

# RS Technologies Co., Ltd.

**3445**

Tokyo Stock Exchange Prime Market

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FISCO Ltd.

<https://www.fisco.co.jp>

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## Summary

### Robust performance persisting in the wafer reclaim business and prime wafer business also poised to enter a recovery phase

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. Net sales for 1H FY12/24 set new record high

For the 1H FY12/24 consolidated results (January to June 2024), whereas net sales increased 15.1% year-on-year (YoY) to a new record high of ¥30,068mn, operating profit declined slightly by 4.9% to ¥6,082mn. This was primarily attributable to a situation where the wafer reclaim business achieved an increase in sales and profits in part as a result of the Company having initiated shipments to new plants of major semiconductor manufacturers, but sales and profits decreased in the prime wafer business due to factors such as effects of a slowdown in the Chinese market along with a downturn in profits also in the semiconductor-related equipment and materials, etc. business. However, operating profit for the three months of 2Q increased for the first time in four quarters, having gained by 1.9% to ¥3,450mn due to recovery of the prime wafer business.

#### 2. Earnings poised to enter a phase of expansion in 2H due to recovery of the semiconductor market and effects of capacity enhancement

The forecasts for the FY12/24 consolidated results are for net sales to increase 5.8% YoY to ¥54,900mn and operating profit to grow 17.7% to ¥14,000mn, unchanged from the initial forecasts. These forecasts appear to be achievable in part given the notion that effects of capacity enhancement are poised to emerge beginning in 3Q in the wafer reclaim business and also given that Chinese demand for power semiconductors is turning toward recovery in the prime wafer business.

#### 3. Aiming to achieve more rapid growth by expanding existing businesses, developing new businesses, and enlisting M&A strategy

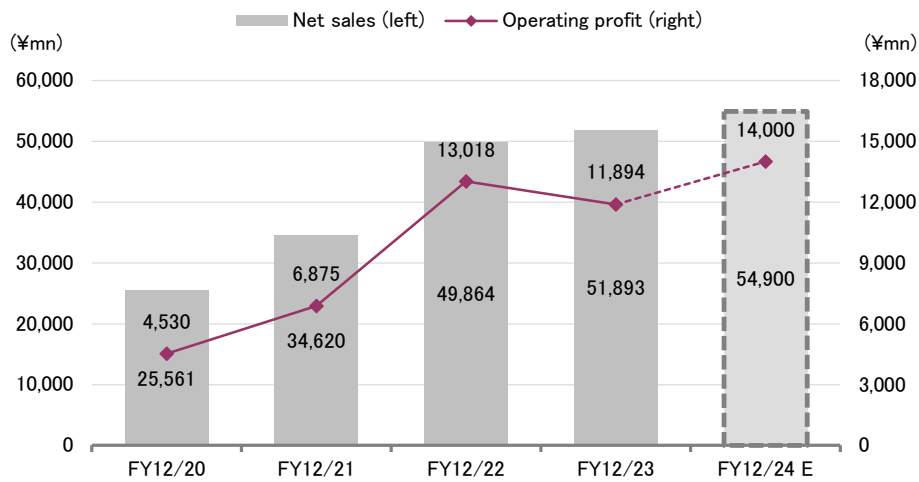
The Company’s results targets for FY12/26, the final year of the three-year medium-term management plan, consist of net sales of ¥64,100mn and operating profit of ¥16,830mn under its base plan (based on its existing businesses) and consists of net sales of ¥131,100mn and operating profit of ¥24,200mn under its up-side plan encompassing effects of future M&A initiatives. The base plan forecasts three-year CAGR of 12.3% in operating profit, which we at FISCO think is an achievable level given the prospect of growth in the semiconductor market going forward. In addition, the upside plan anticipates additional gains that include net sales of ¥24,000mn and operating profit margin of 20% in the renewable energy business (electrolytes for VRFBs business), which is a new business, along with net sales of ¥43,000mn and operating profit margin of 10% with respect to M&As. Developments in the renewable energy business warrant attention going forward given that the Company has finalized orders for applications involving large-scale storage batteries installed at power plants in North America along with an increase in inquiries in China and elsewhere.

Summary

Key Points

- Net sales for 1H FY12/24 set new record high
- Initial forecasts likely to be achieved in FY12/24 due to recovery of the semiconductor market
- The three-year medium-term management plan anticipates achievement of 23.5% sales growth on the basis of the Company’s existing business, and furthermore seeks to accelerate growth enlisting the Company’s new businesses and M&A strategy
- With priority assigned to ongoing dividend increases, the Company aims to achieve sustained dividend growth taking into account investment funds and business trends

Results trends



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

## Company overview

### Business domain expansion after having started in the silicon wafer reclaim business

#### 1. History

The Company was established in December 2010 to take over the facilities of Rasa Industries, Ltd. <4022>, which had withdrawn from the silicon wafer reclaim business. Since then, it has been developing its silicon wafer reclaim business through its 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.

#### Company overview

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. (hereafter, 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. (hereafter, 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. (hereafter, 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 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 "test wafers" in this report). From a cost perspective, reclaimed wafers are mainly used for "test wafers."

#### (2) Wafer reclamation

The volume of test wafers used accounts for around 20% of the total volume of wafers input into the semiconductor manufacturing line, and basically, test 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 test wafer, so currently it seems that around 80% of test 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 is highly regarded 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 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).

Company overview

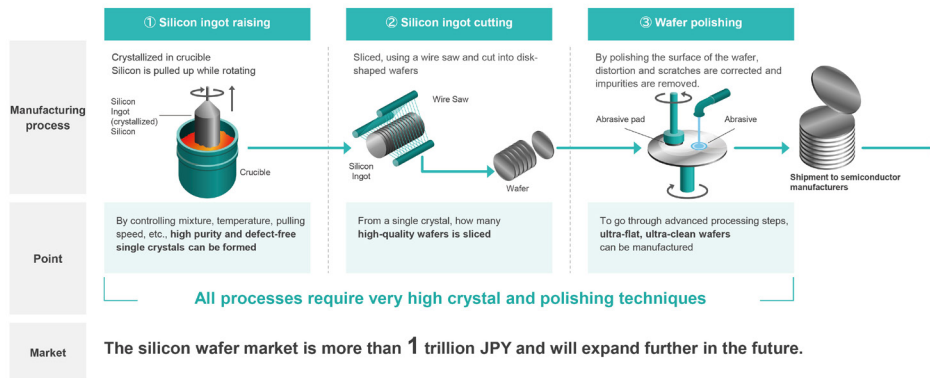
The wafer reclaim business is distinguished by its stable profitability in that it is less susceptible to conditions in the semiconductor market. This is because input quantities of monitor wafers geared to improving quality largely through yield improvement remain essentially unchanged, in contrast to a situation where quantities of prime wafers introduced into production lines decrease during downturns in the semiconductor market.

