Suppliers' meeting
- Bidding meeting
- Commendation of excellent suppliers

Communication ways

- Public benefit activities
- Public visit day
- Volunteer service
- SPC exhibition room

Communication ways

- Customer visit
- Marketing of new products
- After-sale service
- Satisfaction survey

Communication ways

- Workers congress
- Trade union
- Youth League Committee
- Employees' activities
- New media



Honors of responsibility

National level



- SPC scored 80+ points in 2016 CSR development indicator, thusly becoming one of six highest grade CSR Five-star enterprises



- Wang Zhiqing, SPC chairman of the board and GM was awarded with "2015 Sustainable Innovation Leader Prize"



- SPC was awarded with the best technological innovation breakthrough prize of "12th Five-year Plan" in national chemical fiber industry



- SPC employee Xu Jianwei was awarded with the national May 1st Labor Medal



- SPC two inventive patents filled the gap of domestic Cast Polypropylene (CPP) feedstock



- YGH041T special material product produced by SPC has been listed into the international premium quality product directory by international PE100+ association for consecutive 3 years

Shanghai level



- SPC employee's reasonable recommendations were awarded with 2015 Shanghai Employees' Reasonable Recommendation Project Innovation Prize



- SPC Plastics Segment was awarded with "Shanghai Municipal May 1st Labor Medal"



- SPC employee Lu Dingliang was awarded with the title of the first batch of "Shanghai Craftsman"



- SPC was granted with the honorary title of "Model Unit of Patriotism and Supporting the Army" in 2016

Group level



- SPC was granted with the title of SINOPEC Public Visit Day Demonstration Unit."



- SPC 2# PE Complex won first prize in comprehensive contest of Sinopec similar units.



- SPC Senior Entertainment Center was granted with the honorary title of Sinopec Group "Five Virtues" elderly entertainment center.



- SPC was awarded with the model unit of Sinopec 2015 quality control medal.



- SPC was granted with the title of model unit of Sinopec Group's "6th Five-year Law Dissemination Plan"



- SPC employees were awarded with Min Enze Youth Scientific & Technological Talents Prize three times; and Sinopec Expert Title of Outstanding Contributions twice



- SPC 4 projects were awarded with the 2nd and 3rd prize of Sinopec scientific & technological advancement and first prize of technological invention, respectively



- SPC won 1 gold medal and 1 silver medal in 2016 Sinopec Xylene operators occupational skills contest



Revitalize Petrochemical Industry with Innovative and Pragmatic Mindset

As one of the large-sized comprehensive petrochemical enterprises in China, SPC has always been persisting in considering technological innovations as prioritized driving force, has always been pursuing customer satisfaction and has always been committed to providing the best products and service to the society. SPC has always been specialized in guiding the company to step on the track of medium-and-high-end development through building smart plant and pushing forward reform of production mode and control mode.

- Secure product supply
- Deepen quality for business promotion
- Make innovations in Petrochemical Technology
- Build smart plant

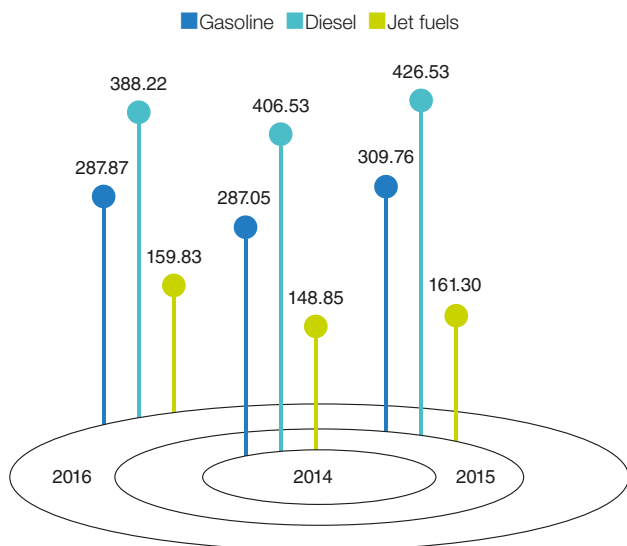


Secure product supply

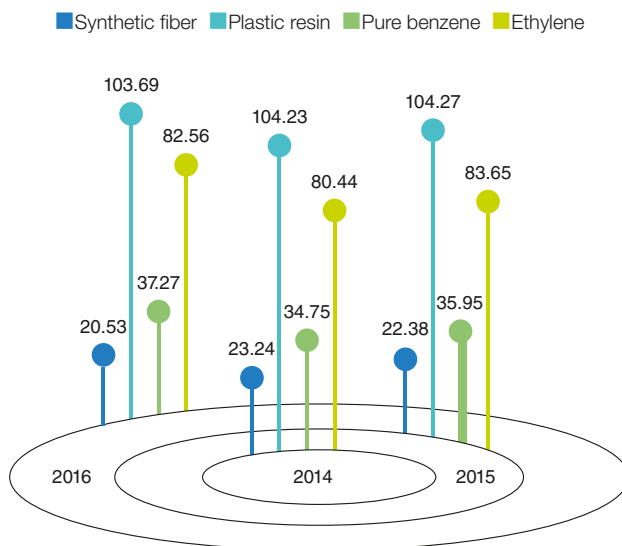
In 2016, SPC further improved the stability of production operations, extended the operation cycle of production units, enhanced management and assessment of production operations, completed the company main technical and economic targets.

In 2016, SPC all mogas and road diesel products reached national V standard. Besides, SPC supplied various basic chemicals, plastic products and fiber products, with the products involving the people's basic necessities of life.

SPC main petroleum product output (10 KT)



SPC main chemical product output (10KT)



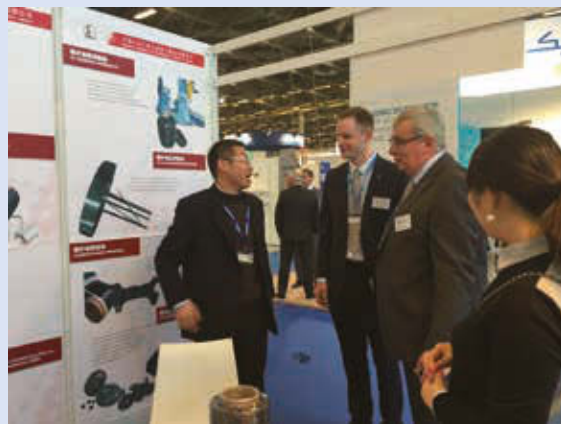
SPC secured oil product supply under extreme climate

Shanghai was affected by extremely low temperature climate early 2016, when national V standard 0# diesel with condensation point of 0°C was prevailing in the market. SPC urgently produced 3,300 tons of national V -10# diesel with condensation point lower than -10°C, thusly significantly secured premium diesel supply under cold weather in Shanghai.



SPC polyester products received international attention

At the international exhibition meeting of non-woven fabrics held by American Non-woven Fabrics Association in Boston in May 2016, the heavy metal-free environment friendly polyester, biodegradable polyester, flame retardant polyester, hydrophilic polyester and other environment friendly polyester products developed by SPC received attention of exhibitors and visitors from all over the world.

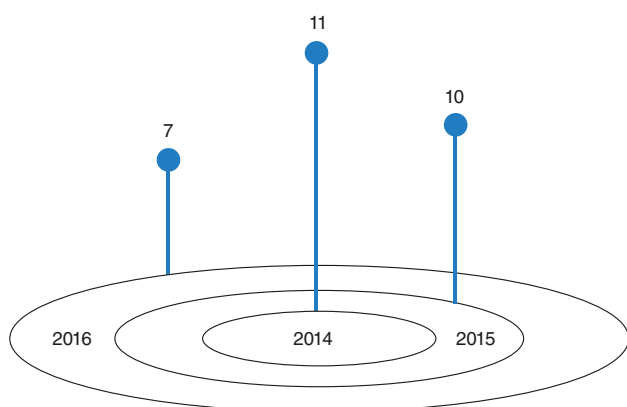




Improve process management system

SPC revised and improved the process management system in 2016 through strictly implementing various standards of process technology management as well as the performance assessment and management of process technology, thusly promoting continuous improvement of process technology management level. Among 83 main technical and economic indicators incorporated into the list of performance assessment, 41 items of indicators were better than last year, with the progress rate of 49.40% on a year-on-year basis; 18 items reached the advanced level in industry, with the industry advancement rate of 21.69%.

Frequency of unplanned stops(time)



Keep on carrying out production optimization management

While continuing with the material balance and optimization of feedstock allocation in 2016, SPC further carried out production optimization management from multiple aspects, so as to stet supply of energy and chemical products, thusly improving the profitability.

SPC measures of production optimization management in 2016

Placed particular emphasis on crude oil distribution, ethylene feedstock and reforming feedstock, hydrogenation of residual oil and the feedstock of two sets of hydrocracking units, properly conducted optimization of feedstock allocation.

Made rational arrangement for operation of the hydrogen system, hydrogen production unit and hydrogen pipe network, followed up and analyzed the operation data every day, made optimization and adjustment in a timely manner.

Conducted real time follow-up and supervision of the key operation data and process indicators for the principal unit and performed dynamic optimization and adjustment in a timely manner.

Carried out production optimization in combination with the whole process optimization model of oil refining.

Timely adjusted the consumption in accordance with the cost estimates of natural gas, hydrogenation production with LPG and fuels, thusly achieving proper balance and optimization of fuel gas system.

SPC equipment operation management reached advanced level in industry

SPC 3.5 million t/a FCC unit was put into operation on November 29, 2012 and has always been maintaining operation state at high capacity. Through fine management and optimization of operations, FCC technical and economic indicators have kept on improving. It has been running for consecutive 1351 days and has created a record of the longest operation days in initial operation period.



Optimized production to reduce generation of plastic transition materials

In February, SPC integrated different types of polypropylene product chains through optimization of PP production lines to maintain balance and stability of three production lines, which had reduced the frequency of product grade switchover, thusly reducing generation of transition materials. The production of non-target products was reduced by 377 tons on year-on-year basis in that month.





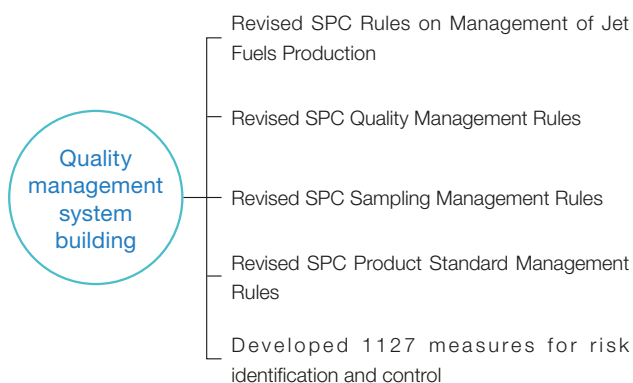
Deepen quality for business promotion



SPC complies with relevant national laws and regulations as well as those of Shanghai in relation to its production quality. In 2016, SPC took the opportunity of integrated management system certification to continuously improving and perfecting the quality management system, push forward the standardization management in an all-round way, control the quality risk throughout the life cycle, focus on improving the quality supply level and enhance the corporate competitiveness. The qualification rate of SPC product spot check reached 100%. There were no quality incidents at SPC throughout 2016 and no product callback took place with sold products due to quality issues.

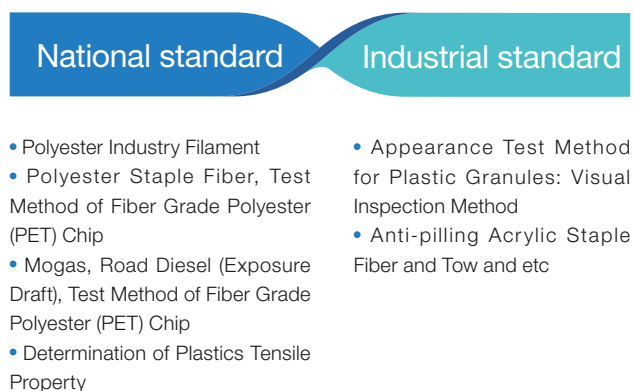
Continuously improve the quality management system

SPC has always been attaching great importance to building of the quality management system for long term and has developed standard quality verification and recovery procedure. Considering intensification of improving "Three Basics" as the fulcrum, SPC revised a batch of quality management rules in 2016, thusly ensuring the product quality from the perspective of regulations.



