COMPANY RESEARCH AND ANALYSIS REPORT

RS Technologies Co., Ltd.

3445

Tokyo Stock Exchange Prime Market

11-Apr.-2024

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Summary

Expanding business domains from semiconductors to renewable energy-related areas, with the potential for accelerated growth from 2025 onward

RS Technologies Co., Ltd. <3445> (hereafter, also "the Company") is the leading company for the business of wafer reclaim of silicon wafers (hereafter, the wafer reclaim business), which are a main semiconductor material, with a global market share of around 33% (the Company's estimate based on SEMI data). In China in 2018, it made a subsidiary of GRINM Semiconductor Materials Co., Ltd. (hereafter, GRITEK), which conducts a prime silicon wafer manufacturing and sales business (hereafter, the prime wafer business), and then in October 2023, it newly established LE System Co., Ltd., which took over the business of the previous LE System Co., Ltd., that conducted a vanadium redox flow battery (hereafter, VRFB) electrolytic solutions business, and it has expanded its business domains in the renewable energy market as well.

1. The FY12/23 results were about the same level as in the previous fiscal year, despite the sluggish conditions in the semiconductor market

The FY12/23 results were about the same level as in the previous fiscal year, despite the slumping conditions in the semiconductor market, with net sales increasing 4.1% year-on-year (YoY) to ¥51,893mn and ordinary profit decreasing 3.7% to ¥14,921mn. In the wafer reclaim business, which is not easily affected by changes in market conditions, sales and profits increased by double digits, including due to the effects of the strengthened production capacity, and this covered for the decline in the prime wafer business.

2. The prime wafer business is expected to recover from the second half of 2024

The forecasts for the FY12/24 consolidated results are for net sales to increase 5.8% YoY to ¥54,900mn and ordinary profit to grow 3.2% to ¥15,400mn. In the wafer reclaim business, both sales and profits are expected to increase due to the strengthened production capacities in Japan and overseas. Conversely, in the prime wafer business, it seems that results will continue to slump up to the 1H, but in the 2H, the forecasts are for results to start to improve because a round of inventory adjustments by customers will have been completed, and also due to the strengthened production capacity and increase in market share for 8-inch prime wafers.

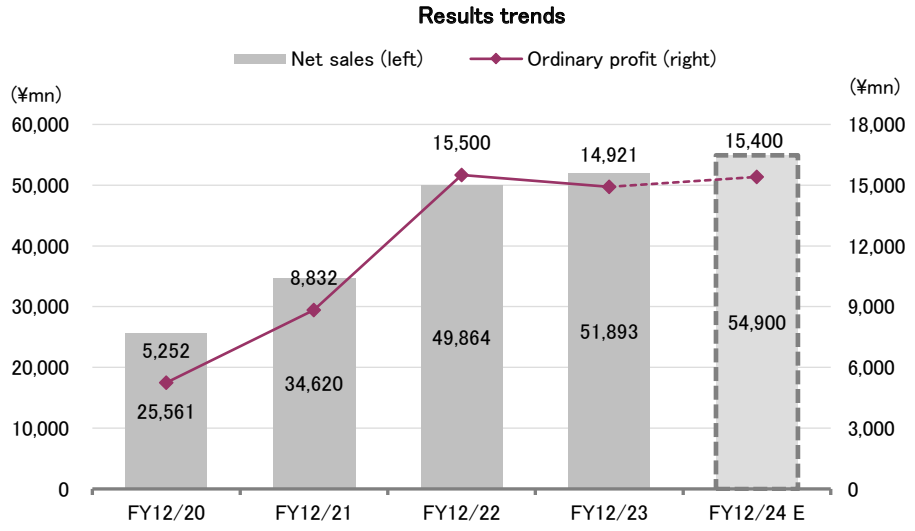
3. The renewable energy business, which is a new business for the manufacture and supply of large storage battery electrolytes, is aiming for net sales of ¥24.0bn in FY12/26

The Company has announced a new three-year plan in which it has set net sales of ¥64,100mn and ordinary profit of ¥18,230mn as the results targets for FY12/26, the final year of the plan, based on its existing businesses. So it plans annual growth of 7.3%, which we at FISCO think is an achievable level. It has also announced an up-side plan that adds the target amounts (net sales of ¥67.0bn and operating profit of ¥9.1bn) to be obtained from the new renewable energy business, which manufactures and supplies electrolytes for VRFBs, and from M&A in the future. Of these amounts, for the renewable energy business, it has set targets of net sales of ¥24.0bn and an operating profit margin of 20% by entering into the Chinese market, which is the largest market. Its strengths include the quality of its electrolytes and its low-cost technologies, and we at FISCO think it is fully capable of capturing share in the Chinese market. For M&A also, the Company's policy is to investigate as targets semiconductor-related companies with synergies with its existing businesses, and also those businesses that match its corporate philosophy based on keywords such as "recycling."

Summary

Key Points

- The FY12/23 results were about the same as in the previous fiscal year, despite the slumping conditions in the semiconductor market
- The FY12/24 results are forecast to recover and return to a growth trajectory, including from the recovery of the prime wafer business from the 2H onwards
- The renewable energy business is aiming for net sales of ¥24.0bn and an operating profit margin of 20% in FY12/26 from entering-into the Chinese market
- May once again increase the dividend per share in FY12/24 if results trend steadily



Source: Prepared by FISCO from the Company's financial results

Company overview

Started in the wafer reclaim business and expanded its business domain to prime wafers, semiconductor-related equipment and materials, and renewable energy businesses

1. History

The Company was established in December 2010 to take over the facilities of Rasa Industries, Ltd. <4022>, which had withdrawn from the wafer reclaim business, inheriting its equipment. Since then, it has been developing its wafer reclaim business and currently has two plants, the Sanbongi plant in Osaki City, Miyagi Prefecture and the Tainan plant in Taiwan (completed in 2015), which is owned by RSTEC Semiconductor Taiwan Co., Ltd., a subsidiary established in 2014.

Also, in 2017, the Company announced that it would be launching a prime wafer business in China, and in 2018, together with Chinese state-owned company Beijing General Research Institute for Nonferrous Metals (now GRINM Group Co., Ltd.; hereafter, GRINM) and Fujian Kuramoto Investment Co., Ltd. (hereafter, Fujian Kuramoto), it established a joint venture, Beijing GRINM RS Semiconductor Technology Co., Ltd. (BGRS). At the same time, BGRS invested in GRITEK, which was a subsidiary of GRINM that manufactured and sold silicon materials and prime wafers, turning it into a wholly owned subsidiary. The investment ratios in BGRS are 45% for RS Technologies, 49% for GRINM and 6% for Fujian Kuramoto. Although its investment ratio is below 50%, Fujian Kuramoto is an investment company managed by Mr. Nagayoshi Ho, the president and CEO of the Company, so in actual terms, it owns more than 50%, and moreover, has appointed three of the five directors that comprise the BGRS Board of Directors. Therefore, it effectively holds the management rights and BGRS is deemed to be a subsidiary within its scope of consolidation. The reason for the complex investment scheme for BGRS is that, if a Chinese company's investment ratio from local capital is 50% or above, it is treated by the Chinese government and local governments as a domestically funded company and is eligible to receive various types of subsidies and other funding. Such companies also receive preferential treatment in areas like capital investment and taxes, giving them competitive advantages over foreign-funded companies.

To further expand its business, GRITEK established Shandong GRINM Semiconductor Materials Co., Ltd. (hereinafter referred to as "Shandong GRITEK") in 2018 as a joint venture with the local government of Dezhou City, Shandong Province (with an investment ratio of 80% for GRITEK and 20% for Dezhou Economic and Technological Development Zone Jingtai Investment Co., Ltd.), and set up the Shandong Plant as a new manufacturing base. The decision to expand into Shandong Province was based on factors such as the concentration of major semiconductor manufacturers in the surrounding area, the proximity of science and engineering universities, which makes it easier to acquire talented personnel, and the ability to enjoy preferential treatment in terms of infrastructure costs such as water, utilities, and company housing, etc. In 2020, the Company also established Shandong GRINM RS Semiconductor Materials Co., Ltd. (hereinafter referred to as "SGRS"), which handles 12-inch reclaimed wafers and prime wafer businesses, as a joint venture with GRINM, Dezhou City Government-affiliated funds, and others (the Company's initial investment ratio was 19.99%, making it an equity-method affiliate, and currently holds shares through GRITEK), advancing business expansion in China. GRITEK was listed on the Shanghai Stock Exchange's Sci-Tech Innovation Board (STAR Market) in November 2022. Although GRITEK's investment ratio, including indirectly owned shares, is just over 40%, the Company is deemed to have substantial management control and includes it as a consolidated subsidiary, and intends to maintain it as a subsidiary in the future.

In terms of M&A in Japan, the Company made Union Electronics Solutions Co., Ltd., a semiconductor trading company, a subsidiary in 2018, followed by DG Technologies Co., Ltd., which manufactures and sells consumable materials for semiconductor manufacturing equipment (quartz rings and silicon electrodes), in 2019. In October 2023, the Company established a new subsidiary, LE System Co., Ltd., to take over the business of the former LE System, a pioneer in the development and manufacturing of electrolytes for VRFBs that had been leading the industry since the 1970s. This expansion into the renewable energy market, in addition to the semiconductor market, was driven by several factors. Firstly, it aligns with the Company's keyword of contributing to society through the "recycling" business, which it has been working on since its founding. Secondly, it allows the Company to contribute to SDGs through this business. Lastly, the Company judged that it would be possible to expand the business by leveraging the network of local companies and local governments that it has built up to date to develop the Chinese market, which is expected to become the largest demand center for VRFBs.