**(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.

**About prime wafers**

- A prime wafer is a silicon wafer that is a substrate material for semiconductors and used for semiconductor chips.
- Made from 99.99999999% silicon, it has the highest flatness of any material currently on Earth.



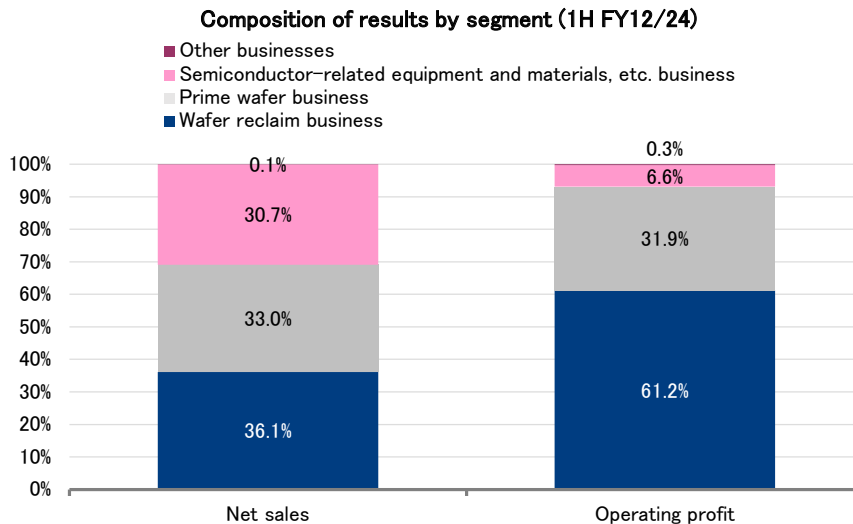
Source: The Company's results briefing materials

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 1H FY12/24 (excluding adjustments), the wafer reclaim business provided 36.1% of net sales and 61.2% of operating profit, and the prime wafer business provided 33.0% of net sales and 31.9% 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

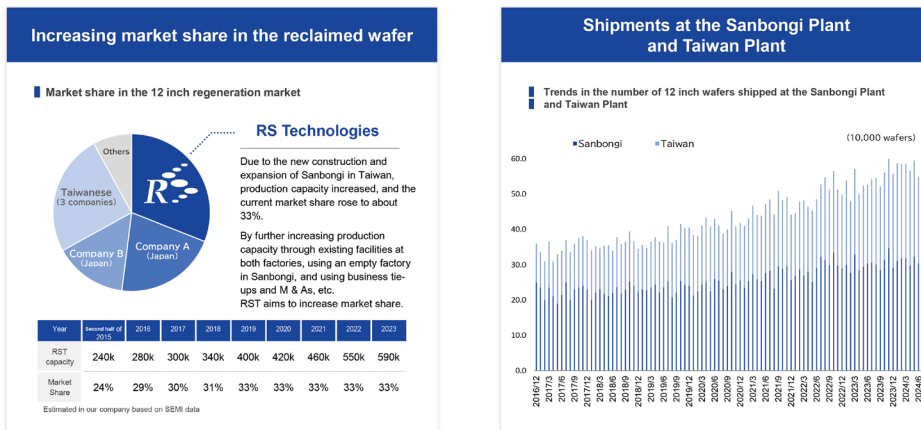
The wafer reclaim business is conducted by the Company and its Taiwanese subsidiary, but from 1H FY12/22, the equity-method affiliate SGRS also began a mass production line of 12-inch reclaimed wafers. Only the Company is conducting this business with three bases in Japan, Taiwan, and China. The monthly production capacity for the mainstay 12-inch wafers at the end of 1H FY12/24 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.



Company overview

In terms of the composition of sales, the 12-inch wafer provides the majority, at around 90%. 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 RECTECH LTD. and MIMASU SEMICONDUCTOR INDUSTRY CO., LTD. (a subsidiary of Shin-Etsu Chemical Co., Ltd. <4063>), 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

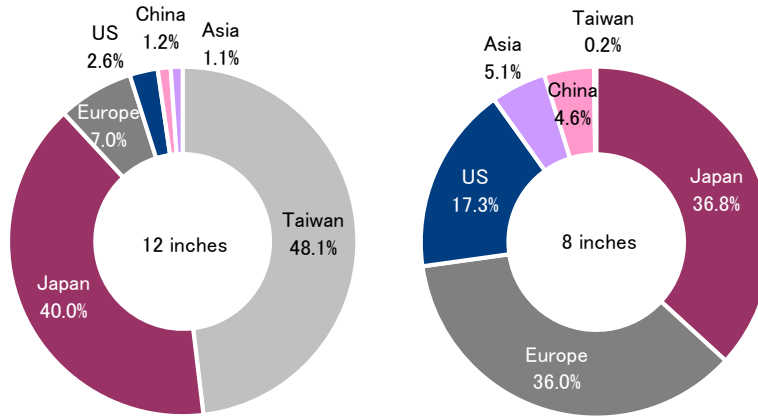


Source: The Company's results briefing materials

Furthermore, the breakdown of the number of wafers shipped by region (1H FY12/24) is as follows. For 12-inch reclaimed wafers, Taiwan provides 48.1% and Japan 40.0%, so these two countries provide just under 90% of the total. Meanwhile, shipments of 8-inch reclaimed wafers were distributed evenly across regions with Japan, Europe and the US, at 36.8%, 36.0% and 17.3%, 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.