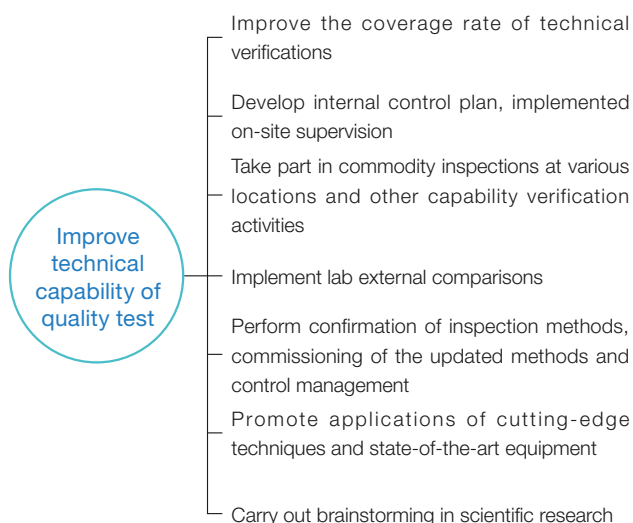
Push forward standardization management in an all-round way

In 2016, SPC further normalized the requirements for development and review of the product standards, improved the work process for confirmation of standard implementation and related record forms, drafted a batch of industrial and national standards, thusly promoting improvement of industrial overall quality level.



Improve technical capability of quality test

In 2016, SPC earnestly studied various factors affecting the accuracy of analytical data, improved the coverage rate of technical verifications, implemented internal and external quality control, technical brainstorming and scientific research to ensure accuracy of the analytical data.



Strictly control the quality risks

SPC focused on the quality supervision in accordance with the quality formation process and related elements, so that the product quality was always under control, the quality problems could be corrected and prevented.

YGH041T Product maintained the title of international premium product for consecutive 3 years

In 2016, SPC YGH041T special material product once more passed the premium product test organized by international PE100+ association and maintained the title of international premium directory product for consecutive 3 years.

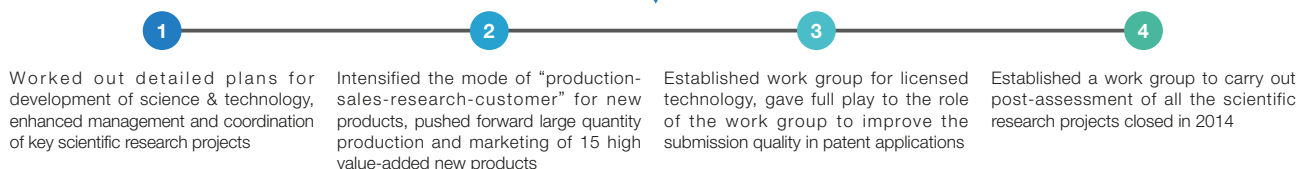




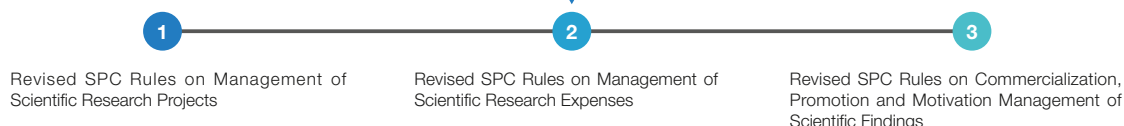
Make innovations in petrochemical technology

SPC looked at the direction of petrochemical industry transformation and upgrading, enhanced and improved the whole process management and performance assessment in scientific and technological innovations, so as to form a favorable environment for technological innovations continuously conquered technical barriers and scored remarkable achievements in development of cutting-edge technology and new products, thusly making contributions to improvement of China's comprehensive self-sufficiency rate of new chemical materials.

New Mechanism for SPC Development of Science & Technology



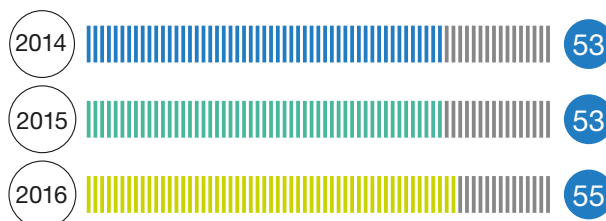
Building of scientific research management system



According to deployment of "2013-2020 Planning for Development of Fine Chemicals and Scientific & Technology", SPC made efforts to push forward development of carbon fiber and other key projects in 2016.

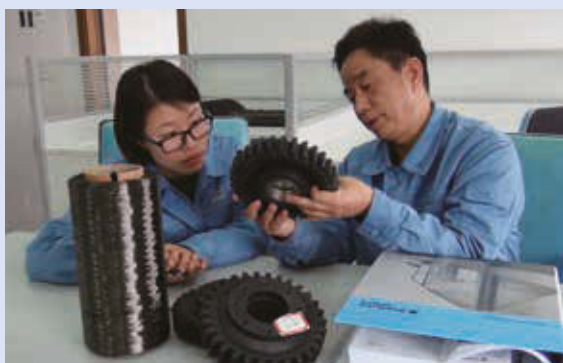
In 2016, SPC four scientific findings were awarded with above provincial and ministry level Science and Technology Advancement Prize, including 1 1st prize, 1 2nd prize and 2 3rd prizes.

Number of Inventive Patent Applications Filed by SPC over the Past Years



Application area of SPC carbon fiber products continuously got broadened

SPC's carbon fibers have been widely used for production of sucker rods, gears, sports goods and etc. and also made into various kinds of sheets and tubular products for repair of the corroded pipelines, repair of cracks on the dam, hanging of cables and reinforcement of various buildings and etc.



SPC was awarded with National Best Technological Innovation Breakthrough Prize in Chemical Fiber Industry

SPC was awarded with National Best Technological Innovation Breakthrough Prize of "12th Five-year Plan" in chemical fiber industry at the second council meeting of sixth committee of China Chemical Fiber Industry Association and the summit forum of "Going Global" of China chemical fiber industry on March 16, 2016



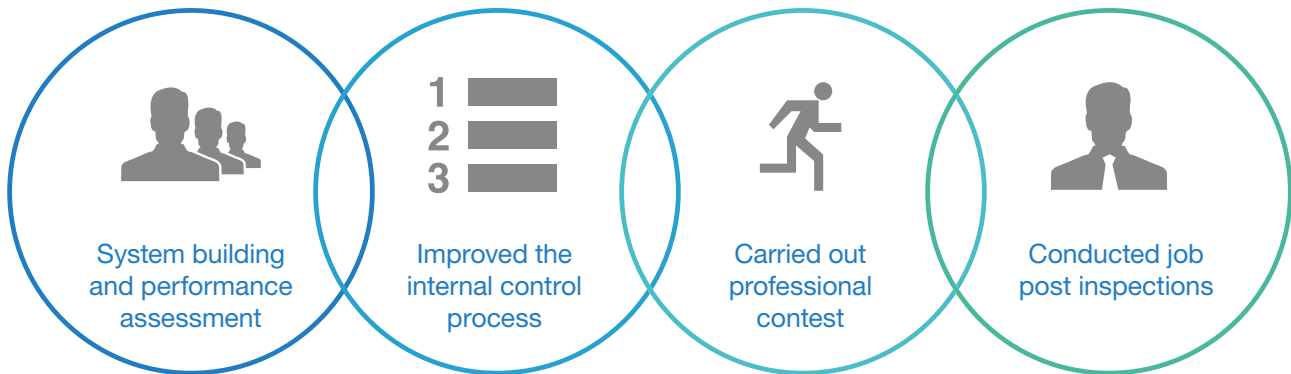


Build smart plant

Based upon the enterprise development strategy and information application platform, SPC proposed the smart plant construction project in 2016, which was successfully shortlisted in the national smart plant demonstration project. Considering the smart plant as the fulcrum, SPC pushed forward reform of the production mode and control mode, thusly facilitate intelligent transformation of SPC various businesses and leading SPC to step onto the medium and high end development track.

SPC was awarded with national innovation model prize for excellent enterprises integrating petroleum with chemical industry in 2016.

New measures for informatization management



- Revised and released 10 informatization management related by-laws, such as SPC Rules on Implementation of Informatization Management;
- Revised the detailed rules of assessment and rules on scoring, conducted the performance assessment on a monthly basis.

- Improved part of process related IT in internal control manual.
- Enhanced training and implementation.

- Organized and carried out IT training and contest.

- Conducted random inspection of information security for all units. Improved SPC overall information security.

Key points of smart plant construction



Launch of SPC statistical information management system

SPC comprehensive statistical information management system was officially put into service early 2016 and provided statistical data support to SPC production operations, management decision-making, cost accounting, assessment of technical and economic indicators and other related systems.



SPC pushed forward application of production management system

Early 2016, SPC initiated application of the production management system in main production units. New system substituted the ways of paper record and manual inspections with such modes as instrument testing, data uploading and information sharing. Besides, automatic alarm would be sounded in case of abnormal data.





Create Value through Integrity and Normalization

SPC is committed to operating business with integrity and normalization, so as to create value through cooperation with the customer and supplier. We are committed to jointly developing with our partners through providing premium quality and sufficient quantity of diversified products and meticulous professional service.

- Jointly create value with our customers
- Intensify management and control of supply chain



Jointly create value with our customers

Under the situations of economic growth shifting, faced with fierce industrial competition and increasing environmental protection safety pressure, SPC made innovations of optimization means for the production structure, smoothened the communication channels of production, supply and sales, optimized the assessment method for product measurement, established the mechanism of product information communication, ensured customer information security, thusly jointly creating and sharing commercial value with partners.

Make innovations of optimization means for the production structure

SPC upgraded the data management system for resources of market conditions and introduced the third party price forecasting model for plant margin benefit calculations in 2016, thusly providing decision-making support to optimization of product structure.

Increase the production of jet fuels to improve economic benefit

Faced with the market situations that the diesel demand was decreased and jet fuels demand was increased, SPC took such measures as reduction of diesel output and increase of jet fuels production to optimize the product mix and improve the economic benefit.



Optimize the assessment method for product measurement

SPC adopted the slip ratio as the assessment indicator of product measurement for the statistic center and chemical segment for the first time, thusly truly implementing fair measurement and operating with good faith.

EO loading and measurement for delivery



Smoothen the communication channels of production, supply and sales

Adhering to the principle of "determining the output by sales volume and promoting sales with production", SPC enhanced communication and contact with the professional sales companies, feedstock producers and transportation companies to balance production and sales.

Establish the mechanism of product information communication

In combination with production and marketing, SPC visited markets and customers, established the customer service hot lines, conducted survey of customer satisfaction, set up customer information feedback and other communication mechanism, thusly ensuring the product quality and extending forward the customer service work in 2016.

Secure supply at G20 summit meeting

Based upon the time nodes of G20 summit meeting in Hangzhou, SPC worked out different plans of sales and transportation in accordance with the production and inventory of various products and achieved coordination of production and marketing strictly in accordance with monthly plan, weekly arrangement and the principle of daily balance, thusly ensuring smooth production and marketing during the summit meeting.

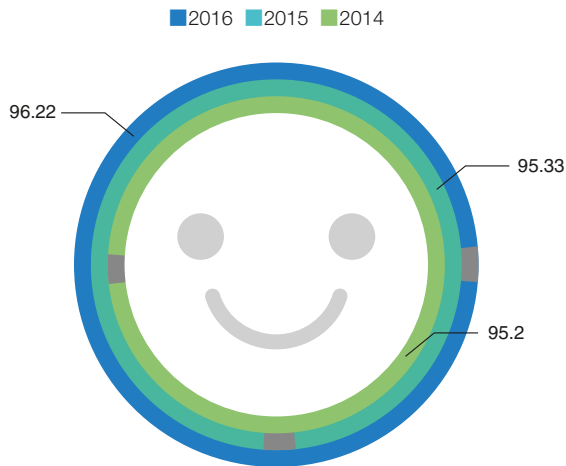
Visit market for marketing of premium products

In 2016, SPC's low-melting point PET chips product achieved very good economic benefit. The product manager and sales personnel successively visited Zhejiang, Jiangsu, Shandong and other places for collection of market demand information and understanding the product applications, introducing and marketing this product properties and extension space to customers through face-to-face communication and "zero-distance" contact.



In 2016, SPC continued enhancing the customer service process management, promulgated and implemented SPC Acrylic Fiber Product Callback System to guarantee customer benefit. As a result, the customer complaint resolution rate was 100%, sales contract performance rate 100% and the mean value of product satisfaction reached 96.22%

SPC mean value of product satisfaction (%)



Established channels of friendly communication with customers

- 1 Friendly reminded the customer of the qualifications in form of written fax or through telephones
- 2 Visited VIP customers to listen to their comments.
- 3 Based upon problems found in the customer visit, coordinated relevant units to tackle, solve these problems or give a reply.
- 4 Understood the customer's product application habit, characters and special requirements of various industries by way of questionnaire
- 5 Officially put the IC-card based delivery order management system into service and improved the customer service information system

SPC continuously enhanced product storage & transport management, found out the reasons, split the responsibilities and made rectifications in a timely manner for the problem of contaminated and wet packages of cargoes received by the customer.