The Company's strength in reclaimed wafers lies in the large number of times they can be reclaimed through precision inspection and polishing technologies and in technologies for removing metallic impurities

2. Reclaimed wafers and prime wafers

To appreciate the strengths and growth potential of the Company's mainstay wafer reclaim business business and prime wafer business, it is essential to understand the semiconductor manufacturing process and role of silicon wafers as well as the manufacturing methods used to produce them. An explanation is provided below.

(1) Silicon wafers

The semiconductor manufacturing process consists of the front-end process, where fine circuits are formed on silicon wafers (repeating the photolithography process hundreds of times), and the back-end process, where the wafers are finished into individual semiconductors. The silicon wafers used in the front-end process manufacturing line include "prime wafers" (new wafers) used for semiconductor products, as well as "monitor wafers" used to evaluate the finish condition of each process and "dummy wafers" used to improve the stability of precision processing (hereafter referred to as "monitor wafers" in this report). From a cost perspective, reclaimed wafers are mainly used for "monitor wafers."

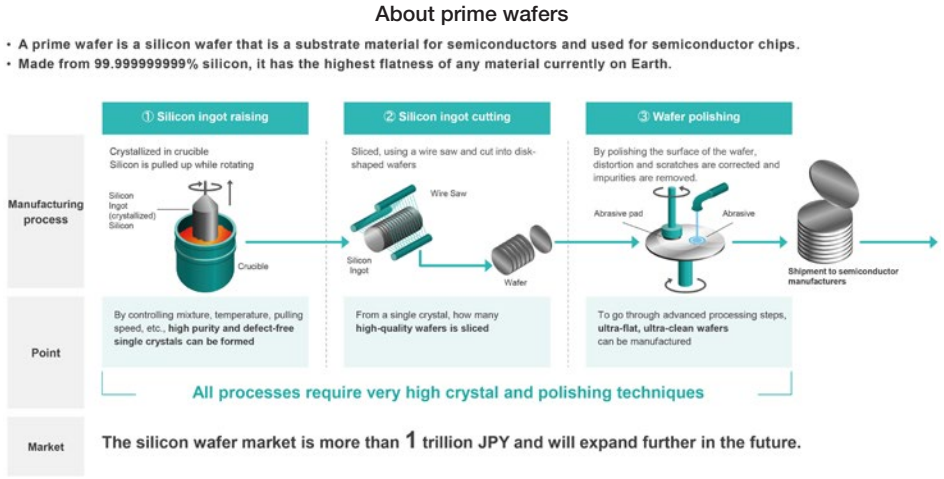
(2) Wafer reclamation

The volume of monitor wafers used seems to be around 20% of the total volume of wafers input into the semiconductor manufacturing line, and basically, monitor wafers input are new wafers. However, in order to reduce the costs of manufacturing semiconductors even by just a little, semiconductor manufacturers are reusing monitor wafers that have been used once and then reclaimed by a reclamation processing business such as the Company. The price of a reclaimed wafer is around 25% cheaper than that of a new wafer, so currently it seems that around 80% of monitor wafers are reclaimed wafers.

In the wafer reclamation process, an acceptance inspection is conducted and all elements, such as the insulating film formed in the semiconductor manufacturing process, are removed. After that, polishing is performed in a clean room, followed by precision cleaning, and then shipment. The Company's strengths can be summarized as the following three points. The first is that it can precisely ascertain needs and demand trends by communicating directly with all customers through a direct-sales system (it can hold technical meetings with customers' engineers in the main languages), and it is realizing management with thorough cost reductions at its Tokyo headquarters. The Company's second strength is its technological capabilities, as in the film removal process, it can strip all the film through chemical processes and perform precision polishing that keeps any damage to the wafer's surface to the absolute minimum. This increases the number of times a wafer can be reclaimed from 20 to 30 times, which is around double the industry average. Therefore, the less the amount of the wafer's thickness that is removed by polishing in a single reclamation process, the higher the number of times it can be reclaimed, which has benefits for customers. The Company's third strength is that it has technologies to remove metal impurities. In particular, it has been certified by many semiconductor manufacturers to remove copper (Cu) as the only supplier capable of polishing wafers to a degree of cleanliness that is as good as new. This means that even for monitor wafers, which are used in the copper (Cu) wiring formation process, it can reuse them in other processes (its competitors are unable to completely remove copper impurities, so they can only reuse them in the copper wiring formation process).

(3) Prime wafers

Prime wafer manufacturing processes consist of front-end processing, which includes silicon crystal ingots in a crucible being pulled up and rotated, and back-end processing, which includes slicing wafers from silicon materials into disk-shapes and polishing the surface of the wafers. The success or failure of the business depends largely on front-end processing, which directly affects wafer quality in particular. Differences in quality occur due to the speed of lifting out the silicon ingots and various other conditions, so profitability changes depending on how many wafers can be obtained that clear the prime wafer quality standards (homogeneous purity, oxygen concentration, resistance value, etc.) This is because even for new wafers, the grade is determined by quality in the same way, and if certain standards are not met, they are sold at a low price as monitor wafers. (The price of a monitor wafer is around 30% cheaper than a prime wafer).



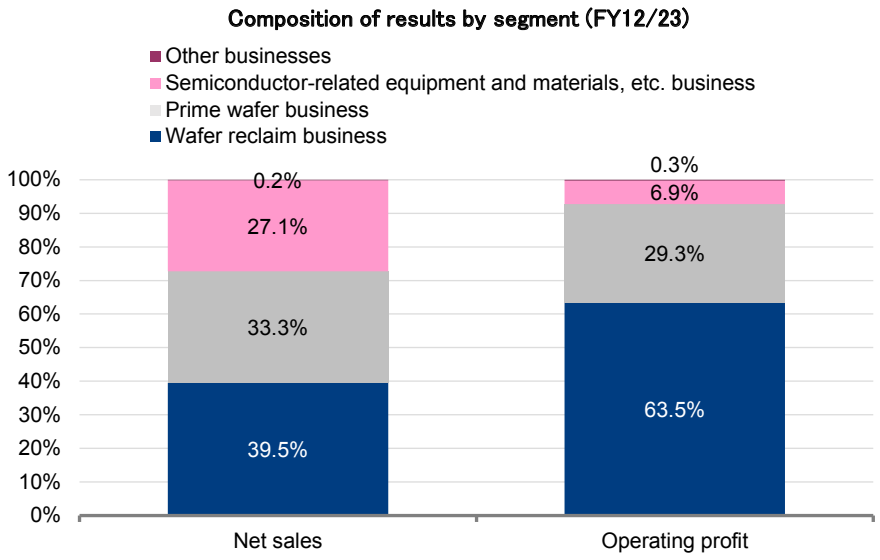
Source: Reprinted from the Company's results briefing materials

Shandong GRITEK of China manufactures and sells prime wafers. One of its strengths is that it can utilize various preferential treatment systems as a domestically funded company, and that the Company could benefit from various Chinese government measures given that the semiconductor industry is being developed as a national policy. In technology, the Company leverages its industry-leading technology capabilities cultivated over many years in the wafer reclaim business in back-end polishing and cleaning processes. It currently sells them in the Chinese market, but it is considering selling them worldwide in the future, and in that case, a strength will be its ability to utilize its customer base in the wafer reclaim business

The wafer reclaim business has a leading share of the 12-inch wafer market, at approximately 33%, and is developing the prime wafer business for the Chinese market

3. Business description

The Company classifies its business operations into three business segments, specifically the wafer reclaim business, prime wafer business, and semiconductor-related equipment and materials, etc. business, and other businesses, and discloses information on each segment. Looking at the composition of results by business segment in FY12/23 (excluding adjustments), the wafer reclaim business provided 39.5% of net sales and 63.5% of operating profit, and the prime wafer business provided 33.3% of net sales and 29.3% of operating profit. These two businesses are the Company's core earnings drivers.



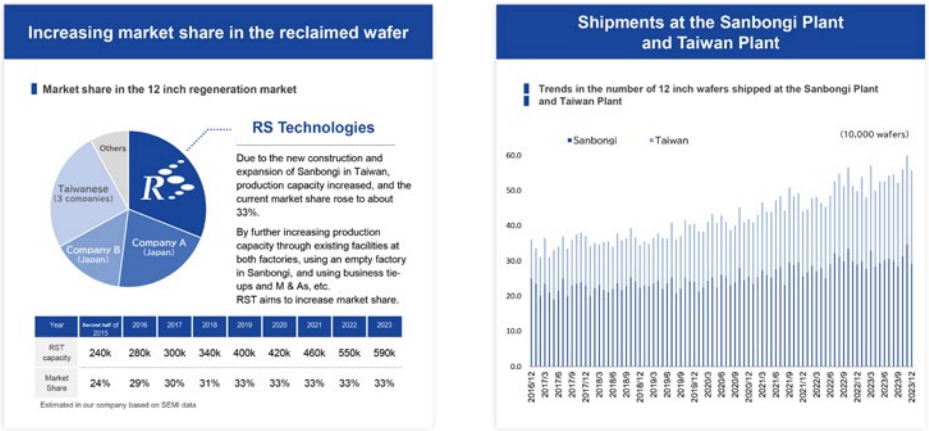
Source: Prepared by FISCO from the Company's financial results

(1) Wafer reclaim business

The wafer reclaim business is conducted by the Company and its Taiwanese subsidiary, but from 1H FY12/22, the equity-method affiliate SGRS also began a mass production line of 12-inch reclaimed wafers. Only the Company is conducting this business with three bases in Japan, Taiwan, and China. The monthly production capacity for the mainstay 12-inch wafers at the end of FY12/23 was 540,000 wafers in total, comprised of 310,000 wafers in Japan (also has a capacity for 150,000 8-inch wafers) and 230,000 wafers in Taiwan, in addition to capacity for 50,000 wafers in China.

