



DONGGUANG CHEMICAL LIMITED

東光化工有限公司

(incorporated in the Cayman Islands with limited liability)

Stock Code: 1702

**2018 ENVIRONMENTAL,
SOCIAL AND
GOVERNANCE REPORT**

CONTENTS

1	Company profile	3
1.1	About us	3
1.1.1	Brief Introduction.....	3
1.1.2	Major industries.....	4
1.1.3	Corporate social responsibility	6
1.2	Honors and Achievements	6
1.2.1	Responsibility honors overview	6
1.2.2	Key achievements overview	8
1.3	Corporate governance	8
1.3.1	Corporate Governance Framework	8
1.3.2	Overview of Dongguang Chemical Limited's Board of Directors	10
1.3.3	Overview of stakeholders and the communication with them	11
2	Environmental Performance Analysis	13
2.1	Overview of relevant environmental protection policies in major business areas	13
2.2	Emissions Correlation Analysis	14
2.2.1	Exhaust emission data calculation	14
2.2.2	GHG emissions data calculation	14
2.3	Waste classification and emissions	15
2.3.1	Waste classification and processing	15
2.3.2	Solid waste emissions	15
2.4	Resource Usage Analysis	15
2.4.1	Main energy consumption structure of enterprises	15
2.4.2	Other Energy Consumption Statistics	16
2.4.3	Energy Saving and Emission Reduction	16
2.5	Environmental protection	17
2.5.1	Report on the air, water and noise situation of the plant	17
2.5.2	Pollution reduction measures	18
2.5.3	Strengthen pollution control facilities.....	18
2.5.4	Environmental System Treatment Process (Handling Harmful Substances).....	18
2.5.5	Environmental inspection department daily inspection	22

3	CSR Analysis	22
3.1	Employment and labor status analysis	22
3.1.1	Overview of staff employment and labor standards	22
3.1.2	Overview of employee Health and Safety.	24
3.1.3	Overview of Staff development and training	28
3.1.4	Guidelines and measures to prevent child labor or forced labor	32
3.2	Analysis of Operation Management Status.	32
3.2.1	Supply Chain Management Overview.	32
3.2.2	Analysis of Anti-corruption Measures of Enterprise.	33
3.3	Product liability.	33
3.4	Community investment.	33
4	Future planning.	34
4.1	The external risks and Future Plans	34
4.2	The internal risks and Future Plans.	34
4.3	Future development strategy and business plan	34

1 COMPANY PROFILE

1.1 About us

1.1.1 Brief Introduction

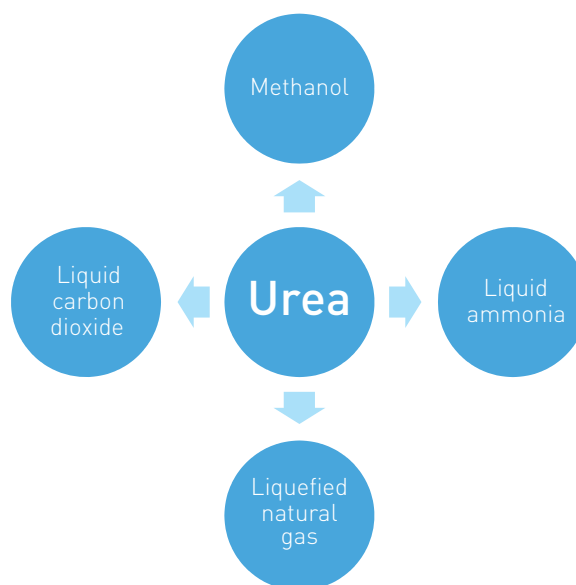
Hebei Dongguang Chemical Co., Ltd ("**Dongguang Chemical**"), the indirect wholly owned subsidiary of Dongguang Chemical Limited (the "**Company**" and together with its subsidiaries, the "**Group**"), was originally established in 1970. Its predecessor, Hebei Dongguang Huafei Factory ("**Dongguang Huafei**"), was a local state-owned enterprise and was later privatized and reorganized in July 1998. On 11 July 2017, the Group was listed on the Main Board of the Stock Exchange of Hong Kong Limited (the "**Stock Exchange**"), (Stock code "1702"). As of 31 December 2018, the company's total issued shares were 620,472,000 shares.

We have an operating history of over 40 years in Hebei Province, and we have been operating in the urea industry since 2001. The early start in the urea industry had allowed us to develop into an experienced player in the region and maintain long-term and established relationships with customers in the industry. We have developed our production know-how and management which in turn enhances our production efficiency by increasing the quantity and improving the quality of our products while minimizing costs. Our management team has extensive experience and an in-depth understanding of the history and the future trends of the urea industry in PRC which is instrumental to our continued success.

We are a chemical company with urea production as main business. As at 31 December 2018, the Group has 1,269 employees, total assets of approximately RMB1.8 billion, Dongguang Chemical covers an area of approximately 700,000 square meters. We have been leading the China's coal-based urea producers in recent years, and in terms of revenue from the sale of industrial and agricultural urea, the financial performance of our Group has been robust in recent years, ranking among the top urea production companies in China. Since our geographical locations are close to major national highways, railways and major ports of Northern China, we are able to react swiftly to the demands of different customers across different regions of the PRC. We have established a reputable brand in Hebei Province and nearby regions where our products are sold. We are currently the biggest urea producer of Hebei province and one of the top 20 urea producers.

For the year ended 31 December 2018, the Group recorded revenue of approximately RMB2.286 billion and a net profit of approximately RMB99.7 million. As of 31 December 2018, the Group reached total assets of approximately RMB1.8 billion and net assets of approximately RMB998 million.

1.1.2 Major industries



The Group is one of the major coal-based urea producers in the PRC, with headquarter located in Hebei Province. The Group mainly produces and sells urea. It also produces and sells other by-products of urea, including methanol, liquid carbon dioxide and liquid natural gas. Urea is a white crystalline solid organic compound, which is widely used in agriculture as an effective neutral nitrogen fertilizer and in industry to produce various products such as adhesives, coatings, plastics and cosmetics. For the year ended 31 December 2018, the revenue from sales of urea accounted for over 85.25% of the total revenue which increased 21.96% compared to 2017. Besides, we have won the honorary title of the top 20 profit of urea production in the national nitrogen fertilizer industry of 2017 in the first half of 2018. The urea products are sold to the end-users and trading customers in agriculture and manufacturing. These trade customers then sell urea to (i) farmers using urea as a fertilizer; (ii) fertilizer trading companies that sell urea directly to farmers; (iii) synthetic fertilizer companies that use urea for the production of synthetic fertilizers; and (iv) the use of urea in chemical companies producing melamine and cyan uric acid.

Anthracite and bituminous coal is the major raw material required for the production of our major product, urea. Anthracite is used as a raw material for the production of urea and methanol, and bituminous coal is used to generate power for the production process and steam for the gasification process.

- Urea

Based on particle size, urea products can be categorized into granular urea (large granular) and prilled urea (small granular). Granular urea is more effective and harder than prilled urea. Granular urea is a more effective fertilizer than prilled urea, and is commonly used in coffee, corn, sugar cane and other crops.

- Liquid carbon dioxide

The liquid carbon dioxide is produced by the degassing process of the air release body after purification, compression, purification, distillation and cooling. As a by-product of the production of urea, liquid carbon dioxide can be used in various industries such as catering, health and environmental protection, etc. It is most commonly used to extinguish small fires caused by flammable liquids, etc.; refrigerants for air conditioning in cars; and also the oil production process. It is also one of the important main raw materials.

- Methanol

Methanol is an important organic chemical raw material. It is also an important organic solvent. It is a colorless, volatile liquid with an alcoholic odor. It is also highly toxic, but it can be used as an artificial protein due to its high protein conversion rate, non-toxic and very economically. Methanol is widely used in pharmaceutical, chemical, energy and other industries. After processing, it can be used as fuel and mixed with gasoline combustion. Of course, the main application area of methanol is the production of formaldehyde, which can be used to produce adhesives. It is mainly used in the wood processing industry and it is also an indispensable raw material for the production of various synthetic resins.

The methanol production methods include gas-to-methanol, coal-to-methanol, and cooking gas to methanol. Because of the lack of natural gas resources, the company mainly uses coal to produce methanol, and is equipped with innovative equipment and utilizes technologies developed by China to facilitate the Competitors are in an advantage state.

- Liquid natural gas

The main component of liquid natural gas is methane, which is recognized as the cleanest energy source on Earth. It is colorless, odorless, non-toxic, and non-corrosive. It is a relatively advanced energy source. As urea-by-products, it is also widely used in residential, industrial, and commercial industries; the most important industrial application is power generation. The advantages of liquid natural gas in ceramics, glass and other industries are even more obvious, which can greatly improve product quality or reduce costs. In addition, as a sustainable development of clean energy, it also has obvious environmental and social benefits, and is a premium alternative fuel for automobiles. With the improvement of the living standards of residents, the adoption of liquid natural gas for the residents of small and medium-sized cities and towns is gradually increasing.