Adopt the market segmentation mode of "separated storage and separated marketing"

Based upon different requirements of different industries and customers to the viscosity of product polyvinyl alcohol 100-27, SPC adopted the mode of "separated storage and separated marketing", subdivided the application market, enhanced management of various links from production, storage & transport to sales, thusly ensuring that customers bought products of their real demand.

Ensure customer information security

In 2016, SPC signed confidentiality agreement with every salesperson to ensure customer information security; organized multiple times of training courses about anti-commercial bribery and anti-illegitimate competition, with coverage rate reaching 100%; carried out special topic education lecture of integrity practice and knowledge examination; concluded 323 liability statements of integrity practice with the customer units.

Carry out Co-construction of Honest Administration





Intensify management and control of supply chain

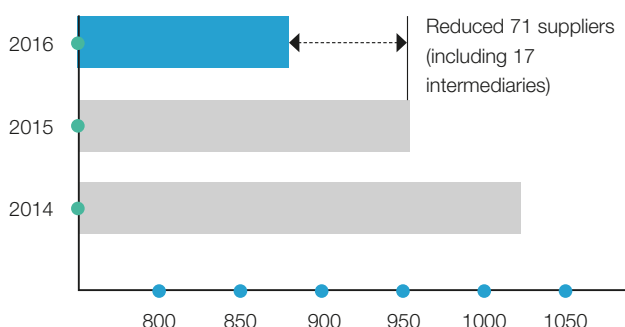
In 2016, SPC took the initiative to adapt ourselves to the new normal of economic development, strictly carried out audit and optimized the supplier structure; made the material procurement mode open and transparent; managed and controlled the material quality throughout the process; stored material by the supplier and optimized the inventory structure; intensified HSE system supervision of supply chain and upgraded the supply chain value in an all-round way.

Strict audit and optimization of supplier structure

In 2016, SPC optimized and integrated the expert resources of procurement, bid evaluation and site investigation of suppliers to promote the bidding quality; supplemented the expert team of supplier review to improve the suppliers' prequalification quality.

In 2016, SPC strictly controlled the intermediary procurement and prohibited multi-hierarchy agent. As a result, the manufacturer direct supply rate reached 97.87%; gave priority to selection of suppliers with higher star level by making reference to the dynamic quantification assessment result; intensified the strength of searching bottleneck type supplier and reduced materials of exclusive procurement; handled three default suppliers and eliminated inferior supplier.

Quantity of suppliers



Open and transparent material procurement mode

In 2016, SPC pushed forward the procurement modes, such as framework agreement procurement, procurement by invitation to bids, Internet platform procurement and etc., making the material procurement competition transparent and open, in which the rate of procurement by invitation to bids increased by 12.1%. SPC annual performance rate of procurement contract reached 100%; annual saving rate of procurement fund was 6.52%.



Control of material quality throughout the process

In 2016, SPC strictly controlled the material quality in terms of such three links as "focusing on the sources", "checking the process" and "highlighting the acceptance"; stressing implementation of warehouse-in quality control of such materials as bulky chemical feedstock, auxiliary three chemical agents and etc., as a result, the compliance rate of warehouse-in inspection reached 99.43%.

Storage of materials at supplier and optimization of inventory structure

In 2016, SPC developed the channel of "material storage at supplier", extended special storage of materials towards the storage mode of supplier's inventory and just-in-time supply, thusly scoring annual 87.04 million RMB material storage at supplier, far more than annual target.



Intensification of HSE system supervision of supply chain

In 2016, SPC improved the HSE system at department level and HSE responsibility system at all levels and intensified the carriers' routine HSE supervision and KPI assessment; enhanced safety education in the period of contractor mobilization to the logistics company, strictly performed and implemented the engineering project system of "report on safety supervision" and HSE major operation report system; enhanced the management activities of procurement, storage and handling of hazardous chemicals, properly conducted hazard identification and analysis of critical quantity.

In 2016, SPC rate of amount paid for green procurement reached 100% and the percentage of suppliers' passing ISO14000 environmental management system certification was 38.61%.



Develop Business Through Win-win Cooperation

As the first listed company listed on the stock markets in Shanghai, Hong Kong and New York, SPC strictly abided by the securities supervision rules and regulations of the listing exchanges, strictly executed financial audit system and information disclosure system, continuously perfected the governance structure, optimized operations, improved the investors' relationship management, so as to safeguard the investors' right and interest, improve the corporate business performance and realize win-win cooperation.

- Improve business performance
- Safeguard investors' right and interest

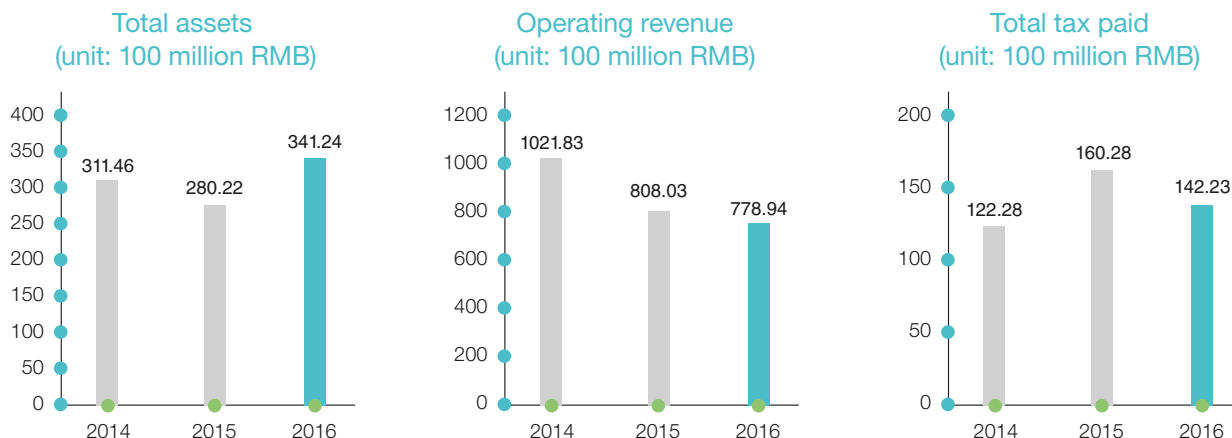


Improve business performance

In 2016, SPC actively coped with complicated market situations, took great efforts to implement safety and environmental protection, optimization of operations, market development and cost reduction by centering on SPC overall benefit. As a result, satisfactory effect was achieved in production operations and the economic benefit was significantly improved that at the same period of last year.

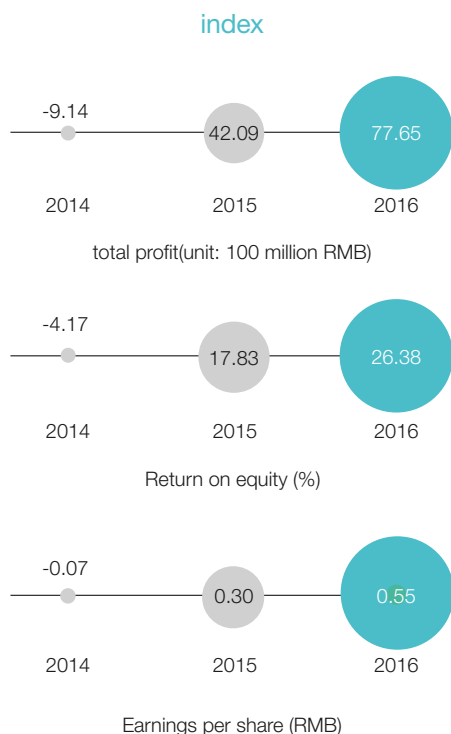
Business growth

From the perspective of growth, the market stress faced by SPC in 2016 was somewhat mitigated and the total assets was slightly increased.



Operation income

SPC focused on optimization & adjustment as well as cost reduction and benefit increase in 2016. As a result, the product profit was increased to some extent and the performance was further improved.



Financial security

From the perspective of safety, SPC's financial situations were good and its asset-liability ratio in 2016 was 26.65%.





Cost reduction and benefit increase

In 2016, SPC took multiple measures to reduce cost and increase benefit (such as system upgrading, technological improvement, production optimization, unity and cooperation and etc.), thus improving its market competitiveness.

System upgrading

SPC implemented the static elimination system upgrading and revamping project. After completion of revamping, SPC organized employees to learn the operation method, routine monitoring and troubleshooting of the new system and helped employees to understand new system as quickly as possible, which, on one hand, provided support to stable equipment operation and work safety, on the other hand, was favorable for improvement of the work efficiency.



Production optimization

Faced with the situations that the contract price of natural gas was higher than the LPG market price, the aromatics department actively communicated with relevant departments to substitute the natural gas with LPG as the feedstock of hydrogen production, thusly reducing the production operation cost.



Technological improvement

Through improvement of the process management method and the cleaning of the recovery reboiler, chemical department effectively reduced the polyvinyl alcohol combined device maintenance time and unit consumption, and also reduced the waste water discharge.



Unity and cooperation

From January to April, 2# oxidation unit of Polyester department organized the technological brainstorming activity for cost reduction and efficiency improvement, with participants including department leaders, personnel from discipline offices, oxidation unit and various discipline lines, which achieved remarkable effect of potential tapping and benefit increase.



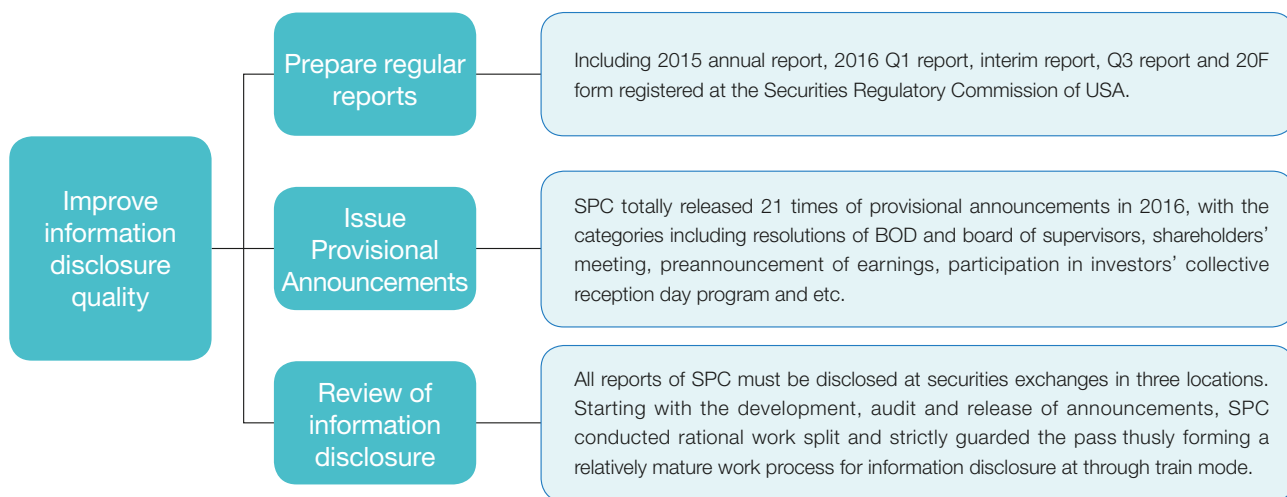


Safeguard investors' rights and interests

In the course of improving business performance, SPC persisted in assuring the quality of information disclosure, enhanced communication with investors and safeguard the investors' right and interest.

Assure information disclosure quality

Adhered to the principle of authenticity, accuracy, timeliness and integrity of the information disclosure, concurrently followed the requirements of information disclosure raised by various exchange supervision organizations, coordinated SPC various departments to push forward information disclosure in an orderly way in accordance with specific requirements raised by chairman of the board at preparatory meeting concerned.



Improve investors' relation management

SPC highlighted maintenance of good relationship with investors and attached importance to building a communication platform with investors.

Totally received visits of over 200 domestic and foreign institutional investors in 2016, increased by 50% on a year-on-year basis.



A low-angle photograph of a large industrial facility, likely a refinery or chemical plant, featuring tall distillation columns and complex piping. The scene is set against a clear blue sky. In the foreground, a large, stylized green leaf graphic is superimposed, partially obscuring the lower part of the industrial structure. The leaf has a gradient from light green to dark green and a white outline.

Precision operations, safety and green development

SPC strictly implemented the work safety management system, continued pushing forward energy saving and emission reduction as well as regional environmental governance, kept the record of zero incident of work safety and environmental pollutions for consecutive years. SPC adhered to the concept of green development, kept on pushing forward green and low-carbon transformation development, thusly making contributions to adaption to climate change.

