We offer a diverse variety of products, from basic chemicals to fluorine-based high-performance chemicals. Our products help create an affluent, safe and secure society and promote environmental conservation.

Business Outline

Summary of Fiscal 2014

Trends in Operating Profit

Sales Trends

(Note) As of December 2014

AGC Report 2015
Business Outline

Under the principle of “Chemistry for a Blue Planet,” the AGC Group’s chemicals business keeps its environmental impact to a minimum by making complete use of the by-products created in chemical reactions, while continuing to provide a wide variety of products that are useful to society in areas ranging from basic chemicals to functional chemicals. The AGC Group is also working on the recovering and recycling of chlorofluorocarbons and other ozone-depleting substances and the development of environmentally friendly products.

In the field of chlor-alkali and urethane, the Group manufactures caustic soda, sodium bicarbonate and other highly versatile basic chemical products that are vital to daily life and various industries. Urethane-related products are used in thermal-insulating materials, car seats and other products that bring comfort to our lives.

In the field of fluorine/specialty chemicals, the AGC Group boasts the world’s top-class technologies. The Group manufactures and supplies high-performance products with extremely high heat resistance, chemical resistance and weather resistance. In particular, the Group’s fluorinated resins (Fluon® ETFE) enjoy a global top-class share.

The AGC Group also supplies a wide range of high-performance products in various global industries: fluorinated resins and fluorinated elastomers in the automotive and aircraft industries; fluoropolymer films and fluoropolymer resin for coating in the architecture field; and multifunctional materials for the electronics and display field.

Summary of Fiscal 2014

Shipments of chlor-alkali and urethane products in the Japan and Asia region were strong, resulting in increased sales in comparison to the previous period. For fluorine and specialty products, shipments of fluorinated resins and of pharmaceutical and agrochemical intermediates and active ingredients were strong, leading to increased year-on-year sales.

As a result, sales in the Chemicals business for the current period were 317.2 billion yen, up 26.6 billion yen (9.1%) from the previous period, while operating profits were 24.1 billion yen, up 6.4 billion yen (35.8%) from the previous period.

Sales Trends

<table>
<thead>
<tr>
<th>Year</th>
<th>Sales (Billion yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>254.1</td>
</tr>
<tr>
<td>2013</td>
<td>288.0</td>
</tr>
<tr>
<td>2014</td>
<td>314.7</td>
</tr>
</tbody>
</table>

Trends in Operating Profit

<table>
<thead>
<tr>
<th>Year</th>
<th>Operating Profit (Billion yen)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>16.8</td>
</tr>
<tr>
<td>2013</td>
<td>17.7</td>
</tr>
<tr>
<td>2014</td>
<td>24.1</td>
</tr>
</tbody>
</table>

1 Sales to external customers.
The Chemicals Company President Message: Growth Strategy

We will work to achieve solid growth while increasing our market predominance through proactive investment in growth fields and growth markets.

Business Goals
Chlor-alkali and urethane: Capture demand from the Southeast Asian market
Fluorine and specialty: Secure increased global demand

Masao Nemoto
Chemicals Company President

Reinforcing Local Production and Sales Systems in Response to Expanding Demand in the Southeast Asian Market

As Indonesia, Thailand and other ASEAN countries continue to grow, demand for chlor-alkali products is expected to continue expanding. The AGC Group began local production and sales of chlor-alkali in Thailand in 1964, and in Indonesia in 1986, and established its presence as the manufacturer with the top market share of caustic soda in Southeast Asia. In order to respond to the growing demand across the entire Southeast Asian market in recent years, we are enhancing the capacity of our electrolysis facility in Indonesia, and in 2014 we acquired a leading Vietnamese vinyl chloride resin manufacturer as a subsidiary. We will continue achieving steady growth by proactively investing in growth fields and growth markets.

Exploring Markets for High-Performance Fluorine Chemicals by Strengthening Technical Support on a Global Scale

High-performance fluorine chemicals are highly weather resistant, long lasting and have many other excellent properties. Consequently, demand for such products is growing globally, particularly in the automotive, electronics and construction industries, and for use in agricultural greenhouses. Global demand is anticipated to grow further, including in environment-related fields.