- Liquid ammonia

As an important chemical raw material, ammonia is convenient for transportation and storage. Usually, gaseous ammonia is pressurized or cooled to obtain liquid ammonia. Liquid ammonia is a colorless liquid and is widely used in industry. However, because it is corrosive and volatile, the probability of a chemical accident is relatively high. Liquid ammonia is mainly used for the production of nitric acid, urea, and other chemical fertilizers. It can also be used as a raw material for medicines and pesticides. At the same time liquid ammonia has a certain bactericidal effect, so in the poultry farming industry, it is used for sterilization and cooling.

1.1.3 Corporate social responsibility

Entrepreneurial spirit	<ul style="list-style-type: none">• Open spirit• Unity spirit• Fighting spirit• Perseverance and enterprising spirit• Wholehearted dedication spirit
Business philosophy	<ul style="list-style-type: none">• The user is supreme• Sincere hospitality• Careful service
Management concept	<ul style="list-style-type: none">• Simultaneous development of reform and transformation• Equal emphasis on safety and benefits• Synchronization of environmental protection and development• Coexistence of quality and business
Social responsibility and values	<ul style="list-style-type: none">• Loyal to the company• Diligence and career• Dedicate to the society

1.2 Honors and Achievements

1.2.1 Responsibility honors overview

Since the establishment of the Group, we have won many honors with our good brand image, down-to-earth spirit, well-developed corporate governance structure, sound information disclosure system, and environmentally safe production awareness and concepts. We have been honored National Model Workers' Home, Hebei Province AAA-level Labor Relations Harmonious Enterprise, Hebei Province Benchmarking Model Enterprise, Top 20 Urea Production of Nitrogen Fertilizer Companies in 2016, Top 20 National Nitrogen Fertilizer Enterprises Urea Production and Total Profit Companies in 2017, Advanced Unit of Energy Saving and Emission Reduction in Nitrogen Fertilizer and Methanol Industry. In addition, in 2018, we have been awarded the title of Advanced Group of Staff Service and Hebei Province High-integrity Enterprise. We have been awarded the title of "Advanced Enterprise" by the China Nitrogen Fertilizer Industry Association, Advanced Energy Saving and Emission Reduction Units in Nitrogen Fertilizer and Methanol Industry, Advanced Unit of Dongguang Chemical Industry, Top 20 Production and Profits of Urea Fertilizers in National Nitrogen Fertilizer Industry in 2017 and Top 20 Production of Urea Fertilizers in National Nitrogen Fertilizer Industry in 2018.

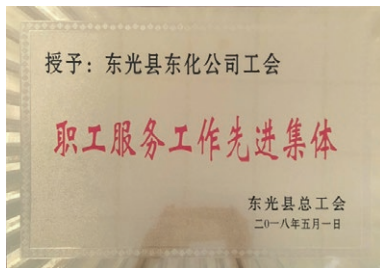
The following is an overview of the honors we received in 2018:



China Nitrogen Fertilizer Industry Association approved Dongguang Chemical's 2017 urea production and corporate profits into the top 20 of the nitrogen fertilizer industry, and won the title of "National Nitrogen Fertilizer Industry Urea Production and Top 20 Corporate Profits".



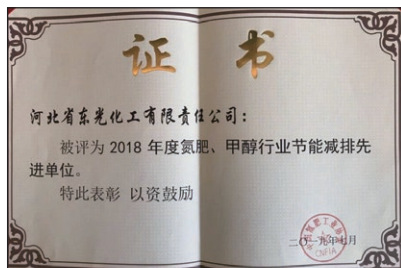
The China Nitrogen Fertilizer Industry Association awarded the honorary title of "Advanced Enterprise" of Dongguang Chemical in the 60th anniversary of the development of China's nitrogen fertilizer industry in 2018.



The Dongguang County Federation of Trade Unions awarded the honorary title of "Advanced Collective of Staff Service Work" of Dongguang Chemical Industry Union in 2018.



Dongguang Chemical was awarded "Hebei Province Credit Enterprise" by the Hebei Province Honest Enterprise Selection Committee in 2018.



Advanced Energy Saving and Emission Reduction Units in Nitrogen Fertilizer and Methanol Industry in 2018.



The Dongguang County Committee of the Communist Party of China and the People's Government of Dongguang County commented on Dongguang Chemical as an "advanced unit" when it established a well-off society in 2018.

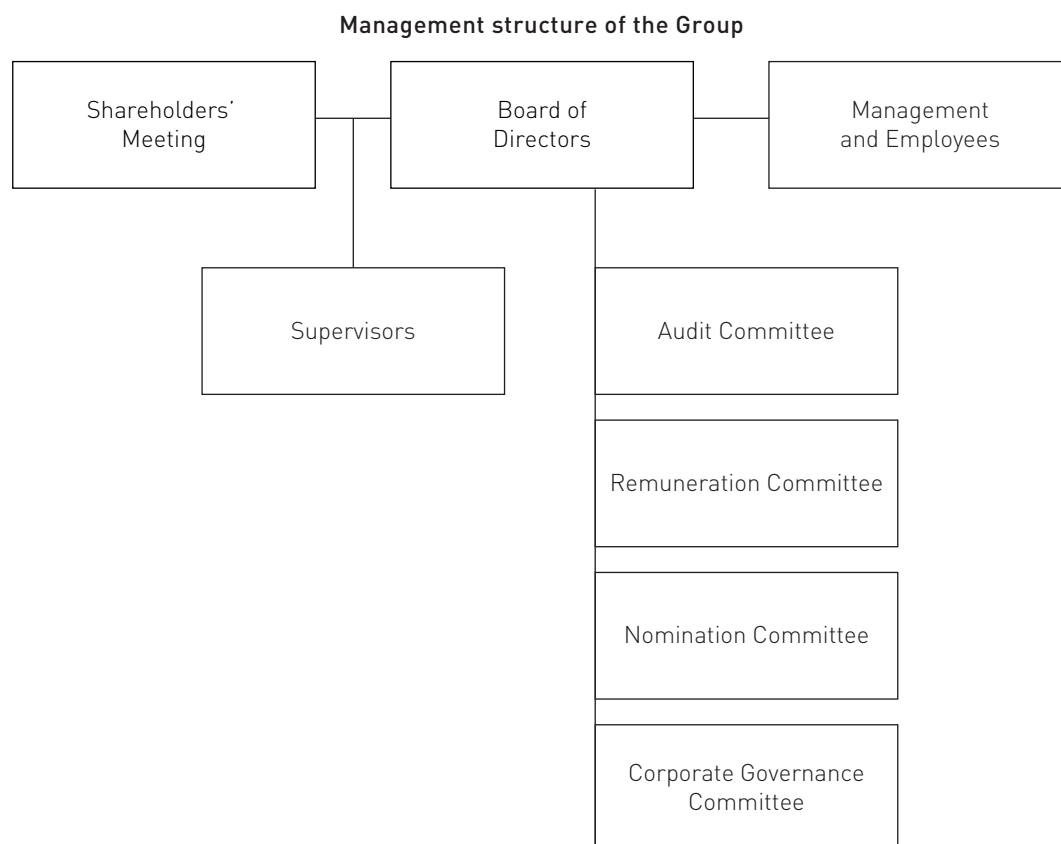
1.2.2 Key achievements overview

We made significant progress in industrial development and environmental protection. We has implemented or installed advanced technology or equipment on the production line, such as heated lithium bromide absorption refrigeration unit, waste heat recovery technology, circulating fluidized bed boiler, unpowered ammonia recovery, urea granulation tower dust recovery, full low temperature conversion process, liquid Carbon dioxide, etc., which have effectively increased production capacity, reduced production costs, allowed the company's pollutant emissions to be far below the prescribed targets. Furthermore, we have improved our ability to comply with environmental laws and regulations, in line with national sustainable development strategies and brought many positive effects to the society and natural environment.

1.3 Corporate governance

1.3.1 Corporate Governance Framework

In accordance with related national laws and regulations, resolutions of shareholder general meetings and the Group's articles of association, the Group has defined the organizational hierarchy of the board of directors, board of supervisors, management, and the Group's internal organizational structure, staffing, responsibilities and authorities, work procedures and related requirements. Management structure of the Group is shown in the following table.



