



President
He Xian Han

Ferrotec Holdings Corporation (6890)



Company Information

| | |
|------------|---|
| Exchange | TSE Standard Market |
| Industry | Electric Equipment (Manufacturing) |
| President | He Xian Han |
| HQ Address | Nihonbashi Plaza Building, Nihonbashi 2-3-4, Chuo-ku, Tokyo |
| Year-end | March |
| Website | https://www.ferrotec.co.jp/en/ |

Stock Information

| Share Price | Shares Outstanding (Term end) | Market Cap. | ROE (Act.) | Trading Unit | |
|-------------|-------------------------------|------------------|------------|--------------|------------|
| ¥2,656 | 46,984,362 shares | ¥124,790 million | 18.9% | 100 shares | |
| DPS (Est.) | Dividend Yield (Est.) | EPS (Est.) | PER (Est.) | BPS (Act.) | PBR (Act.) |
| ¥100.00 | 3.8% | ¥319.07 | 8.3x | ¥4,255.40 | 0.62x |

*Share price as of closing on December 13. Shares outstanding (Excluding Treasury Shares), DPS, EPS, and BPS are based on the results of the second quarter of the fiscal year ending March 2024. ROE is previous results.

Consolidated Earnings Trends

| Fiscal Year | Sales | Operating Income | Ordinary Income | Net Income | EPS (¥) | DPS (¥) |
|-------------------|---------|------------------|-----------------|------------|---------|---------|
| March 2019 (Act.) | 89,478 | 8,782 | 8,060 | 2,845 | 76.90 | 24.00 |
| March 2020 (Act.) | 81,613 | 6,012 | 4,263 | 1,784 | 48.12 | 24.00 |
| March 2021 (Act.) | 91,312 | 9,640 | 8,227 | 8,280 | 222.93 | 30.00 |
| March 2022 (Act.) | 133,821 | 22,600 | 25,994 | 26,659 | 668.06 | 50.00 |
| March 2023 (Act.) | 210,810 | 35,042 | 42,448 | 29,702 | 644.81 | 105.00 |
| March 2024 (Est.) | 220,000 | 27,000 | 28,000 | 15,000 | 319.07 | 100.00 |

*The forecast is from the company. Unit: million-yen, yen. DPS for FY 3/21 includes a commemorative dividend of 4.00 yen/share. The dividend forecast for the term ending March 2022 includes a special dividend of 9.00 yen/share. Net income is net income attributed to parent shareholders. The same shall apply hereafter.

This Bridge Report reviews the overview of Ferrotec's earnings results of the second quarter of the fiscal year ending March 2024 and earnings estimates for the fiscal year ending March 2024.

