SHOWA DENKO K.K.

May 15th, 2020

First Quarter, 2020 Consolidated Financial Results (Summary)

1. First Quarter Results

(1) Summary

(Unit: billions of yen)

Items	2019 CQ1 Jan.1 - Mar.31	2020 CQ1 Jan.1 - Mar.31	Increase/ decrease
Net Sales	234.7	171.7	-63.0
Operating Income	45.4	2.5	-42.9
Net income attributable to owners of the parent	33.1	2.7	-30.4

(2) Net sales and Operating Income by Segment

(Unit: billions of yen)

Segment		2019 CQ1 Jan.1 - Mar.31	2020 CQ1 Jan.1 - Mar.31	Increase/ decrease
Net Sales	Petrochemicals	62.7	55.0	-7.7
	Chemicals	36.0	36.3	0.3
	Electronics	20.6	23.6	3.0
	Inorganics	72.4	21.4	-51.0
	Aluminum	23.8	19.2	-4.6
	Others	32.4	28.6	-3.8
	Adjustments	-13.1	-12.3	0.8
	Total	234.7	171.7	-63.0

Segment		2019 CQ1 Jan.1 - Mar.31	2020 CQ1 Jan.1 - Mar.31	Increase/ decrease
Operating Income	Petrochemicals	4.0	-0.2	-4.1
	Chemicals	2.4	2.3	-0.1
	Electronics	-0.3	1.0	1.3
	Inorganics	39.5	0.8	-38.7
	Aluminum	0.3	0.0	-0.2
	Others	0.3	0.2	-0.1
	Adjustments	-0.8	-1.7	-0.9
	Total	45.4	2.5	-42.9

2. Reference

Items	2019 CQ1 Jan.1 - Mar.31	2020 CQ1 Jan.1 - Mar.31	Increase/ decrease
Exchange rate (yen/US$)	110.2	108.9	Yen appreciated by 1.3
Domestic naphtha price (yen/kl)	41,200	44,800	3,600

(Unit: billions of yen)

Items	Dec.31, 2019	Mar.31, 2020	Increase/ decrease
Total assets	1,076.4	1,051.6	-24.8
Interest-bearing debt	298.5	325.1	26.6

Note : The above forecast is based on the information available as of today and assumptions as of today regarding risk factors that could affect our future performance. Actual results may differ materially from the forecast due to a variety of risk factors, including, but not limited to, the influence of the coronavirus disease 2019 (COVID-19) on the world economy, the economic conditions, costs of naphtha and other raw materials, demand or market conditions for our products such as graphite electrodes and other commodities, and foreign exchange rates. We undertake no obligation to update the forward-looking statements unless required by law.

SHOWA DENKO K.K.

Consolidated Financial Statements

For the first quarter ended March 31, 2020

Ⅰ. Consolidated Financial Results

May 15th, 2020

(1) Results of operations:

(¥ in millions, US$ in thousands, except for net income attributable to owners of the parent per share)

	Results for the first quarter (Jan.1–Mar.31)			
	2019	**2020**	Increase (Decrease)	**2020**
	¥	**¥**	%	**$**
Net sales	234,727	**171,734**	(26.8)	**1,578,000**
Operating income	45,376	**2,469**	(94.6)	**22,690**
Ordinary income	44,182	**3,221**	(92.7)	**29,597**
Net income attributable to owners of the parent	33,074	**2,699**	(91.8)	**24,798**
Net income attributable to owners of the parent per share: Basic	226.73	**18.50**	—	**0.17**
Net income attributable to owners of the parent per share: Diluted	—	**—**	—	**—**

Notes

Important changes in accounting policies : not applicable

Comprehensive income :

Results for the year ended March 31, 2020 ¥−13,034 million

Results for the year ended March 31, 2019 ¥37,304 million

(2) Financial position:

(¥ in millions, US$ in thousands, except for stockholders' equity ratio)

	Dec.31, 2019	**Mar.31, 2020**	**Mar.31, 2020**
	¥	**¥**	**$**
Total assets	1,076,381	**1,051,580**	**9,662,593**
Total equity	519,433	**493,647**	**4,535,949**
	%	**%**	**%**
Stockholders' equity ratio	46.4	**45.1**	**45.1**

(3) Dividends:

	2019	**2020 Forecast**
Q1 dividends per share (¥)	—	—
Q2 dividends per share (¥)	50.00	undecided
Q3 dividends per share (¥)	—	—
End of Term dividends per share (¥)	80.00	undecided
Annual dividends per share (¥)	130.00	undecided

Ⅱ. Forecast of performance for the year ending December 31, 2020

(¥ in millions, US$ in thousands, except for net income attributable to owners of the parent per share)

	1st half		fiscal year	
	¥	$	¥	$
Net sales	undecided	–	undecided	–
Operating income	undecided	–	undecided	–
Ordinary income	undecided	–	undecided	–
Net income attributable to owners of the parent	undecided	–	undecided	–
Net income attributable to owners of the parent per share: Basic	undecided	–	undecided	–

Note

The U.S. dollar is valued at ¥108.83 throughout this statement for convenience only.