Company overview

**Breakdown of shipment volume in the wafer reclaim business by region (1H FY12/24)**



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

**(2) Prime wafer business**

The business of the Company's Chinese subsidiary, GRITEK, comprises manufacture and sales of prime wafers and silicon materials. With respect to composition of sales for 1H FY12/24, prime wafers accounted for 70% of sales and silicon materials accounted for 30% of sales. Prime wafer monthly production capacity at the end of 2Q FY12/24 totaled 50,000 5-inch wafers, 200,000 6-inch wafers, and 170,000 8-inch wafers. Chinese semiconductor manufacturers constitute its main customers for prime wafers, which are primarily used for power and analog semiconductors installed in home appliances and automobiles. The Company estimates that its share of the 8-inch wafer market in China is around 5% as of 2023, but it plans to grow share in the future by increasing production capacity. Meanwhile, the Company also 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 company that mainly handles power devices from Minebea Power Semiconductor Device Inc. and MCUs from Renesas Electronics Corporation <6723>. DG Technologies manufactures and sells consumable materials for dry etching equipment.

**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.

We encourage readers to review our complete legal statement on "Disclaimer" page.

## Business trends

### 1H FY12/24 results set new record highs aside from operating profit

#### 1. 1H FY12/24 results summary

In 1H FY12/24 consolidated results, the Company reported ¥30,068mn in net sales (up 15.1% YoY), ¥6,082mn in operating profit (down 4.9%), ¥7,896mn in ordinary profit (up 2.0%), and ¥3,833mn in profit attributable to owners of parent (up 3.0%), setting new record highs aside from operating profit. This was largely attributable to favorable performance in the mainstay wafer reclaim business. Net sales were 13.5% higher than the Company's forecasts as a result of the semiconductor-related equipment and materials, etc. business having secured a large order in 1Q, while ordinary profit and profit attributable to owners of parent also exceeded the forecasts as a result of the Company having recorded foreign exchange gains.

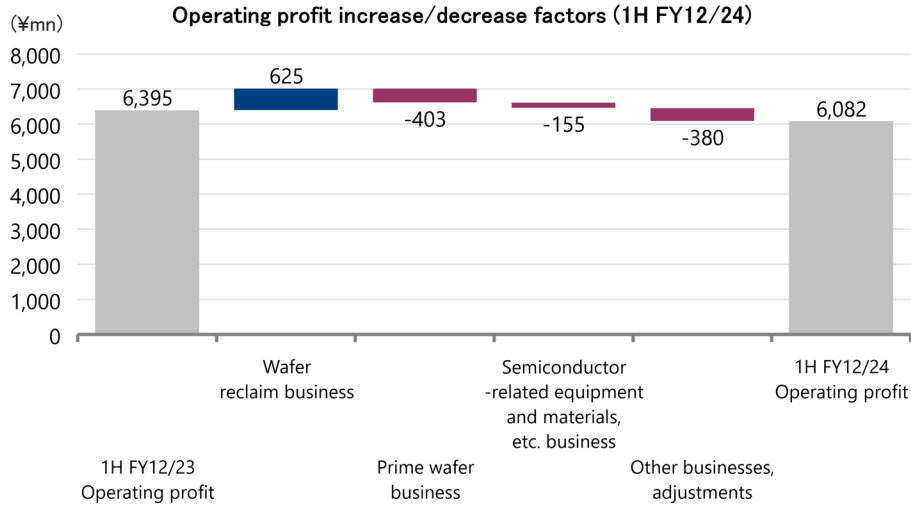
#### 1H FY12/24 results (consolidated)

	1H FY12/23			1H FY12/24				(¥mn)
	Results	% of sales	Forecast	Results	% of sales	YoY	vs. forecast	
Net sales	26,126	-	26,500	30,068	-	15.1%	13.5%	
Cost of sales	17,081	65.4%	-	20,919	69.6%	22.5%	-	
SG&A expenses	2,649	10.1%	-	3,066	10.2%	15.7%	-	
Operating profit	6,395	24.5%	6,500	6,082	20.2%	-4.9%	-6.4%	
Foreign exchange gains	133	-	-	659	-	-	-	
Subsidy income	697	-	-	607	-	-	-	
Share of loss/profit of entities accounted for using equity method	-171	-	-	-210	-	-	-	
Ordinary profit	7,741	29.6%	7,300	7,896	26.3%	2.0%	8.2%	
Profit attributable to owners of parent	3,722	14.2%	3,700	3,833	12.7%	3.0%	3.6%	

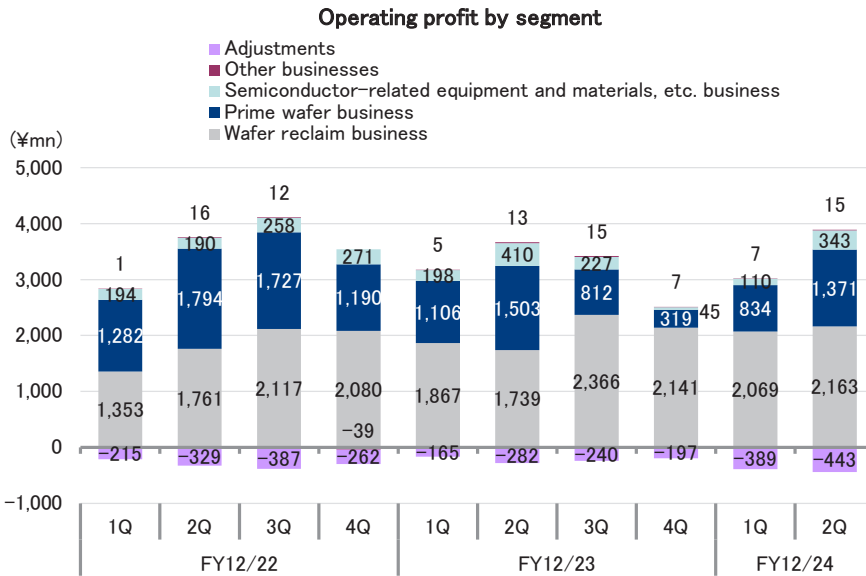
Source: Prepared by FISCO from the Company's financial results

The cost of sales ratio rose by 4.2 percentage points (pp) YoY to 69.6%. This was due to significant growth in net sales of resale products in the semiconductor-related equipment and materials, etc. business, and also due to a decline in unit sales prices in the prime wafer business. The SG&A expense ratio also increased having gained 0.1pp to 10.2%, while the operating profit margin fell 4.3pp to 20.2%. Breaking down the changes in operating profit, whereas operating profit in the wafer reclaim business increased ¥625mn, operating profit decreased ¥403mn in the prime wafer business, ¥155mn in the semiconductor-related equipment and materials, etc. business, and ¥380mn in other businesses, adjustments. On a quarterly basis, however, operating profit increased for the first time in four quarters in 2Q, having gained by 1.9% to ¥3,450mn due to recovery of the prime wafer business.