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Key Points

- In the second quarter of the term ending March 2024, sales increased 8.2% year on year, and operating income decreased 23.6% year on year. Regarding the achievement rate with respect to the plan the company set for the first half at the beginning of the fiscal year, it achieved 100.5% of its sales target and 86.9% of its operating income target. The electronics industry, especially the semiconductor industry, is in a demand adjustment phase, and demand remains sluggish. In this environment, the company's sales decline in the semiconductor and other equipment-related businesses was offset by increased sales in the electronic devices business and the inclusion of a new company in the scope of consolidation, but gross profit dropped. Despite the recent unfavorable environment, the company continued to invest in production expansion and strengthen R&D activities, as the medium/long-term outlook remained unchanged. Thus, operating income fell short of the initial forecast.
- The company has downwardly revised its full-year forecast for the term ending March 2024, while considering the results in the first half. While the forecast sales of 220 billion yen remain unchanged, the sales composition was revised in light of product and customer demand trends. Since the medium-term outlook remains unchanged, the company will continue to aggressively invest in production expansion and strengthen R&D for the future (96.9 billion yen, as planned at the beginning of the fiscal year), which lowered its profit forecast (down 5.5 billion yen for operating income, down 2 billion yen for ordinary income, and down 3 billion yen for net income from the initial forecast). Depreciation is assumed to increase from 12,618 million yen in the previous fiscal year to 17,400 million yen (as initially forecast). The assumed average exchange rates are as follows: 1 US dollar = 130 yen to 140 yen (132.08 yen in the previous fiscal year), and 1 Chinese yuan = 19.00 yen to 19.72 yen (19.50 yen in the previous fiscal year). The company plans to pay a dividend of 100.00 yen per share (50.00 yen in the first half and 50.00 yen in the second half).
- There is no change in the company's stance of thoroughly pursuing growth in its medium-term management plan. The plan for sales to reach 360 billion yen in the term ending March 2026 (CAGR +19.5% from the term ended March 2023 to the term ending March 2026) has not been changed. In the financial report, it was also reported that there is no change in the outlook for market recovery in the term ending March 2025 and the term ending March 2026. The expansion of the global production system is progressing as planned, and if demand in the semiconductor sector recovers, it should be possible to achieve the plan. In the semiconductor equipment-related business, the company is making steady progress in expanding its global production system and automation and believes that rapid sales growth is possible when demand recovers.
- The semiconductor market has been deteriorating since the end of 2021, and the assumption that inventory adjustment will continue in the current fiscal year has not changed. Although the short-term forecast has been revised downward due to the delay in inventory adjustment and other factors, it is noteworthy that there is no change in the outlook that the semiconductor market will see an expansionary trend again from 2025 to 2026. In the medium/long term, it is unlikely that the trend toward green energy will change. The company is strongly determined to do so and is maintaining an aggressive investment stance this fiscal year without being sidetracked by the immediate future. The fact that the company was able

to raise funds in the first half of the current fiscal year is also helping support its management strategy. On the other hand, the company's attitude toward the capital market should also be evaluated, as it should not invest haphazardly, but formulate capital allocation strategies based on an appropriate balance between investment opportunities and financial conditions. The company's stock value will probably be affected by the macro environment in the short term, but we would like to focus on how the company is proactively taking measures that will lead to higher valuations in the medium to long term.

1. Company Overview

Ferrotec Holdings Corporation conducts business mainly on the basis of the following two segments: the semiconductor and other equipment-related Business, in which it offers parts for semiconductors and fine panel display (FPD) manufacturing equipment, consumable materials and wafers used in the process of manufacturing semiconductors, and semiconductors for equipment offering cleaning services of equipment parts, and the Electronic Device Business that focuses on the thermal element “thermo-electric modules,” with 86 companies serving as Ferrotec’s subsidiaries (73 consolidated subsidiaries and 13 non-consolidated affiliated companies accounted for by the equity method and other related companies).

Ferrotec was born as a company with highly unique technologies including thermo-electric modules with uses in thermal elements and vacuum technologies that respond to magnetic fluids that were born from the NASA space program in the 1980s. Over the course of its 43 years history of operations, the Company has developed a wide range of diverse technologies with applications in the automobile, electronics, next generation energy, and other industries. As a transnational company, Ferrotec deploys its businesses in Japan, Europe, the Americas, China, and Asia, and boasts of marketing, development, manufacturing, sales, and management capabilities in various countries and regions. A holding company structure was implemented from April 2017. In April 2022, due to market reorganization, the company got listed on the Standard Market of TSE.

[Corporate Ethos and Priority Policies for Enhancing Organizational Strength and Achieving Sustainable Development]

The Ferrotec group strives to be a company that is trusted by stakeholders such as customers, shareholders, employees, business partners, and local communities, by achieving sustainable growth and complying with laws, regulations, social order, and international rules with decency in its corporate activities.

| | |
|--|--|
| Initiatives to enhance corporate value | Promote independent management of all subsidiaries, and redistribute management resources |
| Thorough awareness that puts quality first | Perfect design and product quality that pleases customers, and improvement of the quality of services inside and outside the company |
| Strengthen corporate governance | Thorough internal control and management of affiliated companies, and strengthening of risk management and compliance |

[1-1. Business Segments]

Ferrotec’s operations includes semiconductor seal related products such as vacuum seal, quartz products, ceramic products, etc. used in manufacturing equipment of semiconductor, FPD, LED etc., electronic device business centering on thermo-electric modules and business segments that are not included in the reportable segments. Other businesses, which handle silicon crystal and solar cell wafers, saw blades, machine tools, surface treatment, industrial washing machines etc.