[Business Results and Financial Conditions]

1. Analysis of business results

(1) Summary

With regard to the Japanese economy in the first quarter of 2020 (January 1 – March 31), consumer spending deteriorated rapidly since February due to the increasing influence of the coronavirus disease 2019 (COVID-19). Corporate earnings are now greatly affected by the slowing down of the world economy caused by the pandemic of COVID-19, and there are also significant effects of the major slowdown in domestic consumer spending, the fast reduction in export and overseas production, and a sharp drop in crude-oil prices on corporate earnings. As a result, many companies have shown serious deterioration in their business sentiment. As countermeasures against such an economic downturn, the major powers including Japan, the Unites States and the European Union are now taking ambitious monetary and fiscal policies. However, business environment of the Showa Denko Group is expected to deteriorate further in and after the second quarter of 2020.

Taking the current situation into consideration and giving the highest priority to all stakeholders' safety and health, the Showa Denko Group is implementing various measures to prevent further spread of the infectious disease. To be specific, we are taking various measures to give the highest priority to keeping our employees' health and preventing the spread of COVID-19, including homeworking implemented by employees belonging to major plants, divisions and departments, and grant of special holidays. At the same time, in our production bases, we are making utmost efforts to fulfill our corporate social responsibility to continue providing our customers with products essential for infrastructural functions of society.

Medium-term business plan "The TOP 2021"

The Showa Denko Group set up its long-term vision and has been promoting its medium-term consolidated business plan "The TOP 2021" since January 2019. It is very important for the Showa Denko Group to enhance the value of the Group and satisfy all stakeholders including shareholders, customers, suppliers, local communities and employees in order that the Group continuously grows and becomes trusted and acclaimed by society. The Showa Denko Group defines this idea as the Group's business philosophy, thereby promoting management to maximize shareholders', customers', and social value.

Furthermore, SDK made tender offer against Hitachi Chemical Company, Ltd. (Hitachi Chemical), and made Hitachi Chemical a consolidated subsidiary in April 2020. World's industrial structure and competitive environment have been changing greatly, and the recent pandemic of COVID-19 will accelerate this trend. In particular, it is expected that the spread of digitalization of social activities will be accelerated, including the diffusion of telework and online businesses, acceleration of introduction of factory automation to production sites, and further strengthening of cyber security. To survive as a global top-level functional chemical manufacturer while coping with such changes in business environment, the Showa Denko Group must evolve into the "One-stop Advanced Materials Partner" for our customers which provides the customers with solutions beyond materials and components. The Group will strengthen its earning power and reduce the range of fluctuation in income through steady implementation of "The TOP 2021," enhance the value of the Group, realize substantial business integration with Hitachi Chemical as soon as possible, and establish a stable business foundation which will continuously support the Group's growth far into the future.

The Group recorded consolidated net sales of ¥171,734 million in the first quarter of 2020,

down 26.8% from the same period of the previous year. The sales in the Electronics segment increased due to an increase in shipment volumes of hard disk media. The sales in the Chemicals segment also increased. However, the sales in the Inorganics segment significantly decreased due to a decrease in shipment volumes of graphite electrodes. The sales in the Petrochemicals, Aluminum and Others segments also decreased due to a drop in market prices of products.

Operating income of the Group in the first quarter of 2020 decreased by 94.6%, to ¥2,469 million. Operating income in the Electronics segment increased due to an increase in shipment volumes. However, operating income in the Inorganics segment significantly decreased due to a decrease in shipment volumes of graphite electrodes. Operating income in the Petrochemicals, Chemicals, Aluminum and Others segments also decreased due to a drop in market prices of products. As a result, the Group recorded ordinary income of ¥3,221 million, down 92.7% from the same period of the previous year.

The Group recorded net income attributable to owners of the parent of ¥2,699 million in the first quarter of 2020, a significant decrease of 91.8% from the same period of the previous year.

