

# Message from the Management



*Kyohei Takahashi, Chairman of the Board (left) and Hideo Ichikawa, President and CEO*

**With regard to the Showa Denko Group's business environment in 2014, in the Japanese economy, there was an improvement in the labor market due to recovery in corporate profits, especially in export-related industries, resulting from rapid depreciation of the yen triggered by the recent economic policy of the Japanese government and the easy-money policy of the Bank of Japan. However, consumer spending was sluggish owing to the consumption tax hike.**

As for overseas economies, while the US economy recovered steadily, the Chinese and ASEAN economies showed a mild recovery with decelerated growth. On the other hand, the European economy showed a more stagnant mood during the second half of 2014, and economies of resource-producing countries including Russia slowed down.

In the petrochemical industry, operating rates at domestic plants continued at high levels, reflecting strong demand in China. However, in the second half of the year, crude-oil prices plunged, resulting in a large drop in prices of oil-related materials and products. The electronic parts/materials industry remained firm, due mainly to increased overseas production of semiconductors.

Under these circumstances, the Showa Denko Group launched in 2014 "PEGASUS Phase II" business plan for the 2014-2015 period as the second half of the ongoing five year consolidated business plan "PEGASUS."

To strengthen its presence on the global market as an individualized chemical company, the Group is promoting its growth strategies in which the hard disk (HD) media and graphite electrode (GE) businesses serve as its "Wings." Furthermore, the Group will continue accelerating business expansions in the growing Asian market in the areas of aluminum cans, high-purity aluminum foil, semiconductor-processing high-purity gases, and functional chemicals, positioning them as "Growth" businesses (See pages 9–12).

The Group recorded consolidated net sales of ¥876,580 million in 2014, up 3.4% from the previous year. While sales in the Petrochemicals segment decreased due to the fall in shipment volumes resulting from the periodic large-scale shutdown maintenance that takes place once in every four years, sales in the five other segments increased, due mainly to higher shipment volumes. Operating income decreased 19.4%, to ¥20,915 million. While the Chemicals, Electronics, and Inorganics segments recorded higher income than the previous year, the Petrochemicals segment recorded lower income due to the sharp drop in naphtha prices at the end of the year, in addition to the influence of the shutdown maintenance. The Aluminum segment also recorded lower income due to the rise in prices of aluminum ingots, and the Others segment recorded a slightly larger operating loss. The Group posted a net income of ¥3,500 million, down 61.4%, due partly to the increase in loss on sales and retirement of noncurrent assets and loss on valuation of investment securities.

Dividends of ¥3.00 per share were paid to shareholders on record at the end of December 2014. Moreover, in 2014, Showa Denko decided to repurchase its own shares for the first time, in order to improve shareholder returns. The total number of shares repurchased was 68,261,000 (equivalent to about ¥10 billion).

As for our capital investment in 2014, we completed establishment of new facilities to produce aluminum cans for coffee beverages, establishment of a new ethyl acetate plant, expansion of lithium ion battery (LIB) packaging film production capacity, and expansion of our ability to produce SiC epitaxial wafers for power devices. We also made capital investments to ensure future growth, including expansion of the capacity for producing graphite electrodes in the United States, expansion of high-purity ammonia production capacity in China and establishment of a new high-purity N<sub>2</sub>O base in South Korea to strengthen our high-purity semiconductor-processing gas business, and a decision to expand high-purity aluminum foil production capacity in China. As a result, our capital expenditures in 2014 amounted to ¥47,318 million, up ¥2,948 million.

The outstanding balance of interest-bearing debt as of the end of 2014 rose ¥29,438 million from the end of the previous year, to ¥383,124 million, due partly to the refinancing of existing hybrid securities by a subordinated loan and additional consolidation of subsidiaries. Meanwhile, the D/E ratio rose to 1.20.

## Segment Performances

A breakdown of net sales and operating income by segment is as follows:

In the **Petrochemicals** segment, sales decreased 1.9%, to ¥281,400 million. Sales of olefins decreased owing to the fall in shipment volumes resulting from the shutdown maintenance that takes place once in every four years. Sales of organic chemicals increased owing to the rise in shipment volumes of vinyl acetate and ethyl acetate.