With reference to the above corporate governance system, the main conditions of corporate governance are as follows:

- (1) Shareholders and Shareholders' Meetings: The Group convenes general meetings of shareholders according to the "Articles of Association". During the reporting period, when the general meeting of shareholders of the Group reviewed relevant proposals and the Group's major business decisions, the topics of the meeting were considered through voting and the authorities were exercised according to law. During the meeting, the general meeting of shareholders reviewed and approved the reports of the board of directors and board of supervisors, revised the Group's articles of association, and approved the Group's annual financial budget plan and final accounts plan.
- (2) The relationship between the controlling shareholder and the listed company: The resolution of the general meeting must be passed by more than half of the voting rights held by the shareholders attending the meeting. The controlling shareholders strictly abide by the relevant laws and regulations of the securities market, regulate their own corporate governance and information disclosure procedures, and perform their duties with due diligence to promote the standardized operation of listed companies and improve the quality of listed companies. The controlling shareholder shall safeguard the assets of the listed company and shall not infringe upon the possession, use, income, and disposal of the legal person's property by the listed company. The controlling shareholder fulfills its obligation of information disclosure strictly in accordance with the relevant regulations, and guarantees that the disclosed information is timely, true, and complete, and there are no false records, misleading statements or major omissions.
- (3) Directors and Board of Directors: All directors of the Group strictly exercise their powers and obligations in accordance with the "Articles of Association" and relevant laws and regulations, attach importance to the performance of duties and safeguard the interests of the Group. Directors of the Group need to include independent directors who are natural persons and not holding shares in the Group. The independent directors shall adopt a prudent, serious and diligent attitude and make objective and fair judgments on the proposals reviewed by the board of directors in accordance with their professional knowledge and abilities. Independent directors need to ensure that they have sufficient time and energy to perform their duties independently and effectively, to safeguard the Group's overall interests, and to always pay attention to the legitimate rights and interests of small and medium shareholders. Make correct judgments based on the Group's "related party transaction management system" to ensure that related party transactions are fair and reasonable.
- (4) Supervisors: According to the "Articles of Association" and relevant laws and regulations, the supervisors of the Group supervised the Group's financial status, daily activities and the behavior of all directors, managers, and other management personnel to figure out whether they violated the laws, regulations, the Group's articles of association, or the resolutions of shareholders' meetings. The Group's supervisors supervise and inspect the Group's business activities and exercise their power for the best interests of the Group. They also can attend board meetings and raise questions or suggestions on board resolutions.
- (5) Executives: The Group appoints and changes its executives strictly in accordance with the Group's "Articles of Association". The executives can perform their duties in accordance with laws and regulations, and they are responsible for the Group's operational management and performance. Besides, they need to comply with laws, administrative regulations and the Group's articles of incorporation, and to be loyal and diligent to the Group. Moreover, they need to try their best to realize the best interests of the Group.

1.3.2 Overview of Dongguang Chemical Limited's Board of Directors

Ms. Chen Jimin was appointed on 6 April 2018 as a non-executive director of the Company, supervising the management and participating in the development of the company's business and affairs, and expressing objective opinions on the above issues faced by the board of directors. As of 31 December 2018, the board was served by eight directors, including four executive directors, one non-executive director and three independent non-executive directors as follows:

Name	Age	Position	Date of appointment	Date of joining the Group	Responsibility
Wang Zhihe	61	Executive director Chairman of the Board	2014.06.12	1998.07	Responsible for the Group's overall strategic development and lead the Group's business development
Sun Yi	64	Executive director Vice Chairman of the Board	2014.06.12	1998.07	Responsible for the Group's overall financial management and internal control
Sun Zushan	66	Executive director Chief Operating Officer	2014.06.12	1998.07	Responsible for the overall operational management of the Group
Xu Xijiang	57	Executive director Chief Technology Officer	2014.06.12	1998.07	Responsible for the overall technology and production management of the Group
Chen Jimin	44	Non-executive Director	2018.04.06	2018.04	Supervise management, participate in the direction of the company's business and affairs, and provide objective opinions on the issues facing the board
Lin Xiuxiang	56	Independent non-executive director	2017.06.20	2017.06.20	Supervise the board and make independent judgments
Liu Jincheng	54	Independent non-executive director	2017.06.20	2017.06.20	Supervise the board and make independent judgments
Ng Sai Leung	46	Independent non-executive director	2017.06.20	2017.06.20	Supervise the board and make independent judgments

1.3.3 Overview of stakeholders and the communication with them

Stakeholders of the Group and the Group are interdependent to each other. Stakeholders achieve personal goals through the Group while the Group's development cannot be separated from the input or participation of various stakeholders. It is closely related to the Group's survival and development. Stakeholders are also crucial to corporate governance. Whether there is good communication with stakeholders directly affects the development of the Group, the Group should always maintain contact with stakeholders to facilitate understanding of the objectives and concerns of the stakeholders, and their opinions should be taken into account when making decisions. Some stakeholders share the Group's operating risks, some monitor and control the Group. Different stakeholders play different roles in the Group. Detailed information are as followed.

Stakeholders	Main objectives and focus	Communication channel	Measures
Shareholders and investors	Steady operations, revenue payback, protection of shareholders' rights; true, accurate, and timely disclosure of information.	Interim Report, Annual Report, Shareholders' Meeting, Stock Exchange Information Disclosure.	According to the Listing Rules, regularly discloses interim reports, annual reports and announcements, and holds shareholders' meetings.
Customers	Product quality and quantity guarantee, long-term and stable cooperation.	Visit regularly and maintain regular communication.	Establish a quality inspection center and a customer service center. Strictly monitor product quality and provides customers with satisfactory products. While focus on protecting the interests of customers, facilitating customers and serving customers and ensuring the smooth delivery of goods.
Government	Operating legally, paying taxes according to law, producing safe and environmentally friendly, fulfilling social responsibilities.	On-site inspections, work conference discussions, approval of work reports.	Legal operation, compliance management, and tax payment in accordance with the law. Strengthen company safety and environmental protection management; receive supervision and inspection by the government, and actively undertake social responsibilities.
Staff	Guarantee of fundamental rights and interests, welfare and remuneration, working environment, development space, occupational health and safety, self-value realization.	Trade unions, employees and management communication channels, set up a WeChat platform for employees to facilitate timely feedback on job suggestions, employee activities, training and learning.	Establish a corporate trade union organization to provide employees with a communication platform; pay compensation and benefits in full and on time, pay social insurance in accordance with the law; provide a healthy and safe working environment; establish a fair promotion mechanism; care for employees, help employees in difficulties, and organize employee activities.
Suppliers	Fair bidding, long-term stable cooperation and timely payment.	Bidding meetings, fairs, regular communication.	Fair bidding, selection of merit, performance of contracts as per contract, strengthening of regular communications, long-term cooperation with high-quality suppliers.

Stakeholders	Main objectives and focus	Communication channel	Measures
Bank	Repayment on schedule, operating conditions, business risks, honesty and credit.	Work conference, on-site inspection, post-loan tracking, and regular communication.	Repayment of loans and interest on time, cooperation with loan review and supervision.
Competitors	Fair competition, cooperative development, sharing of technology and experience, industry development.	Seminars, exchange visits, negotiations, industry conferences.	Practiced fair competition, achieved win-win cooperation, shared experiences, participated in industry seminars and research exchange activities for more than ten times, and promoted the sustainable development of the industry.
Market supervisor	Compliance with regulatory requirements, compliance management, disclosure of information and filing information.	Consulting, information disclosure, reporting, filing information.	Strictly abide by regulatory requirements, and disclose information and filing materials in a timely, accurate, and truthful manner according to law.

- Investor Relationship Management

Investor relationship is an important factor to enhance the Group's value. Strengthening the management of investor relations is beneficial to the Group's establishment of a good capital market, improvement of investor's recognition and loyalty to the Group, and then maximizes the relative value of the Group. The Group communicate with investors through emails, regularly disclose mid-year reports, annual reports and announcements in accordance with the Listing Rules and hold shareholders' meetings.

- Customer Relationship Management

Dongguang Chemical has fully developed its production technology and management since joining the industry, continuously improving the quantity and quality of its products and enabling the company to establish long-term and stable relationships with customers in the industry. We usually visit new customers before signing contracts with them, and discuss the quality of products and services required by them as well as their future purchases. We can basically satisfy the supply of urea products in North China and Northeast China.

In order to ensure the quality of products and the timely completion of orders by customers, the company adopted quality management and a set of quality control systems implemented in the production process. The main focuses are on product testing and inspection; and the quality control during the procedure of packaging and storage.

- Environmental Protection Agency Relationship Management

Cangzhou Environmental Protection Bureau Dongguang County Branch strictly follows the national environmental protection laws and regulations on Dongguang Chemical's environmental supervision and environmental monitoring. The environmental protection work of our company can meet the requirements of the Ministry of Environmental Protection.