(Unit: millions of yen)

	1Q 2019	1Q 2020	Increase/decrease
Sales	234,727	171,734	-62,993
Operating income	45,376	2,469	-42,907
Ordinary income	44,182	3,221	-40,961
Net income attributable to owners of the parent	33,074	2,699	-30,376

(2) A breakdown of net sales and operating income by segment (January 1 - March 31, 2020)

[Petrochemicals segment]
In the Petrochemicals segment, sales decreased 12.3%, to ¥55,025 million. In our olefin business, sales decreased due to a drop in market prices of products including ethylene and propylene resulting from a fall in prices of raw materials and softening supply-demand balance in East Asia caused by a slowdown in the Chinese economy. Sales of derivatives also decreased due to periodic maintenance of production facilities which took place in the first quarter of 2020. Sales of organic chemicals decreased due to a reduction in shipment volumes of ethyl acetate and vinyl acetate resulting from the periodic shutdown maintenance of facilities to produce these products, in addition to the effect of a drop in market prices of organic chemicals. As a result, the Petrochemicals segment recorded an operating loss of ¥156 million, a deterioration of ¥4,149 million from the same period of the previous year.

(Unit: millions of yen)

	1Q 2019	1Q 2020	Increase/decrease
Sales	62,716	55,025	-7,691
Operating income	3,993	-156	-4,149

[Chemicals segment]
In the Chemicals segment, sales increased 0.8%, to ¥36,315 million. In the basic chemicals business, sales decreased. Sales of liquefied ammonia and acrylonitrile were at the same level of the year-before period. However, sales of chloroprene rubber

decreased due to a reduction in export. Sales of functional chemicals decreased due to a fall in sales volumes in China. Sales of industrial gases were at the same level of the year-before period. Sales of electronic chemicals increased due to an increase in shipment volumes of products for the semiconductor industry. Consolidation of non-stick coating chemicals companies which took place in the second half of 2019 also increased the segment's sales. However, operating income of the segment decreased 5.2%, to ¥2,286 million.

(Unit: millions of yen)

	1Q 2019	1Q 2020	Increase/decrease
Sales	36,026	36,315	289
Operating income	2,413	2,286	-126

[Electronics segment]
In the Electronics segment, sales increased 14.6%, to ¥23,553 million. Sales of HD media increased due to an increase in shipment volumes of media for use in data centers, in addition to the steady shipment volumes of media for PCs, though the level is still lower than before. Sales of compound semiconductors increased due to an increase in export. Sales of lithium-ion battery (LIB) materials were at the same level of the year-before period because a decrease in shipment volumes of materials for use in on-board LIBs was compensated by an increase in shipment volumes of Showa Denko Packaging's aluminum laminate film (*SPALF*™) used as packaging material for LIBs built into tablets and smartphones. As for SiC epitaxial wafer business, sales slightly decreased due mainly to a decrease in export. Operating income of the segment increased ¥1,259 million, to ¥987 million.

(Unit: millions of yen)

	1Q 2019	1Q 2020	Increase/decrease
Sales	20,553	23,553	3,000
Operating income	-271	987	1,259

[Inorganics segment]
In the Inorganics segment, sales decreased 70.5%, to ¥21,385 million. Sales of graphite electrodes significantly decreased due to a further reduction in the Company's production and sales volumes of graphite electrodes aiming to respond to the weakening supply-demand situation of graphite electrodes in the market resulting from a global slowdown in steel production and partial-clearance of our customers' graphite-electrode inventory. Sales of ceramics decreased due to a fall in sales volumes of abrasives and fine ceramics for electronics. Operating income of the segment decreased 97.9% from the year-before period, to ¥848 million.

(Unit: millions of yen)

	1Q 2019	1Q 2020	Increase/decrease
Sales	72,383	21,385	-50,998
Operating income	39,506	848	-38,658

[Aluminum segment]
In the Aluminum segment, sales decreased 19.3%, to ¥19,177 million. Sales of rolled products decreased due to a decline in shipment volumes of high-purity aluminum foil for capacitors resulting from adjustment of production in customer industries including industrial equipment and automotive parts industries. Sales of aluminum specialty components

decreased due mainly to a decline in shipment volumes of those for use in automotive parts resulting from a reduction in production of cars in China, Europe and ASEAN countries. Sales of aluminum cans decreased due to a reduction in the Group's domestic production capacity and, in the Vietnamese market, a significant fall in production of beer resulting from outing restrictions. Operating income of the segment decreased 81.0% from the year-before period, to ¥48 million.

(Unit: millions of yen)

	1Q 2019	1Q 2020	Increase/decrease
Sales	23,751	19,177	-4,573
Operating income	255	48	-207

[Others segment]
In the Others segment, sales decreased 11.8%, to ¥28,606 million. SHOKO CO., LTD.'s sales decreased due to a fall in market prices of products and reduced demand. Operating income of the segment decreased 36.7%, to ¥192 million.

(Unit: millions of yen)

	1Q 2019	1Q 2020	Increase/decrease
Sales	32,431	28,606	-3,825
Operating income	304	192	-111

(3) Major steps taken or decided in the first quarter of 2020
[General]
- Announcement regarding results of tender offer for shares in Hitachi Chemical Company, Ltd. and change in subsidiary
- Announcement regarding fundraising, capital reduction of the consolidated subsidiary and change in the specified subsidiary company

For details, please refer to our news releases announced on April 21, 2020.