In terms of the composition of sales, the 12-inch wafer provides the majority, at around 85%. According to the Company's estimate, it has the leading global market share on a volume basis, of approximately 33%. In addition to the sophisticated reclaim processing technologies, it thoroughly reduces costs through a direct-sales system and provides services with high levels of customer satisfaction by communicating closely with customers, and these strengths are considered to lead to its high share. It has two competitors in Japan, HAMADA HEAVY INDUSTRIES Ltd. and MIMASU SEMICONDUCTOR INDUSTRY CO., LTD. <8155>, while its overseas competitors are three Taiwanese-owned companies. These six companies form an oligopolistic market that hold roughly 90% of the total market share, and therefore it can be said that that price competition is unlikely to occur as a feature of this industry's structure.

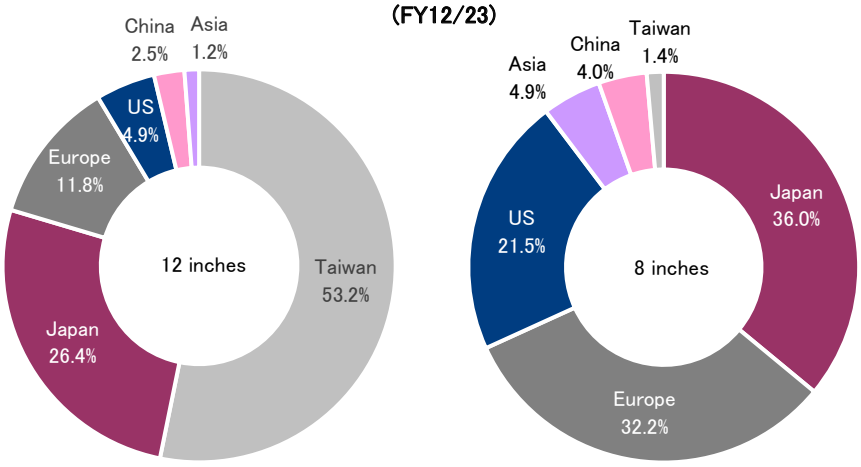
Wafer reclaim business



Source: Reprinted from the Company's results briefing materials

Furthermore, the breakdown of the number of wafers shipped by region (FY12/23) is as follows. For 12-inch reclaimed wafers, Taiwan provides 53.2% and Japan 26.4%, so these two countries provide around 80% of the total. Meanwhile, 8-inch reclaimed wafers stand out for having higher numbers for Japan, Europe and the US, at 36.0%, 32.2% and 21.5%, respectively. The Company's main customers include major semiconductor manufacturers, such as TSMC <TSM> in Taiwan, Sony Semiconductor Manufacturing Corporation and Kioxia Corporation in Japan, Intel <INTC> and Micron Technology <MU> in the US, and STMicroelectronics International N.V. <STM> and Infineon Technologies in Europe.

Breakdown of shipment volume in the wafer reclaim business by region (FY12/23)



Source: Prepared by FISCO from the Company's results briefing materials

(2) Prime wafer business

Prime wafer business is covered by the Chinese subsidiary GRITEK and comprises manufacture and sales of prime wafers and silicon materials. Prime wafer monthly production capacity at the end of FY12/23 totaled 50,000 5-inch wafers, 200,000 6-inch wafers, and 130,000 8-inch wafers. Chinese semiconductor manufacturers are the main customers for prime wafers, and slightly more than 70% of sales are for analog and power semiconductors. The Company estimates that its share of the 8-inch market in China is around 5%, but it plans to grow share in the future by increasing the production capacity. The Company sells silicon materials in overseas markets outside of China. The final customers are manufacturers of semiconductor manufacturing equipment and semiconductors, while direct-sales customers are processors of consumable materials, and it ships to Group company DG Technologies.

(3) Semiconductor-related equipment and materials, etc. business

The semiconductor-related equipment and materials, etc. business includes sales of semiconductor manufacturing equipment and semiconductor materials as well as parts that are purchased and sold by the Company and sales by subsidiaries Union Electronics Solutions and DG Technologies. It mainly purchases the semiconductor manufacturing equipment from Japanese semiconductor manufacturers and others (including some used products), and primarily sells them to semiconductor manufacturers around the world.

Union Electronics Solutions is a semiconductor trading firm that mainly handles ultrasonic testing equipment from Hitachi Power Semiconductor Device, Ltd. and MCUs from Renesas Electronics Corporation <6723>. It opened a Shanghai office in 2020 and sales activities began in earnest in 2023 as the COVID-19 pandemic was suppressed. DG Technologies manufactures and sells semiconductor-related consumable materials for dry etching equipment. Its production sites are the Kamisu plant (Ibaraki Prefecture) and it also opened the Kurihara plant (Miyagi Prefecture) in May 2021 and it has started production for some processes, while in June 2022 it completed the construction of the new plant that is able to carry out integrated production.

4. Other businesses

The sales of other businesses are comprised of revenue from electricity sales from the solar power generation business started in 2013 (power generation capacity of approximately 1.59 MW) and technical consulting services and other services provided by the Company in the semiconductor wafer manufacturing process. However, its effect on results overall is negligible.

Business trends

The FY12/23 results were about the same level as in the previous fiscal year, despite slumping conditions in the semiconductor market

1. FY12/23 results summary

In FY12/23 consolidated results, the Company reported ¥51,893mn in net sales (up 4.1% YoY), ¥11,894mn in operating profit (down 8.6%), ¥14,921mn in ordinary profit (down 3.7%), and ¥7,703mn in profit attributable to owners of parent (down 0.5%), so the results were about the same level as in the previous fiscal year. Compared to the Company forecasts, the slump in the earnings of the Chinese subsidiary continued longer than anticipated and operating profit was 9.2% below forecast, but each of net sales, ordinary profit, and profit attributable to owners of parent were slightly higher than forecast. Negative factors included that the global semiconductor market recorded negative growth for the first time in four years, and in this context, the year can be evaluated as being a strong effort.

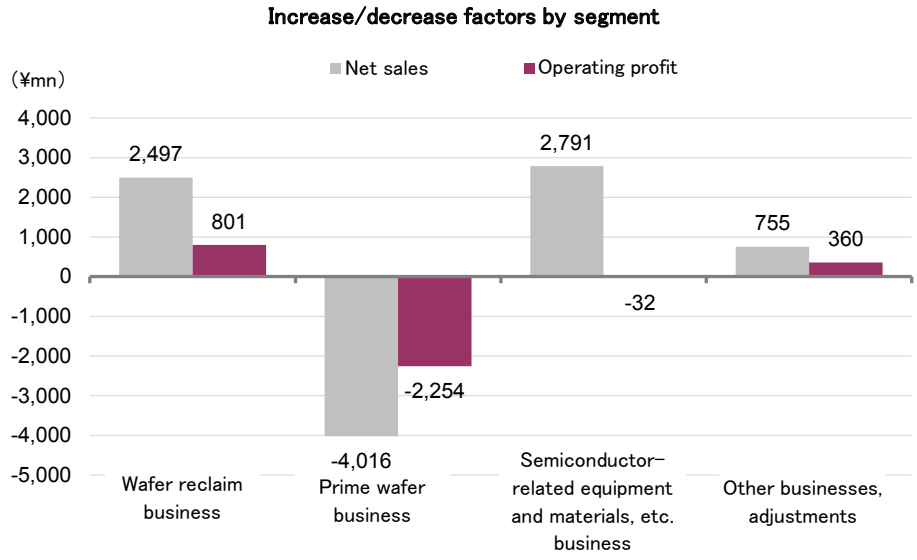
FY12/23 results (consolidated)

(¥mn)

	FY12/22		FY12/23				
	Results	% of sales	Forecast	Results	% of sales	YoY	vs. initial forecast
Net sales	49,864	-	50,800	51,893	-	4.1%	2.2%
Cost of sales	31,432	63.0%	-	34,479	66.4%	9.7%	-
SG&A expenses	5,413	10.9%	-	5,519	10.6%	2.0%	-
Operating profit	13,018	26.1%	13,100	11,894	22.9%	-8.6%	-9.2%
(Financial balance)	447	-	-	1,430	-	219.9%	-
(Subsidy income)	867	-	-	1,735	-	99.9%	-
(Foreign exchange gains)	1,189	-	-	97	-	-91.8%	-
(Share of loss of entities accounted for using equity method)	-74	-	-	-292	-	-	-
Ordinary profit	15,500	31.1%	14,300	14,921	28.8%	-3.7%	4.3%
Extraordinary profit	-339	-	-	63	-	-	-
Profit attributable to non-controlling interests	4,997	10.0%	-	3,681	7.1%	-26.3%	-
Profit attributable to owners of parent	7,739	15.5%	7,400	7,703	14.8%	-0.5%	4.1%
Capital investment value	5,379	-	-	5,999	-	11.5%	
Depreciation	3,422	-	-	3,774	-	10.3%	
R&D expenses	1,657	-	-	1,764	-	6.5%	

Note: The anticipated exchange rates are ¥132/USD for FY12/22 and ¥141/USD for FY12/23
Source: Prepared by FISCO from the Company's financial results and results briefing materials

For net sales, the decrease in the prime wafer business was covered by the increases in the other businesses, including the wafer reclaim business and the semiconductor-related equipment and materials, etc. business. But for operating profit, the significant decline in the prime wafer business could not be covered by the higher profit in the wafer reclaim business.