- Strengthen safety management
- Intensify environmental protection
 - Develop recycling economy
 - Promote green development

Strengthen safety management

SPC complies with relevant national laws and regulations as well as those of Shanghai to protect employees from occupational hazards. SPC strictly implemented work safety management system, pushed forward HAZOP analysis in an all-round way, completed first round of leakage detection and repair, fully tapped wisdom of the first line staffs, enhanced work safety training to employees, thusly practically ensuring safe operations. SPC improved the emergency management organization framework building, built the network system of emergency response plan, carried out emergency linkage for regional work safety, intensified emergency drill of safety to improve emergency response capability.

In 2016, SPC maintained the target of "Seven Zeroes" for employees' annual mortality of occupational injury, employees' annual serious injury rate, major incident of fire hazards and explosion, major incident of environmental pollutions, major incident of occupational hazard, major traffic accident and major incident of work safety responsibility.

Implement regular inspection of work safety

SPC strictly implemented the work safety management system by spot check of employees' HSE job responsibilities and learning status of various reported incidents on a regular basis, conducted daily HSE supervision inspections at the project construction site and effectively improved the safety factor of various operations, thusly ensuring safe project implementation.



Adhere to the system of shift leadership by leaders

SPC strictly an implemented the system of on-site leading of the shift by leaders for major operations and high risk operations. In 2016, SPC on-duty leaders totally led the shifts for 37 times, timely solving and rectifying work safety problems and hidden dangers, thusly ensuring the construction safety at the job site.



Improve network of emergency management organization

SPC established an emergency command center, under which there are command center office, expert group and discipline team for emergency response to be responsible for handling of major incidents at SPC. Various level-2 units established emergency command center and the unit workshop established the emergency command organization. Through improvement of emergency management network, organizational guarantee was provided for emergency rescue.



Push forward HAZOP analysis in an all-round way

In 2016, 240 SPC employees received HAZOP (Hazard and Operability Study) assessment popularization and training to provide basis for development of basic disaster prevention measures and emergency response plan through advance identification, analysis and assessment of potential hazard.



Fully tap the wisdom of frontline staffs

SPC collected the work safety practices of frontline workers in terms of safe operations, patrol inspections, shift handover management, optimization of process and etc. to publicize and disseminate the reproducible operation methods, so that they can better serve the corporate work safety.

SPC carried out the campaign of "I diagnose safety". First line staffs totally reported 6,074 diagnosis (recommendations), for which 1,732,900 RMB was awarded to these employees in 2016.



Strictly implement hazardous chemicals management system

SPC strictly implemented "five-dual" system for hazardous chemicals management, i.e. dual-person management, dual-lock, dual-person transportation, dual-person receiving and dispatching and dual-person usage.

SPC created archives of major hazard for hazardous chemicals, thusly implementing "one archive for one hazard".

SPC established carrier resource pool for hazardous chemicals to incorporate management of hazardous chemicals carrier into internal management scope, thusly improving the risk control for hazardous chemicals.



Complete first round of leakage detection and repair

SPC established a steering group, completed first round of leakage detection and repair and accomplished collection of sealing points and establishment of database for 84 units, with the sealing points reaching 635,400. As a result of detection, 650 leak points were found, 303 of which were repaired by way of fastening and replacement of valves, mechanical seals, plugs and gaskets. Leak points that are hard to be repaired will be repaired by chance of plant turnaround.



Implement cardification of emergency response plan

SPC manufactured “emergency response plan card”, which included such seven plans as comprehensive emergency response, special emergency response to fire hazard and explosion incident, special emergency response to hazardous chemical incident and etc., and indicated the key steps of emergency response, so that employees can learn the emergency response plans at any moment. Dedicated persons were sent to the positions to carry out all-staff training on use of the “Emergency Response Plan Card” as well as introductions and simulation operation of the handling steps of sudden events, so that employees can improve their emergency response capability.



Carry out emergency safety drilling

Based upon such frequency as once every six months for the company, once every quarter for level-2 units and once every month for unit workshop, as of November 2016, SPC had organized 896 times of emergency drilling, with participants reaching more than 14,000 person times, which significantly intensified the employees' awareness of work safety and improved the participation departments' overall capability of emergency response.



Carry out complete coverage of work safety training

In 2016, SPC invested over 400 million RMB for development of 100 sessions of safety trainings, with over 16,500 person participating the training and the coverage rate reaching 100%, which effectively improved the employees' awareness of work safety and emergency response skills.



Carry out trans-regional linkage for emergency response

SPC closely cooperated with Jinshan, Pinghu and other regions, intensified information communication, continuously established more orderly mechanism of linkage for emergency response of work safety, focused on intensification of trans-regional emergency response drill for long-distance pipeline leakage and etc., thusly realizing scientific response.



Linkage drill for emergency response of sudden incident of long-distance pipeline leakage between SPC and Pinghu City

Through simulation of long-distance pipeline leakage at real scene, drilled the trans-regional linkage procedure for emergency response to incidents, so as to test the emergency response plans of all levels, improve all departments' capability of decision-making and implementation of rapid response to sudden events, thusly further strengthening the emergency response linkage of various departments.



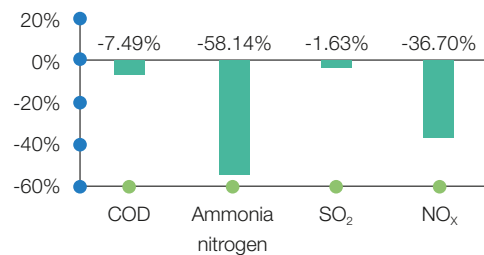
Intensify environmental protection

2016 was the year to finalize the top-level design of environmental protection for the “Thirteenth Five-year Plan”, in which many laws, regulations and policies were successively released, including the Atmospheric Pollution Prevention Law of the People’s Republic of China, the Environmental Protection Law of the People’s Republic of China, the State Council’s Circular on Print and Distribution of the Work Program for Control of Greenhouse Gas Emissions in the “Thirteenth Five-year Plan”, Circular on Print and Distribution of the Implementation Scheme for the License System of Pollutant Discharge Control Issued by the General Office of the State Council, the State Council’s Circular on Print and Distribution of the Comprehensive Work Scheme for Energy Conservation and Emission Reduction in the “Thirteenth Five-year Plan” and the Circular on Print and Distribution of the Scheme for Promotion of Producers’ Responsibility Extension System Issued by the General Office of the State Council.

SPC complies with relevant national laws and regulations as well as those of Shanghai to control hazardous and non-hazardous pollutant emission.

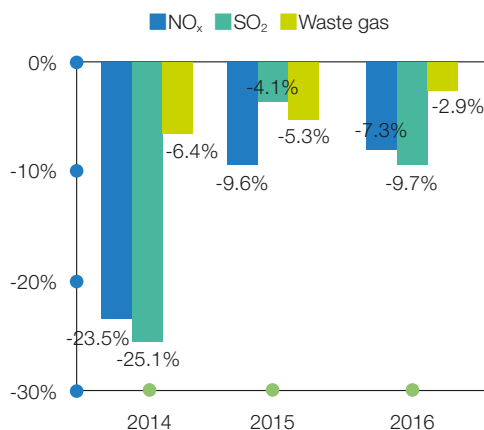
During the “Twelfth Five-year Plan”, SPC achieved remarkable effect in pollutant emission. Total emission of COD, ammonia nitrogen, SO₂ and NO_x accounted for 92.51%, 41.86%, 98.37% and 63.30% of total control target, respectively. Thusly, the task of emission reduction was overfilled.

SPC emission reduction rate of various pollutants in the “Twelfth Five-year Plan”

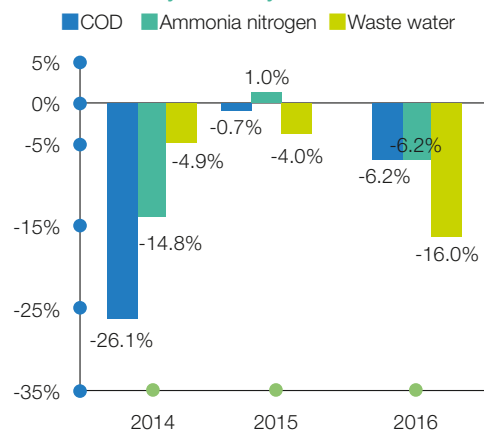


In 2016, SPC total investment input into environmental protection was 171 million RMB. Thanks to persistent endeavor, SPC discharge of various pollutants was decreased, the discharge of COD was decreased by 6.2%, ammonia nitrogen by 6.2%, waste water by 16.0%, waste gas 2.9%, NO_x by 7.3% and SO₂ by 9.7%, all on a year-on-year basis. The disposal rate of hazardous wastes reached 100%.

Changes of air pollutants discharge on year-on-year basis



Changes of water pollutants discharge on year-on-year basis



SPC entrusted various hazardous wastes generated from production to qualified hazardous wastes disposal contractor in accordance with the List of Hazardous Wastes Disposal Companies with Operating License released by Shanghai Administration of Environmental Protection. The transfer process was strictly in conformity with double draft system for transfer of hazardous wastes.

Boost key project construction of pollutant emission reduction

In 2016, SPC successfully completed construction of “Clean Water and Blue Sky” project and 11 comprehensive environmental improvement projects at Jinshan District and further improved SPC capability in waste gas, waste water and solid waste treatment. SPC’s revamping project of “one furnace and one tower” was completed and put into service. Discharge of SO₂ from both new and modified desulfurization units was controlled within 50 mg/m³.

Modifications of desulfurization and denitrification units for olefin startup boiler

This project was officially put into operations in June 2016. Online monitors were installed for complete online operation monitoring of desulfurization and denitrification units. The project is under strict control of Shanghai municipality. After the project is put into operation, the denitrification efficiency is about 80% and desulfurization efficiency 90%, which has reached domestically advanced level of technical treatment. It can reduce 151 t/a of soot emission, 71 t/a SO₂ and 303 t/a NO_x, saving accumulatively pollution discharge fees by about 1.53 million RMB.



Research & development and promotion of emission reduction technology

In 2016, the side line test of supergravity desulfurization technology achieved success at SPC refining units for the first time. The test success of this technology can not only remove the hydrogen sulfide component from the offgas with high efficiency and improve the sulfur recovery rate for sulfur recovery unit, but also reduce sulfur emissions, thusly providing valuable technical references for improvement of environmental operations of the refining units.



Actively participate in regional environmental protection

SPC actively participated in the comprehensive environmental improvement at Jinshan district. 18 comprehensive environmental improvement projects, which are planned to be implemented from 2016 to 2017, have all been initiated. Firmly completed comprehensive environmental improvement task, continuously improved the regional environmental quality. In 2016, SPC organized the 11th session of joint conference on environmental protection at the junction area of Shanghai and Zhejiang province to promote harmony between enterprises and local government.



Improve long-term mechanism of public open day

SPC held the first public open day program in 2013, for which accumulatively nearly 500 person were invited to visit SPC, so that SPC can receive public supervision. In total, SPC held 17 times of "Public Open Day" programs in 2016, retaining three resident representatives to work as the environmental supervisors, thusly demonstrating a wise, green and safe brand image to the public and erecting an important platform for communication between SPC and the public.



Develop environmental publicity and training activities

SPC organized and developed the project training specific to the production process, technical regulations and operation procedures, totally accomplishing 252 person of environment management training and 111 person of clean production audit training in 2016. SPC organized development of handy service for the public on the environmental day and distributed brochures of environmental protection knowledge, which had achieved satisfactory effect of environmental protection publicity.



Develop recycling economy

SPC vigorously boosted waste water recycling, waste gas recovery for clean production, technical revamping, material saving and efficiency improvement, promoted resource conservation and developed recycling economy, thusly implementing sustainable development.

Waste water recycling

By taking such measures as waste water recycling modifications, split flow of clean water and sewage at circulating water plant, centralized washing and increase of reuse water consumption, SPC intensified the water management and realized continuous decrease of total water consumption and water consumption of unit output value. As a result, the waste water recycling rate was significantly increased, the economic, social and environmental benefit of waste water recycling became remarkable.

Continuously push forward the waste water recycling modification project

Waste water recycling

Commissioning of waste water recycling modification project

Split flow of clean water and sewage

Implemented intermediate handover of improvement project for split flow of clean water and sewage at circulating water plant

Dedusting of return water

Replacement and modifications of coal dedusting unit and sprinkler facilities at boiler ash bunker

In-depth treatment

Modifications of waste water in-depth treatment and reuse plant

SPC's "Clean Water and Blue Sky" program---Since startup of the esterification waste water treatment system at polyester unit in May 2015, it has been stably operated for nearly four years. The COD value in waste water was decreased by over 80%, accumulatively 1108.59 tons of high-purity acetaldehyde and 160 tons of EG were recovered, which had realized "dual harvest" of environment and benefit.