2 ENVIRONMENTAL PERFORMANCE ANALYSIS

2.1 Overview of relevant environmental protection policies in major business areas

Laws and Regulations	Authority and announcement date	Content
Hebei Province Air Pollution Control Regulations (Amended in 2016)	2016.1.13; NPC Standing Committee	To protect and improve the environment, prevent and control atmospheric pollution, safeguard public health, promote the construction of ecological civilization, and promote sustainable economic and social development.
《Law of the PRC on the prevention and control of atmospheric pollution》 (Amended in 2015)	2015.8.29; NPC Standing Committee	To protect and improve the environment, prevent pollution and other public hazards, safeguard public health, recommend ecological civilization construction, and promote sustainable economic and social development.
《Law of the PRC on environmental protection》 (Amended in 2014)	2014.4.24; NPC Standing Committee	To protect the environment, prevent and control pollution, and promote the development of pollution control technologies for the production of synthetic ammonia
《Law of the PRC on water protection》 (Amended in 2017)	2017.6.27; NPC Standing Committee	To protect and improve the environment, and reduce pollutant emissions.
《Law of the PRC on Environmental Protection Tax》	2018.1.1; NPC Standing Committee	To accelerate the construction of environmental protection credit system in Hebei Province, establish the mechanism of “trustworthy encouragement, discretion and disciplinary punishment” for environmental protection, and implement the main responsibility of environmental protection of enterprises.
《The administration’s methods of assessment of enterprise credit of Hebei province (Trial implementation)》	2017.11.29; NPC Standing Committee	To prevent construction projects from generating new pollution and destroying the ecological environment.
《The regulations of environmental protection of constructive project》	2017.10.01; NPC Standing Committee	

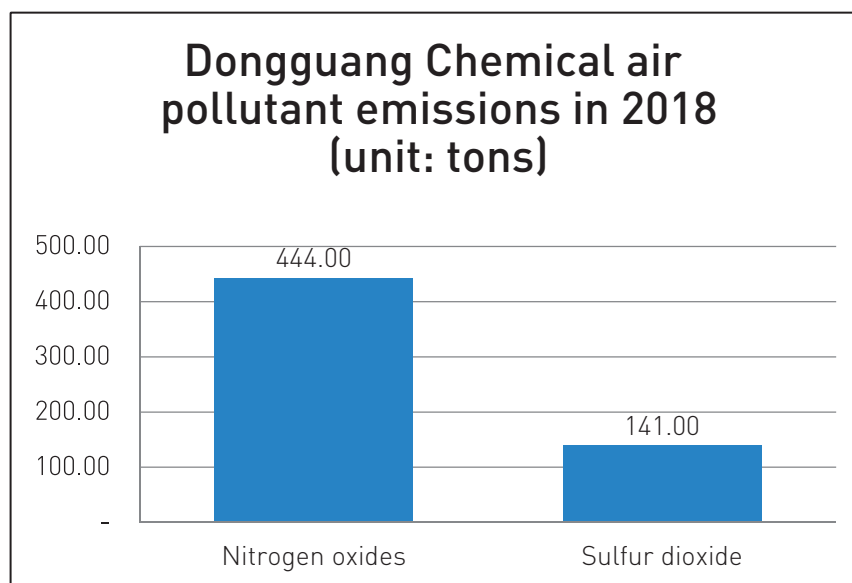
2.2 Emissions Correlation Analysis

The pollutants emitted by Dongguang Chemical due to fuel combustion mainly include nitrogen oxides (NO_x), sulfur dioxide (SO₂) and particulate matter. Most of the exhaust gas emitted comes from the consumption of coal fuel combustion, and a small part comes from the consumption of cars.

The company's main fuel combustion source is coal. The types of vehicles that consume fuel are mainly small and light-duty vehicles, mainly from small-sized vehicles, and the consumption of passenger cars, trucks and other vehicles.

2.2.1 Exhaust emission data calculation

In the process of combustion, air pollutants such as nitrogen oxides, sulfur dioxide, and particulates are emitted. Excessive discharge of pollutants can lead to air pollution. Therefore, the appropriate amount of pollutants is an important prerequisite and a priority for the chemical industry. The emission of each emission is calculated based on the data obtained and collected of Dongguang Chemical's gas fuel consumption and vehicle emissions and is shown in the following figure:



According to the standards set by the local environmental protection bureau for waste emissions, the annual limit of nitrogen oxides are 549.25 tons, and the annual limit of sulfur dioxide are 327.1 tons. As shown in the above figures, the NO_x and SO₂ emissions of the Group in 2018 were 444 tons and 141 tons respectively. The total emissions of the two major air pollutants have not exceeded the standard indicator.

2.2.2 GHG emissions data calculation

Greenhouse gases will be emitted through both direct and indirect methods. When fuels are burned via fixed and mobile sources, a certain amount of greenhouse gases such as carbon dioxide, methane, and nitrous oxide are directly emitted, which is Scope1; The electricity provided will indirectly emit greenhouse gases which is Scope 2; Our company can basically recover carbon dioxide generated during the production process of fixed source combustion. The carbon dioxide recovered from this part is then produced into liquid carbon dioxide as by-product and then into the sales channel. The mobile source (small and light vehicle emissions) fuel consumption and emissions of carbon dioxide, methane and Nitrous Oxide amounted 93,738.05 tons of carbon dioxide equivalent. We calculate the carbon dioxide emissions of 666,930.60 tons of carbon dioxide equivalent via Dongguang Chemical monthly electricity bills.

2.3 Waste classification and emissions

2.3.1 Waste classification and processing

Dongguang Chemical Waste Sorting and discharging in 2018 (Unit: Ton)

Category		Name	Collection	Treatment	Weight
General waste	Non-recyclable waste	Peel, residual food and other domestic waste;	Placed in company trash	Collection	6
	Recyclable waste	Slag and sludge	Place it in the designated depository	Burned by three-waste furnace	46,000
		Waste paper: waste newspapers, office waste paper, etc.	Place it in the designated depository	Dealt by waste recyclers	1.5

2.3.2 Solid waste emissions

Dongguang Chemical Solid Waste Generation in 2018 (Unit: Ton)

Harmless waste	sludge 528
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The sludge produced by the Group has no emission index and is not discharged. Instead, it is directly sent to the three waste furnaces for combustion after being generated.

2.4 Resource Usage Analysis

2.4.1 Main energy consumption structure of enterprises

In 2018, Dongguang Chemical consumed 63 tons of gasoline, 56 tons of diesel, 0.25 million tons of raw coal, and 0.84 million tons of anthracite. At the same time, the power consumption related to the urea production is 1.30 billion kwh, the total water consumption of groundwater is about 0.78 million tons, and the water density is $1.0 \times 10^3 \text{Kg/m}^3$. Among them, Dongguang Chemical applies water sources according to the relevant national environmental protection policies and regulations, and has always been adhering to the good habit of water conservation.

In 2018, the total energy consumption of Dongguang Chemical amounted to 1.21 million ton standard coal, of which 68.69% came from anthracite and the other 20.61% mainly came from raw coal.

Different types of energy consumption of Dongguang Chemical in 2018

(unit: ton standard coal)

Electricity	130,104.00
Anthracite	836,082.00
Raw Coal	250,896.00
Gasoline	63.00
Diesel	56.00
Total	1,217,201.00

2.4.2 Other Energy Consumption Statistics

Since coal is the main source of the company's energy consumption, it is a difficult task for the company to develop the urea industrial chain through the system's maximum use of the gas emitted from urea production, while reducing energy consumption, emissions, and environmental pollution. As of the end of December 2018, the number and types of company office equipment have been calculated. There are 202 computers, 41 printers, 3 fax machines, and 2 copy machines. Overall, the number of equipment is small. In addition to work equipment, there are a total of 1,500 bulbs, all energy-saving lamps and 120 air conditioners which are all split-type.

Dongguang Chemical's sewage disposal capacity of 2018 is 42 cubic meters per hour. All sewage discharges are properly handled in accordance with relevant national environmental protection policies and regulations.

In addition, for the urea industry, the amount and treatment of fertilizer packaging also has important implications for the protection of human and animal security and the ecological environment. In 2018, the company used 1,100 tons of packaging bags, which accounted for 0.10% of each production unit. In order to strengthen the quality management of urea bags, the company has established a bag inspection and management system, strictly implements sampling inspections and issues inspection reports. Discarded packaging bags are standardized for recycling and unified scientific treatment to maximize the protection of the ecological environment.

2.4.3 Energy Saving and Emission Reduction

Energy-saving and emission reduction is an important measure to implement the scientific concept of development, promote economic restructuring, change the mode of economic development, and increase the potential for sustainable development. Dongguang Chemical formulated related plans on energy-saving and emission reduction, and committed to implementing and achieving certain results. The company has completed several technical upgrades of the production line to further improve the energy-saving function in the production line process, including reducing the consumption of electricity. In 2016 and 2017, Dongguang Chemical was awarded as the advanced unit for energy conservation and nitrogen reduction in the nitrogen fertilizer and methanol industries during the "Twelfth Five-Year Plan" period.

2.4.3.1 Freeze blocking and waste avoiding

In order to minimize waste, the company has done lots of job on preventing freezing. It is stipulated that the on-duty dispatcher should always pay close attention to the temperature change when the temperature reaches zero degree centigrade, and immediately notify the various positions to check the discharge status of each dredge to avoid the occurrence of frozen plugging events.

2.4.3.2 The use of heater

In order to reasonably control the on and off of heaters, the company stipulated that when the temperature is higher than 15 degrees centigrade, heating measures such as office buildings and workshops should be turned off, and heating should be performed at less than 15 degrees Celsius according to the needs of the employees, so as to avoid waste of resources due to long-term heating.