- Received award for used-plastic chemical recycling business

SDK received an award from Chairman of the Japan Business Federation for its used-plastic chemical recycling business. This award is part of Fujisankei Communications Group's 29th Grand Prize for the Global environment Award*. SDK has been conducting the used-plastic chemical recycling business since 2003. At its Kawasaki Plant, used plastic collected from home is gasified by thermal decomposition to generate hydrogen and carbon monoxide. Carbon monoxide from this process is used for production of carbonic acid products. Hydrogen is used as raw material for ammonia production, in fuel-cell vehicles, and for power generation at hotels using fuel cells. Thus this business is contributing toward promotion of a low-carbon society. While reducing CO_2 emissions by avoiding incineration of used plastic, the business promotes resource recycling on land and reduces marine pollution by plastic. In addition to this chemical recycling, the Showa Denko Group is conducting various environment-friendly businesses. They include the global supply of graphite electrodes for recycling of iron, and production of aluminum cans based on used aluminum cans (can-to-can recycling). The group was the first company in Japan to start an aluminum can recycling project.

*This award was established in 1992 by Fujisankei Communications Group with special contribution from World Wide Fund for Nature (WWF) Japan. The award aims at encouraging the development of new technologies and products that will prevent global warming and promote a recycling-oriented society. It also aims at promoting environmental protection measures and enhancing global environment awareness. The award is granted to corporations recognized as having accomplished distinguished achievements in these areas.

- Introduced AI system to examine capital investment

SDK introduced an artificial-intelligence-based search system to look efficiently for information useful for capital investment evaluation from the company's knowledge databases. This new search engine uses an AI system named "KIBIT*" and searches the company's document database for knowledge useful for its internal examination and screening of investment plans. SDK started operation of the new system at the end of January 2020. KIBIT is an AI which simulates "tacit knowledge" held by experts and skilled workers. In order to search databases for cases appropriate to refer, this AI looks up not only key words but also structure of writing and the line of thought in documents on databases, including those in documents contained in attached files. This system enables us to extract cases of investment similar to newly suggested investment plans under screening not reliant on examiners' experiences. In a trial run of the new system conducted in SDK, we confirmed that the KIBIT-based system searched our document databases for similar cases of investment and judged degree of similarity within almost one tenth of the time needed by conventional search systems. In addition, the KIBIT-based system enables us to pick up many similar cases simultaneously, and make the most of our knowledge and know-how about facility-safety measures. SDK will put this new search system into regular use in its process to judge appropriateness of capital investment plans, and consider to extend the use of the news search system to cover search for similar cases of accidents and abnormalities in production fields.

*KIBIT: An artificial intelligence originally developed by FRONTEO, Inc. This AI is equipped with FRONTEO's original mechanical learning algorithm and powerful natural-language processing technology. It can learn deeply from small amount of teaching data, and conduct high precision analysis of database in a short time.

- Developed AI-based image analysis system to improve spherical alumina production

SDK developed an artificial-intelligence-based image analysis system for spherical alumina production in cooperation with BLUE TAG. SDK will start using the system at its production line in the first half of 2020. SDK's spherical alumina product has the advantage of uniformity in sphericity and stability in product quality. Due to high fluidity and compatibility, it is used as filler for heatsinks for electronic components and as abrasive. The AI-based image analysis system we developed this time utilizes BLUE TAG's high technology of micro-level-image processing in the process to learn examples of skilled operator's judgement as training data. Thus the new system is aimed at visualizing experience-based knowledge of skilled operators and ensuring quick feedback of digitalized data to the production process to stabilize product quality. This was not possible under the conventional image-analysis software. As a result of initial tests, we confirmed the system's ability to make a judgement at the same level as that of skilled operators in about 20 seconds. In addition, this system also enables accumulation of data for relearning process, and inspection accuracy under the system can be improved based on operation results at the production line. Fully utilizing the new AI-based image analysis system, we will work to further improve product quality and productivity.