In combination with the hidden danger handling at petroleum coke yard and coal/coke contaminated waste water treatment system, SPC upgraded the coal contaminated waste water treatment system. After treatment, part of the waste water is sent to some units for recycling, while the rest is used as the reuse water of the sprinkler system, which thusly can prevent and reduce generation of pollutants and achieve the objective of clean production.



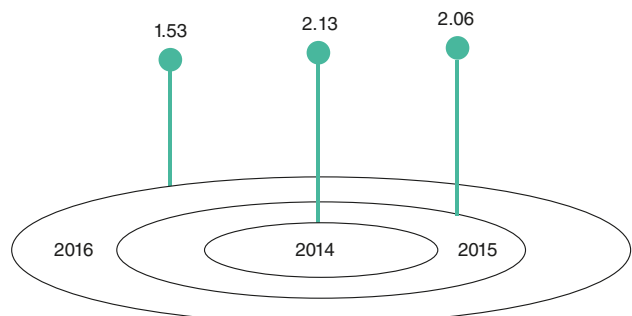
As one of SPC "Clean Water and Blue Sky" environmental governance program, old and new systems of waste water pipe network was successfully interfaced. The project installation and commissioning were completed in July 2016. After project completion, the external discharge of waste water met the requirements of split flow of clean water and sewage and environment friendly discharge.



Sludge recycling took on growth

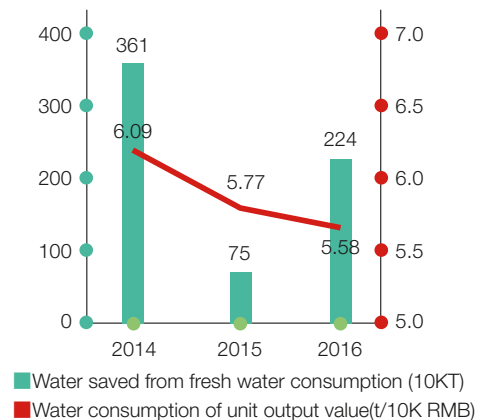
SPC took delicacy management measures to optimize and deepen the plant technology, improve the sludge treatment process, intensify recycling of sludge and other wastes. In 2016, the quantity of comprehensive recovery and recycling of sludge reached 15.3 KT.

Quantity of comprehensive recycling of sludge (10KT)

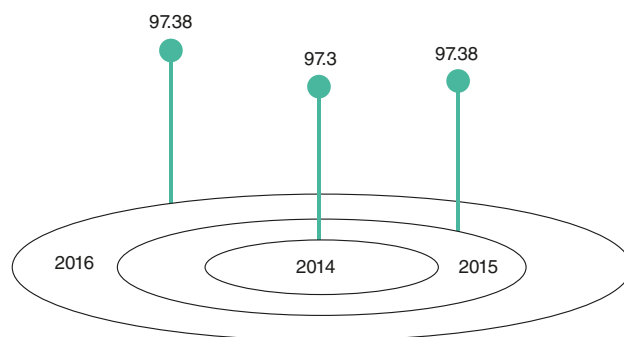




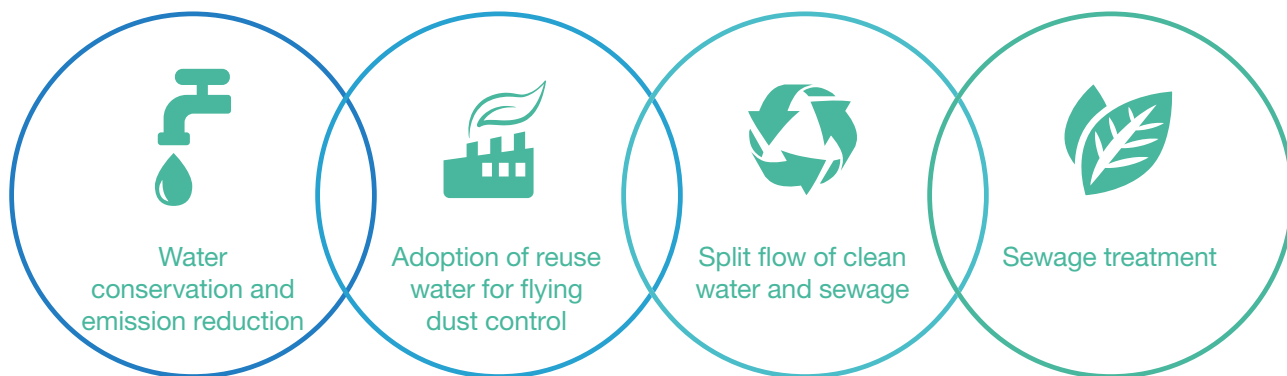
water saved from fresh water consumption and water consumption of unit output value



Repeated use of industry water (%)



Favorable benefit of waste water recycling



12 KTPA industry water is saved in waste water recycling modification project of water making system.

SPC used the treated reuse water for sprinkler system of the ash bank, which also reduced the secondary pollution to the environment while the cost was controlled. The flying dust was effectively controlled.

Through layout of pipeline with drainage capacity of 1300 m³/h and utilization of existing mixed sewage pipe network, the sewage of 9 production units was connected to the sewage treatment plant of environmental water affairs segment in the "SPC improvement project for split flow of clean water and sewage at circulating plant", which had significantly improved the compliance rate of externally discharged clean sewage.

Adopted the mode of centralized cleaning in equipment overhaul for centralized treatment of clean sewage, thusly avoiding the environmental pollution by sewage.

Waste gas recovery for clean production

Terminal oil and gas recovery unit takes the lead in China

SPC has synchronously considered the oil and gas recovery from the oil tanker in terminal revamping and expansion and constructed first set of domestic oil and gas recovery unit by adoption of domestic oil & gas recovery technology with proprietary intellectual right. Adequate considerations were given to the harmless treatment in oil & gas recovery, which achieved remarkable effect in energy conservation and emission reduction as well as clean production.



Offgas project of water vapor startup boiler

"The offgas project of olefin water vapor startup boiler" was put into service in May 2016. NO_x in the fume is converted to harmless nitrogen and water in the combined action of ammonia and catalyst, SO₂ in the offgas is absorbed by alkali liquor; Besides, additional waste heat recovery system was constructed for reduction of thermal energy loss.



Waste gas recovery unit contributes itself to clean water and blue sky

The waste gas treatment plant was officially put into operations. This project effectively improved the work environment at the tank farm, reduced VOC emissions and provided technical support to waste gas adsorption facilities.





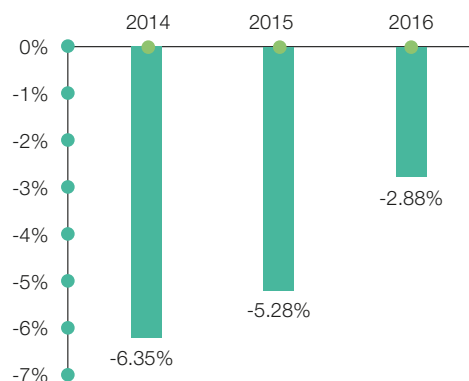
SPC further strengthen management over flare gas system intensified recycling of flare gas and promoted the goal of energy conservation and emission reduction.



low sulfur recycled by flare with a daily average of 4,687 Nm³ in 2016.

high sulfur recycled by flare with a daily average of 2,621 Nm³ in 2016.

Change rate of external discharge of waste gas on year-on-year basis



Technical revamping for material saving and benefit improvement

Extraction of intermediate distillate to increase jet fuels

The project of extraction of intermediate distillate for output increase of jet fuels by MP hydrogenation unit at SPC refining was successfully put into operations, which increased the output of jet fuels by 8 t/h.



Potential tapping for benefit improvement at oxidation unit achieved remarkable benefit

From January to May, the reuse of low-purity coarse material at SPC 2# oxidation unit was increased. As a result, the production cost per ton was decreased by 69 RMB. 5 tons of LP steam was saved per hour under identical capacity



Reduction of leaking stoppage cost through utilization of wasted paper scraps

SPC collected and recycled the wasted paper scraps to substitute wood shavings for leakage reduction of titanium tubes of the condensing turbine,



Reduction of steam and water consumption

Under the conditions of satisfying equipment anti-freezing and anti-condensation, steam and water consumption was incorporated into the competition and assessment indicators, which reduced the steam and water consumption.



Reduction of packaging scraps to boost benefit

SPC carried out labor contest for reuse of heavy-duty packing film, in which the uneven, broken and defective heavy packing films were reused as far as possible for reduction of packing wastes, which reduced consumption of heavy-duty packing film by 1%, i.e. 1 kg heavy-duty packing film consumption was reduced for packing of per 10 ton plastic products. As a result, the heavy-duty packing film save per month reached 800 kg.

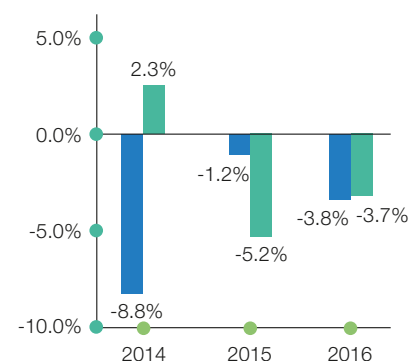


Boost green development

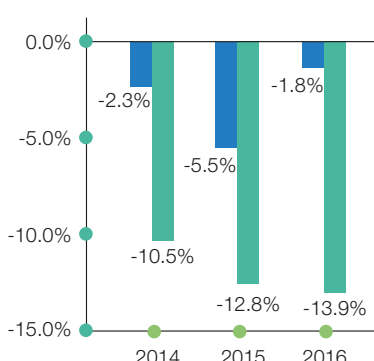
SPC intensified the energy saving and consumption reduction in the links of management, technology and production by continuously improving the energy utilization efficiency and actively practicing green and low-carbon development. SPC is dedicated to biodiversity protection and has continuously carried out ecological environment monitoring at Hangzhou Bay for consecutive years. SPC kept on intensifying the environment landscaping strength to improve the greening level.

Practically push forward energy conservation and consumption reduction

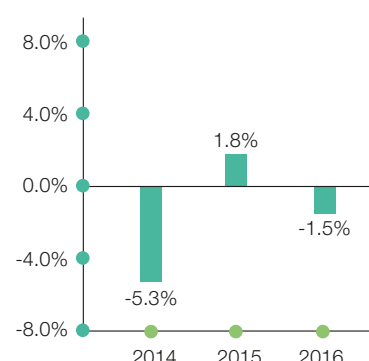
In 2016, SPC strengthened energy conservation management and technical energy conservation, passed the energy management review and obtained the certificate of energy management system certification. The total quantity of comprehensive energy consumption in 2016 was decreased by 3.8% on a year-on-year basis; the energy consumption of unit output value was decreased by 3.7% on a year-on-year basis.



■ Change rate of total consumption of comprehensive energy (%)
■ Change rate of energy consumption per unit of output value (%)



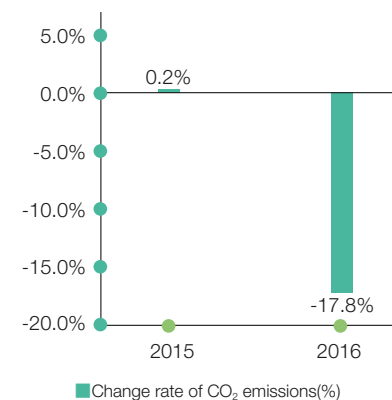
■ Change rate of coal consumption (%)
■ Change rate of natural gas consumption (%)



■ Change rate of Electricity consumption (%)

Actively carry out carbon investigations

In 2016, SPC intensified the awareness of carbon emission control and management, actively participated in the capability building like carbon emission series training and etc., coordinated with verifications of carbon emission and fulfilled the obligations of quota pay-up on time.



■ Change rate of CO2 emissions(%)

Ecological monitoring of intertidal zone at Hangzhou Bay

SPC has kept on monitoring and assessing the benthonic animal communities at the intertidal zone of surrounding sea twice every year for 40 consecutive years, tracking and observing the ecological situations of the sea, so as to protect the regional marine biodiversity.

Carry out tree planting and landscaping activities

SPC carries out tree planting and landscaping activities every year for co-construction of ecological SPC. In 2016, totally 1,213 nursery stocks and 1,550 m² lawn were planted in the tree planting and landscaping campaign, with landscaping area reaching 14,307 m². The total area of landscaping was about 2.54 millionm², the landscaping coverage rate was 36.3%, plant varieties 165, total quantity of tree-shrubs was over 800,000.