Business trends



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



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

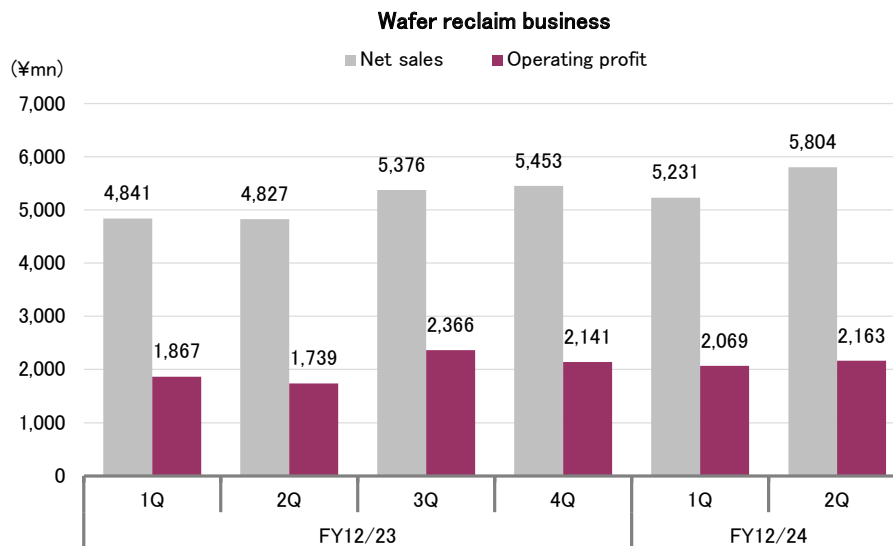
Business trends

## Wafer reclaim business continued to operate at full capacity upon having embarked on shipments to new semiconductor plants in Japan and the US

### 2. Developments by business segment

#### (1) Wafer reclaim business

The wafer reclaim business achieved favorable results in 1H with net sales having increased 14.1% YoY to ¥11,035mn (includes internal sales and transfer value, same below) and operating profit having risen 17.3% to ¥4,232mn. The increase in net sales is partially attributable to strong demand for reclaimed wafers in Japan and overseas and is also a result of new orders beginning to emerge for new plants from major customer TSMC in Japan and the US. The operating profit margin rose 1.1pp to 38.4% partially because of the increase in net sales and also due to some progress having been achieved in negotiations toward returning prices to their previous levels undertaken with memory manufacturers who requested price reductions in the previous 2H.



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

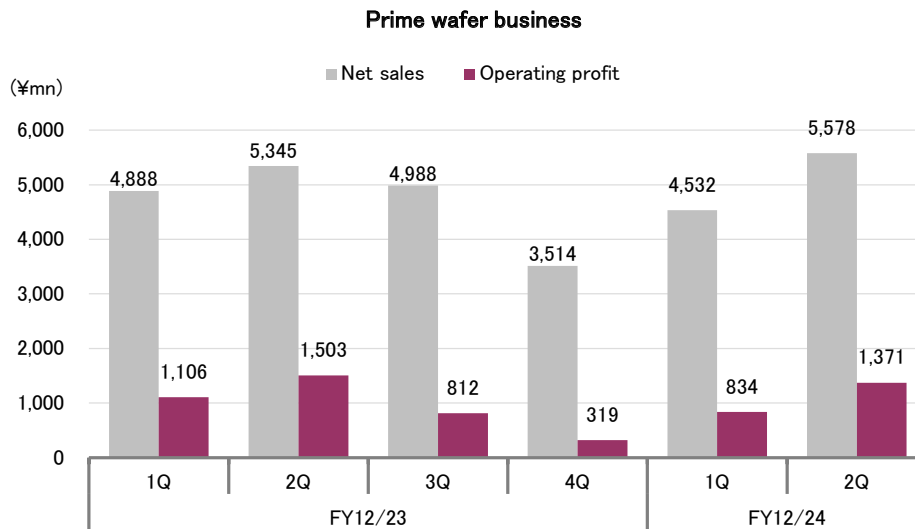
On a quarterly basis, 2Q net sales increased 20.2% YoY to a new record high of ¥5,804mn, and operating profit also increased, having gained 24.4% to ¥2,163mn. Sales and profits increased relative to the previous quarter primarily as a result of heightened demand for new test wafers sold to new plants for use as test wafers\*, in addition to higher average unit prices of reclaimed wafers. Orders are likely to persist from 3Q onward given the tendency for use of new test wafers\* as monitor wafers during the start-up phase of new semiconductor plants. The operating profit margin fell 2.3pp in 2Q relative to the previous quarter, which was due to temporary shutdowns of operations to perform maintenance at plants in Japan and Taiwan in 2Q, consistent with previous years.

\* The Company procures prime wafers (B-grade) as wafers to be sold, polishes them at its own plants, and ships them for use as new test wafers. Unit sales prices and profitability of new test wafers sold for use as test wafers are higher than is the case with respect to reclaimed wafers.

Business trends

**(2) Prime wafer business**

The prime wafer business incurred lower sales and profits in 1H with net sales having decreased 1.1% YoY to ¥10,111mn and operating profit having declined 15.4% to ¥2,206mn. On a quarterly basis, however, net sales in 2Q increased for the first time in four quarters at a gain of 4.4% to ¥5,578mn, thereby indicating upward momentum in results after having bottomed out in 4Q of the previous fiscal year. Meanwhile, whereas operating profit decreased by 8.8% to ¥1,371mn, the operating profit margin recovered to 24.6% marking a return to the 20% range for the first time in four quarters. This was primarily attributable to improvement in production efficiency in addition to cost reductions upon revision of the Company’s materials procurement strategy.