- Cooperatively proved that AI speeds up development of flexible transparent film

SDK, National Institute of Advanced Industrial Science and Technology (AIST), New Energy and Industrial Technology Development Organization (NEDO) and Research Association of High-Throughput Design and Development for Advanced Functional Materials (ADMAT) have cooperatively proved that introduction of artificial intelligence (AI) into the process to develop flexible transparent film[1] can reduce the numbers of times of experiment to produce film that satisfies required properties to one-twenty-fifth (1/25) or less of those conventional development methods require. This development work has been subcontracted by NEDO's "Ultra High-Throughput Design and Prototyping

Technology for Ultra Advanced Materials Development Project" (Ultra-Ultra PJ) to the consortium. By fully utilizing AI and multiscale simulation[2], Ultra-Ultra PJ aims to reduce substantially the numbers of times of experiment and development period required for the development of flexible transparent film from those conventional ways of material development require. As a result of the experiment we conducted this time, physical properties of all of the three types of films made from combinations of raw materials recommended by the AI showed superiority over those of the 25 types of films made by the skilled researchers. We obtained films with physical properties superior to those developed by skilled researchers through one-twenty-fifth times of experiments or less compared to the development process conducted by the skilled researchers. Thus, we proved that we can substantially shorten the period of development of flexible transparent films by utilizing AI, and that it is possible for us to develop films with physical properties superior to those of films made by researchers based on their knowledge and experience. Hereafter, we will improve this technology further, and develop a system in which the AI can suggest ratios of combinations of raw materials that can produce target products with even better physical properties while satisfying required characteristics.

1) Flexible transparent film: This is a bendable transparent film. Flexible transparent film is applicable to wide-ranging use such as electroconductive transparent base for touch panel, base for flexible electronic circuit and base for flexible display panel.
2) Multiscale simulation: This simulation connects material density, flux density and energy density in an interactive way and as common languages. It simulates behavior of various matters ranging from atoms and molecules in micro fields to fluids and continuums in macro fields.

[Chemicals segment]

- Decided to establish second factory in Shanghai to produce electronic high-purity gases

In January 2020, SDK decided to establish its subsidiary's second factory in Shanghai to produce high-purity gases for electronics. Shanghai Showa Electronics Materials Co., Ltd. (SSE), which is SDK's wholly owned subsidiary producing high-purity gases for electronics, acquired a right to use a site for its second factory adjacent to the First Factory for 50 years, and will establish facilities to produce high-purity nitrous oxide (N_2O) and high-purity octafluorocyclobutane (C_4F_8) gases and a dangerous goods warehouse to stock high-pressure gases. The second factory will start its operations in the second half of 2021. High-purity N_2O is a specialty gas used to form oxidized films on surfaces of integrated circuits which will compose semiconductor chips or display panels. High-purity C_4F_8 is a specialty gas used for etching of those oxidized films and other micromachining processes. The Showa Denko Group is now producing high-purity N_2O at Kawasaki Plant and a site of a group company in the Republic of Korea, and high-purity C_4F_8 at Kawasaki Plant and SSE's First Factory in Shanghai. Due to progress in information communication technologies including 5G mobile communication technology and Chinese government's policy to nurture high-technology industry, the market in China for semiconductor chips and display panels. In order to strengthen its adaptability to changes in needs of the market, including the need for stable supply of high-purity gases, the Group now aims to promote "local consumption of locally produced high-purity gases" further. Moreover, in the present situation where the Chinese government is strengthening regulations on chemicals, establishment and expansion of the Showa Denko Group's dangerous goods warehouse in China to stock high-pressure gases will enable the Group to strengthen its supply chain and competitiveness. By combining its production and quality-control technologies and getting best supply system ready for customers, the Showa Denko Group will further strengthen its high-purity gas business. In addition, since the market for semiconductor chips in Taiwan is also expected to expand, SDK's subsidiary "Taiwan Showa Chemicals Manufacturing Co., Ltd." will establish a new facility to produce high-purity C_4F_8 with annual production capacity of 150t. The start-up of operations of the new facility in Taiwan is scheduled to be in the spring of 2020.

- Decided to streamline domestic production of unsaturated polyester resin and vinyl ester resin

SDK decided to terminate operation of its production lines to synthesize unsaturated polyester resin (UP) and vinyl ester resin (VE) at Isesaki Plant by the end of June 2021, and concentrate domestic production of UP and VE at Tatsuno Plant in order to improve profitability of its UP and VE businesses. SDK's functional polymer business has production lines at two bases in Japan, two bases in China and one base in Thailand. UP is marketed mainly as molding material for automotive parts, housing and construction materials. VE is marketed mainly as corrosion resistant material and electronic material. The demand for UP and VE is increasing in overseas markets, especially in China and ASEAN countries, due to increases in house building and infrastructure construction, and the growth of automotive industry. However, in the domestic market, the demand for UP and VE is decreasing due to a decrease in new house building, because the use as housing material is the main use for UP and VE in Japan. Therefore, SDK decided this time to concentrate its operation to produce UP and VE at Tatsuno Plant, aiming to streamline production of UP and VE in Japan. In addition, SDK decided to concentrate its marketing effort for UP and VE on market segments which are expected to be highly profitable and grow, aiming to strengthen earning power of the UP and VE businesses. In Japan, SDK will focus its marketing effort on infrastructural use. Outside Japan, SDK will focus its sales effort on promising markets including China and ASEAN. Furthermore, Isesaki Plant will commit itself to development and production of highly functional resins for electronics, whose market continues growing.