People Foremost, Benefit Employees

The company carries out health, safety and recreational and sports activities to care for employees so as to create an atmosphere where employees work happily and have a healthy life style. The company let employees share the enterprise development achievements and establish a creative training and promotion system so as to help its employees to grow up.

- Safeguard employees' rights and interests
 - Improve salary and welfare
 - Intensify occupational safety
- Facilitate employees' career development
 - Enrich employees' spare-time life

Safeguard employees' rights and interests



At present, the company has 11,088 employees, 24.27% of which employees have bachelor degrees and above and the employee quitting rate in 2016 is 0.69%. The company complies with relevant national laws and regulations as well as those of Shanghai and respects and safeguards employees' rights and interests including prohibition of employing child labourers or forced labours and protection of employee's privacy.

Improve the role of the workers congress, labor union and openness of factory affairs as a communication channel

The company used the workers congress, labor union consultative conference and openness of factory affairs to form a communication and negotiation mechanism for staff welfare and other major matters as well as problems concerned by staff.

Workers congress

The company promotes the employees' representative training system so as to improve the quality of proposals from the source, uses the employees' representative examination system, commitment system, incentive system and the care system to give play to "release of information from superior and report of the situation to the top" during the intersessional period and evaluates the degree of satisfaction of proposal implementation.



▲Fourth Session of 6th Workers Congress held by the company

Labor union

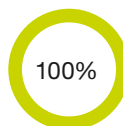
The company's management and the labor union hold an equal negotiation meeting on an annual basis to discuss such major matters as the collective contract and the welfare and attaches a great importance to the daily negotiation system so as to solve the problems concerned by employees in a timely manner.



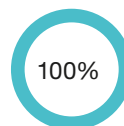
▲Representatives participating in workers congress

Openness of factory affairs

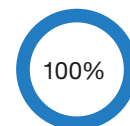
The company uses the policy information system as the main platform and the employee policy consultation hotline as the auxiliary platform so as to release information to employees and to listen to employees' suggestions and requirements. The company has obtained a title of "Shanghai advanced unit of openness of factory affairs".



Joining rate of Labor Union



Signing rate of collective contract



Social insurance coverage rate



Percentage of female management personnel

17.8%

Advanced female employees at municipal level or above

3 persons



Advanced collective of female employees at municipal level or above

1 award

Advanced collective of female employees at company level

9 awards

Equality for all employees

The company strictly prohibits discrimination against gender, region, religion, nationality and so on in relation to recruitment, salary, training and promotion and treat all employees equally.

Promotion of gender equality

The company has realized the practice of equal pay for men and women and signed a special collective contract for female employees. The company utilizes the quality improvement programme for female employees and training system for advanced female employees to promote the growth of female employees and to help them obtain development opportunities equal to those for male employees.



Improve salary and welfare

Salary system

The company complies with relevant national laws and regulations as well as those of Shanghai, pays the insurance and housing fund for employees and has established the incentive annuity and supplementary housing fund systems. The employees' salary increases with the growth of company's performance and the employees share the enterprise development achievements.

Holiday system for balancing work and life

The company tries its best to prevent employees from working overtime, pays for overtime working as per relevant regulations and establishes and improves the system of vacation with pay, leisure and recuperation as per relevant national laws and regulations as well as those of Shanghai.

Multiple Security System

The company established a multiple security system for poor employees: I. Pay the supplementary medical insurance premium for employees. II. Organize employees to participate in the Shanghai Workers' Mutual-aid Insurance Programme and provide allowances for them. III. Establish the company's employee mutual aid fund and improve its management rules.

Care for the life of different groups of employees

The company took various measures to care for the life of different groups of employees: Organize farewell meetings for retired employees and express appreciation for the employees at important festivals. Organize dinner party for left-behind employees at the Spring Festival. Carry out activities as "visit the worksite, listen to the youth, look for stars" and "Double-month Dorm Culture Festival".



▲ Wang Zhiqing and Gao Jinping expressing appreciation for the employees at the production line during the high temperature period

Intensify occupational safety

Ensure employee health

The company ensures employees' health via organizing physical examination, establishing health records and cooperating with famous hospitals to provide quick medical channels.

PE rate of employees

99%

Coverage rate of health record

100%

Occupational disease

0%

The company has designed and evaluated the mentality indexes of employees and built long-term dialogue mechanism to understand employees' psychological states and to provide psychological counseling.

Strengthen occupational safety protection

The company has carried out such propaganda and education activities as "Propaganda Week" and propaganda films to let employees know the Occupational Disease Prevention and Control Law and to guide employees to carry out self-protection measures against the occupational diseases. The company also utilized simulation trainings to improve the employees' awareness and ability of occupational safety protection. In 2016, 8,798 employees have undergone the occupational health and safety training.

Production safety education

600s safety education before work
Safety warning education by work team

Simulation training

"Double preventions (fire / gas prevention)" practice
Scenario simulation emergency drill

Improving employees' self-protection and self-saving ability

Motivating employees to participate

Safety diagnosis
Signing safety proposal

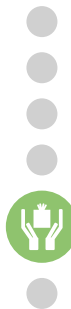
Production safety propaganda by new media

Setting the column of Safety habits in Official Accounts - Home of Shanghai Petrochemical
Sending safety risk warning in WeChat group

▲ Completely improving employees' self-protection and self-saving ability



▲ Employees actively participating in finding out major safety risks



Facilitate employees' career development

The company utilized training to improve employees' occupational skills and to promote the growth of employees and provided diversified and fair growth channels for employees to promote employees' career development.

Occupation training mode "study + practice"

The company built occupation training bases and used the method of "study + practice" to improve employees' occupational skills. The company attached great importance to the individualized training, prepared training plans in accordance with employees' aptitude, adjusted training plans as per relevant feedbacks and provided process management for training so as to improve the training effect.



▲ Providing process management for employees' training

Five training bases

The company built five training bases including refining and chemical equipment base, refining and chemical instrument base, substation operation base, chemical industry analysis base and HSE base. In addition, the five bases have passed the acceptance inspection of skilled talents training base by Shanghai Human Resources and Social Security Bureau.

Training investment	Number of man-course	Training time
27.95 million yuan	62,800 man-course	88 hours

Diversified and fair growth channels

The company provided various promotion sequences for management personnel, technicians and operating workers so that different employees can obtain suitable development opportunities. In addition, the company also established an equal, open and fair procedure for competing for employment so that competent persons can be employed.

Promotion: no stereotype in selecting capable people leapfrog

Competitive selection of leaders shall be in accordance with some defined indicators. However, the company provided a fair exceptional selection channel for competent persons. One person who has obtained excellent results in skill competition, made contributions in finding out major safety hazards or has strong professional abilities will be unconventionally promoted.

Enrich employees' spare-time life

The company organized rich recreational and sports activities to create an atmosphere where employees work with joy and live a healthy life style.

Conduct recreational and sports activities

The company has carried out several mass sports activities such as "Four Seasons League", vigorous walking, bicycle riding, funny football game and funny water sports. In addition, the company established 17 hobbyist teams, held the activity of "Weekend School" and organized singing competition, cooking competition and paper-cut exhibition. The departments of the company organized such reading activities as "joy • sharing" and "lingering charm • classics in my heart".



▲ Rich parents-child campaigns held by the company

Organize happy camp activity and positive energy training camp

In 2016, the company organized one phase of EAP (Employee Assistance Program) happy camp activity and two phases of positive energy training camp activities for young workers so as to teach through lively activities and help employees to release pressure and to gather positive energy.



▲ Happy camp activity



Fulfill Responsibilities and Serve the Society

The company pays taxes in good faith, supports the development of neighboring areas through joint construction and volunteer services, and keeps creating new contents for its public visit events. The company intensifies its communications with neighboring communities to fulfill responsibilities and serve the society.

- Pay taxes in good faith and develop business based on win-win strategy
 - Mass participation for common governance of environment
 - Combat corruption and advocate integrity
 - Promote public welfare and serve the society

Pay taxes in good faith and develop business based on win-win strategy



SPC was operated in good faith, paid taxes according to laws and carried out all-round cooperation with local government and communities in terms of culture, education, dissemination of science, training, environment, safety and etc.

Pay taxes in good faith

Credibility is the enterprise foothold and has always been one of SPC's commercial principles for long period. Adhering to the corporate values of humanism, responsibility, credibility, delicacy, innovation and win-win, SPC has formed our unique corporate culture. SPC abided by business ethics and laws & regulations, is operated in good faith and paid taxes according to laws. SPC amount of taxes paid has ranked top three in Shanghai industry enterprises for consecutive years. As a result, SPC set up a good corporate image in the society and won great support from local government, tax authorities and all sectors of the society, thusly laying a solid foundation for sustained development of the company.

Joint efforts in education and culture

SPC joined hands with Jinshan District of Shanghai to establish "Joint Development Committee", carried out joint development of culture and education with surrounding schools and libraries for long term, dispatched employees to act as instructors and cooperated to hold reading activities; SPC provided science dissemination service to surrounding residents by use of SPC exhibition building and other facilities; As one of Shanghai municipal science dissemination bases, SPC pushed forward construction of the "one library and one brand"; SPC has provided training courses and opportunities of internship to East China University of Science and Technology, Donghua University, Shanghai Institute of Technology and School of Petrochemical Industry for long period; Besides, SPC has also established all-round cooperation with the surrounding areas of Pinghu city in Zhejiang Province.

Popular science report

5 sessions

Audience

Over 400 people



▲ Students from East China University of Science and Technology on a training program

Join efforts in environment conservation and safety assurance

The Company co-sponsored the 2016 Shanghai Health and Safety Environmental Management Innovation Forum with the Revolutionary Committee of the Chinese Kuomintang, and founded the Shanghai HSE Research Association with itself as the headquarter. It also co-hosted the Asian Clean Air Center with the Monitoring and Traceability Seminar for Yangtze River Delta Industrial Park.



▲ Co-host Shanghai HSE Management Innovation Forum

Over the years, the company has been working with the relevant institutions in Jinshan District (Shanghai), Pinghu City (Zhejiang Province) and the local enterprises to carry out joint emergency drills against flammable and explosive fire accidents and pipeline burst and leakage accidents. It has also joint efforts with the water, flood control, seawall management authorities of Jinshan District (Shanghai) and Pinghu City (Zhejiang Province) in establishing the Flood Prevention and Joint Defense Conference System for the North Shore of Hangzhou Harbor.

Contribution to G20 security management

During the G20 Hangzhou Summit, the Company strengthened control over personnel, material and vehicles by increasing patrol on key locations and sections, so as to enhance the security level of the surrounding areas of Hangzhou.

Army supporting model

Over the years, the company has been working with the local garrisons to celebrate national defense education day, organize acknowledge activities on the Army's Day, provide scientific education and donate books to army camps, host competition, socializing and other activities. For these efforts, it is honored by the Shanghai government as the "Corporate model in Patriotic and Army Supporting Deeds".



▲ Donate books to troops



Public participation & Supervision in Environmental protection

The Company takes the public visit day and community environmental protection exchange events as opportunities to communicate with the surrounding communities and adapt its environmental protection efforts to their needs.

Host public visit day events

The Company takes the public visit day events as opportunities to publicize its corporate environment information to local residents, government officials, reporters, students and other social groups, and collect comments and requests on its environmental protection efforts and demands. It also deems those events as an opportunity to eliminate public misunderstanding about chemical industry production and help them understand its contribution and achievements in environmental protection. In 2016, SPC successively received high level visit delegations, including "Thousand People Program" Macao elite Shanghai visit delegation, the Ninth Global Health Promotion Meeting delegation and etc. The social influence of SPC's public visit day continuously got improved. SPC was granted with the title of SINOPEC public visit day demonstration unit.



Boost environmental protection awareness in local communities

The relevant departments of the Company paired with the local communities in Jinshanwei Town, Jinshan District (Shanghai) and Dushangang Town, Pinghu City (Zhejiang Province) to engage in in-depth exchanges on the issue of environmental protection, in an effort to promote balanced growth between enterprises and local communities. The achievements include the establishment of a community publicity gallery as part of their efforts to build environmental protection, cultural and educational facilities.

Combat corruption and advocate integrity

The Company complies with relevant national laws and regulations and imposes strict discipline and anti-corruption principles on its staff in an effort to preclude extortion, fraud, money laundering and other illegal and unethical activities and to contribute in the promotion of ethic integrity across the country.