Source: Prepared by FISCO from the Company’s financial results and quarterly reports

Sales and profits decreased slightly due to price reductions with respect to prime wafers, which account for 70% of the segment’s net sales, ongoing since the previous 2H, and despite there having been an increase in sales volume particularly with respect to 8-inch prime wafers due to recovery in demand for power semiconductors for use in automobiles and home appliances. Prices of 8-inch prime wafers were reduced by approximately 10% in 2Q relative to the previous quarter with the aim of expanding market share, and the Company is likely to maintain current pricing from 3Q onward. The Company plans to increase monthly production capacity of 8-inch prime wafers from 130,000 wafers at the end of the previous period to 180,000 wafers during the second quarter. Production is operating at full capacity with shipment volume having reached nearly 170,000 wafers during 2Q given that demand is already mounting a recovery. The Company plans to ramp up production to 180,000 wafers by the end of FY2024.

Meanwhile, although upward momentum has emerged beginning in 2Q with respect to silicon materials used in consumables for etching equipment partially due to recovery of the memory market, sales and profits decreased amid a situation where sales of such materials to the US have remained stagnant due to inventory adjustments among customers. It is likely to take some time before the US shifts to recovery in part due to inventory adjustments among customers.

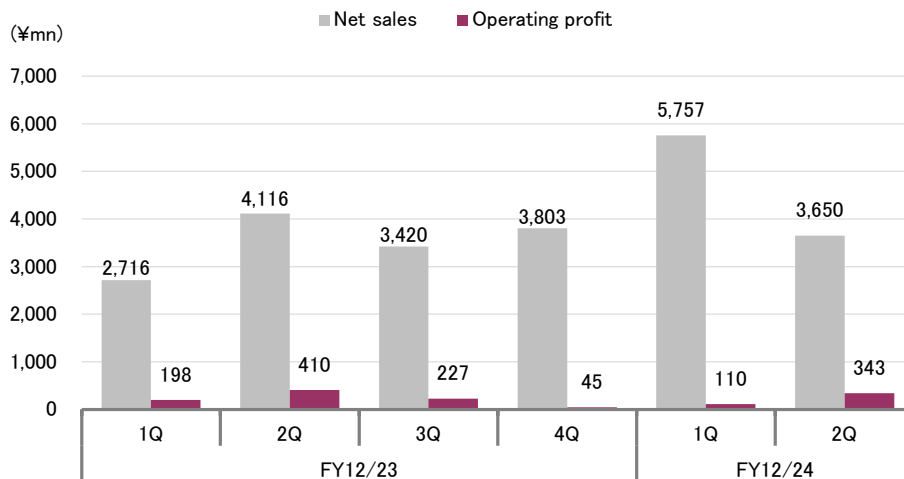
Business trends

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

In the semiconductor-related equipment and materials, etc. business, 2Q net sales increased 37.7% YoY to ¥9,408mn but operating profit decreased 25.4% to ¥454mn. The increase in sales is primarily attributable to a situation where the Company recorded sales associated with a large project in 1Q whereby it purchased a complete semiconductor manufacturing line in bulk from a trading company, which it sold to an overseas manufacturer. However, the contribution to profits was insignificant given that the Company incurred inspection costs and other such outlays because this was the first time it had made a large sale involving a complete manufacturing line.

As for business trends of the Company's subsidiaries, although earnings results were insignificant with respect to DG Technologies, which handles consumable materials for dry etching equipment, its net sales improved in 2Q accompanying market recovery.

**Semiconductor-related equipment and materials, etc. business**



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

**Net cash increased to ¥72.6bn amid progress achieved in strengthening the financial base**

**3. Financial condition and management indicators**

Looking at the Company's financial condition at the end of 1H FY12/24, total assets had increased by ¥14,781mn from the end of the previous period to ¥155,446mn. The main factors behind these changes were respective increases in current assets including cash and deposits of ¥7,043mn and notes and accounts receivable of ¥4,434mn, while inventories decreased by ¥3,275mn. In non-current assets, property, plant and equipment increased ¥5,812mn due to the investment to strengthen capacity, while investments and other assets rose ¥761mn.

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Business trends

Total liabilities increased by ¥160mn from the end of the previous period to ¥25,397mn. Interest-bearing debt decreased ¥259mn and other current liabilities declined, but notes and accounts payable-trade increased ¥1,091mn and deferred tax liabilities rose ¥334mn. Total net assets increased ¥14,620mn to ¥130,049mn. Retained earnings rose ¥3,043mn, including due to the recording of profit attributable to owners of parent, while the foreign currency translation adjustment increased ¥4,486mn and non-controlling interests rose ¥7,254mn.

Looking at the management indicators, the equity ratio, which reflects soundness, rose 0.9pp from 39.9% at the end of the previous period to 40.8%, while the interest-bearing debt ratio fell 1.5pp from 9.7% to 8.2%. Net cash (cash and deposits – interest-bearing debt) also increased ¥7,302mn to ¥72,615mn to set a new record high, and these and other factors can be seen as the Company having further strengthened its financial base. The Company intends to allocate such accumulated cash to funds for capital investment, M&As and other such growth investment, as well as to shareholder returns.

**Consolidated balance sheet**

	End of FY12/21	End of FY12/22	End of FY12/23	End of 1H FY12/24	Change
	(¥mn)				
<b>Current assets</b>	45,851	90,470	96,409	104,605	8,195
Cash and deposits	27,766	67,939	70,758	77,802	7,043
Inventories	6,907	9,700	11,589	8,314	-3,275
<b>Non-current assets</b>	33,146	37,084	44,256	50,841	6,585
<b>Total assets</b>	78,997	127,554	140,665	155,446	14,781
<b>Current liabilities</b>	14,218	17,622	18,265	18,275	10
<b>Non-current liabilities</b>	9,827	8,458	6,972	7,122	149
<b>Total liabilities</b>	24,045	26,081	25,237	25,397	160
Interest-bearing debt	8,116	8,208	5,446	5,186	-259
<b>Net assets</b>	54,951	101,473	115,428	130,049	14,620
<b>[Stability]</b>					
Equity ratio	36.2%	36.8%	39.9%	40.8%	0.9pp
Interest-bearing debt ratio	28.4%	17.5%	9.7%	8.2%	-1.5pp
Net cash	19,649	59,730	65,312	72,615	7,302

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



## Forecasts

### Initial forecasts likely to be achieved in FY12/24 due to recovery of the semiconductor market

#### 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, unchanged from the initial forecasts. We at FISCO think there is a high likelihood of the Company achieving its forecasts given factors that include: the Company's rates of progress toward achieving its full fiscal year forecasts up through 2Q are 54.8% for net sales, 43.4% for operating profit, and 51.3% for ordinary profit, such that progress toward achieving the operating profit forecast is somewhat low but recovery in results of the Chinese subsidiary has become increasingly evident since 2Q, as mentioned previously in this report; in 2H, earnings are poised to increase further due to effects of capacity enhancement in the wafer reclaim business, and; there is an absence of notable factors indicating the prospect of higher costs in 2H.