The segment recorded an operating loss of ¥4,930 million, down ¥9,328 million, due to the influence of the shutdown maintenance and the sharp decline in naphtha prices toward the end of the term.

In the **Chemicals** segment, sales increased 6.4%, to ¥139,064 million. Sales of basic chemicals increased due to the rise in the volume of chloroprene rubber exports and the rise in acrylonitrile market prices, notwithstanding lower sales of liquefied ammonia. Sales of industrial gases were maintained at the previous year's level. Meanwhile, sales of electronic chemicals increased due to higher shipment volumes to East Asia. Sales of functional chemicals increased slightly.

Operating income of the segment increased 113.4%, to ¥5,460 million.

In the **Electronics** segment, sales increased 1.5%, to ¥138,537 million. Sales of HD media increased due to steady shipments for PC and other applications. Sales of rare earth magnetic alloys decreased due to lower shipment volumes. Meanwhile, sales of compound semiconductors increased due to higher shipment volumes.

Operating income of the segment increased 17.5%, to ¥25,770 million, due mainly to the diminishing influence of reductions in the book value of rare earth inventories in the previous year.

In the **Inorganics** segment, sales rose 2.5%, to ¥67,557 million. While oversupply of steel continued in Asia, steel demand recovered gradually in the United States and Japan. Thus, sales of graphite electrodes increased slightly due to higher shipment volumes. Sales of ceramics increased due to higher shipment volumes of abrasives and other ceramic products.

The segment recorded an operating loss of ¥300 million, an improvement of ¥538 million.

In the **Aluminum** segment, sales rose 8.4%, to ¥97,956 million. Sales of rolled products were up due to the rise in shipment volumes of high-purity foils for aluminum electrolytic capacitors, reflecting increased production by capacitor manufacturers for such applications as electric appliances and vehicles. Sales of aluminum specialty components increased due to higher shipment volumes for automotive parts applications. Sales

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of aluminum cans increased following the acquisition and consolidation of Hanacans Joint Stock Company, a manufacturer of aluminum beverage cans in Vietnam.

Operating income of the segment fell 48.7%, to ¥2,999 million, due to the sharp rise in aluminum ingot prices.

In the **Others** segment, sales increased 10.5%, to ¥195,024 million. Sales of LIB materials were maintained at the previous year's level. Shoko Co., Ltd.'s sales increased. SDK's consolidation of BE International Corporation, a subsidiary of Shoko Co., Ltd., also increased the sales of the segment.

The segment recorded an operating loss of ¥678 million, down ¥52 million.

## Working to Accomplish “PEGASUS Phase II”

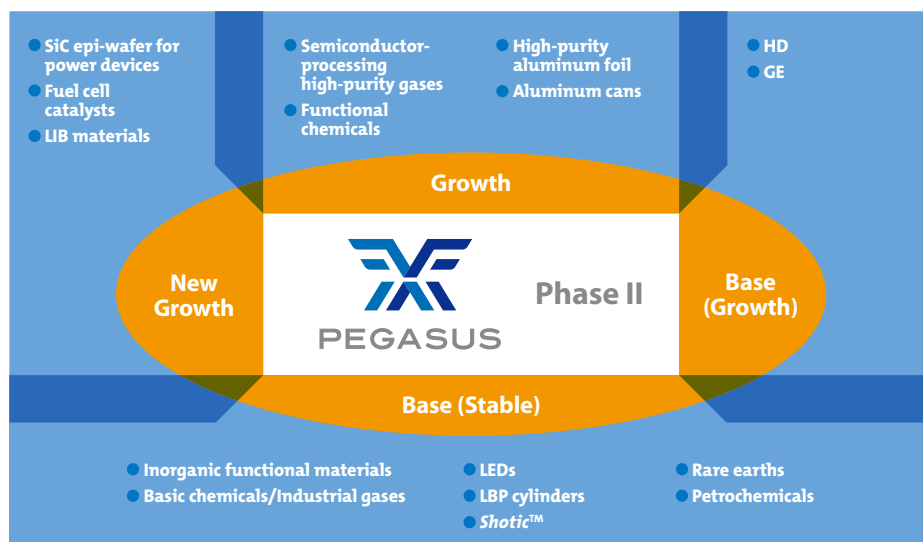
The Group is now implementing its “PEGASUS Phase II” business plan launched in 2014. The most important theme of this business plan is to make the Group return to its growth track. To attain this, the Group has been strengthening its existing businesses and implementing strategies to expand its “Growth” businesses by honestly working on specific measures including revision of its business portfolio, restructuring of each business, and concentration of its R&D efforts on promising themes. The Group will accelerate implementation of its growth strategies by allocating its management resources intensively to the “Growth” businesses with global competitiveness.