In order to firmly connect this increasing demand to business growth, we are expanding our technical support functions in an effort to cultivate new applications for high-performance fluorine chemicals and promoting sales. In addition to opening a technical center in China in 2014, we are planning to set up technical centers in other countries and regions in 2015. Technical centers provide technical services, applied development and analytical work tailored to regions’ needs in order to explore new markets in the region.

As a promising product field, we are focusing on the development of substitute refrigerants that have a lower environmental load and greatly contribute to preventing global warming and the destruction of the ozone layer.

Through these initiatives, we aim to achieve an operating profit ratio of 10% or more for its Chemicals business in fiscal 2017.

Capacity enhancement scheduled at PT Asahimas Chemical in Indonesia

Newly constructed technical center in China
The Chemicals Company President Message: Growth Strategy

In order to firmly connect this increasing demand to business growth, we are expanding our technical support functions in an effort to cultivate new applications for high-performance fluorine chemicals and promoting sales. In addition to opening a new market in Indonesia, and in 2014 we acquired a leading Vietnamese vinyl chloride (PVC) market in Southeast Asia, after Indonesia and Thailand, and the demand for PVC that accompanies the country’s economic development is expected to keep the annual growth of approximately 5%. In addition, increased demand for other chlor-alkali products, such as caustic soda and hydrochloric acid, is anticipated along with the expansion of the heavy chemical industry in Vietnam.

In order to develop business in this promising market, in 2014 the AGC Group acquired 78% of the stock of Phu My Plastics and Chemicals Company Ltd. (hereafter PMPC), a PVC manufacturer. PMPC has an over 30% share in the PVC resin market in the country, and the AGC Group’s business development in Vietnam made a full-fledged start. By establishing a new production and sales base in Vietnam in addition to enhancing the production capacity in Indonesia, the AGC Group will work to expand its Southeast Asian chlor-alkali business even further.

Acquisition of Vietnamese Vinyl Chloride Company in Preparation for Expanding Chlor-Alkali Business in Southeast Asia

Vietnam is a market with great room for growth—over half of its population of approximately 90 million is under thirty—and it is anticipated to see continued stable economic growth at a rate of over 5% annually. The country has the third largest polyvinyl chloride (PVC) market in Southeast Asia, after Indonesia and Thailand, and the demand for PVC that accompanies the country’s economic development is expected to keep the annual growth of approximately 5%. In addition, increased demand for other chlor-alkali products, such as caustic soda and hydrochloric acid, is anticipated along with the expansion of the heavy chemical industry in Vietnam.

In order to develop business in this promising market, in 2014 the AGC Group acquired 78% of the stock of Phu My Plastics and Chemicals Company Ltd. (hereafter PMPC), a PVC manufacturer. PMPC has an over 30% share in the PVC resin market in the country, and the AGC Group’s business development in Vietnam made a full-fledged start. By establishing a new production and sales base in Vietnam in addition to enhancing the production capacity in Indonesia, the AGC Group will work to expand its Southeast Asian chlor-alkali business even further.

Hydrofluorocarbons (HFC) are used as refrigerants in air conditioners and cars. However, since their global warming potential (GWP) is high, their use is being increasingly restricted in Japan, Europe, North America, and the rest of the world. The AGC Group is the world’s first company to establish the production technology for the next-generation automotive refrigerant HFO-1234yf, one that has an extremely low environmental load with a GWP that’s equal to or less than 1/1,300 the GWP of conventional products. In January 2014, the AGC Group announced that it would supply the product to the US company Honeywell. In addition, in March 2014, the Group developed AMOLEA™, a new refrigerant for air conditioners whose performance is the same as conventional products, but whose GWP has been lowered to approximately 1/6. Commercial production is expected to begin in 2016.

Approach 1
Existing Products to New Markets

Approach 2
New Products to Existing Markets

HFO-1234yf and AMOLEA™: Low-Environmental Impact Refrigerants with Reduced Influence on Climate Change

1 As compared to the automotive refrigerant HFC-134a
2 As compared to HFC-410A

Automotive refrigerants: Comparison

Air Conditioner Refrigerants: Comparison

3 When the GWP of HFC-134a is 1
4 When the GWP of HFC-410A is 1