2.4.3.3 Electricity-saving management

In accordance with the principle of maximizing electricity savings, the company stipulates the timely turn-off of office computers, the air-conditioner on-off control in the production workshop, and the prohibition of permanent lights in the factory area. The employees are required to turn off the lights and the fans when they leave the workshop. Drinking fountains need to be turned off after work.

2.4.3.4 The use of air-conditioning

The use of air-conditioning is based on the principles of safety management, energy saving and consumption reduction, so the company makes relevant regulations on the use of air-conditioning according to changes in seasonal temperatures. Doors and windows should be closed during use, air conditioners must not be arbitrarily changed the direction of the fan blades, and air conditioners and other energy-saving regulations should be promptly closed when off duty.

2.4.3.5 Water conservation

Water conservation is also an important measure for effective energy conservation and emission reduction. The company insists on eliminating the phenomenon of wasting water, and punishes it according to the assessment criteria such as long running water and other assessments. The situation of adding faucets needs to be declared to the production department, etc., and it can be implemented only after approval.

2.4.3.6 Energy saving

The company's production department formulates total energy-saving and consumption-reduction measures for gas production, purification, compression, and urea according to the actual conditions every month. The straight-through furnace is reformed to increase the gas production, and the effluent is added to the synthetic circulating water to reduce the chlorine content of the circulating water. The old stainless steel pipe was used to reform the leak detection of the urea synthesis tower. All parts of the production need to be improved to improve the device, choose a better process to optimize, from the perspective of environmental protection and energy conservation on the recovery of the emission of steam, to achieve more energy conservation and reduce the possibility of consumption.

2.5 Environmental protection

2.5.1 *Report on the air, water and noise situation of the plant*

Each year, the EPA entrusts or the company commissions a testing technology service company to inspect the company's operating conditions and environmental protection facilities. The monitoring of the locations and items corresponding to exhaust gas, waste water, and noise is performed according to the implementation of the standard values. The monitoring equipment is used to check whether the monitoring limits of the equipment exceed the standard values. Based on the inspection results, the test results are obtained and a monitoring report is issued. The company uses the monitoring report to obtain the discharge permit.

The monitoring report data of 2018 shows that the monitoring values of exhaust gas, waste water and noise meet the local or national emission standard values.

2.5.2 Pollution reduction measures

2.5.2.1 Resource recycling

The company needs to consume a certain amount of steam per ton of urea in production. The company recycles this part of the steam condensate through the urea unit. After the steam is cooled by the circulating water, it can be recycled for heating in the relevant workshop to meet the requirements, saving the use of white coal. A treated efflux that does not meet the requirements. In addition, the company's uses the residual heat generated by fuel combustion to generate electricity, which in turn saves some of the raw materials consumed by direct coal-fired power generation.

2.5.2.2 Waste treatment

Waste produced during the production of the chemical industry. Improper handling can cause severe pollution in the surrounding environment. Therefore, Dongguang Chemical can discharge the waste after it has passed treatment facilities. The technology adopted by the company in dealing with the exhaust gas generated during the boiler combustion process is SNCR DE nitrification – EP-Bag filter comprehensive – deducting-ammonia desulfurization, and finally reaches the national standard for discharge; the method for treating the gas-making coal slag is directly sent to the three-waste furnaces. The treatment of waste water is discharged into the sewage treatment tank. Part of the treatment of waste water is recycled, and the rest are up to standard and filtered for discharge.

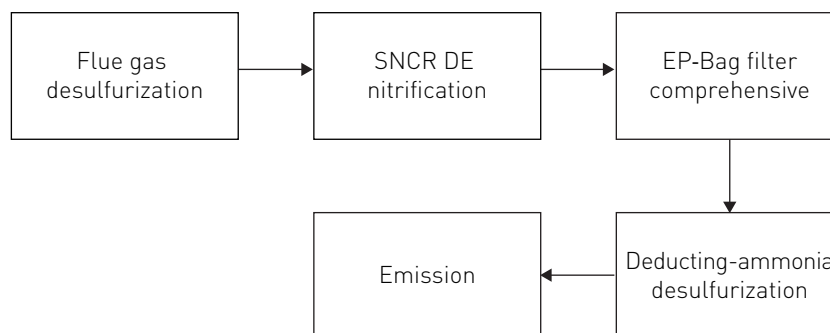
2.5.3 Strengthen pollution control facilities

According to the requirements of the "Industrial Action Plan for the Comprehensive Management of Air Pollution in the Autumn and Winter of 2018-2019 in Beijing, Tianjin and Hebei and the Surrounding Areas" issued by the Natural Department of Hebei Province in September 2018, so from 1 October 2018, to implement this policy, the company actively solved the problem of unorganized emissions of the first particulate matter in the coal shed storing coal, continued to promote the unorganized emission control of industrial enterprises, added dust collection facilities at the drop opening, and reduced dust emissions.

2.5.4 Environmental System Treatment Process (Handling Harmful Substances)

2.5.4.1 Waste gas/water/residue treatment flow chart

Waste gas treatment flow chart



The production process produces exhaust gas. The company has used the program to recycle the exhaust gas from the furnace fuel production process and also installed a wet scrubber to remove dust. The exhaust gas generated by the boiler is purified by electrostatic precipitators, DE nitrification and desulfurization equipment.

In 2018, an upgrade project of 700,000 m³/h flue gas desulfurization was added. Through the further modification of the flue gas desulfurization facility in the exhaust gas treatment section of ammonia desulfurization, the spray contact area was enlarged and the spray layer was increased, which greatly enhanced the effect of removing sulfur and dust and is better to meet the national environmental protection requirements.

Waste slag processing flow chart

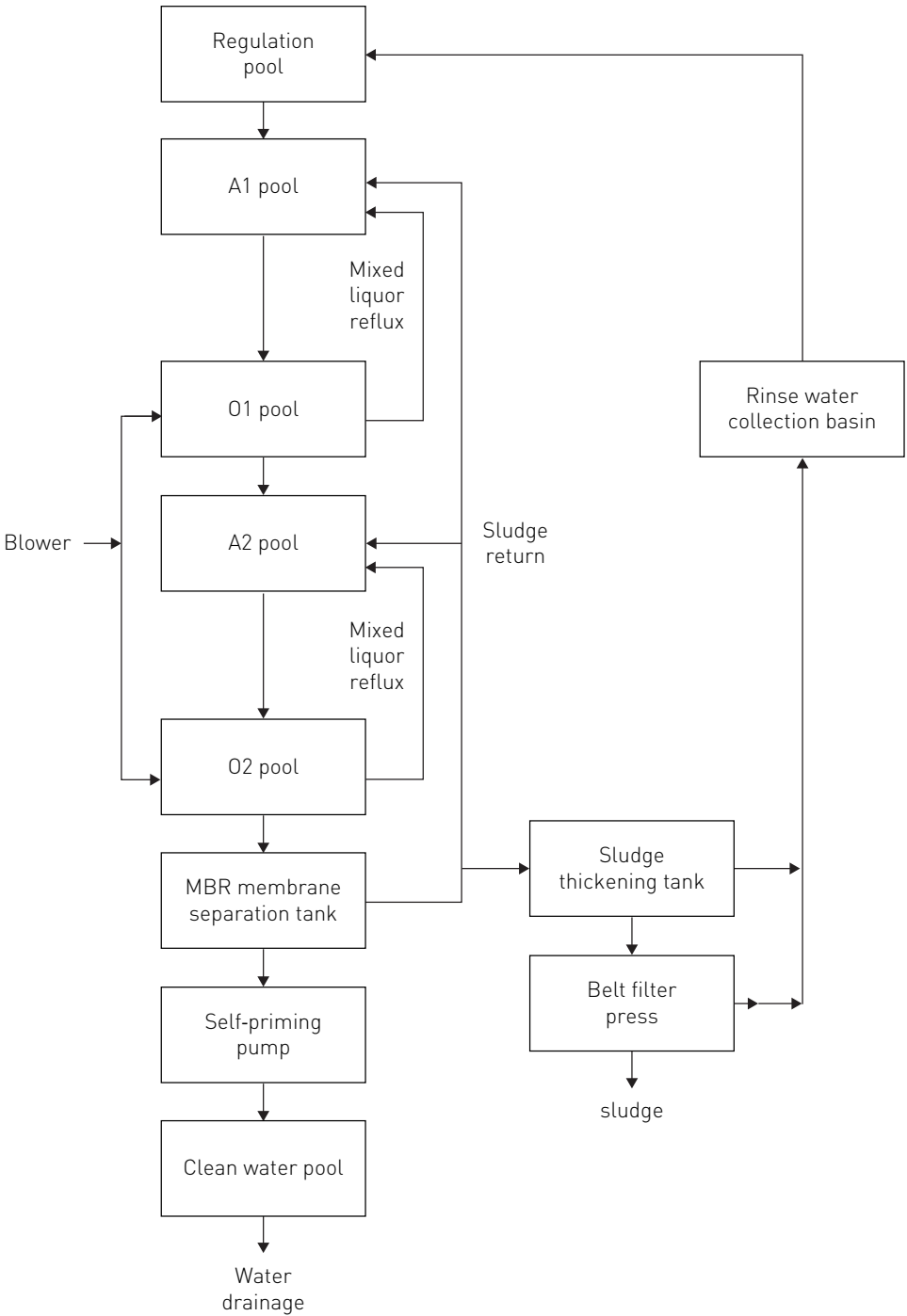


Unlike urea producers who use natural gas as their raw material, the production process and boilers of Dongguang Chemical generate a large amount of cinder. The company's cinder will be sent to the three-waste furnaces for combustion. After combustion, part of the slag will be recycled as boiler fuel and the company will sell other waste (such as dust collected by the dust collector) for construction purposes.