#### FY12/24 consolidated results forecasts

(¥mn)

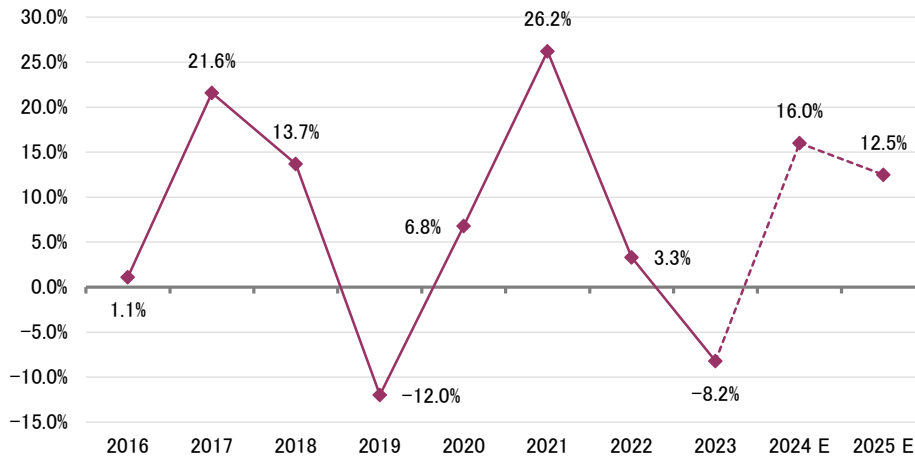
	FY12/23		FY12/24			Progress rate up to 2Q
	Results	% of sales	Full fiscal year forecast	% of sales	YoY	
Net sales	51,893	-	54,900	-	5.8%	54.8%
Operating profit	11,894	22.9%	14,000	25.5%	17.7%	43.4%
Ordinary profit	14,921	28.8%	15,400	28.1%	3.2%	51.3%
Profit attributable to owners of parent	7,703	14.8%	7,600	13.8%	-1.3%	50.4%
Earnings per share (EPS) (¥)	292.76		288.34			

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

The worldwide semiconductor market outlook for 2024 (WSTS, values released in June 2024) projects a 16.0% increase relative to the previous year, thereby marking a return to positive growth for the first time in two years due to recovery of the memory market associated with mounting demand for AI-related investment. The outlook also projects double-digit growth of 12.5% again in 2025. The prevailing recovery trend is poised to continue unchanged despite the perception that the pace of recovery is likely to be somewhat slower than initially anticipated due to factors that include a slowdown in electric vehicle sales and prolonged slump in the Chinese economy.

Forecasts

The semiconductor market growth rate



Source: Prepared by FISCO from WSTS materials

In its wafer reclaim business, the Company is likely to encounter further gains in earnings given that monthly production capacity of its plants in Japan and Taiwan will be increased by 7% in 2H relative to 2Q amid an outlook envisioning an ongoing scenario of bustling conditions in its wafer reclaim business due to escalating demand for AI-enabled semiconductors. The prime wafer business is likely to encounter an ongoing trend of recovery with respect to its earnings in 2H in part due to effects of increased production amid recovery in demand from Chinese semiconductor manufacturers, who are customers of the Company.

Although non-operating profit and expenses are forecast to worsen by ¥1.6bn relative to the previous period, there are no significant downside factors aside from the absence of ¥300mn in subsidy income attributable to a domestic subsidiary that had been recorded in the previous period. Also, 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 2H onwards, at the earliest.

**(1) Wafer reclaim business**

The wafer reclaim business is expected to achieve strong growth again in 2024. With new semiconductor plants being opened in Japan and overseas, the Company has responded to such demand by increasing its monthly production capacity of 12-inch reclaimed wafers by 10,000 wafers beginning in 2H 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. In addition, continued orders of wafers to be sold are anticipated in preparation for operational launch of the new plants. With the Company also proceeding in carrying out ongoing price negotiations with memory manufacturers, profit margins in 2H are likely to remain at levels on par with those of 2Q.

## Forecasts

**(2) Prime wafer business**

In the prime wafer business, the outlook for the full fiscal year is one of a return to an increase in sales and profits for the first time in two fiscal years amid further gains in 3Q financial results relative to the previous quarter. This is due to factors that include: an increase in monthly production capacity of 8-inch wafers to 180,000 wafers in 2H; robust demand from the Company's customers that manufacture power semiconductors, and; the emergence of growing demand for silicon materials. Although worldwide demand for power semiconductors has entered an adjustment phase due to a slowdown in demand related to EVs and capital investment, the Company's customers that manufacture semiconductors are apparently encountering increases in orders amid favorable performance in sales to major EV manufacturers.

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

In the semiconductor-related equipment and materials, etc. business, sales are forecast to increase YoY. The Company is likely to achieve strong performance with respect to procurement and sales of semiconductor manufacturing equipment and laser diodes, along with recovery in 2H with respect to previously sluggish results of DG Technologies.

## Aiming to achieve more rapid growth enlisting new businesses and M&A strategy

### 2. Medium-term management plan

The Company launched its three-year medium-term management plan extending through FY12/26, which consists of a base plan that establishes results targets from existing businesses encompassing 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. Meanwhile, the up-side plan establishes targets encompassing net sales of ¥131,100mn and operating profit of ¥24,200mn in FY12/26, factoring in growth of the renewable energy business launched as a new business initiative and effects derived from M&As going forward. With respect to its M&A targets, the Company intends to consider options for extending its business domain into the renewable energy industry in addition to the semiconductor industry.