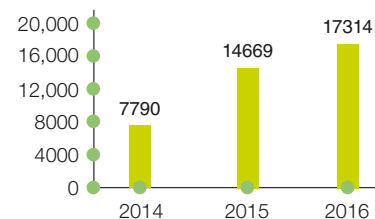
Optimize the anti-corruption mechanism

Nip evil in the bud	• Enforce the Accountability Consultation Mechanism for Reinforcing Party Discipline in Sinopec (Shanghai)
Enhance process management	• Establish defect lists to identify defects, investigate causes, and propose improvement measures. Past deviations can be written off once rectified.
Appoint competent discipline inspection cadres	• Enforce the Nomination and Inspection Methods for the Secretary and Deputy Secretary of the Discipline Inspection Commission in the Second-level Units of Sinopec (Shanghai)
Monitor sensitive posts	• Establish the integrity risk prevention and control team • Enforce the Sensitive Posts Shift and Rotation Rules of Sinopec (Shanghai) • Strengthen efforts in online public business patrol
Censor newly promoted cadres	• Carry out joint review on the integrity of cadre candidates
Supervise the family members of cadres	• Promote the "integrity and discipline supervision" program on the family members of cadres • Carry out self-inspection on the business activities of cadre relatives and their business correspondence with Sinopec (Shanghai)
Apply efficient censorship on prospect partners	• Work with Shanghai Jinshan People's Procuratorate to promulgate the Comments on the Work Concerning Bribery Records Inquiry, in order to prevent enterprises and individuals convicted of bribery acts from engaging business with Sinopec (Shanghai).

Normalize anti-corruption education

The Company employs normalized anti-corruption education to keep the anti-corruption awareness of its staff at a high level, specifically by building the integrity culture among the staff in the plant area, and distributing Party Discipline Reminder Cards to each post for them to practice those disciplines and rules in their daily activities. It also circulates notices concerning work aimed at building the culture of integrity and self-discipline among its staff on important festivals.

The coverage of anti-corruption awareness program continuous to rise over the years



Departments undergone corruption risk assessment

100%

Anti - commercial bribery training coverage

100%

The number of integrity conformity commitment signed by staff family members

953 copies

Public welfare and Volunteer service



The Company has finalized the Reward Management Measures for Achievements in the Intellectual and Ideological Development Efforts of Sinopec (Shanghai), held the "Corporate Culture Story" competition, and commended the outstanding moral deeds by its staff in an effort to encourage care for public welfare.

Poverty and difficulty relief

The Company engages its staff in donation events and charity sales on an annual basis, and organizes special disaster relief activities in the aftermath of earthquakes, floods and other disasters.



▲Charity sale of embroidery works by staff

Since 1997, SPC has organized employees to contribute money to support students

2364 students 4,748,000 yuan

Volunteer services

The Company's youth volunteer service team has been devoted to volunteer services for 20 years, and made "Baby Breath" a national famous brand. It was invited as the sole entrepreneurial representative to give a speech on the opening ceremony of the first "Shanghai Volunteer Service Network Culture Festival" held in 2016.



▲"Mantianxing" volunteer service team

Blood and stem cell donation

The company has been engaging its staff in blood donation over decades, and regards it as a special pro bono activity to organize its employees to donate hematopoietic stem cells.

He Ying: Voluntary blood donation for 20 years

He Ying has insisted on voluntary blood donation for 20 years. In 2013 and 2014, she has been awarded with the honor of "top ten good personalities and good deeds". Moreover, she donated blood for two times at short intervals to help patients.



Sheng Jian'an: The 6th stem cell donors

There have been hundreds of company's employees joining the Chinese bone marrow bank for consecutive years. In 2016, Sheng Jian'an, a 1980's generation employee, became the 6th Stem Cell donor of the company.



Outlook for 2017

In 2017, the global economy is still sluggish and the challenges faced by petrochemical industry are still grim and complicated; In 2017, the economy of China is right at a critical stage of shifting for speedup, restructuring, transformation of kinetic energy and stepping into a powerful manufacturing nation and also an interweaving period of transformation and upgrading of petrochemical and chemical industries, environmental protection stress of petrochemical industry development and increasingly prominent factor cost constraint; The economic development of China steps into new normal and new requirements are raised for performance of social responsibilities. Such five major development concepts as “innovative, harmonious, green, open and sharing” were put forward by the Fifth Plenary Session of the 18th Central Committee. In the coming new year of rising wind and scudding clouds, favorable conditions and restraining factors interweave each other, and the potential of growth and descending stress coexist. SPC will follow the trend to seize the great opportunities of supply side reform and the state strategy of “One Belt, One Road”, thusly promoting the transformation development of the enterprise and pursue higher economic value, social responsibility and environmental responsibility.

In 2017, SPC will strengthen the structural reform of the supply side, further boost the product structural upgrading, eliminate backward production capacity and further improve the enterprise work safety, environmental protection and development, thusly laying a solid foundation for the safe development and green development of the company.

In 2017, SPC will vigorously implement the philosophy of innovation-driven, integrate resources, accelerate improvement of the technical innovation system of “industry-university-research cooperation and utilization” and vigorously develop products with more market competitiveness, higher high-tech elements, more added-value, thusly realizing upgrading of product value chain; significantly boost technical innovations, management innovations, product innovations, market innovations, resource innovations and strategy innovations and lead green development by drive the transformation and upgrading of the enterprise for green development.

In 2017, SPC will overcome its shortcomings in safety and environment protection, improve integrated HSE management system, enhance governance of potential safety hazard an all-round way, establish long-term mechanism of potential hazard investigation and governance, further implement the position environment responsibility, intensify disclosure of environment information, reduce accidents, improve safety and environmental management level; SPC will focus on enhancing environmental protection and governance and realize continuous decrease in emission of waste water, waste gas and industry solid wastes; highlight recycling of wastes and further push forward reduction of wastes.

In 2017, SPC will continue to improve modern enterprise system, to improve the social responsibility performance assessment system and boost the corporate social governance to step onto a new stage; SPC will continue to give play to our specialized advantages to create value for our partners; SPC will further push forward management of green supply chain and endeavor to mobilize partners to perform social responsibilities.

In 2017, SPC will continue to adhere to the development concept of “people the foremost”, persist in employee-based development and ensure sharing the enterprise development achievements with employees; SPC will continue to pay attention to community development and performing the duties of enterprise citizenship; further mitigate enterprise operations, impact on the surrounding environment and realize win-win co-existence and of the enterprise and communities.



2016 Chronicle of events of social responsibilities

January

- Employees actively participated in “the one-day salary donation” activity.
- Provided special training to college students majoring in chemical engineering who are to graduate from the East China University of Science & Technology soon.
- Supplied national V standard -10# diesel to the market in an urgent manner.

February

- Held the fourth session of the sixth employee representative committee.
- Official commissioning of statistics information management system.
- Passed the certification of the integrated management system integration.

March

- Held the public visit day together with Jinshan District.
- The coal yard environmental governance project of the thermal power segment stepped into installation stage.
- “Mantianxing” Volunteers carried out a series of “Learning from Leifeng” activities to provide handy service for the public.

April

- The modification of the last set of desulfurization plant was completed, and successfully started up.
- Residual oil hydrogenation unit gained success in terms of innovative, safe and environmental vulcanization.

May

- Volunteer blood donation was initiated.
- Successful trial of the domestically manufactured low-nitrogen burner for cracking heater.

June

- Finished the round-off work for the “one furnace and one tower” desulfurization modifications.
- Held activities to commemorate the handy service for the public on the “June 5th” environment day .

July

- SPC four projects were awarded with SINOPEC Science and Technology Advancement Award and Technological Invention Award.
- Initiated “CPC’s Cradle-Glorious City” themed itinerant exhibition.
- Urban emergency seminar of Association of Southeast Asia National Regional Forum-----fire extinguishment rescue drill at chemical plant was held at SPC.

August

- First product callback system was promulgated.
- Online flying dust monitoring system was put into service at the coal jetty.
- Supergravity desulfurization technology test achieved success.

September

- Organized special anti-terrorist precaution publicity and education.
- Sent “presents” to schools of migrant workers’ children at the beginning of new semester.

October

- Employee volunteer blood donation for the second half of the year was officially initiated.
- SPC retirees took part in the public visit day program.

November

- SPC was granted with the honorary title of Shanghai municipal “Model Unit of Patriotism and Supporting Army”.
- Filled the gap of thermophilic digestion of domestic feedstock for Cast Polypropylene (CPP) film.

December

- “Mantianxing” volunteers carried out handy service for the public.



Written Comments on Assessment of Corporate Social Responsibility Report

No. K00278

Title of report	2016 Annual Social Responsibility Report
Corporate name	Sinopec Shanghai Petrochemical Company Limited
Corporate Profile	<p>Covering a floor area of 9.4 km², Sinopec Shanghai Petrochemical Co., Ltd. (called “SPC” or “the Company” for short) is situated at Jinshanwei, Jinshan District, Shanghai, with its predecessor being Shanghai Petroleum Chemical Engineering Corporation founded in 1972. As a result of restructuring, SPC became a share holding enterprise in 1993. As the large-sized integrated refining and chemical enterprise and an important base for development of modern petrochemical industry in China, SPC is the first listed company of China that got listed on the stock market of Shanghai, Hong Kong and New York at the same time.</p> <p>At present, SPC products cover four major categories over 60 varieties, including the refining products, chemical products, plastic products and fiber products.</p> <p>In 2016, SPC completed the total volume of main commodities of 112.8394 million tons; implemented operating revenue of 77.894 billion RMB; paid tax of 14.223 billion RMB, ranking the third position among Shanghai municipal top 100 tax payer enterprises in industry taxation in 2016, thusly making its due contribution to the state and local economic and social development.</p> <p>Nowadays, SPC has 11,088 staffs and employees, in which employees with bachelor’s degree and above education background account for 24.27%.</p> <p>SPC was awarded with the highest level of “Five-star Corporate of Social Responsibility” at the second session of corporate social responsibility summit meeting for China (Shanghai) listed companies.</p> <p>Contact information: (please visit the website for further information) Add.: 48 Jinyi Road, Jinshan District, Shanghai, P.R. China Zip code: 200540 Tel.: +86(21)57941941 Fax: +86(21)57940050 Email box: spc@spc.com.cn Website: http://www.spc.com.cn</p>
Report Issue	Ninth release
Assessment basis	Shanghai municipal group standard Guidelines for Corporate Social Responsibility (T31/01001-G001-2014)
Assessment method	<p>Written assessment was conducted for 2016 Annual Social Responsibility Report (called “the Report” for short) of Sinopec Shanghai Petrochemical Co., Ltd. in accordance with the requirements of T31/01001-G001-2014 Guidelines for Corporate Social Responsibility.</p> <p>The assessment process included confirmation of the source of information disclosed by the Report and its reliability with help of the enterprise official website and the third party’s data concerned.</p>

Assessment matters	
Structural integrity	<p>There are totally 53 pages in 2016 report on corporate social responsibility of Sinopec Shanghai Petrochemical Co., Ltd. (hereinafter referred to as “the Report”). With combination of pictures and text as well as rational structure and complete contents, the Report elaborated various activities and the performance completed and achieved by SPC in 2016, covering the basic contents of SPC fulfillment of economic, social and environmental responsibilities and containing the main items of key performance indicators required by T31/01001-G001-2014.</p>
Substantial contents	<p>The Report stated the corporate mission, vision and core value and disclosed SPC's practice and performance in fulfillment of social responsibility in 2016.</p> <p>•Scientific development: SPC has always persisted in considering making technical innovations as the prioritized driving force, always pursued customer satisfaction and been dedicated to providing the best products and service to the society. By way of building intelligent plant, promoting reform of production method and management ways, SPC walked onto a track of middle and high end development.</p> <p>SPC managed to promote continuous improvement of the process technology management level through revising and improving the process management systems in 2016. As a result, the progress rate of assessed 83 technical and economic indicators was up to 49.40% on a year-on-year basis, in which 18 items reached the advanced level in industry.</p> <p>SPC three achievements like production of ethylene oxide high selective silver catalyst with ethylene oxidant were awarded with Sinopec Group's award of technological invention and scientific technology improvement in 2016 and won the best technical innovation breakthrough prize of “Twelfth Five-year Plan” in national chemical fiber industry.</p> <p>SPC comprehensive statistical information management system was officially put into service early 2016, which provided statistical data support to SPC production operations, management decision-making, cost accounting, assessment of technical and economic indicators and other related systems. In addition, the application of production management system was initiated at main production units.</p> <p>•Fair operations: SPC signed confidential agreement with each sales personnel in 2016 to adequately protect every customer's information security and organized multiple training courses on anti-commercial bribery and anti-unfair competition, with the coverage rate reaching 100%; carried out symposium and knowledge test of clean conduct; signed 323 copies of annual liability statement of clean conduct with the customer organizations.</p> <p>SPC intensified management and control of the supply chain in 2016 by adopting dynamic assessment results for selection of preferred star level suppliers. As a result, the manufacturer's direct supply rate reached 97.87% and the procurement rate through bidding increased by 12.1% on a year-on-year basis, which saved the procurement fund by 6.52%.</p> <p>•Environmental protection and saving: SPC pushed forward the energy saving and consumption reduction in such two aspects as management and technique in a down-to-earth manner in 2016, passed the energy management system review and obtained the certificate of energy management system certification. Consequently, the total consumption of comprehensive energy was decreased by 3.8% and energy consumption of unit output value decreased by 3.7% on a year-on-year basis.</p> <p>SPC intensified the strength of environmental improvement, successfully completed “the Clean Water and Blue Sky” program and 11 comprehensive environmental improvement projects at Jinshan District and further improved SPC's capacity in treatment of waste water, waste water and solid wastes. SPC emissions of various pollutants were all decreased in 2016, in which the discharge of COD was decreased by 6.18%, ammonia nitrogen by 6.17%, waste water by 15.97%, NO_x by 7.27% and SO₂ by 9.74% on a year-on-year basis. Hazardous wastes were 100% properly treated.</p>

Assessment matters

Substantial contents

Work safety: SPC strictly implemented the work safety management system, pushed forward HAZOP analysis in an all-round way, completed first round leakage test and repair work, enhanced employees' HSE training and improved the emergency response capability. SPC had hit the target of "seven zeroes" in terms of employees' annual mortality of work related injury, employees' annual serious injury rate, major incident of fire and explosion, major incident of environmental pollution, major incident of occupational hazard, major traffic accident and major incident involving serious consequences.