Semiconductor and other equipment-related business

Ferrotec provides total engineering services in the Equipment Related business segment, including the manufacture and sale of Vacuum Feedthrough of equipment parts for solar power, semiconductor, FPD and LED applications, consumable products used in manufacturing of devices, quartz products, ceramic products, CVD-SiC products, quartz crucibles, silicon wafer processing and equipment cleaning services.

Its vacuum seal boasts of top market share in the world and is a functional part that insulates the interior of manufacturing equipment from gas and dust contamination while supporting rotating action of the above-mentioned equipment. These Vacuum Feedthrough use magnetic fluids (Fluids that respond to magnetic fields), which has been a core technology of Ferrotec since its founding. Because of

instability in these applications arising from their link with corporate capital investments cycles, the Company focuses its marketing efforts upon expanding sales to applications for which demand is more stable, including transportation equipment, precision robots, and general industry usages. In addition, Ferrotec has also focused its efforts upon assuming consigned manufacture of vacuum chambers that use Vacuum Feedthrough and gate valves (Both use vacuum related equipment).

At the same time, quartz, ceramic, and CVD-SiC products are critical elements in the process of semiconductor manufacturing. Quartz products are able to resist high temperature conditions that exist in the semiconductor manufacturing process and are a high purity silica glass product that protects semiconductors from undergoing chemical reaction by preventing it from activating with gas. The Company boasts of semiconductor manufacturing equipment manufacturers as their main clients in Japan and overseas who purchase ceramic products, which are Ferrotec’s core material and technology. At the same time, semiconductor inspection tools for machinable ceramics and fine ceramics used in semiconductor manufacturing equipment are two main products in this CVD-SiC.

CVD-SiC products are the term used to describe SiC products manufactured by "CVD method (Chemical Vapor Deposition method)" (created from compounds of silicon and carbon gas). Currently, semiconductor equipment and structural parts are provided, and research and development for products used in aeronautics and space (Turbine, mirrors), automobile (Power semiconductors), energy (Nuclear power related), information technology (Semiconductor manufacturing equipment parts) and other applications are also being conducted. As for silicon wafer processing, the posting of sales of 12-inch (diameter) wafers started in the term ended March 2021, in addition to 6-inch and 8-inch wafers and has a leading share of more than half of the manufacturing equipment cleaning services market in China.

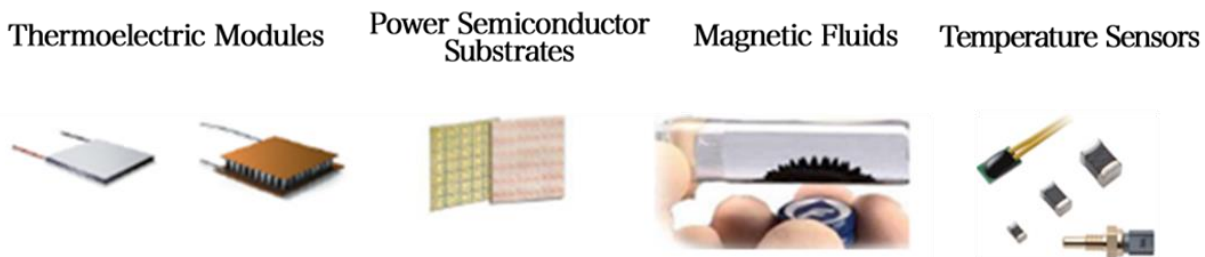


(From the company website)

Electronic Device Business

Thermal element “thermo-electric modules” are products that can instantly raise or lower temperatures to a highly precise degree and are a core product of this business. Thermo-electric modules are mainly used for automotive temperature control seats and many other purposes, including wafer temperature control in semiconductor manufacturing equipment, genetic testing apparatus, optical communications, home appliances, and other application products such as power semiconductor substrates. The company has the largest share in the global market of thermo-electric modules. By developing new products using high-performance materials and reducing costs and improving quality by adopting automated manufacturing lines, the company is stirring new demand and diversifying purposes of use of its products.