## Forecasts

## Targets for medium-term results

	(¥mn)				
<Base plan>	FY12/23 Results	FY12/24 Forecast	FY12/25 Targets	FY12/26 Targets	CAGR (FY12/23-FY12/26)
Net sales	51,893	54,900	59,300	64,100	7.3%
Operating profit	11,894	14,000	15,330	16,830	12.3%
Operating profit margin	22.9%	25.5%	25.9%	26.3%	-
Ordinary profit	14,921	15,400	16,730	18,230	6.9%
Ordinary profit margin	28.8%	28.1%	28.2%	28.4%	-
Profit attributable to owners of parent	7,703	7,600	8,200	8,800	4.5%
Earnings per share (EPS) (¥)	292.76	288.34	311.10	333.86	
<Up-side plan>	FY12/23 Results	FY12/24 Targets	FY12/25 Targets	FY12/26 Targets	CAGR (FY12/23-FY12/26)
<b>LE System</b>					
Net sales		1,000	3,000	24,000	
Operating profit		50	300	4,800	
<b>Additions due to M&amp;A</b>					
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	26.7%

Source: Prepared by FISCO from the Company's releases

The global semiconductor market is expected to achieve growth in the 10% range annually up through 2026 driven by demand for AI-related and automotive semiconductors. As such, we at FISCO think the results targets for the existing businesses are at an achievable level. Although there are concerns that ongoing trade friction between the US and China over semiconductors will negatively affect the Chinese semiconductor market, China's commitment to developing its semiconductor industry as a national policy remains unchanged. In addition, we believe that the Company will not be adversely affected by export restrictions imposed on cutting-edge semiconductor manufacturing equipment because the prime wafers it handles target legacy sectors rather than advanced domains. In fact, profitability of the prime wafer business is heading toward recovery. China serves as a major production hub for items such as PCs, smartphones, automobiles, and household appliances, and furthermore encourages the use of domestically produced semiconductors. As such, FISCO contends that the Company's operations in both China and outside of China help to diversify risk incurred with respect to its financial results over the medium to long term.

The medium-term management plan does not factor in financial results of SGRS, an equity-method affiliate that seeks to mass produce 12-inch prime wafers. Whereas its Dezhou plant will start with production of 50,000 12-inch prime wafers per month, plans call for working toward improving quality to meet prime wafer quality standards for the time being with full-scale mass production likely around 2027. In the meantime, it will continue to ship test wafers.

Forecasts

### (1) Wafer reclaim business

In the wafer reclaim business, the plants in Japan and Taiwan are increasing their production capacities to respond to 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. 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, a total of nine new plant projects have been decided from 2024 onwards, including operational launch of the Hiroshima plant of Micron Technology <MU> as well as plans whereby JSMC Co., Ltd., a joint venture of SBI Holdings <8473> and PSMC of Taiwan, are constructing a new plant in Miyagi Prefecture with operations scheduled to start in 2027. 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	200,000 wafers
<b>Total</b>	<b>590,000 wafers</b>	<b>630,000 wafers</b>	<b>770,000 wafers</b>	<b>890,000 wafers</b>

\* The Dezhou plant is the portion of the equity-method affiliate SGRS  
 Source: Prepared by FISCO from the Company's results briefing materials

#### Capital investment plans

Plant	Monthly production capacity at period-end			
	2023	2024	2025	2026
Sanbongi plant	1.0	0.2	1.3	1.5
Tainan plant	1.1	1.0	1.5	3.5
Dezhou plant*	0.1	0.1	3.0	3.0
<b>Total</b>	<b>2.2</b>	<b>1.3</b>	<b>5.8</b>	<b>8.0</b>

\* The Dezhou plant is a plant of equity-method affiliate SGRS, and the Company was responsible for about 20% of the capital investment  
 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 FY12/23 to 280,000 wafers by the end of FY12/26. The three-year cumulative capital investment amount will be ¥8.0bn. In 2023, it 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.

Forecasts

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. Major customers in the wafer reclaim business have expressed intentions to purchase prime wafers due to their price advantage as long as quality standards are ensured and a stable supply system is established, thereby indicating ample potential for the Company to expand market share once that system is in place.

**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 and silicon 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 ¥17.0bn and an operating profit margin at the 21% level based on its company results 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.

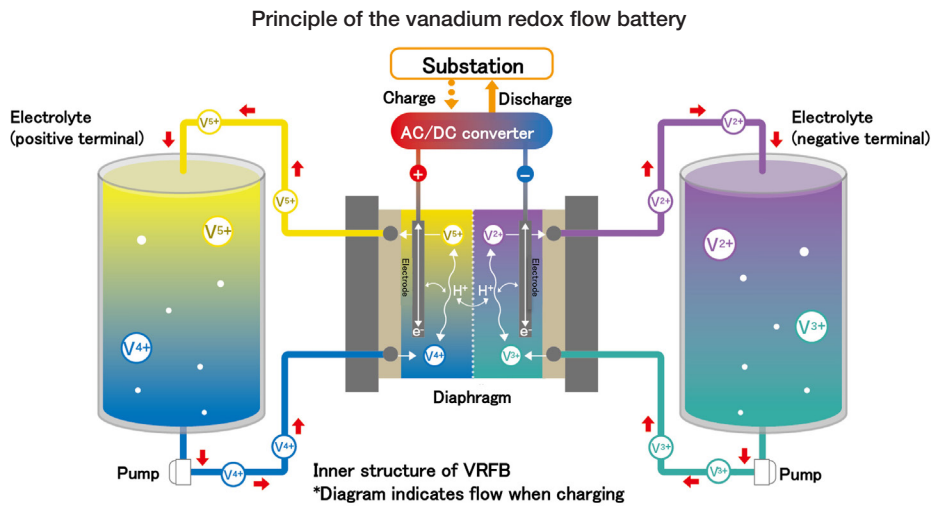
## The electrolytes for VRFBs business is targeting net sales of ¥24.0bn and an operating profit margin of 20% in FY12/26

### 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 electrolyte levels. 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 they offer cost advantages in applications premised on 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.