Source: Prepared by FISCO from the Company's results briefing materials

Non-operating profit and expenses improved ¥545mn YoY. Breaking this down, the foreign exchange gain decreased ¥1,092mn and equity in losses of affiliates increased ¥217mn, but financial income and expenses increased ¥983mn and subsidy income rose ¥867mn. Financial income and expenses increased due to the funds raised from the listing of GRITEK shares. Subsidy income of ¥1,735mn was recorded, and of this amount, around 80% related to Shandong GRITEK development costs and infrastructure costs at the Dezhou plant, while the remainder related to DG Technologies' Kurihara plant. Also, profit attributable to non-controlling interests, which is the portion of the China subsidiary, decreased 26.3% to ¥3,681mn due to the worsening of earnings.

The wafer reclaim business continued to operate at full capacity and set new record-high results

2. Developments by business segment

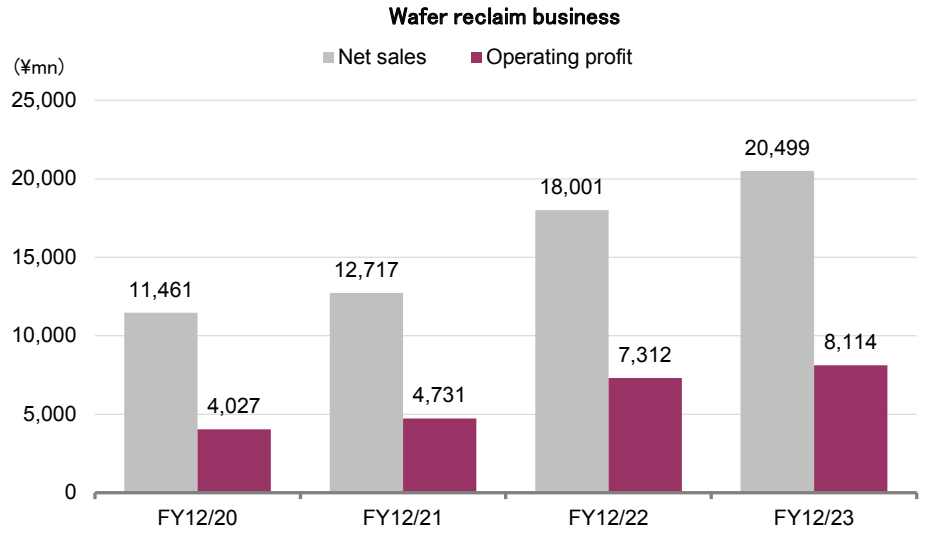
(1) Wafer reclaim business

In the wafer reclaim business, net sales increased 14.6% YoY to ¥20,499mn (includes internal sales and transfer value, same below) and operating profit rose 11.0% to ¥8,114mn, for double-digit increases in sales and profits that set new record highs. Depreciation costs and fuel costs increased, while on entering the 2H, the Company responded to requests for price decreases from some customers whose results had worsened, so the operating profit margin declined 1.0 percentage point (pp) to 39.6%, but the results were still outstanding when considering that the growth of the semiconductor market became negative.

Business trends

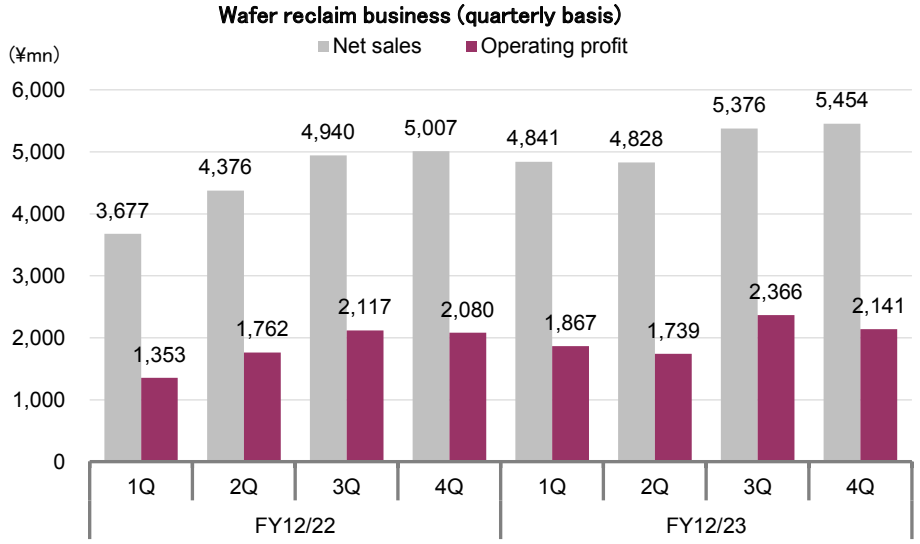
Demand for reclaimed wafers is not easily affected by conditions in the semiconductor market*, because a certain amount of demand can be expected as the manufacturing lines and plants for the mainstay 12-inch wafers increase. Also, in order to respond to the strong demand, the Company increased the monthly production capacity by 40,000 wafers compared to the previous period to 590,000 wafers, which was a factor behind the higher sales. Looking at the sales ratio by destination (on a volume basis), the ratio to Taiwan rose from 40.4% in the previous period to 53.2%, the first time it has exceeded 50%. It seems that this was driven by sales to TSMC, the main customer of the Company.

* This is because even if market conditions worsen, the manufacturing lines continue to operate and the amount of prime wafers input is reduced, but monitor wafers for testing and evaluation continue to be input in order to improve the yield.



Source: Prepared by FISCO from the Company's financial results and results briefing materials

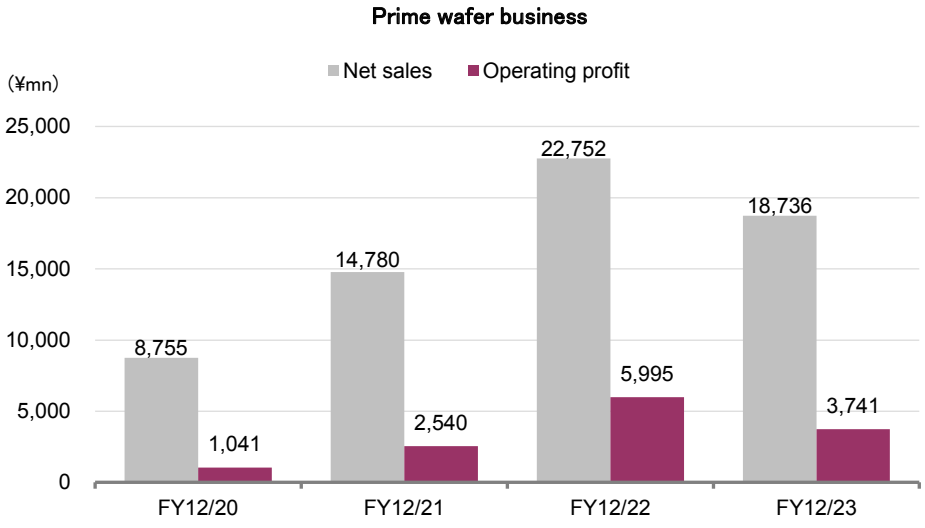
On a quarterly basis, in the 4Q net sales increased 1.5% on the previous quarter to ¥5,454mn, including due to the effects of the strengthened production, to set a new record high, but operating profit declined 9.5% to ¥2,141mn. There was a rebound from the absence of the highly profitable spots projects that contributed to the increase in profits in the 3Q, but the profit margin still trended at the high level of 39.3%.



Source: Prepared by FISCO from the Company's results briefing materials

(2) Prime wafer business

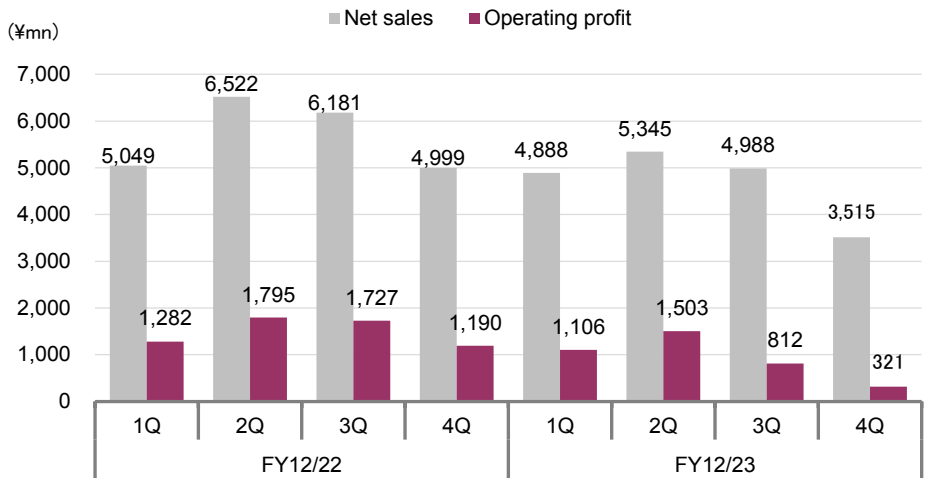
In the prime wafer business, net sales decreased 17.7% YoY to ¥18,736mn and operating profit declined 37.6% to ¥3,741mn. This was mainly because sales of silicon materials, which had increased rapidly in the previous period, declined significantly as semiconductor market conditions worsened and customers entered an inventory adjustment phase. It also seems that sales prices declined slightly. For prime wafers, the 8-inch sales volume increased, but on entering the second half, prices were reduced by several percent as the Company responded to the price cuts by competitors, so sales decreased. The operating profit margin declined 6.3pp to 20.0% due to the price reductions and the lower operating rate.



Source: Prepared by FISCO from the Company's financial results and results briefing materials

Looking how sales trended on quarterly basis, in the 4Q net sales decreased 29.5% on the previous quarter to ¥3,515mn and operating profit declined 60.5% to ¥321mn, which were the lowest levels across the entire year. The Company considered that the sales level would bottom-out in the 3Q, but it seems that sales of silicon materials declined even further.

