

Shin-Etsu Chemical Co., Ltd. FY2019 First Quarter Consolidated Business Results: Summary of the Teleconference Presentations	
Date	July 25, 2018 16:00-17:00
Venue	Shin-Etsu Chemical Co., Ltd. Tokyo Headquarters Conference Room
Company Side Attendees	<ul style="list-style-type: none"> ● Yasuhiko Saitoh, Representative Director-President ● Masahiko Todoroki, Senior Managing Director, General Manager, Semiconductor Materials Div. ● Toshiya Akimoto, Managing Director, In charge of Public Relations ● Toshiyuki Kasahara, Director, General Manager, Finance & Accounting Dept. ● Yukihiro Adachi, General Manager, Public Relations Dept.
Reference Material	<u>Consolidated Financial Results for the First Quarter of FY 2019, ended June 30, 2018.</u>

**This memo is a summary of the presentations made and the Q&A session held during the teleconference.*

Key Points Made by President Yasuhiko Saitoh in His Words of Greeting

- This first quarter had the highest financial results, above that of each of the previous year's four quarters. Compared with the corresponding period of a year earlier, earnings and profit grew in all business segments, and in particular, our PVC/Chlor-Alkali Business and Semiconductor Silicon Business achieved about a 50% increase in profit.
- Regarding the business forecast for this fiscal year, Consolidated Net Sales is ¥1.5 trillion, Operating Income is ¥360.0 billion, Ordinary Income is ¥370.0 billion, Net Income is ¥270.0 billion and the Group's highest profit ever is expected.
- The forecast for this fiscal year's cash dividends per share is ¥180. The average payout ratio of the past 10 years, including this year's forecast, is about 35% and following our basic policy of paying stable dividends over the long term, we would like to carry out our business with this kind of ratio in mind.

Overview Explaining 1Q's Business Results Presented by Yukihiro Adachi, General Manager of Public Relations

PVC/Chlor-Alkali Business:

Net Sales ¥123.1 billion (8% increase YoY), Operating Income ¥26.3 billion (49% increase YoY)

- With regard to Shintech Inc's 1Q (January to March 2018), even though business was affected by the severe winter weather in the beginning of the year, both PVC and caustic soda continued high levels of shipments. Both products experienced a further improvement in their supply-demand environment, and Shintech greatly increased its business results

- Shin-Etsu PVC B.V. in the Netherlands' during their 1Q (January-March) maintained good business results as market conditions continued to be steady, and it increased its sales volume.
- The PVC business in Japan had a decrease in shipments due to the effects of periodic maintenance.

Silicones Business:

Net Sales ¥55.6 billion, (11% increases YoY), Operating Income ¥13.5 billion (11% increase YoY)

- This business segment's results increased as a result of demand being robust all around the world, price adjustments for both general-purpose and functional products and the carrying out of maximum production leading to increased sales.

Specialty Chemicals Business:

Net Sales ¥30.500 billion, (8% increase YoY), Operating Income ¥6.8 billion (5% increase YoY)

- The cellulose business had good shipments in pharmaceutical-use products, and construction materials products and coating products also continued to perform steadily.
- Pheromone products and POVAL products also had firm shipments.

Semiconductor Silicon Business:

Net sales ¥90.9 billion (27% increase YoY), Operating income ¥30.0 billion (52% increase YoY)

- Supported by robust semiconductor device demand, this business continued a high level of shipments. Implementing a product price adjustment also contributed to this business segment's results, and the results increased greatly.

Electronics & Functional Materials Business:

Net Sales ¥56.0 billion (14% increase YoY), Operating Income ¥16.0 billion (6% increase YoY)

- Sales in rare earth magnets business increased greatly in products for applications in automobiles and industrial equipment.
- In the photoresist products business, KrF resists, ArF resist and trilayer materials all were firm.
- Photomask blanks increased sales in both general-purpose and leading-edge products.
- Optical fiber preform did well by taking advantage of the increase in global demand and also of the contribution made by the production of our joint-venture companies in China.

Processing, Trading & Specialized Services Business:

Net Sales ¥27.2 billion (15% increase YoY), Operating Income ¥3.0 billion (4% increase YoY)

- Shin-Etsu Polymer Co., Ltd. did well as the business of semiconductor wafer-related containers maintained a high level of shipments.

Supplementary explanation about this fiscal year's consolidated business forecast

- The exchange rate basis for this term's business forecast from July onwards is: US \$ 1.00=¥105, 1€=¥130.
- The foreign exchange sensitivity of ordinary income in U.S. dollars is ¥2.6 billion (Import/Export of Japanese companies is ¥1.600 billion and overseas subsidiary companies conversion is ¥1.0 billion) and in Euros is ¥0.3 billion.

- The capital expenditure of this term is forecast to be ¥250.0 billion and depreciation and amortization is ¥135.0 billion.
- The business results forecast for FY 2019 includes various factors such as products' demand, market conditions and exchange rates. We ask for your understanding that there is possibility that the actual results may differ from the forecast.