The three-waste furnace is a facility mainly used for the treatment of waste gas, waste residue, and coal waste. In order to further respond to the environmental protection policy in 2018, solved the problem of the original 150 tons boiler and 90 tons three-waste furnace without spare desulfurization facilities, reduced pollutant emissions, and continuously transformed the flue gas desulfurization facilities for better effects of energy saving and emission reduction. According to the production situation of the company, the construction was carried out according to the design scheme of two furnaces and one tower, which better met the national ultra-clean emission requirements. The above four equipment have different discharge outlets, and they are all connected to the City Council, so that the information can be transparent enough and discharging according to indicators at all times. According to statistics, the actual operating number of the three chimneys is 24 hours/day in order to keep the production facilities uninterrupted. The running time in the past three years is as follows:

Category	Time	2016		2017		2018	
		Operating days	Operating hours	Operating days	Operating hours	Operating days	Operating hours
Three waste furnace chimney (120 tons)		285	6,840	349	8,376	362	8,680
Three waste furnace chimney (90 tons)				92	2,208	277	6,654
Boiler chimney (150 tons)		191	4,584	305	7,320	260	6,239
New exhaust gas outlet						84	2,024

Wastewater treatment flow chart



The company's production and operations need to comply with various PRC laws and regulations of environmental protection, occupational health and safety, government policies and industry standards applicable to the discharge of waste water, solid wastes and gases. The company has installed wastewater treatment facilities at No. 1 plant and No. 2 plant to handle all the wastewater generated by the company's products during the production process. The respective wastewater treatment capacity of the facilities is 154 tons and 845 tons per day. The treated waste water is recovered and used in the production process of the product.

2.5.4.2 New emissions treatment facility



In order to further respond to the environmental protection policy in 2018, solved the problem of the original 150-ton boiler and 90-ton three-waste furnace without spare desulfurization facilities, reduced pollutant emissions and achieved Better results of energy saving and emission reduction, we continuously transformed the flue gas desulfurization facilities. According to the production situation of the company, the construction was carried out according to the design scheme of two furnaces and one tower, which better met the national ultra-clean emission requirements.

2.5.5 *Environmental inspection department daily inspection*

In order to protect the company's living and production environment, prevent pollution, implement sustainable development strategies and gradually achieve cleaner production, implement relevant management in accordance with the "Environmental Protection Management Regulation" formulated by the company. Employees are required to pay attention to energy-saving and emission reduction programs, and raise awareness of environmental protection and legal concept of staff. We keep the production workshop clean, timely clean up the roads in the factory to prevent dust pollution, inspect, repair, maintain the environmental protection facilities on time, and ensure the integrity of the equipment. The Environmental Protection Department is responsible for supervision and management. The Environmental Protection Department implements daily inspections and surprise inspections through the monthly inspection plan, and imposes penalties on timely handling of miscellaneous items or workshops and departments that do not meet the requirements, and forms a penalty notice. Daily inspections of the operation of each production facility and form environmental protection inspection table to check whether the equipment is on time or whether the equipment is operating normally.

3 CSR ANALYSIS

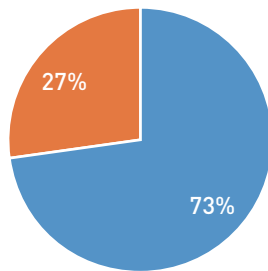
3.1 Employment and labor status analysis

3.1.1 *Overview of staff employment and labor standards*

Dongguang Chemical Co., Ltd. formulates a comprehensive staff employment rules and regulations in accordance with national and local policies regarding the employment of staff and labor conditions. From the employee handbook, it is seen that employees work eight hours a day and implement a three-shift system for factory workers. The non-production department is closed for five days a month, and the production department is closed for eight or nine days a month. At the same time, employees legally enjoy any prescribed benefits, wages, and holidays. Staff recruitment employs employees in strict accordance with the company's established recruitment process and plans, and resolutely resists the recruitment of underage children as regular employees of the company. The company upholds the principle of "justice, openness and fairness" to motivate and restrain every employee.

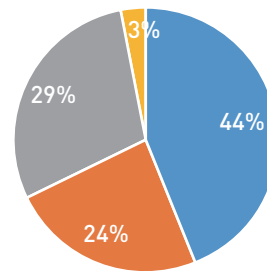
For the joint development of the company and its employees, every employee of Dongguang Chemical Company has the right and opportunity for promotion. In accordance with the company's performance evaluation implementation measures, the self-recommended employees are assessed and evaluated, and the qualified employees are promoted.

Dongguang Chemical's major indicators of employees in 2018



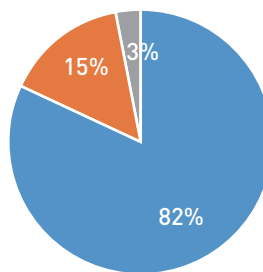
■ Male ■ Female

Gender



■ Below 30 ■ 31-40 ■ 41-50 ■ Above 50

Age



■ Technical secondary school and below
■ College
■ Undergraduate

Education situation

Dongguang Chemical's number of employees and turnover rate in 2018

Type of employees	Number at y.e	Percentage at y.e	Number of staff left	Turnover rate
Functional management	178	14.00%	2	1.12%
Urea production	1,014	79.78%	35	3.45%
Other	79	6.22%	1	1.27%
Total	1,271	100.00%	38	2.99%

As of 31 December 2018, the total number of employees in Dongguang Chemical Co., Ltd. was 1,271, of which males accounted for a relatively large proportion, among which the staff number of urea production was the largest. Overall, the company's annual turnover rate was small, and there was little change in personnel, so the overall situation is stable. Dongguang Chemical Co., Ltd. conducts health check for all its employees each year and invites hospitals to provide "home service" to provide convenience for employees. In addition, employees in the production line also have physical examinations in hospitals that qualify for occupational health (safety) examinations. What's more, female employees are given special protection, additional examination items on women's health are added during the annual voluntary medical examinations. The company usually pays attention to the employees' entertainment activities, not only to carry out daily discussions and competitions, but also to provide employees with time to go out to play, so that employees can relax in the busy work and mind.

3.1.2 Overview of employee Health and Safety

In order to ensure the health of employees, prevent pollution, implement sustainable development strategies and gradually realize clean production, Dongguang Chemical Company issued the "Management Measures for Percentage Assessment of Production Systems" and "Eastern Environmental Protection Management Rules and Regulations" and other documents to establish a relatively perfect protection system. The company conducts a 100-point assessment on the bonuses of managers and all employees of each unit, based on the assessed result of staff's performance on safety and environmental protection, equipment and process management, the employee's labor discipline and the management of various specifications. And the employees' bonuses will be calculated based on the assessment results. The company will try its best to eliminate potential dangers of major accidents and deal with the hidden dangers discovered in time so as to ensure that employees have a good working environment. The picture below shows the photo of the Security Warning Education Conference.



In November 2018, the General Office of the Hebei Provincial Government issued an urgent notice on the fire prevention and explosion accident of a chemical fertilizer company in Hebei Province. We launched a safety warning education conference for the accident. The branch factory and the company are organized separately. Taking the accident as a case, we constantly tighten the string of safety production. Using different investigation methods and frequency for different types of hidden dangers, responsible persons shall strictly implement in accordance with the "Safety Inspection and Hidden Danger Inspection and Management System", classified implement the prevention and control, and the hidden dangers shall be dealt with in a timely manner. In addition, we included the investigation, treatment and monitoring situation of hidden dangers of every departments in the monthly safety assessment, reward excellent workshops and punish the responsible person who did not implemented as required. We will do a good job in the safety production of our company to prevent similar accidents. The picture below shows the photos of the daily job knowledge test.



In order to further improve the quality of employees and professional competence, the production department of organized production personnel to conduct daily job knowledge examinations in 2018. The content of the examination includes the work of each position, the relationship with other positions and the standard of filling the records as the test content, aiming to investigate the proficiency of production personnel in the perception of the position and daily production operations. The reference staff answered carefully and had a strong sense of self-discipline. They were able to abide by the discipline of the examination room and complete the examination within the time specified in the examination. In this assessment, the examination for the main operations of the gas generation, the main operation of the 90t, the main operation of the steam turbine, and the main operation of the steam turbine are carried out based on the attendance. We combined the score of attendance, notes and examination of each shift and give reward. Through the examination, all the staff of the production department further deepened the operation procedures of their respective posts, more clearly defined the job responsibilities, ensured the production quality of the post, ensured the better completion of the production tasks in the future, and also improved the enthusiasm of everyone's work and study.