Furthermore, the company has the largest share in the global market of magnetic fluid, which is used increasingly for linear vibration motors for smartphones, speakers for 4K TV and automobiles, high-quality sound headphones, etc. In addition, the temperature sensors of Ohizumi Mfg. Co., Ltd., which became a consolidated subsidiary of Ferrotec Holdings in the second quarter of the term ended March 2023, were added to this business.



(From the company website)

Others



(From the company website)

2. The second quarter of the Fiscal Year ended March 2024 Earnings Results

【2-1. Consolidated Earnings】

| | 2Q of FY 3/23 (cumulative total) | Ratio to sales | 2Q of FY 3/24 (cumulative total) | Ratio to sales | YoY | Ratio to forecast |
|-------------------------------|---|-------------------|---|-------------------|--------|-------------------|
| Sales | 97,505 | 100.0% | 105,494 | 100.0% | 8.2% | +0.5% |
| Gross Income | 34,538 | 35.4% | 34,311 | 32.5% | -0.7% | - |
| SG&A | 17,476 | 17.9% | 21,276 | 20.2% | +21.7% | - |
| Operating Income | 17,061 | 17.5% | 13,035 | 12.4% | -23.6% | -13.1% |
| Ordinary Income | 23,554 | 24.2% | 15,217 | 14.4% | -35.4% | +12.7% |
| Net Income for the quarter | 15,979 | 16.4% | 8,390 | 8.0% | -47.5% | -1.3% |

*Unit: million yen.

The demand adjustment phase continues, especially in the semiconductor industry.

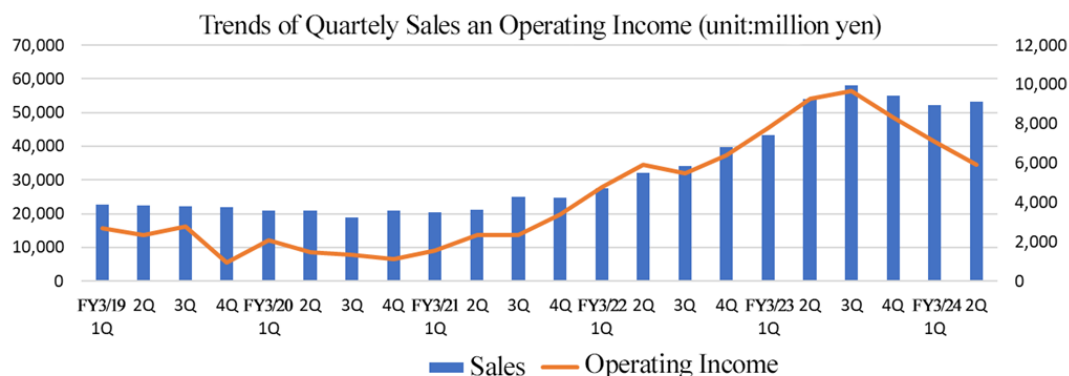
In the second quarter of the term ending March 2024, sales increased 8.2% year on year to 105,494 million yen, and operating income declined 23.6% year on year to 13,035 million yen.

In the electronics industry, demand for semiconductor production equipment remained sluggish due to the semiconductor industry being in a demand adjustment phase as well as a recoil from strong demand in 2022. In this environment, the company saw sluggish growth in vacuum components and contract processing for manufacturing equipment, as well as in various material products for semiconductor manufacturing processes, mainly in Europe and the U.S. On the other hand, the markets for power semiconductors and solar panels remained relatively firm, and shipments of CVD-SiC products and quartz crucibles grew, resulting in an overall sales increase. Although sales exceeded the company's initial forecast for the first half (105 billion yen in net sales and 15 billion yen in operating income), the company only achieved 87% of its operating income target due to higher SG&A expenses. This was due to higher-than-expected SG&A expenses resulting from investment in production expansion and R&D enhancement measures.