[Electronics segment]

- Developed HAMR-technology-based HD media

SDK developed the technology of manufacturing media for next-generation hard disk drives (HDDs) based on the Heat Assisted Magnetic Recording (HAMR*) technology. Due to the rapid expansion of cloud service, video content, and image-sharing website, the world's data generation volume is growing rapidly. Thus, data centers need HDDs with larger storage capacity. While HD media record information through the polarity of magnetic particles, the speed of improving recording density has slowed down under conventional magnetic recording methods. As a result, there is a need for new recording methods, including HAMR. Also, there is a need for next-generation HD media corresponding to such new recording methods. To contribute toward commercialization of HAMR-based HDDs, SDK has successfully manufactured a new type of HD media. The new product has magnetic coercivity several times as high as the existing most-advanced HD media, while achieving low noise due to very small crystal grain size and optimized grain size distribution control. The new product embodies the highest levels in the industry in terms of read-write characteristics and durability. HD media are key parts for HDDs to determine their storage capacities. As the largest independent HD media supplier, SDK aims to quickly launch top-quality media based on innovative technologies. In accordance with its motto of "Best in Class," SDK will continue contributing to the increases in storage capacities of HDDs.

*HAMR represents a recording method in which magnetic film is locally heated at the time of recording. This technology has been developed to solve the "magnetic recording trilemma": difficulty in simultaneously meeting the three requirements of fine-particle structure, resistance to thermal fluctuation, and ease of magnetization. Compared with the recording density of approx. 1.14 Tb/in^2 for HD media based on conventional magnetic recording methods, it is said that HAMR-based HD media will achieve recording density of 5-6 Tb/in^2 in the future. Provided that the same number of disks are used, it is estimated that a 3.5-inch HDD will achieve storage capacity of approx. 70-80 TB per unit.

- Decided to install equipment to mass-produce *SPALF*™ packaging material for large onboard LIBs

Showa Denko Packaging Co., Ltd. (SPA), a consolidated subsidiary of SDK, has developed a new product to be added to the lineup of *SPALF*™ aluminum laminate film which is used as packaging material for pouch-type lithium-ion batteries (LIBs), and decided to install equipment to mass-produce the new product. This new product is specialized for large-sized LIBs, which are mainly used for cars. Operation of the new production equipment is scheduled to be started in March, 2021. *SPALF*™ is laminated composite film consisting of resin films and aluminum foil, and is mainly used as packaging material for pouch-type LIBs. Pouch-type LIBs have outstanding flexibility in shaping. In recent years, pouch-type LIBs have begun to be widely used in large-sized equipment including EVs because pouch-type LIBs' high quality has been widely recognized and there has been considerable progress in verification of pouch-type LIBs' safety. Since development of EVs is in progress not only in China but also in Europe, the demand for pouch-type LIBs has been increasing. The global demand for LIBs (in electrical capacitance) is expected to increase 30% a year until 2025*. The Showa Denko Group produces and sells various LIB materials with distinguishing advantages, such as *SPALF*™, *VGCF*™ additives for anode/cathode materials, and *POLYSOL*™ aqueous binding resin. By increasing sales of these LIB materials, the Group will aim to contribute to the growth of LIB market and improvement in functions of LIBs, and make the Group's LIB materials business grow to be established as a KOSEIHA Business in the field of advanced battery materials.

*SDK's estimate

[Inorganics segment]

- Started labor-management consultations about realignment of graphite electrode production sites in Europe

Labor-management consultations have started concerning planned closure of a production site in Meitingen, Germany, under the jurisdiction of consolidated subsidiaries SHOWA DENKO CARBON Products Germany GmbH & Co. KG and SHOWA DENKO CARBON Germany GmbH. The Meitingen site is currently producing connecting pins* for graphite electrodes. When the site is closed, the Showa Denko Group's connecting pin production will be concentrated at Omachi Plant in Japan. When production at Meitingen is stopped, the Showa Denko Group's global graphite electrode production capacity will decrease by 40,000 t/y, to 210,000 t/y. The Group has the leading share in the global ultrahigh power (UHP) graphite electrode market. However, electric steelmakers are continuing to adjust their inventory of graphite electrodes since the second half of 2019. Thus, our operating rates have fallen in the European market, where economic slowdown is noticeable. In addition, labor-management consultations have started at SHOWA DENKO CARBON Austria GmbH's Steeg site concerning temporary idling for a limited period of time. These two actions will result in a rebalancing of capacity in Europe in line with projected graphite electrode demand. SDK will continue taking various measures to achieve "Value in Use No. 1" for customers and to further increase competitiveness and profitability.