As a chemical industry, ensuring the safety of production is the top priority for us. To ensure safe production, we has formulated and implemented the "Work Environment and Safety Management Measures" and "On-Site Safety Management Percentage Assessment Measures" and other rules and regulations. According to the production system percentage assessment management method to assess daily production safety issues. The heads of various departments are the first responsible persons of civilized production. The Environmental Protection Department is responsible for the supervision and inspection of the company's civilized production management work, implementing daily inspections and regular joint inspections, issuing daily assessments and deadlines for rectification of violations of civilized production assessment standards, and doing daily assessments and rectification inspection records. The equipment maintenance accounts of the 2018 branch factory have shown in the following figure. At the same time, the Safety Department organizes a comprehensive inspection of the production, equipment, process, electrical, instrumentation and other departments in a quarterly manner. The safety responsibility system and the safety production management system are implemented as inspection priorities to ensure the safe operation of equipment. In order to ensure that the safety facilities are complete, intact and in normal use, the large-scale substation will be repaired once a year, and small production equipment will be regularly repaired and maintained.

We will also conduct seasonal and professional investigations on hidden dangers, and then prepare hidden danger inspection records. The safety department will establish accident hidden danger files, clarify hidden danger levels, and implement measures to supervise hidden dangers according to the principle of "five decisions". The situation is monitored to ensure that the hidden danger management is completed on schedule. It is necessary to promptly rectify the hidden safety hazards, and take corresponding measures in time for the inability to rectify. And fire equipment is in place to prevent accidents such as accidents. Labor and defense materials will be distributed around the 15th of each month to ensure that the employees' materials are sufficient and complete.

Under the initiative of the employees of the company and the regular self-examination of each workshop group, there was no safety accident in 2018.

Safety-production indicators	Times
Environmental pollution accident	0
Fire accident	0
Light-hurt accident	0
Severe accident	0
Death accident	0

In 2018, Dongguang Chemical actively organized workshop staff to carry out education and training, strengthen employee safety awareness, and improve employee safety knowledge. The main training included safety operation skills; emergency rescue training; protective equipment, emergency supplies training; and safe operating procedures of possible hazardous accidents in the workshop, etc. In addition, employees' awareness of self-safety protection is also emphatically explained, ensuring that not only the quality of the products is qualified, but also the working environment is equally safe. In addition, all employees of the company must conduct pre-job training and obtain the necessary vocational skills before taking up their posts. Some employees also need to be certified to work, so as to avoid unnecessary harm caused by the lack of technology.



Photos of fire drill

With the slogan and goal of “safe production first, environmental protection determines the future”, Dongguang Chemical Co., Ltd. implements national laws and regulations on safe production, strengthens safety management, further strengthens fire safety education for all personnel, and does a good job in fire safety in the factory. In July 2018, a fire drill was organized, including on-site simulation of fire evacuation first aid, fire extinguishing, and rescue of injured personnel. The participants took the drill seriously and were orderly. Through this fire drill, a practical simulation exercise was provided for the emergency personnel, which made everyone familiar with the basic emergency operations, strengthened the staff’s fire awareness and emergency escape ability, and laid a solid foundation for the handling of emergencies. At the same time, we also mastered the operation methods and steps of fire extinguishers, fire hydrants, etc., and improved in various aspects. The following picture shows the safety protection products wearing competition.



In June 2018, in order to strengthen the company’s safety and environmental management work, protect the personal safety and health of employees in the production process, and reduce unnecessary accidents, the safety department organized production personnel to carry out air breathing apparatus wearing competition. The game adopts a timekeeping system, which has steps such as pre-use inspection and wearing operation. The game is played in a single group. After hearing the “start” password, the game timing starts. After wearing, the hand is raised. After all the steps are finished, the game timing ends. According to the scoring standard, the first person who completes the protective equipment and wears the correct one wins. Through this competition, not only the staff’s safety skills were reviewed, but also the emergency rescue capability of employees’ safety and environmental accidents was improved, and the enthusiasm of employees to pay attention to safety accidents was fully mobilized.



In July 2018, the company organized all employees to participate in health checkups, invited doctors, and moved the corresponding instruments to the company to do physical examinations for employees. In addition, some gynecological examinations for women were added to enable employees to Health status has a comprehensive understanding of the health of employees. The on-the-job employees who work for some positions such as dust and noise in production will also arrange relevant occupational health examinations, organize employees to go to the hospital for physical examination, to ensure the health of employees, and issue occupational health examination reports.

3.1.3 Overview of Staff development and training

In order to provide employees with a better working environment and development prospects, the company arranges various forms of on-the-job training, job skills competitions, daily discussion and study, outing tourism, various other leisure activities and donations; such as mutual donations, from time to time. The internal training of the company is divided into on-the-job training and daily training. The content is mainly divided into two parts: process and safety. In 2018, there are 644 trainings, totaling 846 hours, and the cumulative number of participants is 2,222. After the training, there are assessments.

Training Name/type	Content	Internal/ external	Acc. Hours (unit hours)	Acc. Times (unit times)	Acc. Participants (unit people)	Percent (acc. Part./ total staff)	Result
On-the-job training	process	internal	144	18	56	100%	Y
	safety	internal	48	6	56	100%	Y
Daily training	process	internal	472	472	1,010	78%	Y
	safety	internal	182	148	1,100	85%	Y
Total			846	644	2,222		



- Environmental knowledge training:

In January 2018, all managers of Dongguang Chemical Industry participated in environmental protection knowledge training. They listed substances of high concern through analysis of current status of water resources, noise, garbage production and pollutant emission, environmental pollution consequences and physical harm. Also, they listed examples of common and non-compliant cases, allowing participants to learn relevant environmental protection knowledge based on this training, and make rational use of natural resources to prevent environmental pollution and damage. The managers are responsible for the company's environmental protection work management, planning and implementing the company's various environmental protection work, and related management measures for wastewater, waste gas and noise to reduce the impact on the environment.

- Welder skill competition:

Accurate mastery and continuous improvement of skills are very important for the needs and development of employees' job positions. To improve the skills of frontline employees and improve the welding level of employees, the company organized a welding staff skill competition in April 2018, and the participants were workshops. All employees, on the premise of daily training, focus on appraisal skills, and aim to improve job skills, providing employees with a platform to showcase their talents. After receiving the notice from the competition, each team was highly motivated and enthusiastically signed up for the competition. Through the holding of this skill competition, employees have been greatly exchanged and learned, and the technical quality and technical skills of the company's welders have been further improved. At the same time, the contestants also increased their knowledge through this platform, learned welding techniques, improved their professional skills, accumulated experience in competitions, and created a good learning and competition atmosphere to achieve the expected results of this competition.



- Staff basketball game:

During the National Day of 2018, the Dongguang Chemical Industry Labor Union organized branch factories and functional departments to conduct the "Donghua Cup" professional basketball competition. Eight teams participated in this competition, including the first factory operation team, the second factory operation team, production system maintenance team, etc. Each team has 8 players. The competition also has one referee, one commentator, one scorer, one timekeeper, and several staff members. In the competition, two cross-takeout rounds were held in the afternoon and afternoon. The winners entered the finals. Finally, the champion and the runner-up are awarded the trophy and given material rewards. The participants presented the commemorative prize. The players on the field actively attacked, worked hard to defend, sweated, and showed themselves. The final game ended in the applause of the audience. Through this professional basketball game, the staff's amateur cultural life has been enriched, and friendship, unity and cooperation have been passed down in this game. It not only enhances mutual understanding between employees, but also relieves the pressure on the work, allowing employees to relax their body and mind after intense work, stimulating the enthusiasm of work, and promoting the formation of positive and positive work and life attitudes.



- Department tug-of-war competition:

To enrich the spiritual and cultural life of employees, enhance corporate cohesion, and promote communication and collaboration between functional departments, the office held a tug-of-war competition in the basketball court in May 2018. The competition has 6 teams and each team has 11 people. Total 66 people participated in the competition with high enthusiasm. Competition system of the game is two wins in three games. Six teams are divided into three groups, each group has a winner, and three winners fight for the final. There are four awards for the tug-of-war competition, namely the 1st, 2nd and 3rd prizes and the participation awards, one for each award. Each participating team is actively involved in it, using their sweat to tell the meaning of unity, tenacious perseverance and hard work spirit to make everyone moved, reflecting the collective sense of honor of employees. After fierce competition, draw a perfect ending in the rhythmic shouts and cheers. Through this passionate tug-of-war competition, the employees enhanced the spirit of group cooperation and demonstrated the positive spirit of the company's employees.