### a) “Base (Growth)” businesses

HD media and graphite electrodes are positioned as the main businesses of the Group. We will improve their profitability by increasing their competitive power on a global scale and reducing costs. The two businesses will serve as major contributors to our profit and cash flows. Specifically, in our HD media business, we will enhance our marketing efforts in the field of HD media for near-line servers mainly used in data centers. In our graphite electrode business, we will strengthen our marketing activities to promote high-end products, giving priority to the US market.

### b) “Growth” businesses

We have classified the business in aluminum cans, high-purity aluminum-foil, semiconductor-processing high-purity gases, and functional chemicals as “Growth” businesses. We will preferably allocate resources, aiming to expand them mainly in the growing Asian market. Demand for high-purity industrial gases for producing semiconductor devices and small-size LCDs is rapidly growing mainly in East Asian countries. In order to expand our semiconductor-processing high-purity gas business, we have adopted “Matrix Strategy,” in which we pursue in each semiconductor-processing East Asian country the best combination of our high-purity gas products and establishment or expansion of our production/delivery bases. We are also expanding our functional chemicals business in the growing Chinese and ASEAN markets, focusing on the field of automotive parts, which is the main market for our products. We will increase the sales of high-purity aluminum foil for capacitors with a focus on high-end products, in order to respond to the increase in demand in the Chinese market for capacitors used



“PEGASUS Phase II” Business Portfolio

in home electric appliances including air conditioners. As for our business in aluminum cans, we will further expand it in the growing Vietnamese market, by modernizing production facilities of the Vietnamese aluminum can manufacturer Hanacans, which we acquired in 2014, and establishing can lid production lines by the end of 2015.

#### c) “New Growth” businesses

We will aim to focus our R&D efforts on quick establishment of new businesses covering promising themes. Since LIB materials and SiC epitaxial wafers for power devices are now shifting to the phase of market expansion, we will expand our businesses in these fields and implement establishment of business models.

#### d) “Base (Stable)” businesses

In this business category, which includes petrochemicals and basic chemicals, we will take aggressive measures to boost their cost competitiveness, aiming to improve their profitability. While carrying out our growth strategies, we decided and implemented restructuring, downsizing or withdrawal from businesses that were judged to be suffering from deterioration of profitability and would not allow us to have a strong presence in the future. In 2014, as a measure to restructure our business, we withdrew from production of ethyl acetate in Indonesia, and as a measure to streamline our business bases, we transferred our production base for chemical alumina from Yokohama to Indonesia, and implemented integration and concentration of ceramics business related subsidiaries. As a result of these measures to terminate unprofitable businesses and streamline production bases, our “Base (Stable)” businesses started to show improvement in profitability.

#### e) Overseas business strategy

We will expand operations in growing markets, centering on Asia. In addition to the capacity expansion in our graphite electrode business, which is one of our main businesses, we are now expanding the scale of our operations overseas, centering on the growing Chinese and ASEAN markets, with emphasis on the four “Growth” businesses including semiconductor-processing high-purity gases.

2015 is the final year of PEGASUS, and also the year for us to formulate the new growth strategies of the Group by settling the next medium-term consolidated business plan. There are many fields where the Showa Denko Group can make social contributions, including a contribution toward realization of a clean-energy-based society. We will announce the new medium-term consolidated business plan of the Group by the end of 2015, in which we will clarify the Group’s strong points and clearly state measures and targets to further enhance the Group’s competitive advantages.