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

Forecasts

**(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.

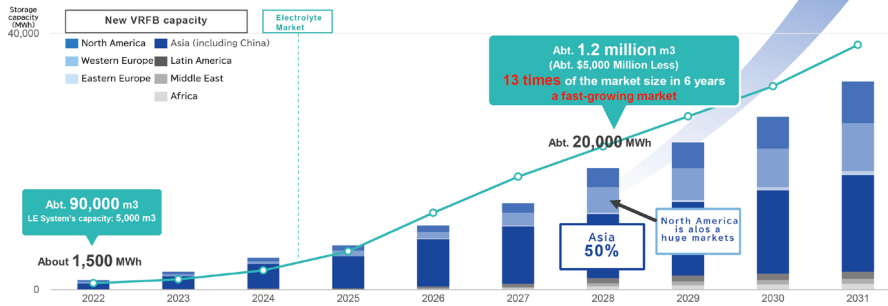
New VRFB storage capacity is expected to grow rapidly from around 1.5GWh in 2022 to approximately 20GWh in 2028, and on an electrolyte basis, to increase rapidly by around 13 times from around 90,000m<sup>3</sup> to about 1,200,000m<sup>3</sup> (in monetary terms, slightly less than US\$5.0bn)\*. Of 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 more and more companies are entering into the VRFB market in anticipation of future market expansion. The Company is 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

**Market size of VRFBs**

- The VRFB market is expected to expand more than 10 times in 2028. Demand for electrolytes is expected to increase.

**New VRFB Capacity and Electrolyte Market Forecast**



- LE System will take advantage of RST's overseas network (especially its strengths in Asia, including China).
- Aiming to achieve top global market share by 2028

Source: Guidehouse Insights

Source: 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 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.



## Forecasts

**a) Ability to procure a stable supply of raw material**

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. LE System engages in bilateral negotiations to procure the intermediate product (AMV) used as raw material in its manufacturing process. LE System has a variety of technologies for recovering vanadium from waste (residue) discharged from thermal power plants, plant facilities and other such sites. LE System is also considering options for establishing a stable procurement system going forward 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).

**(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 approximately 5,000 m<sup>3</sup>/year, but lacked sales results until 2022. However, sales inquiries began coming in from numerous Asian manufacturers in 2023, among which it secured a large order for a North American power plant through an overseas cell manufacturer and has embarked on mass production in that regard. It has already started getting ready to make shipments, but won’t record sales until after inspections have been finalized. LE System has also been receiving inquiries for projects ranging from tens of millions of yen to hundreds of millions of yen.

## Forecasts

Sales targets for LE System have been set at ¥1.0bn for FY12/24, ¥3.0bn for FY12/25, and ¥24.0bn for FY12/26, with an estimated operating profit margin of 20% for FY12/26. Although it may fall short of its sales target for FY12/24 due to the timing of inspections of the project for the North American power plant (worth several hundred million yen), there is a high likelihood that it will achieve rapid growth in sales given a rising number of inquiries. Investment toward increasing production capacity will be necessary in order for LE System to achieve its sales target for FY12/26 given that sales potential of the Namie Plant amounts to around ¥3.0bn annually. There is a high possibility that it will set up operations in China, which has the largest consumer market. If LE System does enter that market, it is expected to be with a plant that has a capacity of 50,000 m<sup>3</sup>/year. In the future, the Company aims to build a production system with a capacity of 150,000 m<sup>3</sup>/year. Given that this would amount to approximately ¥90.0bn at prevailing electrolyte sales prices, it is more than likely that this will grow into a multi-billion yen business even when considering that mass production will lead to lower prices.

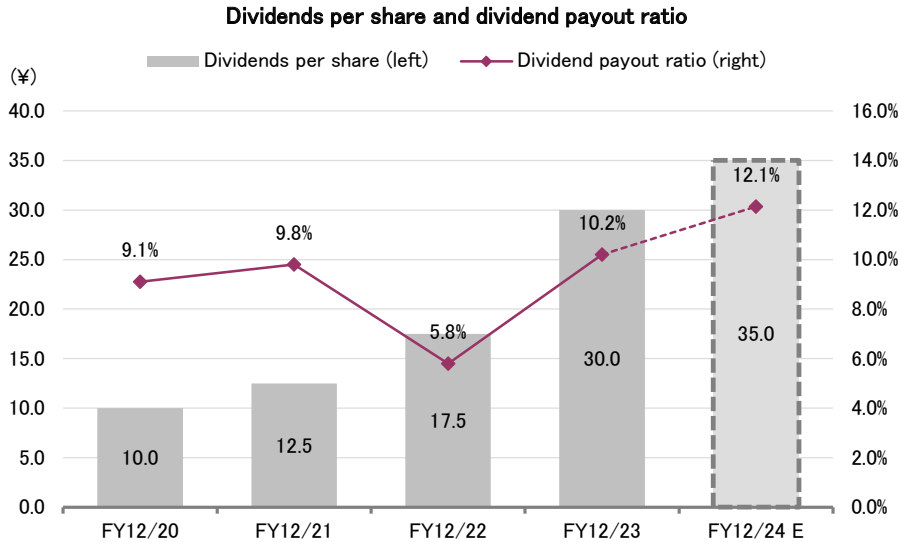
## Returns to shareholders and ESG initiatives

### Aiming to achieve sustained dividend growth with sights set on a dividend payout ratio at the 30% level

#### 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 FY12/24 dividend per share, the Company intends to increase its dividend for the seventh consecutive period by ¥5.0 YoY to ¥35.0 (for a dividend payout ratio of 12.1%). 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. However, because the Company has its sights set on a long-term payout ratio level of around 30%, we at FISCO think it is highly likely that it will once again increase the dividend going forward if results remain favorable.

Returns to shareholders and ESG initiatives



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<sub>2</sub> 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<sub>2</sub> emitted in manufacturing reclaimed wafers is only around 1/9th of the emissions of manufacturing new wafers, so it contributes significantly to reducing CO<sub>2</sub> emissions.

Returns to shareholders and ESG initiatives

Track record of environmental initiatives

	Chemical material usage (kg/k wafers*1)	Industrial-waste emissions (excluding sludge*2) (kg/k wafers)	Water usage (m <sup>3</sup> /k wafers)	Energy usage converted to crude oil (kl/k wafers)	CO <sub>2</sub> 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.

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**

The Company is working to strengthen its corporate governance with the aims of fulfilling its social responsibilities in relation to its various stakeholders and maximizing its corporate value in accordance with its corporate philosophy and code of conduct. 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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