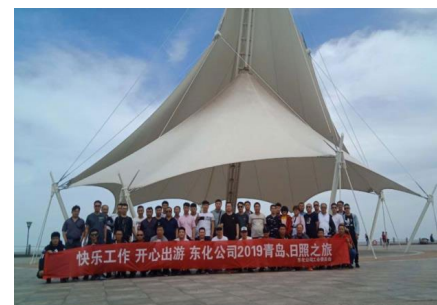


- Three-person four-legged game:

Besides basketball and tug-of-war competitions, the company also held a three-footed four-footed game in the functional department in August 2018. Participants are the supply department and the audit department. Before the start of the competition, the functional department personnel practice continuously on the site behind the office building to find the best partner and the rhythm of walking. Try different methods again and again, and get pace with each other. The game officially began in joy, three people, everyone holding each other's shoulders, go hand in hand, very test the tacit understanding of the participants. The employees fully reflected the spirit of teamwork in the competition, which not only increased the communication between employees, but also strengthened the cohesiveness of the functional departments, so that everyone understands the importance of collective cooperation.

- Company team building activity:

In order to enrich the cultural life of all employees off the work, ease the daily work pressure, and enhance the cohesiveness of the workforce, we organized all employees to participate in the "happy work, happy travel" tourism activities. The event provided a total of two travel routes for employees to choose freely: Shanxi Pingyao three-day tour and Rizhao Qingdao three-day tour. All employees participated in the event in 4 batches, from 21 May to 1 June 2019. The event lasted for 12 days. After the trip, all the staff were happy and devoted to the work with more full enthusiasm.



3.1.4 Guidelines and measures to prevent child labor or forced labor

The company strictly abides by state laws and regulations in labor and employment and strictly prohibits the employment of child labors. From the recruitment, registration, labor contracts and other aspects of strict control, to avoid child labor due to work errors. In the employment of the company and suppliers in 2018, neither the use of child labor nor the use of adolescent workers for high manual labor was found.

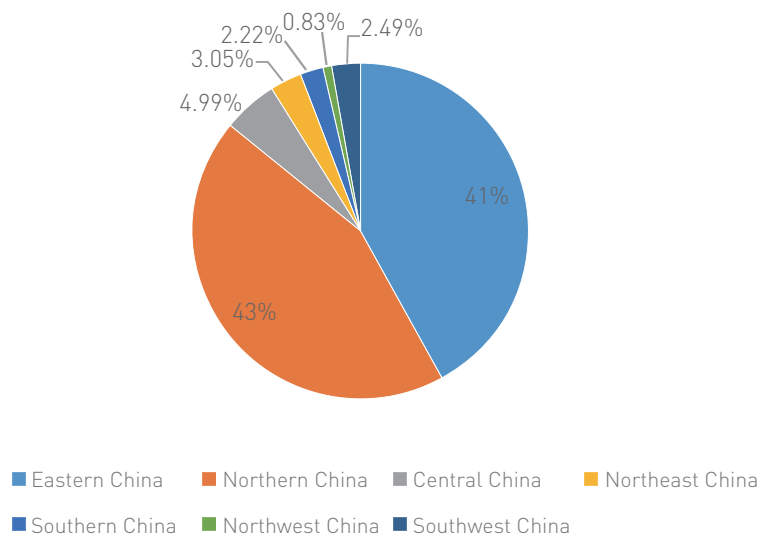
3.2 Analysis of Operation Management Status

3.2.1 Supply Chain Management Overview

To effectively evaluate and select qualified suppliers, optimize the company's supply structure, and improve the company's supply system to ensure that suppliers' supply quality and production delivery capabilities are in line with the company's requirements, the company has formulated corresponding regulations for supplier selection and evaluation management. The system, based on the company's "supplier selection and evaluation management system", set up a responsibilities assessment team to assess the supplier's qualifications, in accordance with the norms of supplier evaluation, from which to select quality suppliers, in order to ensure the company's normal production needs.

The company has established a list of suppliers and updates them as circumstances change. For suppliers that have long-term cooperation, the Supply Department shall establish a file to obtain a copy of a valid business license and various related licenses. The Supply Department organizes related departments and personnel to conduct annual comprehensive evaluations of large suppliers and long-term suppliers at the end of each year, determine the business volume for the following year based on the evaluation situation, and record the evaluation results in written documents. The methods of selecting suppliers include bidding and price comparison. In 2018, Dongguang Chemical had a total of 361 suppliers and distributed in various regions in East China, North China, and China. Most of the suppliers were selected through the method of price-inquiry and price-comparison.

Suppliers regional distribution



3.2.2 Analysis of Anti-corruption Measures of Enterprise

According to the requirement of relevant national laws and policies, the Group has formulated anti-corruption company policies. If there are signs of fraud that harms the company's legitimate economic interests, or if there is a lack of professional ethics among the employees, the hotline can be called or an e-mail can be sent to the management. The Group will take appropriate measures against the offender. The improper economic benefits obtained as a result of fraud are ordered to be retired; if the Group suffers economic losses, it shall be liable for economic compensation in accordance with relevant state regulations. In 2018, there were no major corruption litigation cases in the Group. All the goods and materials that the Group needs to purchase are centrally purchased by the supply department. The Supply Department should do its job for the purpose of reducing the purchase price, maintaining the quality and quantity, being loyal to its duties, and maintaining the integrity and self-discipline of the Group.

3.3 Product liability

The Group has been in strict compliance with laws and regulations including the Law of the People's Republic of China on Product Quality, the Law of the People's Republic of China on the Protection of Consumer Rights and Interests; and pays full attention to product quality and sales management. We ask for the high quality for each step from the production to delivery. It is required to continuously innovated breakthroughs in the areas of product enhancement and improvement in order to ensure the quality of products and to provide safer and more environmentally friendly products. The Group produces products in its own production facilities, so it has been constantly looking for solutions to improve the production processes, identifying new production facility models, optimizing equipment and upgrading production facilities to improve the quality and efficiency of production processes, and ensure that products are more efficient.

In addition, the Group has formulated and strictly implemented internal system procedures such as "Product Quality and Safety Management System", "General Principles of Intellectual Property Management", and "Sales Management System" to strive to enhance customer satisfaction and strengthen after-sales services to win customers' trust and support, to fulfill the responsibility of the Group for consumers and the society.

The Group's main product is urea, which has no smell, is soluble in water, and non-toxic. It is a highly efficient neutral nitrogen fertilizer for agriculture. As a neutral fertilizer, urea is suitable for all kinds of soils and plants. Using urea will not leave harmful substances in the soil, and it can ensure that the products produced are green, environmentally friendly, and synergistic.

3.4 Community investment

The Group takes action for return society by charitable events. The Group also invests heavily in the communities in which it operates and encourages employees to participate in various charitable donation activities.

The Group has provided a large number of employment opportunities for the local residents.

4 FUTURE PLANNING

4.1 The external risks and Future Plans

The external factors such as the constant change of supply and demand in the product market, fierce competition in the market, seasonal fluctuations in the product, and severe weather conditions all have a certain impact on the company. Dongguang Chemical Co., Ltd. is located in an area where coal-based urea production is relatively intensive, and industry competition pressure is high. At present, 80% to 90% of corporate profits are mainly from urea products. So the company's product structure is relatively simple, if the market supply and demand of products change largely, it will bring magnificent risks to the company in maintaining profitability.

With the ever-changing external environment such as market supply and demand and industry competition, we have always faced enormous challenges either at this moment or in the future. Therefore, it is also an important task for us to actively introduce new processes and technologies for energy saving and consumption reduction, and to tap existing production potentials. We will strive to achieve further breakthroughs in energy conservation and emission reduction, and ensure the quality and quantity of our products while minimizing energy consumption. We will develop downstream products related to major products, continuously expand the industrial chain and product chain, strengthen the relationship with existing major customers, actively expand sales channels, consolidate market position, and actively respond to future challenges.

4.2 The internal risks and Future Plans

There are many internal risks that the company faces, such as operational safety, employee health, environmental protection and other safety and environmental protection factors; organizational structure, management methods, asset management, business processes and other management factors as well as research and development, technology investment, and information technology applications. Indigenous innovation and artificial factors of professional competence of employees. Whether the company can correctly identify these factors is also one of the risks

As one of China's major coal-based urea producers in Hebei Province, we intend to adopt certain strategies to continue to consolidate and develop the existing market and industry status, and actively respond to the inherent risks faced by companies. For example, in the fierce market competition, to further optimizes product quality, and strives to improve service quality, with high-quality services to win customers and markets, create a good brand image and corporate reputation. We will continue to give play to the advantages of enterprise management, strengthen internal management, reduce production and operation costs through high-level management, and increase the profitability of enterprises. At the same time, it actively introduces high-level talents that can help the development of the company, and enhances the overall management level and professional level of the company.

4.3 Future development strategy and business plan

The Group will continue to consolidate and develop its existing market and industry position and do its best to increase shareholder value. And the company will continue to promote its growth strategies, including increasing production capacity, improving production quality and efficiency, expanding the value chain to urea-related products, strengthening relationships with major customers, and expanding customer base, while seeking to establish strategic relationships and identify acquisition opportunities. The Group always pay attention to any issues associated to social environmental protection, and develop the company mission as "developing enterprises, creating values, benefiting employees and contributing to the society", to contribute more benefits to the economy and society.