Operating income decreased by 4,026 million yen year on year, while ordinary income declined by 8,337 million yen year on year. This was mainly due to a small foreign exchange gain compared to the same period of the previous year and equity in losses of affiliates in the wafer business. Net income decreased by 7,589 million yen year on year. Although noncontrolling interest income increased, the decline in net income expanded due to the absence of gain on change in equity interest and loss on valuation of investment securities. The average exchange rates were 136.54 yen for the US dollar (124.52 yen in the same period of the previous year) and 19.55 yen for the Chinese yuan (19.13 yen in the same period of the previous year).

The company is aware of the current difficult business environment and is investing for the future, so there is no need to be overly negative about the short-term decrease in profit year on year. In light of its current performance, the company has revised downward its forecast for the current fiscal year, but this is due to the fact that a short-term recovery in sales is unlikely, given trends in product and customer demand, and that SG&A expenses have increased more than expected as a result of investment in production expansion and

R&D enhancement measures. The outlook for a stronger recovery in 2025 and beyond remains unchanged, so the company's performance should be considered from a medium/long-term perspective.



【2-2. Business Segment Trends】

Business Segment Sales and Profits

| | 2Q of FY 3/23 (cumulative total) | Ratio to sales Profit margin | 2Q of FY 3/24 (cumulative total) | Ratio to sales Profit margin | YoY |
|---|-------------------------------------|---------------------------------|-------------------------------------|---------------------------------|--------|
| Semiconductor and other equipment - related | 63,791 | 65.4% | 60,257 | 57.1% | -5.5% |
| Electronic Device | 23,073 | 23.7% | 32,840 | 31.1% | +42.3% |
| Others | 10,640 | 10.9% | 12,396 | 11.8% | +16.5% |
| Consolidated Sales | 97,505 | 100.0% | 105,494 | 100.0% | +8.2% |
| Semiconductor and other equipment - related | 11,707 | 18.4% | 7,788 | 12.9% | -33.5% |
| Electronic Device | 5,325 | 23.1% | 6,080 | 18.5% | +14.2% |
| Others | 398 | 3.7% | -179 | -1.4% | - |
| Adjustments | -369 | - | -654 | - | - |
| Consolidated Operating Income | 17,061 | 17.5% | 13,035 | 12.4% | -23.6% |

*Unit: million yen.

(1) Semiconductor and other equipment-related business

In the semiconductor and other equipment-related business, sales declined by 5.5% year on year to 60,257 million yen, and operating income declined by 33.5% year on year to 7,788 million yen. Profit margin declined by 5.5 points to 12.9%.

As overall demand for semiconductors is in an inventory adjustment phase, demand for semiconductor production equipment is also sluggish. The situation is particularly difficult in Europe and the U.S. Among the various materials used in the semiconductor manufacturing process, orders for quartz products, ceramic products, and silicon parts from Europe and the U.S. declined, partly due to inventory buildup among customers. On the other hand, orders for CVD-SiC products remained firm, and increased production at Okayama Plant helped maintain sales growth. Quartz crucibles saw continued growth in shipments to solar panel manufacturers.

(2) Electronic Device Business

In the electronic device business, sales grew by 42.3% year on year to 32,840 million yen and operating income grew by 14.2% year on year to 6,080 million yen. Profit margin declined by 4.6 points to 18.5%.

Substrates for power semiconductors continue to drive growth. Although the sales of thermo-electric modules declined due to a lull in orders for telecommunications equipment and medical testing equipment, the sales of DCB substrates for industrial machinery and other applications were strong, and shipments of AMB substrates for EVs in China were also solid. It should be noted that sensor sales

and profits of Ohizumi MFG, which were included in the scope of consolidation in the previous second quarter (July-September), are included in this segment.