Prime wafer business (quarterly basis)

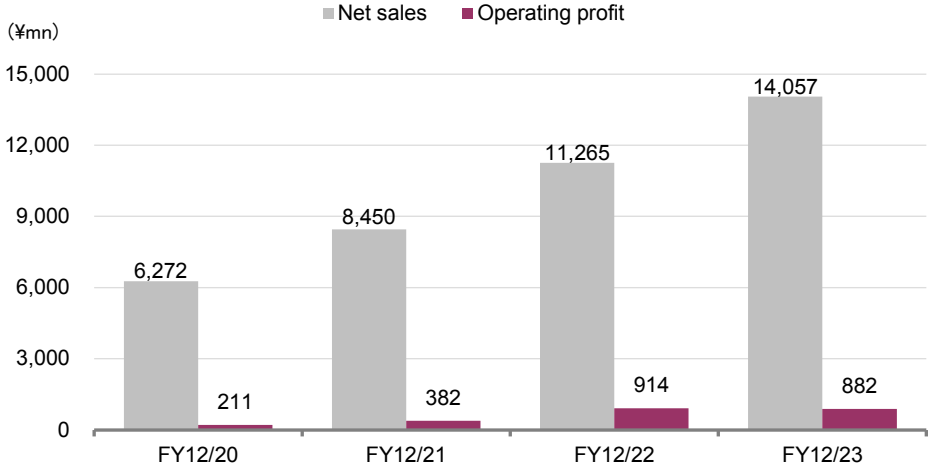


Source: Prepared by FISCO from the Company's results briefing materials

(3) Semiconductor-related equipment and materials, etc. business

In the semiconductor-related equipment and materials, etc. business, net sales increased 24.8% YoY to ¥14,057mn and operating profit decreased 3.5% to ¥882mn. This was attributable to a large increase in laser diode procurement sales due to reinforced sales operations and growing significantly from acquiring new overseas customers. In addition, procurement sales of power semiconductors by the subsidiary Union Electronics Solutions were strong and sales increased, but profits declined slightly due to a change in the composition of sales.

Semiconductor-related equipment and materials, etc. business



Source: Prepared by FISCO from the Company's financial results and results briefing materials

The Company is progressing the strengthening of the financial foundation and allocating accumulated cash to capital investment, M&A funds, etc.

3. Financial condition and management indicators

Looking at the Company's financial condition at the end of FY12/23, total assets had increased by ¥13,111mn from the end of the previous period to ¥140,665mn. The main factors behind these changes were respective increases in current assets including cash and deposits of ¥2,818mn, notes and accounts receivable of ¥1,021mn, and inventories of ¥1,888mn. In non-current assets, property, plant and equipment increased ¥4,041mn due to the investment to strengthen capacity, while investment securities rose ¥2,272mn. The factors behind the increase in investment securities were the additional investment in SGRS and as GRITEK acquired ¥705mn of the shares of a Chinese company.

Total liabilities fell by ¥843mn from the end of the previous period to ¥25,237mn. Accounts payable-other and other current liabilities increased, but interest-bearing debt decreased ¥2,762mn and notes and accounts payable-trade declined ¥1,292mn. Total net assets increased ¥13,954mn to ¥115,428mn. Retained earnings rose ¥7,703mn, including due to the recording of profit attributable to owners of parent, while the foreign currency translation adjustment increased ¥2,082mn and non-controlling interests rose ¥4,813mn.

Looking at the management indicators, the equity ratio, which reflects soundness, rose 3.1pp from 36.8% at the end of the previous period to 39.9%, while the interest-bearing debt ratio fell 7.8pp from 17.5% to 9.7%. Net cash (cash and deposits – interest-bearing debt) also increased ¥5,581mn to ¥65,312mn to set a new record high, and these and other factors can be seen as the Company having further strengthened its financial base.

Consolidated balance sheet

(¥mn)

	FY12/20	FY12/21	FY12/22	FY12/23	Change
Current assets	32,626	45,851	90,470	96,409	5,939
(Cash and deposits)	19,082	27,766	67,939	70,758	2,818
(Inventories)	4,765	6,907	9,700	11,589	1,888
Non-current assets	26,123	33,146	37,084	44,256	7,171
Total assets	58,750	78,997	127,554	140,665	13,111
Current liabilities	12,630	14,218	17,622	18,265	642
Non-current liabilities	5,754	9,827	8,458	6,972	-1,485
Total liabilities	18,384	24,045	26,081	25,237	-843
(Interest-bearing debt)	3,136	8,116	8,208	5,446	-2,762
Shareholders' equity	24,148	26,627	44,961	52,066	7,105
Accumulated other comprehensive income	-382	1,974	1,937	4,020	2,082
Non-controlling interests	16,443	26,140	54,356	59,170	4,813
Net assets	40,365	54,951	101,473	115,428	13,954
[Stability]					
Equity ratio	40.5%	36.2%	36.8%	39.9%	3.1pt
Interest-bearing debt ratio	13.2%	28.4%	17.5%	9.7%	-7.8pt
Net cash	15,946	19,649	59,730	65,312	5,581
[Profitability]					
ROA	9.8%	12.8%	15.0%	11.1%	-3.9pt
ROE	12.7%	12.6%	20.5%	15.0%	-5.5pt
Operating profit margin	17.7%	19.9%	26.1%	22.9%	-3.2pt

Source: Prepared by FISCO from the Company's financial results

Forecasts

The FY12/24 results forecasts are for the prime wafer business to recover from the 2H onwards and a return to a growth trajectory

1. FY12/24 forecasts

For the FY12/24 consolidated results, the Company is forecasting that net sales will increase 5.8% YoY to ¥54,900mn, operating profit will rise 17.7% to ¥14,000mn, ordinary profit will grow 3.2% to ¥15,400mn, and profit attributable to owners of parent will decrease 1.3% to ¥7,600mn, with both net sales and operating profit expected to set new record highs. In the 1H, although results will be sluggish as the adjustment phase in the prime wafer business will continue, the Company expects to return to a growth trajectory from the 2H as the adjustments will have been completed.

FY12/24 consolidated results forecasts

(¥mn)

	FY12/23		FY12/24				
	Results	% of sales	1H forecast	YoY	Full fiscal year forecast	% of sales	YoY
Net sales	51,893	-	26.500	1.4%	54,900	-	5.8%
Operating profit	11,894	22.9%	6,500	1.6%	14,000	25.5%	17.7%
Ordinary profit	14,921	28.8%	7,300	-5.7%	15,400	28.1%	3.2%
Profit attributable to owners of parent	7,703	14.8%	3,700	-0.6%	7,600	13.8%	-1.3%
Earnings per share (EPS) (¥)	292.76		140.37		288.34		

Note: The anticipated exchange rates are ¥135-140/USD
Source: Prepared by FISCO from the Company's financial results and results briefing materials

The outlook for the 2024 semiconductor market is a return to positive growth for the first time in 2 years, driven by demand for AI and data center-related and for automotive. Conditions in the memory market will bottom out and the investment mindset is expected to improve, so we at FISCO think that the Company's forecasts are achievable. A risk factor is how the Chinese prime wafer market will trend, but even if the market as a whole trends softly, a recovery in the 2H seems possible through an increase in market share. The anticipated exchange rate is for the yen to be slightly weaker than in the previous period at ¥130/USD to ¥140/USD, with a change of ¥1/USD affecting operating profit on a scale of tens of million yen.

Non-operating profit and expenses is forecast to worsen ¥1.6bn, but this is because in subsidy income, approximately ¥300mn as the portion of a domestic subsidiary that was recorded in the previous period will not be recorded, and other than the slight worsening of financial profit and expenses due to the increased investment, there will be no worsening factors, and rather the forecast seems to be a conservative estimate that includes risks such as a stronger yen. The FY12/24 results forecasts are the same amounts as the results targets in the three-year medium-term management plan announced in February 2023. The results forecasts are the accumulated figures that were revised at the end of December 2023 after considering factors such as the current market environment. Although the figures for all the businesses have not been changed, by business segment, the amounts for the wafer reclaim business were increased because of the investment to strengthen production capacity, but the amounts for the prime wafer business were reduced. Also, the results of the renewable energy business, which has been launched as a new business, have not been incorporated into the current results forecasts because it is expected to start recording sales from the 2H onwards, at the earliest.

(1) Wafer reclaim business

The wafer reclaim business is expected to grow strongly in 2024 also. New semiconductor plants are being opened in Japan and overseas, and in order to respond to the resulting demand, the Company plans to increase its monthly production capacity of 12-inch reclaimed wafers by 10,000 wafers compared to the end of the previous fiscal year to 320,000 wafers in Japan and by 30,000 wafers to 260,000 wafers in Taiwan. The total capital investment amount for both plants will be ¥1.2bn (¥2.1bn in the previous period).

(2) Prime wafer business

In the prime wafer business, in the 1H, it is highly likely that sales will continue to decrease compared to the same period in the previous fiscal year, but the outlook is that the round of inventory adjustments by silicon materials customers will be completed in the 1H and so results will improve from the 2H onwards. For prime wafers, the forecast is for a recovery trend in the 2H, as the monthly production capacity of 8-inch wafers will be increased incrementally from 130,000 wafers to 180,000 wafers. The Company plans capital investment of ¥4.0bn (¥2.0bn in the previous period). It seems that the sales prices of prime wafers bottomed out in the previous 4Q, and since the start of the year market conditions have been steadily recovering. So the situation is that negotiations to return prices to their previous levels are progressing and that the quarterly results are gradually recovering after bottoming-out in the previous 4Q, and we at FISCO think results will return to a growth trajectory from the 2H.