*A connecting pin is used for connecting rods of graphite electrodes.

2. Financial conditions for the January 1 – March 31, 2020 period (as compared with the conditions at December 31, 2019)

Total assets at the end of the quarter amounted to ¥1,051,580 million, a decrease of ¥24,801 million from the level at December 31, 2019. Total assets decreased due partly to decreases in cash and deposits and notes and accounts receivable, despite an increase in inventories. Total liabilities increased ¥984 million, to ¥557,933 million, due partly to an

increase in interest-bearing debt, despite a decrease in notes and accounts payable. Net assets at the end of the quarter decreased ¥25,786 million, to ¥493,647 million, due partly to a decrease in retained earnings resulting from payment of dividends for the previous year and a decrease in valuation difference on available-for-sale securities.

3. Performance forecast

SDK announced today (May 15, 2020) its decision to change its forecast of consolidated financial results. SDK withdrew its forecast of consolidated financial results for the first half of 2020 and full-year 2020 published on February 13, 2020. This was because SDK considered that it is very difficult to calculate the degree of influence of the coronavirus disease 2019 (COVID-19), and the sharp decline in crude oil prices, on SDK's financial results. SDK also decided to withdraw its forecast of dividend payment for 2020. Thus, SDK's consolidated performance forecast and dividend payment forecast are left undecided for the time being. We sincerely apologize for the inconvenience caused to our shareholders, investors and other parties.

Consolidated Balance Sheets

(¥ in millions, US$ in thousands)

	Mar. 31, 2019	Mar. 31, 2020	Mar. 31, 2020
Assets	¥	¥	$
Current assets			
Cash and deposits	122,086	115,489	1,061,188
Notes and accounts receivable-trade	170,293	152,826	1,404,267
Merchandise and finished goods	70,140	84,112	772,878
Work in process	30,979	21,675	199,160
Raw materials and supplies	72,548	81,627	750,038
Other	31,765	30,120	276,762
Allowance for doubtful accounts	(754)	(729)	(6,699)
Total current assets	497,057	485,120	4,457,594
Noncurrent assets			
Property, plant and equipment			
Buildings and structures, net	79,781	77,264	709,955
Machinery, equipment and vehicles, net	140,681	136,825	1,257,241
Land	226,362	225,306	2,070,257
Other, net	26,344	32,802	301,407
Total property, plant and equipment	473,168	472,198	4,338,860
Intangible assets			
Other	22,650	22,737	208,923
Total intangible assets	22,650	22,737	208,923
Investments and other assets			
Investment securities	71,786	57,336	526,844
Other	19,846	22,152	203,548
Allowance for doubtful accounts	(8,125)	(7,964)	(73,176)
Total investments and other assets	83,506	71,525	657,216
Total noncurrent assets	579,325	566,460	5,204,999
Total assets	1,076,381	1,051,580	9,662,593
Liabilities			
Current liabilities			
Notes and accounts payable-trade	117,510	103,005	946,473
Short-term loans payable	52,720	52,761	484,806
Current portion of long-term loans payable	31,943	29,391	270,066
Commercial papers	—	20,000	183,773
Provision	5,379	8,691	79,856
Other	55,323	44,399	407,966
Total current liabilities	262,875	258,247	2,372,941
Noncurrent liabilities			
Bonds payable	62,000	62,000	569,696
Long-term loans payable	151,861	160,972	1,479,116
Provision	3,045	3,269	30,040
Net defined benefit liability	9,969	9,439	86,732
Other	67,199	64,005	588,119
Total noncurrent liabilities	294,074	299,686	2,753,704
Total liabilities	556,949	557,933	5,126,645
Net assets			
Shareholders' equity			
Capital stock	140,564	140,564	1,291,588
Capital surplus	78,912	78,912	725,092
Retained earnings	249,246	240,739	2,212,065
Treasury stock	(11,664)	(11,665)	(107,182)
Total shareholders' equity	457,057	448,550	4,121,563
Accumulated other comprehensive income			
Valuation difference on available-for-sale securities	9,789	108	996
Deferred gains or losses on hedges	433	(924)	(8,493)
Revaluation reserve for land	33,060	32,848	301,825
Foreign currency translation adjustment	4,140	(1,199)	(11,017)
Remeasurements of defined benefit plans	(5,114)	(5,345)	(49,110)
Total accumulated other comprehensive income	42,309	25,488	234,201
Non-controlling interests	20,067	19,610	180,185
Total net assets	519,433	493,647	4,535,949
Total liabilities and net assets	1,076,381	1,051,580	9,662,593