### Measures Implemented or Decided in 2014

#### 1. Starting commercial production of 3.5-inch HD media with the world’s highest capacity

The leading-edge 3.5-inch HD media produced and sold by SDK have been adopted in eight-terabyte hard disk drives (HDDs), the world’s highest storage capacity HDDs to date. The 3.5-inch HD media have data storage capacity of 1.1–1.3 terabyte per platter, and are classified as the seventh generation products of the HD media based on the perpendicular magnetic recording (PMR) technology.

As the world’s largest independent HD media supplier, we will aim to ensure stable supply of high-capacity media, and continue meeting customers’ expectations in terms of quality as well as quantity.

#### 2. Start-up of new ethyl acetate plant based on new technology

We started producing ethyl acetate at our new plant in Oita Complex, using a new technology. Ethyl acetate is an organic solvent used in wide-ranging applications, including printing ink, paint, and adhesive for liquid crystal display (LCD) panels. At the new plant, we have introduced our proprietary technology that adds acetic acid directly to ethylene, enabling production of low-cost and high-quality ethyl acetate.

#### 3. Completion of the expansion of LIB-packaging film production capacity

Our subsidiary Showa Denko Packaging Co., Ltd. completed the expansion of its capacity at its Hikone Plant for producing LIB-packaging aluminum laminated film. The production capacity has tripled compared to the 2010 level.

The market for LIB-packaging aluminum laminated film continues to grow. Demand for the film is expected to grow for use in large LIBs for automotive applications due to the progress in electrification of cars, in addition to demand for use in small LIBs for smartphones and tablet PCs.



# Message from the Management *(cont.)*

## 4. Expansion of capacity to produce 6-inch SiC epitaxial wafers for power devices

We expanded our capacity to produce 6-inch SiC epitaxial wafers for power devices from 400 units a month to 1,100 units a month. We also started shipping of SiC epitaxial wafers of a new grade with improved quality, to be used in power control modules for automobiles and other applications that require heavy withstanding currents.

When compared with the currently mainstream silicon-based semiconductors, SiC epitaxial wafer based power devices can operate under relatively high-temperature, high-voltage, and heavy-current conditions, while substantially reducing energy loss. With these features, SiC power devices are expected to be in greater demand for use in automobiles, power sources for servers, electric trains, decentralized power generation systems utilizing new energy sources, and other applications. The market size of SiC power devices is expected to grow to be about ¥30 billion in 2020.

The Group will continue contributing to the sound growth of society by developing and providing useful and safe technologies, products, and services. We will ensure safety, conserve resources and energy, and reduce the volume of industrial waste to be discharged and chemical substances to be emitted, thereby contributing to the protection of the global environment.

Utilizing our proprietary technical advantages, we will provide components, materials, and solutions in the areas of advanced technologies so that we can contribute toward creating a society where affluence and sustainability are harmonized. Thus, we will aim to increase our corporate value and promote the common interests of our shareholders.

We will continue to enhance corporate governance, focusing on the following points of view, in order to ensure sound, effective and transparent management, as well as to really become “a company that contributes to the sound growth of society,” which continuously improves its own corporate value and consequently is trusted and appreciated by society.

- (1) Strengthening compliance**
- (2) Strengthening management monitoring and supervisory functions**
- (3) Clarifying management responsibilities**
- (4) Ensuring rapid, effective decision making and business execution**
- (5) Strengthening the information disclosure system**



The world economy is undergoing drastic changes in its market structure. The Showa Denko Group will aggressively strengthen its overseas presence, centering on the growing Asian market, and provide high-performance products and advanced technologies required by the market, thereby continuing to meet customer expectations and social needs.

We look forward to the continued support from our fellow shareholders and all other stakeholders.

March 27, 2015

**Kyohei Takahashi**  
Chairman of the Board

**Hideo Ichikawa**  
President and CEO