(3) Semiconductor-related equipment and materials, etc. business

In the semiconductor-related equipment and materials, etc. business, sales are forecast to increase YoY. Sales of laser diodes to the overseas customers acquired in the previous period will trend strongly, while procurement sales of semiconductor manufacturing equipment are also expected to trend solidly. Also, the results of DG Technologies are expected to recover from the 2H onwards.

In the three-year plan, is aiming for annual growth of 7.3% on an existing-businesses basis, and has presented a new upside plan

2. Medium-term management plan

The Company has announced its medium-term management plan up to FY12/26. As the base plan's results targets from the existing businesses, it has set net sales of ¥64,100mn, operating profit of ¥16,830mn, ordinary profit of ¥18,230mn, and profit attributable to owners of parent of ¥8,800mn. For the three-year CAGR, it is targeting steady growth of 7.3% for net sales, 12.3% for operating profit, and 6.9% for ordinary profit. It has also announced an up-side plan for the first time. This plan adds to the targets value the results targets from LE system, which conducts an electrolytes for VRFBs business, and from the effects of M&A in the future, for net sales of ¥131,100mn and operating profit ¥25,930mn in FY12/26. As its M&A targets, in addition to companies in the semiconductor industry, the Company's policy is to consider targets in the renewable energy industry as well, expanding its business domains.

Forecasts

Targets for medium-term results

(¥mn)

Base plan	FY12/23 Results	FY12/24		FY12/25		FY12/26 Previous targets Revised targets	CAGR (FY12/23-FY12/26)
		Previous targets	Forecast	Previous targets	Revised targets		
Net sales	51,893	54,900	54,900	57,600	59,300	64,100	7.3%
Operating profit	11,894	14,000	14,000	14,700	15,330	16,830	12.3%
Operating profit margin	22.9%	25.5%	25.5%	25.5%	25.9%	26.3%	-
Ordinary profit	14,921	15,400	15,400	16,100	16,730	18,230	6.9%
Ordinary profit margin	28.8%	28.1%	28.1%	28.0%	28.2%	28.4%	-
Profit attributable to owners of parent	7,703	7,600	7,600	8,000	8,200	8,800	4.5%
Earnings per share (EPS) (¥)	292.76	293.91	288.34	309.38	311.1	333.86	

Up-side plan	FY12/23 Results	FY12/24 Forecast	FY12/25 Targets	FY12/26 Targets	CAGR (FY12/23-FY12/26)
LE System					
Net sales		1,000	3,000	24,000	
Operating profit		50	300	4,800	
Additions due to M&A					
Net sales		10,000	25,000	43,000	
Operating profit		1,000	2,500	4,300	
Consolidated net sales	51,893	65,900	87,300	131,100	36.2%
Operating profit	11,894	15,050	18,130	24,200	29.7%

Note: The anticipated exchange rates are ¥135-140/USD
Source: Prepared by FISCO from the Company's results briefing materials and company releases

The global semiconductor market can be expected to grow by around 10% a year up to 2026, driven by demand for AI and data center-related and for automotive, so we at FISCO think the results targets for the existing businesses are at an achievable level. The trade friction over semiconductors between the US and China is continuing, and there are concerns about its negative effect on the Chinese semiconductor market. But there has been no change to China's policy of developing its semiconductor industry as an ongoing national policy, and in addition, for the prime wafers that the Company handles, the target of restrictions is the legacy field not the cutting-edge field, so we think that there will be no negative impact from export restrictions on semiconductor manufacturing equipment that requires cutting-edge technologies.

The current medium-term plan does not incorporate SGRS, which is an equity-method affiliate that plans to start mass production of 12-inch prime wafers in the second half of 2024. It had planned to start monthly production of 50,000 12-inch prime wafers at the Dezhou plant, but initially it will start by shipping samples, and it is thought that it will take some time for the tasks of clearing the quality standards for monitor wafers and prime wafers and to acquire plant certification. Therefore, it seems that it will not start recording fully fledged sales until 2025, and at the stage when its profitability is established, the Company plans to increase its investment ratio and to make it a consolidated subsidiary.

(1) Wafer reclaim business

In the wafer reclaim business, the plants in Japan and Taiwan are increasing their production capacities to respond to the strong demand for 12-inch reclaimed wafers. In addition, SGRS's Dezhou plant has started mass production and its strategy is to capture demand in China. Of these, the total monthly production capacity of the Japan and Taiwan plants will increase from 540,000 wafers at the end of December 2023 to 690,000 wafers by the end of 2026, for annual growth of 8.5%. In Japan, as the new 12-inch wafer plant, the Kumamoto No.1 plant of JASM, Inc. (a subsidiary of TSMC) will start operating within 2024. Also, the Hiroshima plant of Micron Technology <MU> will start operating in 2025, and in total nine new plant projects from 2024 onwards have been determined. In addition to the demand from these new plants, the Company will respond to the demand in the European and US markets. The Taiwan plant plans to respond by increasing production, mainly for TSMC.

Also, at the Dezhou plant of SGRS, capital investment of ¥6.0bn will be made for the two-year period from 2025 to increase the monthly production capacity from 50,000 wafers at the end of FY12/23 to 200,000 wafers by the end of FY12/26. Within China, projects for 17 new plants for 12-inch reclaimed wafers have been decided, and the Company is responding to this demand.

Plan to strengthen production capacity for 12-inch reclaimed wafers

Plant	Monthly production capacity at period-end			
	2023	2024	2025	2026
Sanbongi plant	310,000 wafers	320,000 wafers	340,000 wafers	360,000 wafers
Tainan plant	230,000 wafers	260,000 wafers	280,000 wafers	330,000 wafers
Dezhou plant*	50,000 wafers	50,000 wafers	150,000 wafers (+ 50,000 wafers)	200,00 wafers
Total	590,000 wafers	630,000 wafers	770,000 wafers (+ 50,000 wafers)	890,000 wafers

* The Dezhou plant is the portion of the equity-method affiliate SGRS. The figures within parentheses are the increase/decrease from the previous plan.
Source: Prepared by FISCO from the Company's results briefing materials

Capital investment plans

(¥bn)

Plant	2020	2021	2022	2023	2024	2025	2026
Sanbongi plant	0.2	0.9	0.9	1.0	0.2	1.3	1.5
Tainan plant	0.2	0.8	0.9	1.1	1.0	1.5	3.5
Dezhou plant*	0.5	3.0	0.5	0.1	0.1(+0.1)	3.0(+3.0)	3.0
Total	0.9	4.7	2.3	2.2	1.3(+0.1)	5.8(+3.0)	8.0

* The Dezhou plant is a plant of equity-method affiliate SGRS, and the Company was responsible for about 20% of the capital investment. The figures within parentheses are the increase/decrease from the previous plan.
Source: Prepared by FISCO from the Company's results briefing materials

(2) Prime wafer business

In the prime wafer business, Shandong GRITEK plans to double its 8-inch monthly production capacity by raising it incrementally from 130,000 wafers at the end of December 2023 to 280,000 wafers by the end of FY12/26. The three-year cumulative capital investment amount will be ¥8.0bn. It currently has around a 5% share of the 8-inch market in China, so it still has significant room for growth by expanding its share. In the future, it intends to leverage its costs competitiveness and to expand into markets other than China.

SGRS, which handles 12-inch prime wafers, has succeeded in clearing quality standards at a level that will allow the wafers to be sold as products through a test line for monthly production on a scale of 10,000 wafers at the Beijing R&D building. Going forward, it will strengthen production incrementally at the Dezhou plant and by 2026, it will have increased production to 210,000 wafers per month. The three-year cumulative capital investment amount will be ¥20.0bn, and of this amount, GRITEK will be responsible for funds corresponding to its investment ratio (around 20%).

As the sales strategy, the Company plans to ensure quality standards for prime wafers with a circuit width of 28-40 nm, the volume zone for Chinese semiconductor manufacturers, and then to expand sales. Its strategy is to first acquire top share of the Chinese market and as the next step, to meet the quality standards for 14-20 nm prime wafers, the volume zone for global markets, and conduct sales targeting major overseas semiconductor manufacturers by utilizing its price competitiveness. The Company has received requests from major customers in the wafer reclaim business to purchase prime wafers due to their price advantage as long as quality standards are ensured and a stable supply system is established, and we at FISCO believe an expansion of market share is highly likely once that system is in place. The Company has set the target of capturing a 30% share of the 12-inch prime wafers market in the future.

Investment plan for prime wafers in China
Shandong GRITEK (consolidated subsidiary)

8 inches	2023	2024	2025	2026
Monthly production capacity (10,000/month)	13	18	23	28
Capital investment value (¥bn)	2.0	4.0	2.0	2.0

SGRS (equity-method affiliate)

12 inches	2023	2024	2025	2026
Monthly production capacity (10,000/month)	1*	6	11	21
Capital investment value (¥bn)	24.0	6.0	4.0	10.0

* The Beijing test line
Source: Prepared by FISCO from the Company's results briefing materials

(3) Pursuit of growth in semiconductor-related consumable materials as a third major income source

To attain its goal of developing a third major income source outside of the existing wafer reclaim and prime wafer businesses, the Company focuses on semiconductor-related consumable materials handled by subsidiary DG Technologies. Specifically, it aims to increase sales of consumable materials, including quartz rings used to hold silicon wafers in dry etching equipment and silicon electrodes.