(3) Others

In the other business (including the production of saw blades, machine tools, and silicon parts for solar cells), sales grew 16.5% year on year to 12,396 million yen and operating income turned to a loss of 179 million yen.

Although shipments of machine tools declined, sales increased due to the posting of sales from Toyo Knife, which was included in the scope of consolidation in the previous second quarter (July-September).

【2-3. Financial Condition and Cash Flow】

◎Balance Sheet Summary

| | Mar, 23 | Sep, 23 | Increase Decrease | | Mar, 23 | Sep, 23 | Increase Decrease |
|---------------------------------|---------|---------|----------------------|------------------------|---------|---------|----------------------|
| Current Assets | 215,341 | 249,956 | +31,615 | Current liabilities | 111,294 | 112,569 | +1,275 |
| Cash | 103,115 | 120,052 | +16,937 | Payable | 43,896 | 39,687 | -4,209 |
| Receivable | 53,276 | 58,172 | +4,896 | ST Interest-Bearing | 36,203 | 42,289 | +6,086 |
| Inventory | 49,177 | 57,365 | +8,188 | Noncurrent liabilities | 49,697 | 92,172 | +42,475 |
| Noncurrent Assets | 195,306 | 229,619 | +34,313 | LT Interest-Bearing | 30,515 | 71,145 | +40,630 |
| Tangible Asses | 139,610 | 171,219 | +31,609 | Total Liabilities | 160,991 | 204,741 | +43,750 |
| Intangible Assets | 6,949 | 6,658 | -291 | Net Assets | 249,656 | 271,834 | +22,178 |
| Investments and Other Assets | 48,745 | 51,741 | +2,996 | Retained earnings | 69,656 | 75,466 | +5,810 |
| Total Asset | 410,648 | 476,576 | +65,928 | Total Assets | 410,648 | 476,576 | +65,928 |

*Unit: million yen.

Total assets increased to 476.5 billion yen, up 65.9 billion yen from the end of the previous fiscal year. The main factors behind this increase were an increase in cash and deposits (up 16.9 billion yen year on year) and an increase in tangible fixed assets (up 31.6 billion yen year on year). Current assets grew due to an increase in notes and accounts receivable-trade and inventories in line with sales growth, as well as fundraising. Tangible fixed assets increased due to active investments in all businesses. Major increases were in Ferrotec Manufacturing Malaysia (+5.1 billion yen), Changshan Ceramic & Silicon Parts (+5.7 billion yen), Sichuan Power Substrates (+3.8 billion yen), and Yinchuan FTNC Quartz Crucibles (+4.6 billion yen).

Total liabilities augmented 43.7 billion yen year on year to 204.7 billion yen. In June 2023, the company issued euro-yen convertible bonds with stock acquisition rights maturing in 28 years (total face value of bonds: 25 billion yen), and long-term loans increased by 19 billion yen. Net assets rose 22.1 billion yen year on year to 271.8 billion yen due to the 5.8 billion yen increase in retained earnings, the 9.9 billion yen increase in foreign currency translation adjustments, and the 5.9 billion yen increase in noncontrolling shareholders' equity. Equity ratio dropped 2.7 points from the end of the previous term to 42.0%.

◎Cash Flow

| | 2Q of FY 3/23 | 2Q of FY 3/24 | Increase Decrease |
|--|---------------|---------------|----------------------|
| Operating cash flow (A) | 20,988 | 6,789 | -14,199 |
| Investing cash flow (B) | -28,783 | -29,101 | -318 |
| Free Cash Flow (A + B) | -7,795 | -22,312 | -14,517 |
| Financing cash flow | 32,461 | 41,659 | +9,198 |
| Cash and Equivalents at the end of term | 83,770 | 119,666 | +35,896 |

*Unit: million yen

The cash inflow from operating activities shrank due to a decrease in income before income taxes, trade notes and accounts payable, and other items. In addition, the cash outflow from investment activities expanded a deficit due to the continued aggressive purchase of tangible fixed assets, resulting in a more significant deficit in the free cash flow. In response to that, the company issued convertible bonds with stock acquisition rights and took out long-term loans, resulting in a significant increase in financial cash flow. The cash flow balance at the end of the fiscal year was 119,666 million yen, an increase of 35,896 million yen from the same period of the previous year.