Totally 241 employees of SPC received HAZOP popularization and training in 2016. In total 6,074 items of diagnosis (recommendations) were generated in the campaign of "I make diagnosis for safety", for which the total amount of awards was high up to 1.7329 million RMB.

SPC invested over 4 million RMB for development of 100 various training courses throughout 2016, with the participants up to 16,500 person times and the coverage rate reaching 100%. By November 2016, totally 896 emergency drills were carried out and the participants reached over 14,000 person times. The emergency safety drills had intensified the employees' consciousness of work safety and improved their emergency response capability.

Customer and consumer's rights and interests: In 2016, SPC continuously improved the quality management system, pushed forward the standardization management, upgraded the testing technique and strictly controlled the quality risks, with the product compliance rate reaching 100%. In 2016, the product satisfaction degree was 96.22%, 0.89% higher than 95.33% in 2015.

Win-win Cooperation: SPC identified six stakeholders, including the government, shareholders, suppliers, customers, community and employees' rights and interests, persisted on credible and compliant operations, cooperated with customers and suppliers to create diversified products of premium quality and adequate quantity as well as considerate and standardized professional service, thusly growing up together with the business partners.

Harmonious labor relations: SPC formed a communication and consultation mechanism about the employees' benefit and other important issues as well as the hot topics of employees' concerns in form of workers' congress, trade union's consultative conference and openness of the company affairs. In 2016, SPC total number of employees and staffs was 11,088, the trade union membership rate, collective agreement conclusion rate and social insurance coverage rate had all reached 100%. The number of employees with bachelor's degree and above accounted for 24.27% and the staff turnover rate was 0.69%.

As a result of employees' quality building, SPC staff training time per capita was 88 hours/year. Excellent employees kept on emerging. SPC employee, Lu Dingliang was granted with the title of Shanghai municipal first batch of craftsman. SPC carried out diversified recreational and sports activities in 2016, such as the employee assistance program "happy camp", positive energy training camp for young employees, sports activity of four seasonal tournament, reading activity like "Lingering Charm-Classics in My Heart" and etc.

Community participation and development: SPC established a "joint development committee" with Jinshan District Government and signed a "Memorandum of Cooperation for Deepening Joint Development", carried out joint development in culture and education with surrounding community schools and libraries for long period and provided scientific dissemination service to surrounding residents by use of SPC exhibition building. SPC was granted with Sinopec demonstration unit for public open day program. As one of Shanghai municipal scientific dissemination and education bases, SPC has provided training courses and opportunity of internship to East China University of Science and Technology, Donghua University, Shanghai Institute of Technology, Shanghai Petrochemical Industry School and etc. for long term.

SPC paired with Dushangang Town in Pinghu, Zhejiang Province and Jinshanwei Village in Jinshanwei Town at Jinshan District of Shanghai for joint development, deeply carried out environmental exchange and facilitated harmonious development of enterprise and local government.

Recommendations of improvement: appropriately add some information about horizontal comparisons with peer industry, thusly providing proofs to SPC as "domestically advanced and world-class" refining and chemical enterprise.

Assessment matters	
Performance comparability	The Report disclosed the performance indicators of Sinopec Shanghai Petrochemical Company Limited in terms of fulfillment of social responsibility, partially collecting three-year data, thusly presenting better vertical comparability. However, restricted by industrial data/information, the Report doesn't have horizontal comparability. It is better to add some horizontal comparisons of peer industry in the report next year, if it is possible.
Credibility of content	By way of the enterprise official website as well as consultation of relevant third party's assessment information and other means, we verified SPC's concept, culture and strategy of social responsibility and corporate governance disclosed by the Report as well as typical examples of practice and data, confirmed that Report contents reached certain credibility.
Readability	The Report had a clear structure and plain text. In forms of characters, data, graphs, pictures and etc., the Report displayed the Company's management, practice and performance of social responsibility; it was reader friendly and had strong readability.
Timeliness	The Report focused on information disclosure of the Company's fulfillment of social responsibility in 2016 and considered the examples of practice and performance data as auxiliary information, thusly presenting certain timeliness. Hope that the Company can attach importance to information on related governmental websites and make necessary reflection of such in a timely manner.
Stakeholders' participation	The Report disclosed SPC's communication with relevant parties about main topics of social responsibility as well as expectations and requirements to external stakeholders and set forth protection of the stakeholders' legal rights and interests and win-win cooperation in economic benefit.
Overall comments	The critical information, data and examples of fulfillment of social responsibility disclosed by the Report are basically in conformity with T31/01001-G001-2014 Guidelines for Corporate Social Responsibility.
Statement	The assessment comments are only specific to the 2016 information and data provided by the Report and the Company.

Auditor: Feng Wei

Approved by:

Assessment organization: Shanghai Quality System Audit Center

Audit date: March 10, 2017

Titles	Level-2 titles	ISO26000	ESG	API	Cass-csr3.0	Pages
Address by Chairman of the Board				SOC-1	P3.1 P3.2	P1-2
Responsibility performance Sheet				ECO-1	P5.2	P3-4
Company Profile					P4.1 P4.2 P4.3 P4.4	P5
Development Strategy		6.2				P6
Corporate Culture						P6
Corporate Governance						P7
Responsibility Management		6.2		SOC2	G1-G6	P8
Honors of Responsibility					P5.3	P11
Revitalize petrochemical industry with innovative and pragmatic mindset	Ensure product supply	6.7.4				P13-14
	Deepen quality for business promotion	6.7.4	B6 B6.4		M2.1 M2.3	P15
	Make innovations in petrochemical technology	6.7.4 6.7.5			M2.11-M2.16 E3.3	P16
	Build smart plant					P17
Create value through integrity and normalization	Jointly create value with our customers	6.6 6.7	B6.2 B6.5		M2.4-M2.6 M2.8-M2.10 M3.10-M3.12 E2.25	P19-20
	Intensify management and control of supply chain	6.5 6.6	B5	ECO-3 SOC-8	E3.1	P21
Develop business through win-win cooperation	Improve business performance			ECO-2	M1.4-M1.6	P23-24
	Safeguard investors' rights and interests			ECO-2 ECO-1 ECO-A3	M1.2 M1.3	P25
Precision operations, safety and green development	Strengthen safety management	6.4.6	B2	ENV-6 H&S-5 H&S-4 H&S-2 H&S-5	S3.1 S3.2 S3.3 S3.4 S3.5 S3.6 S3.7	P27-29
	Intensify environmental protection	6.5.3	A1.1 A1.3 A1.4 A1.5 A1.6 A3.1	ENV-1 ENV-2 ENV-A3 ENV-A4	E1.1-E1.5 E1.6-E1.7 E1.8 E2.7-E2.24	P30-31
	Boost recycling economy	6.5.4	A2.2 A2.4 A2.5	ENV-A7 ENV-A5	E2.27-E2.29	P32-34
	Promote green development	6.5.5	A1.2 A2.1 A2.3	ENV-5 ENV-3 ENV-A8 ENV-A9	E2.1-E2.4 E4.1-E4.4 E5.1-E5.3	P35

Titles	Level-2 titles	ISO26000	ESG	API	Cass-csr3.0	Pages
People foremost, benefit employees	Safeguard employees' rights and interests	6.3 6.4 6.8	B1 B1.1 B1.2 B4	SOC-1 SOC-A2 SOC-4	S1.7 S1.8 S2.1-S2.7	P37
	Improve salary and welfare				S2.10-S2.14	P38
	Intensify occupational safety	6.4	B3	SOC-1 SOC-5 SOC-4 SOC-1 SOC-A2	S2.18-S2.20	P38
	Facilitate employees' career development	6.3 6.4 6.8	B2.1 B2.3 B3	SOC-4 SOC-1		P39
	Enrich employees' spare-time life				S2.15	P39
Fulfill responsibilities and serve the society	Pay tax in good faith and develop business based on win-win strategy	6.3 6.4 6.8 6.5	B8 B8.1 B8.2	ECO-1 SOC-A4 SOC-A3 SOC-A5	S1.5 S4.6 S4.7	P41
	Mass participation for common governance of environment				E1.9 S4.1 S4.2	P42
	Combat corruption and advocate integrity	6.6	B7			P42
	Promote public welfare and serve the society	6.8	B8		S4.10 S4.11 S4.13-S4.15	P43
Outlook for 2017					A1	P44
2016 chronicle of events of social responsibilities					P5.2	P45
Written Comments on Assessment of Corporate Social Responsibility Report					A2	P46-49
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Briefing of this report						P52
Form of Readers' Feedback					A4	P53

Briefing of this report

Report release cycle

Once every year

Ninth report of social responsibility

This report is the ninth report on enterprise social responsibility released by SPC, which includes the efforts and achievements made and scored by SPC in terms of economy, environment and society for sustainable development in 2016.

Time frame of the report

This report was prepared on the basis of the data ranging from January 2016 to December 2016. However, we also adopted the data of the past three years since 2014 for certain quantitative of achievements, so as to reflect the variation tendency in time.

Definition of key topics

SPC practice of Corporate social responsibility

Reference standards of the report

References are made to the Guidelines on Enterprise Social Responsibility (SEO-CSR1.0) issued by Shanghai Federation of Economic Organization, ISO26000: Guidelines on Social Responsibility (2010) issued by International Standardization Organization, the Guidelines for Environment, Society and Management Report issued by the Stock Exchange of Hong Kong Limited and Guidelines for Release of Report on Sustainable Development of Petroleum and Natural Gas Industry issued by the International Association of Environmental Protection in Petroleum Industry.

Reliability assurance of the report

This report does not contain intentionally fictitious fact, misleading statement or omission of major events and we guarantee its accuracy and authenticity.

Data sources

All data of the report are sourced from SPC official documents and statistical reports, and have been reviewed by competent authorities.

Abbreviations of the report

SPC and the company as mentioned in the report refer to Sinopec Shanghai Petrochemical Co., Ltd.

Scope of the report

The scope is consistent with SPC business coverage area.

Improvement of the report

We aim at giving play to the dialogue roles of the report, interpreting the value and impact brought about by SPC's fulfillment of social responsibilities and jointly discussing with stakeholders about the opportunities and challenges faced by us in the course of development and then seeking solutions.

Ways to access to the report and extended reading

You can also read the electronic version of this report by visiting the website (<http://www.spc.com.cn>).

Form of Readers' Feedback

Dear readers:

We appreciate your reading of 2016 SPC Report on Corporate Social Responsibility. We attach great importance to and expect your feedback comments about SPC sustainable development and this report. Your comments and recommendations are important references for us to improve our performance of social responsibility. You can send your feedback your comments to us by mail, email or fax. We warmly welcome and sincerely appreciate your precious comments.

Name:

Company:

Contact telephone:

Email address:

Your assessment of our report:

Your assessment of this report	Excellent	Good	Average	Poor
How do you like the rationality of the structure of this report?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Can you understand concepts of social responsibility and characteristics of practice of SPC?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Is this report reader friendly and readable?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
How do you like the content arrangement and format design of this report?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
What is your overall assessment of this report?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Your recommendations on SPC Report on Corporate Social Responsibility:

Your recommendations on SPC sustainable development:

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