The Company estimates that the market for semiconductor-related consumable materials is worth about ¥150.0bn annually and has set its sales goal of acquiring a 10% share (about ¥15.0bn) for the time being. Currently sales are on a scale of several billion yen although profitability is low, but in the future it is targeting increasing share to the 30% range, the same as the wafer reclaim business. Despite the presence of multiple competitors in Japan, Taiwan, South Korea, the US, and other countries, the Company's quality and technological capabilities are thought to be at levels that are at least equal to these competitors. Low production efficiency has been an issue in the past due to small-lot manufacturing of a wide range of product types, but the Company is working to improve production efficiency, including by installing automation equipment and enhancing production management, and to reduce materials-procurement costs. For sales, it is conducting cross sales for customers in the wafer reclaim business and at the same time, its strategy is to increase its sales share by acquiring genuine product certification from major dry etching equipment manufacturers, The long-term targets are a global market share of around 30% and net sales of ¥45.0bn. The business scale of Techno Quartz Inc. <5217>, a competitor for quartz glass, is net sales of ¥16.5bn and an operating profit margin at the 21% level based on its company forecasts for FY3/24, and we at FISCO think that DG Technologies is also capable of raising its operating profit margin to around the 20% level if it expands its sales scale.

The electrolytes for VRFBs business is entering into the Chinese market, targeting net sales of ¥24.0bn and an operating profit margin of 20% in FY12/26

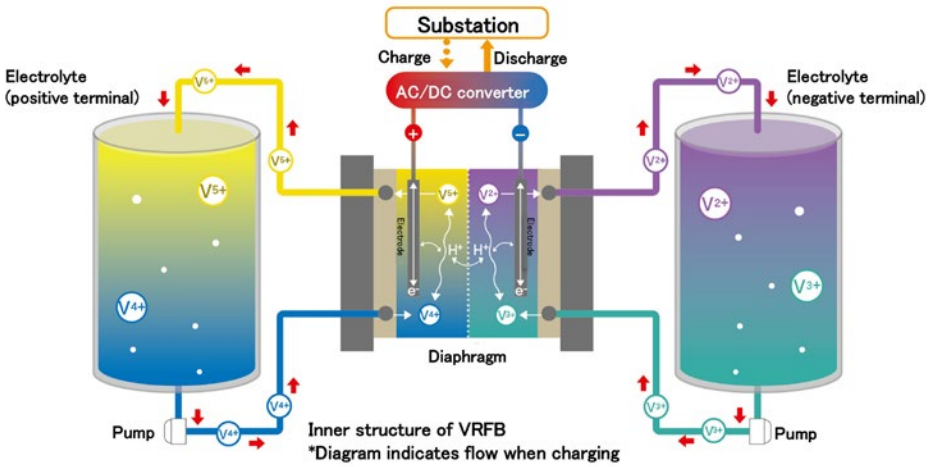
3. Newly entered the market for electrolytes for vanadium redox flow batteries

(1) About VRFBs

In October 2023, the Company established LE System, a new wholly owned subsidiary to handle the development, manufacture and sales of electrolytes for VRFBs (it took over the business of the former LE System Co., Ltd., in December of the same year). VRFBs are a type of storage battery that has undergone research and development since the 1970s as part of a national project aimed at saving energy. Compared to lithium-ion batteries, which are currently in wide use, they are not suited to miniaturization, but their features include that they are highly safe, have no long-term performance degradation, and can be charged and discharged without limitation. In addition, while other storage batteries are charged and discharged by chemical changes of electrodes, VRFBs realize charging and discharging by chemical changes of electrolytes, so the power storage capacity can be easily increased simply by increasing the number of electrolytes. Their design is flexible and they have been attracting attention for large-scale power storage applications, specifically the optimal storage battery for storing electricity generated by solar power or wind power, among other applications. In Japan, Sumitomo Electric Industries, Ltd. <5802> is the only company conducting business as a VRFB manufacturer.

Their initial cost is high, but their performance does not deteriorate so they offer a cost advantage in cases of long-term operations. Compared to lithium-ion batteries (LiB), the Company has calculated that the 10-year operating costs are about the same, but that these costs can drop by more than 30% over a 20-year operating span.

Principle of the vanadium redox flow battery



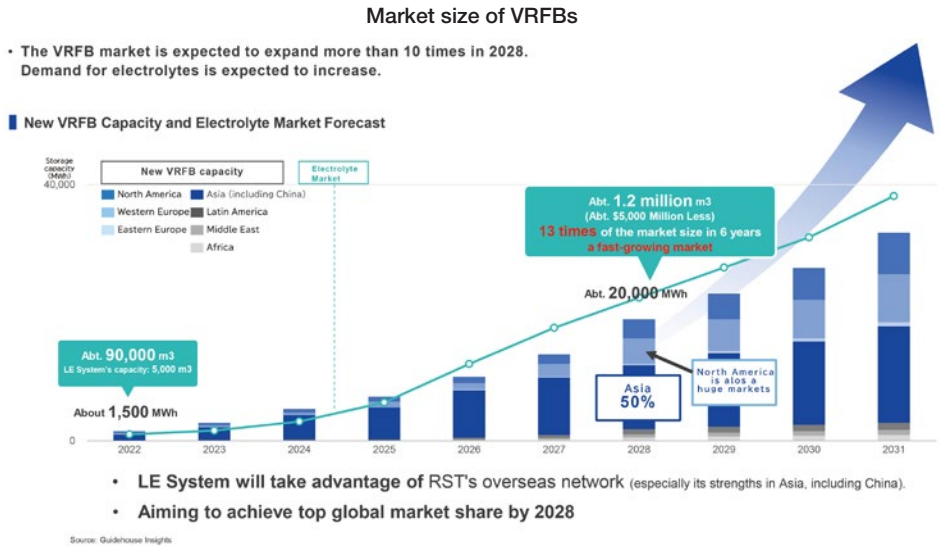
Source: Prepared by FISCO from the materials provided by the Company

(2) Market outlook

While the daytime supply of electricity from clean energy has increased with the spread of mega solar power plants, cases of such projects being abandoned due to supply and demand concerns are increasingly apparent, and the need for large-scale storage batteries that can store generated electricity and make it available at night is rapidly increasing both in Japan and overseas. According to "IEA World Energy Outlook 2022," a document published by the International Energy Agency and included in materials provided by the Company, the most conservative estimate of global stationary energy storage capacity (based on figures declared by each country) predicts that it will expand 10-fold from 27GWh in 2021 to 270GWh in 2030, and 48-fold to 1,296GWh in 2050, with VRFB systems expected to account for a certain percentage of that growth.

New VRFB storage capacity is expected to grow rapidly from around 1.5GWh in 2022 to approximately 20GWh in 2028, and on an electrolyte basis, to increase rapidly by around 13 times from around 90,000m^3 to about 1,200,000m^3 (in monetary terms, slightly less than US$5.0bn)*. Of these amounts, 50% will be in Asia, primarily China. A market has already been created in China, such as by the introduction of VRFB systems by electric power companies, and it seems that more and more companies are entering into the VRFB market in anticipation of future market expansion. The Company is also making use of the network it has built in China, including of local governments and local companies, to develop the market, and it is targeting acquiring top share of the electrolytes for VRFBs market by 2028.

* Forecasts by Guidehouse Insights (US), a market research company in the environment and energy field



Source: Reprinted from the Company's results briefing materials

(3) Strengths of LE System

Currently, most electrolyte manufacturers are Chinese, but LE System has identified three core strengths: the ability to procure a stable supply of vanadium as a raw material; cost competitiveness in the electrolyte production process; and comprehensive technological capabilities that enable collaboration with numerous battery manufacturers. LE System's strategy is to leverage these three strengths to expand sales to VRFB manufacturers in Japan and overseas.

a) Ability to procure a stable supply of vanadium

The four main vanadium-producing countries are South Africa, China, Russia, and the US, which together account for more than 90% of production. More than 80% of its applications are for steelmaking additives (to improve strength and heat resistance), but it is also widely used in the chemical and electronics industries. While vanadium pentoxide is commonly used as a VRFB electrolyte, there was an issue with market fluctuations making it very difficult to control procurement costs. To mitigate the risk of market fluctuations, LE System has a variety of technologies to recover vanadium from waste (residue) discharged from thermal power plants and plant facilities, etc. LE System also aims to establish a stable procurement system by partnering with major domestic and foreign oil companies and steel manufacturers, as well as major South African mining companies.

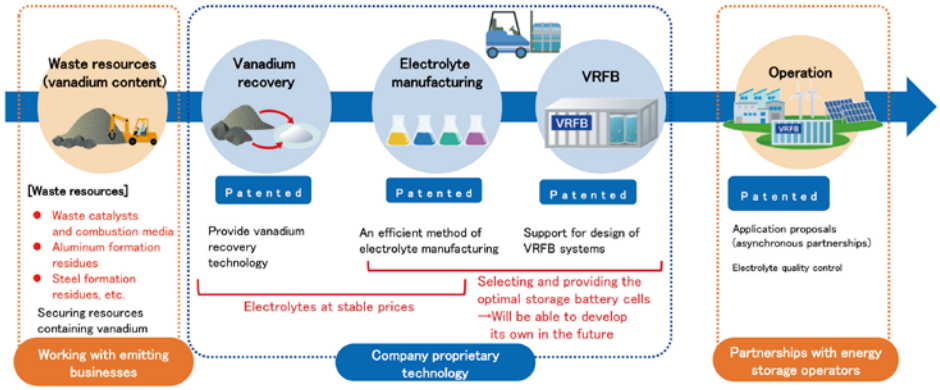
b) Cost competitiveness

The general electrolyte production flow involves purchasing vanadium pentoxide, dissolving and filtering it, then converting it to a 3.5 vanadium oxide solution through an electrolytic reduction process to make electrolytes. By contrast, LE System has established a technology for producing electrolytes directly from ammonium metavanadate ("AMV"), an intermediate product generated in the process of refining vanadium pentoxide. LE System estimates that electrolyte production costs will be about 50% of that of other companies because AMV is negotiated on a relative price basis and can be procured at a lower cost than vanadium pentoxide; electricity costs can be reduced to less than half because dissolution time is 4/5ths shorter; and a reduction device with a higher liquid surface contact area compared to other companies is used. Since electrolytes account for about 35% of the cost of VRFBs, adopting LE System's electrolytes provides a significant benefit for VRFB manufacturers. Another strength, according to its own research, is that the electrolyte contains fewer impurities than other companies' products and is of higher quality. This is because fewer impurities are seen as more suited to long-term operation. In addition, lead-free and antimony-free technologies have been established so that the product is compatible with environmental regulations.

c) Comprehensive technology strengths

LE System sees its strengths in: A team of technical advisors who have been involved in the R&D of VRFB-related technologies in Japan for over 30 years; an established network at the development level with cell manufacturers in Japan and overseas as it continues research in and development of electrolytes; and VRFB design technology which enables it to develop proprietary cells and propose VRFB systems. In terms of its patent strategy, LE System holds patents in vanadium recovery technology, electrolyte production processes, and VRFB system design, among others (with more than 10 patents granted).