Q-and-A Session

PVC/Chlor-Alkali Business

Q	What are the reasons for the decreased sales and profit QoQ in the PVC/Chlor-Alkali business segment?
A	During the October-December quarter there was no periodic maintenance held and Shintech was able to operate at full capacity; however, during the January-March quarter, there was a reduction in production due to the severe winter weather in the U.S. The decline in volume accounts for the decrease in sales and profit.
Q	What was the business situation in Shintech's 2Q (April-June 2018)?
A	<ul style="list-style-type: none"> • The increase in quantity was higher in 2Q than in 1Q. • The PVC market price in the U.S. remained at the same level, while the price of exports somewhat recovered. • The price of caustic soda fell. However, because of the price increases successfully implemented up to now, the current fall in the price has not much affected profit. Now, the price of caustic soda has stabilized. • With regard to ethylene, as you will know from the movements in spot prices, it has continued to show weakness. Because of this factor, the spread has improved and it has contributed greatly to 1Q and 2Q business results.
Q	What is the current situation and forecast with regard to the caustic soda market?
A	<ul style="list-style-type: none"> • The falling of the caustic soda market price started in Asia. The demand for caustic soda in China fell somewhat, and although the volume was not so large, there was a dumping phenomenon of surplus product in Asia and in other areas, and these factors affected the market. • Now, the market has stopped falling and is stabilized. • With regard to aluminum, one of the application fields for caustic soda, there are times that sales channels are being disturbed because of the effects of the imposition of tariffs. It is difficult to foresee what the effects of trade friction and a slowdown of the economy in China might be. However, for the time being, the demand for caustic soda is stable, and we are not so concerned.

Q	What is the completion time for the U.S. ethylene plant?
A	Construction of the U.S. ethylene plant is moving ahead with the completion scheduled at the end of 2018.
Q	What is the situation regarding the plans for the new PVC plant expansion?
A	<p>• The details of the PVC new expansion are described in our Press Release. <u>(For your reference, see Press Release on “Shintech Announces New Integrated PVC Plant Investment of \$1.49 Billion to Bolster PVC Business”)</u></p> <p>[Completion time]</p> <ul style="list-style-type: none"> • We have been working on this new integrated PVC plant project for a long period of time and the things that take time for delivery are being prepared ahead of schedule. • The difference from the construction being carried out for the ethylene plant is that in the case of our integrated PVC plant, our company is carrying out construction on our own. • The completion time of the end of 2020 is a schedule with not so much time allowance; however, we believe it is a sufficiently feasible schedule. <p>[Investment amount]</p> <p>This investment is for the construction of a plant at the new site. The initial investment amount is costly because we are beginning the construction with a layout that takes into consideration future expansion investment. In addition, compared to the previous situation, prices of general construction materials have risen, and the investment amount has become larger.</p> <p>[Contractors]</p> <p>We are not using an EPC. All the activities such as from designing, material procurement and onsite construction are all done on our own. However, for the construction, we will hire multiple contractors and we will do the work section by section. For now, the prospects of securing contract workers are clearly in sight.</p> <p>[Procurement of ethylene]</p> <p>We plan to procure ethylene from outside of our company.</p>

Specialty Chemicals Business

Q	What accounts for the YoY business results in which compared to net sales, profit has not increased?
A	It is due to the fact that a periodic maintenance took place at our POVAL plant. This kind of periodic maintenance is not scheduled every year.

Semiconductor Silicon Business

Q	What were the QoQ business results?
A	The majority of the profit increase is from price adjustments, and there were also the positive effects of volume increases and cost-down efforts.
Q	What was the situation of the April-June quarter with respect to each wafer diameter and what is the forecast for the July-September quarter?
A	<ul style="list-style-type: none"> • We believe that in the April-June period all silicon wafer makers were in full operation. • Global silicon wafer area shipments had a 6% YoY increase in the silicon wafer industry. • The degree of percentage increase according to diameters were in the order of: 300mm, 200mm and 150mm or less. As market shares are almost unchanged, our company's increase is similar to that of the industry. • The increase in volume of 300mm, we believe, is because of such measures taken by each company as improvements in productivity, debottlenecking of the production process and improvements leading to higher-quality products. • With regard to 200mm, every company continued full operation, and we believe the same situation continued into the July-September quarter. <p>Those under 150mm, because there was some leeway in capacity, in CY2017 it increased the most; however, recently it came to settle down. In the July-September quarter, we believe it will continue to be at a similar level as that of the April-June quarter.</p> <ul style="list-style-type: none"> • In the July-September quarter, in all diameters including 300mm, we believe each company will continue on with full operation.
Q	What are the prices for each wafer diameter?
A	<ul style="list-style-type: none"> • Our company's wafers ASP (average selling price) for all diameters in the April-June period was up a little over 30%, based on the ASP at the end of 2016 as a standard, and we believe other companies in the industry are at a similar level. Our company's wafer price increase percentages are in the order of percentage from the large size 300mm, then to the 200mm and on to 150mm wafers. • With regard to price movements after the July-September quarter, price increases are in progress in all diameters. In July-September and the October-December quarter unit prices will also be rising in all diameters. However, we are unable to say what the actual percentage will be because the price increase percentages are affected by the impact of fluctuations in foreign exchange rates. For 300mm wafers, whose markup margin is the largest, we think that we can increase prices by at least 40% over the prices at the end of 2016. • With regard to the forecast for prices after 2019, there are various ways of making contracts, and the prices will keep increasing in 2019 as well. After 2020, there are