3. Fiscal Year ending March 2024 Earnings Forecasts

【3-1. Full Year Consolidated Earnings】

| | FY 3/23 | Ratio to sales | FY 3/24 Est | Ratio to sales | YoY |
|------------------|---------|----------------|-------------|----------------|--------|
| Sales | 210,810 | 100.0% | 220,000 | 100.0% | +4.4% |
| Operating Income | 35,042 | 16.6% | 27,000 | 12.3% | -22.9% |
| Ordinary Income | 42,448 | 20.1% | 28,000 | 12.7% | -34.0% |
| Net Income | 29,702 | 14.1% | 15,000 | 6.8% | -49.5% |

*Unit: million yen

Revised the Full-Year Forecast in Light of the Change in the Sales Composition Forecast

The company has revised its full-year forecast for the term ending March 2024 downward in light of the results in the first half. While the forecast sales of 220 billion yen remain unchanged, the sales composition has been revised in light of product and customer demand trends. Since the medium-term outlook remains unchanged, the company continues to aggressively invest in production expansion and R&D enhancement measures for the future (96.9 billion yen in investments as initially forecast) and thus lowered its profit forecast (down 5.5 billion yen for operating income, down 2 billion yen for ordinary income, and down 3 billion yen for net income from the initial forecast). Depreciation is assumed to increase from 12,618 million yen in the previous period to 17,400 million yen (as initially forecast). The assumed average exchange rates are as follows: 1 US dollar = 130 yen to 140 yen (132.08 yen in the previous fiscal year), and 1 Chinese yuan = 19.00 yen to 19.72 yen (19.50 yen in the previous fiscal year).

The company plans to pay a dividend of 100.00 yen/share (an interim dividend of 50.00 yen/share and a term-end dividend of 50.00 yen/share).

【3-2 Business Segment Earnings Trends】

| | FY 3/23 | Ratio to sales | FY 3/24 Est | Ratio to sales | YoY |
|---|----------------|----------------|----------------|----------------|--------|
| Semiconductor and other equipment-related | 132,194 | 62.7% | 126,677 | 57.6% | -4.2% |
| Electronic Device | 53,024 | 25.2% | 68,009 | 30.9% | +28.3% |
| Others | 25,590 | 12.1% | 25,315 | 11.5% | -1.1% |
| Total Sales | 210,810 | 100.0% | 220,000 | 100.0% | +4.4% |

*Unit: million yen.

Compared to the initial forecast, sales in the semiconductor production equipment-related business and others increased by 1,617 million yen and 1,095 million yen, respectively, while sales of the electronic devices business decreased by 2,711 million yen.

(1) Semiconductor and other equipment-related business

| | FY 3/23 | Ratio to sales | FY 3/24Est | Ratio to sales | YoY |
|--|----------------|----------------|----------------|----------------|--------------|
| Vacuum Feedthroughs / Metal Processing | 27,976 | 21.2% | 24,046 | 19.0% | -14.0% |
| Quartz | 28,837 | 21.8% | 27,252 | 21.5% | -5.5% |
| Silicon parts | 17,542 | 13.3% | 14,310 | 11.3% | -18.4% |
| Ceramics | 27,194 | 20.6% | 23,361 | 18.4% | -14.1% |
| CVD-SiC | 4,812 | 3.6% | 6,239 | 4.9% | +29.7% |
| EB-Gun, LED deposition equipment | 8,036 | 6.1% | 6,069 | 4.8% | -24.5% |
| Wafer processing | 236 | 0.2% | 129 | 0.1% | -45.3% |
| Recycled wafers | 1,501 | 1.1% | 1,730 | 1.4% | +15.3% |
| Equipment parts cleaning | 12,170 | 9.2% | 11,451 | 9.0% | -5.9% |
| Quartz crucibles | 3,891 | 2.9% | 12,091 | 9.5% | +210.7% |
| Sales of Semiconductor and other equipment-related business | 132,194 | 100.0% | 126,677 | 100.0% | -4.2% |

*Unit: million yen.