LE System core competencies



Source: Prepared by FISCO from materials provided by the Company

(4) LE System current status and forward outlook

LE System currently has its R&D center at the Tsukuba Technical Center, as well its Namie plant (Fukushima Prefecture) which was completed in September 2021 and serves as its mass production plant. The Namie plant has a production capacity of 5,000 m^3/year, but it did not go into operation until 2022, and thus has no sales results. However, in 2023, the company received orders from several Asian manufacturers and began mass production, with the possibility of recording sales as early as the latter half of 2024. The company acquired technical certification for its Namie plant at the end of 2022 from Sumitomo Electric Industries, Ltd., a domestic VRFB manufacturer, and expects to capture orders soon.

In Japan, the Company plans to double existing production capacity by 10,000 m^3/year by 2025, using subsidies. However, in response to a growing number of inquiries from Chinese manufacturers, it is also considering establishing a new manufacturing base in China. If LE System does enter that market, it is expected to be with a 50,000 m^3/year plant. In the future, the Company aims to build a production system with a capacity of 150,000 m^3/year, which, at current electrolyte sales prices, would amount to about ¥90.0bn. Considering that mass production will lead to lower prices, it is more than likely that this will grow into a multi-billion yen business.

The targets In the current up-side plan are net sales of ¥24.0bn and an operating profit margin of 20% in FY12/26, but it is considered that this assumes the opening of a plant in China. Due to China's national policy, the solar power generation market has been expanding rapidly and has become a major industry, so we will be paying attention to the developments in the future.

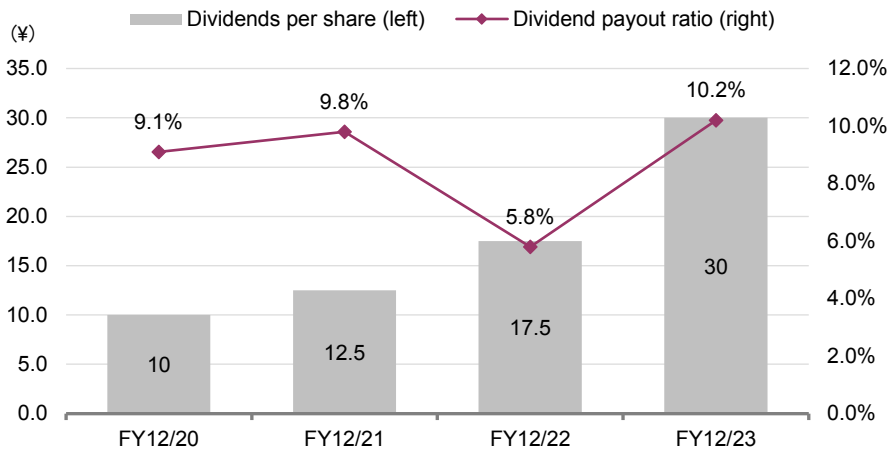
Returns to shareholders and ESG initiatives

The Company has not yet decided on the FY12/24 dividend per share, but may once again increase it if results trend stably

1. Shareholder return policy

Making fair returns to shareholders is an important concern of management, and the Company's basic policy is to return profits to shareholders by paying dividends. It demonstrates a flexible policy of paying out dividends after considering a comprehensive range of factors, including current profits, the outlook of its medium-term management plan, financial condition and investment plans. For the FY12/23 dividend per share, as the consolidated results achieved their forecasts, the Company increased the dividend for the sixth consecutive period by ¥12.5 YoY to ¥30.0 (for a dividend payout ratio of 10.2%). The level of the dividend payout ratio is not that high, but this is because it is necessary for the Company to continuously allocate funds to capital investment, human resources investment, M&A and other areas toward growth in the future, and its basic stance is to reward shareholders by improving corporate value through profit growth. It has not yet decided on the FY12/24 dividend, but its policy is to determine it after ascertaining business conditions. In the previous period as well, it did not decide it at the initial stage, but in the end decided to increase the dividend. The Company is conscious of a long-term payout ratio level of 30%, so we at FISCO think it is highly likely that in FY12/24 it will once again increase the dividend if results trend stably.

Dividends per share and dividend payout ratio



Note 1: FY12/22 includes a commemorative dividend of ¥2.5 following the listing of the Chinese subsidiary
Note 2: The Company conducted a 1:2 share split on December 31, 2022, so the dividends have been retroactively adjusted
Source: Prepared by FISCO from the Company's financial results and results briefing materials

2. ESG initiatives

The Company is advancing the following initiatives from an ESG perspective to help achieve a sustainable society.

(1) Environment

The Company has formulated an environment policy, and based on ISO14001, it has established quality and environmental management committees to conduct environmental impact evaluations for environmental problems, such as those relating to environmental pollution and energy use, and after setting annual targets, it progresses environmental improvement activities. Specifically, as measures to prevent environmental pollution by plants, it defines management standard values for the chemical substances selected by the Company, conducts monthly monitoring and yearly management reviews, and works to reduce emissions. Additionally, to conserve the water environments in the areas around its plants, the Company sets its own drainage standards and regularly monitors drainage by plants, and works to prevent water pollution. It is also working to reduce the amount of industrial-waste emissions by recycling waste and to reduce industrial water usage and improve the reuse rate. In addition, as a measure to prevent global warming, it is working on reducing energy usage and reducing CO_2 emissions by installing solar power generation facilities (power generation capacity, 1.5 MW).

The wafer reclaim business can itself be positioned as an environmentally friendly business, because the use of reclaimed wafers contributes to reducing the consumption of energy that is necessary to manufacture new wafers. The CO_2 emitted in manufacturing reclaimed wafers is only around 1/9th of the emissions of manufacturing new wafers, so it contributes significantly to reducing CO_2 emissions.

Track record of environmental initiatives

	Chemical material usage (kg/k wafers*1)	Industrial-waste emissions (excluding sludge*2) (kg/k wafers)	Water usage (m^3/k wafers)	Energy usage converted to crude oil (kl/k wafers)	CO_2 emissions (t/k wafers)
FY2018	111.324	28.766	158.698	0.906	1.995
FY2019	117.133	32.075	153.998	0.899	1.981
FY2020	124.921	31.855	136.524	0.844	1.846
FY2021	119.098	29.463	123.995	0.795	1.739
FY2022	116.766	30.162	107.084	0.739	1.559
FY2023	115.448	29.109	103.674	0.736	1.496

*1 Calculated by converting the number of reclaimed wafers manufactured at the Sanbongi plant to 8-inch wafers
*2 Sludge is disposed of at a facility shared with other companies, so it is difficult to ascertain sludge for the Company alone and it is excluded from industrial-waste emissions.
Source: Prepared by FISCO from the Company's website

(2) Society

To provide high quality products and services to customers, the Company has constructed a quality assurance system that is based on the quality policy formulated in-house. It conducts quality control and is continuously working to improve quality through a quality management system based on ISO9001.

The Company's code of conduct for employees is that "we value diversity, creating a free and open-minded corporate culture, and aim to realize an employee-friendly working environment," and it is working to recruit and develop diverse human resources and to create environments that are easy to work in. Specifically, it has formulated an action plan toward a work-life balance for up to 2025, and its aims are to reduce work hours outside of the prescribed work hours, improve the rate of employees taking paid leave, and increase their usage of the childcare and nursing care leave systems. It is also creating work environments in which women can be active and is aiming to increase the percentage of employees who are women (currently above 40%, excluding night-shift workers). It has also set and is raising other targets, including the ratio of bilingual employees and the ratio of foreign workers.

The Company is working to disclose information appropriately to shareholders and investors. For local communities, employees actively participate in local volunteer activities, while it also actively accepts members of local communities, such as through work experience, plant tours, and internships, and it is contributing to developing the next generation.

(3) Corporate governance

In accordance with its corporate philosophy and code of conduct, the Company's management targets are to fulfill its social responsibilities in relation to its various stakeholders and to maximize enterprise value. To achieve these targets, it has positioned conducting management with enhanced corporate government as an important issue and is working to strengthen it. As a specific measure for this, following a resolution at the general meeting of shareholders in March 2022, it transitioned from being a company that establishes an auditing committee to a company that establishes auditing and other committees. It will strengthen the supervisory function over the board of directors by appointing to the board audit committee members who will be responsible for auditing and supervising the directors' execution of duties. Also, by separating business execution from supervision, it is aiming to speed up decision-making and further improve enterprise value.

Other than these initiatives, as an organization that conducts risk management, the Company has established a risk management committee that regularly evaluates business activities and other aspects. If there are risks, measures are taken to counter them. In addition, it has formulated a basic policy for compliance and once a year conducts compliance education and training for all employees, while it has also built an information security management system and is working to ensure compliance with information security-related laws and norms.

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