	negotiations that include expansion in greenfield investments. Things will be different depending on each user, and prices will continue to go up.
Q	When will the production of the step-by-step increasing of capacity start?
A	The production of the successive increasing of capacity will gradually start from early autumn of this year. We believe our competitors' capacity will increase at about the same time.
Q	What is the depreciation situation?
A	From last year, mainly for 300mm wafers, we have continued investments for making quality higher and optimizing debottlenecking. The depreciation period has now begun for those units of equipment that were installed. Some of these tangible assets were depreciated in 1Q, and as we go into 2Q and 3Q, the amount of depreciation expense will increase.
Q	What about the industry's 300mm wafer production capacity (shipments of 5,900kp – 6,000kp/month)?
A	In the present situation, it hardly happens that wafer makers make shipments from inventory, so we think that the industry's shipping amount data for the April-June quarter is in fact the production capacity. We believe each company is raising capacity gradually.
Q	What are your thoughts regarding concerns about and the risks of oversupply?
A	<ul style="list-style-type: none"> • It depends on how each wafer company is making contracts and the forecasts being made for each user. If there is a silicon wafer maker who is expanding by mistakenly identifying temporary demand as real demand, then there is a threat that supply capacity will exceed demand; however, at the present point in time, as far as our company has investigated the situation, we do not think there will be an oversupply. • Users have strong future forecasts, and most of the users are saying that there will be a shortage of wafers in 2019, and we even now are receiving additional requests. We cannot know unless we carry out careful examination of each company's situation about whether these users' voices desire to add the stock for 2020 or for an anticipated wafer shortage due to the users' investments in 2019. However, as long as the macro economy does not change its current trajectory, the possibility of 300mm wafers falling into an oversupply situation in 2019 is low. • With regard to future expansion, our company has negotiated individually with users and is making contracts that include price and volumes. There is some talk that one of the DRAM maker is delaying its expansion schedule. ; however, we are not seeing any business affect from that. The reason for this delay is not a market factor, and we believe that there will be no big changes.

Q	What is your view about wafer demand in 2019 and 2020?
A	<ul style="list-style-type: none"> • 2019 wafers are almost all sold out, and as for the 2020 production, a good amount of volume is also booked, Depending on our customers, the contract period varies; however, after 2020 the prospects for demand from users are strong. • The amount of a single year's increase is not certain, but during the past 10 years, 300mm wafers increased about 300,000 every year. It increased for NAND and logic, and DRAM chips saw a slight increase. Memory makers try to avoid overinvestment, and therefore, whether it will increase by 300,000 plus alpha or more than that will, we think, depend on the growth of 3DNAND. • Our company is also interested in the growth in wafer demand. However, such factors for change as improvements in 3DNAND yield and logic chip miniaturization are possible, and we are carefully watching the situation so that our investment does not become an overinvestment.

Electronics & Functional Materials Business

Q	What were the QoQ business results?
A	Rare earth magnets and photoresist products have resulted in increased profit. The optical fiber preform materials business was affected by a large-scale periodic maintenance held at our Kashima Plant.

Entire Company

Q	What was the basis for the forecast of operating income (¥360.0 billion) in FY 2019?
A	We make our company's forecast taking into consideration all possible risks. Recently trade friction between the U.S. and China is occurring and it is not known how it will affect the world economy. So we did not prepare the company's forecast by simply adding forecasts of each business. Based on the current performance level, we made the forecast by taking into account the business uncertainties and risk factors.
Q	What is your policy about cash dividends?
A	Based on our policy of long-term stability, we will carry out our business keeping in mind a payout ratio of 35% (10-year average payout ratio).
Q	What is your view about the percentage the company will be taxed for the year?
A	We view it as around 26% for FY2019.
Q	What is the situation regarding depreciation expenses in 4Q to 1Q?
A	Depreciation expenses are decreasing in each business segment. When you look at it over a period of one year, gradually investments moved ahead, and from the time of their

	<p>completion, depreciation expense begins and towards the end of the term the amount of depreciation increases when using the case of the fixed-rate method. When the fiscal term changes, depreciation is recalculated, and the existing depreciation amount has its base decreased in the following term and there the new depreciation expense amount is added. Looking at particular quarters, 1Q is the time where there is the least depreciation expense. Compared to the previous year's 4Q, each segment has a reduced amount of depreciation expense.</p>
Q	What was the reason for the reduction in inventories?
A	<p>Regarding the finished goods inventory, there is no segment that had a particularly large reduction; however, with regard to the April-June quarter, Kashima and the Gunma Complex had their periodic maintenance, and because of that affect, the finished goods inventory was reduced. Shintech, as it has continued to do over time, maintained a very tight inventory, and at the time of the effects of the severe winter weather, it overcame the situation through the effective managing of shipments.</p>