Consolidated Statements of Income

(¥ in millions, US$ in thousands)

	Results for the first quarter (Jan.1-Mar.31)		
	2019	2020	2020
	¥	¥	$
Net sales	234,727	171,734	1,578,000
Cost of sales	162,888	142,619	1,310,474
Gross profit	71,839	29,115	267,526
Selling, general and administrative expenses	26,463	26,645	244,836
Operating income	45,376	2,469	22,690
Non-operating income			
Interest income	274	222	2,039
Dividends income	332	308	2,832
Equity in earnings of affiliates	—	417	3,835
Foreign exchange gains	226	561	5,151
Miscellaneous income	619	897	8,239
Total non-operating income	1,452	2,405	22,094
Non-operating expenses			
Interest expenses	579	454	4,171
Equity in losses of affiliates	499	—	—
Loss on mothballing of operation	358	576	5,294
Environmental expenses	739	478	4,395
Miscellaneous expenses	471	145	1,328
Total non-operating expenses	2,646	1,653	15,187
Ordinary income	44,182	3,221	29,597
Extraordinary income			
Gain on sales of noncurrent assets	5	1,539	14,143
Other	292	204	1,871
Total extraordinary income	297	1,743	16,014
Extraordinary loss			
Loss on sales and retirement of noncurrent assets	489	842	7,734
Other	219	670	6,159
Total extraordinary losses	708	1,512	13,893
Profit before income taxes	43,771	3,452	31,719
Income taxes	9,498	(328)	(3,015)
Net income	34,273	3,780	34,734
Net income attributable to non-controlling interests	1,199	1,081	9,936
Net income attributable to owners of the parent	33,074	2,699	24,798

Consolidated Statements of Comprehensive Income

(¥ in millions, US$ in thousands)

	Results for the first quarter (Jan.1-Mar.31)		
	2019	2020	2020
	¥	¥	$
Profit	34,273	3,780	34,734
Other comprehensive income:			
Valuation difference on available-for-sale securities	2,152	(9,737)	(89,471)
Deferred gains or losses on hedges	238	(1,354)	(12,439)
Foreign currency translation adjustments	181	(5,428)	(49,874)
Remeasurements of defined benefit plans, net of tax	479	(227)	(2,083)
Share of other comprehensive income of entities accounted for using equity method	(18)	(69)	(635)
Total other comprehensive income	3,031	(16,814)	(154,502)
Comprehensive income	37,304	(13,034)	(119,768)
(Comprehensive income attributable to)			
Comprehensive income attributable to owners of the parent	35,930	(13,909)	(127,807)
Comprehensive income attributable to non-controlling interests	1,374	875	8,038

(Reference)

SEGMENT INFORMATION

Information about sales and operating income :

3 Months ended March 31, 2019	Millions of yen							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination	Consolidated
Sales								
Outside customers	¥60,297	¥31,854	¥20,355	¥70,299	¥21,873	¥30,049	¥–	¥234,727
Inter-segment	2,419	4,172	198	2,084	1,878	2,382	(13,133)	–
Total	62,716	36,026	20,553	72,383	23,751	32,431	(13,133)	234,727
Operating income (loss)	¥3,993	¥2,413	(¥271)	¥39,506	¥255	¥304	(¥824)	¥45,376

3 Months ended March 31, 2020	Millions of yen							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination	Consolidated
Sales								
Outside customers	**¥52,627**	**¥32,189**	**¥23,330**	**¥19,749**	**¥17,373**	**¥26,465**	**¥–**	**¥171,734**
Inter-segment	**2,397**	**4,126**	**223**	**1,636**	**1,804**	**2,141**	**(12,328)**	**–**
Total	**55,025**	**36,315**	**23,553**	**21,385**	**19,177**	**28,606**	**(12,328)**	**171,734**
Operating income (loss)	**(¥156)**	**¥2,286**	**¥987**	**¥848**	**¥48**	**¥192**	**(¥1,738)**	**¥2,469**

3 Months ended March 31, 2020	Thousands of U.S. dollars							
	Petrochemicals	Chemicals	Electronics	Inorganics	Aluminum	Others	Elimination	Consolidated
Sales								
Outside customers	**$483,572**	**$295,773**	**$214,370**	**$181,467**	**$159,639**	**$243,179**	**$–**	**$1,578,000**
Inter-segment	**22,029**	**37,916**	**2,049**	**15,033**	**16,576**	**19,676**	**(113,279)**	**–**
Total	**505,601**	**333,689**	**216,419**	**196,500**	**176,215**	**262,855**	**(113,279)**	**1,578,000**
Operating income (loss)	**($1,430)**	**$21,008**	**$9,073**	**$7,792**	**$445**	**$1,768**	**($15,965)**	**$22,690**