Although the company reduced its forecast sales mainly for quartz crucibles and vacuum seals, it increased its forecast for sales of quartz products and ceramic products, resulting in an overall revised forecast of 126,677 million yen, up 1,617 million yen from the initial forecast.

(2) Electronic Device Business

| | FY 3/23 | Ratio to sales | FY 3/24 Est | Ratio to sales | YoY |
|--|---------------|----------------|---------------|----------------|---------------|
| Thermo-electric modules | 23,266 | 43.9% | 21,233 | 31.2% | -8.7% |
| Power semiconductor substrates | 20,011 | 37.7% | 34,584 | 50.9% | +72.8% |
| Ferrofluid, Others | 936 | 1.8% | 910 | 1.3% | -2.8% |
| Sensors (Ohizumi Mfg) | 8,811 | 16.6% | 11,282 | 16.6% | +28.0% |
| Sales of Electronic Device Business | 53,024 | 100.0% | 68,009 | 100.0% | +28.3% |

*Unit: million yen.

Sales of all products were revised downward from the initial forecast. The negative impact was particularly large for power semiconductors and sensors (Ohizumi MFG. Co., Ltd.).

4. Update of the mid-term management plan(No change since the last report, reposted)

(The revision to the medium-term management plan as a result of the revision to the corporate plan for the term ending March 2024 has not yet been announced.)

【4-1 Basic policy for the mid-term management plan】

The basic policy of pursuing corporate growth thoroughly is unchanged.

| | |
|---|--|
| Business growth | <ul style="list-style-type: none"> ➤ To pursue growth thoroughly and continue active investment ➤ To brush up the competitiveness of the existing business, expand its market share, and strengthen the non-semiconductor business ➤ To launch “in-vehicle sensors” and strengthen them strategically ➤ To accelerate the diversification of businesses and products through product development, M&A, etc. |
| Strengthening of the global production system | <ul style="list-style-type: none"> ➤ To start the operation of the Malaysian base early ➤ To establish Ishikawa and Kumamoto Plants, to promote “reshoring” |

BRIDGE REPORT



| | |
|--------------------------------------|---|
| Fortification of the management base | <ul style="list-style-type: none"> ➤ To keep enhancing quality management ➤ To keep promoting digitalization, automation, use of AI, and visualization ➤ To keep training personnel |
| Finance and shareholder return | <ul style="list-style-type: none"> ➤ To secure an appropriate balance between investment opportunities and financial standing, put emphasis on net income, and tighten ROIC management continuously ➤ The basic policy is to increase shareholder return by earning more revenues, with the aim of achieving a payout ratio of 20%. |

*Produced by Investment Bridge Co., Ltd. with reference to disclosed material.

【4-2 Progress and Update of Mid-term Management Plan KPI】

| (Million yen) | Mid-term management plan (FY3/22 to FY3/24) | | | Target value | |
|------------------------------------|---|-----------------|-------------------|----------------|---------------|
| | FY3/22 (actual) | FY3/23 (actual) | FY3/24 (forecast) | FY3/25 (plan) | FY3/26 (plan) |
| Net sales | 133,821 | 210,810 | 220,000 | 270,000 | 360,000 |
| Operating income | 22,600 | 35,042 | 32,500 | 45,000 | 60,000 |
| Operating margin | 16.9% | 16.6% | 14.8% | 16.7% | 17.5% |
| Net income | 26,659 | 29,702 | 18,000 | 25,000 | 36,000 |
| ROE | 26.9% | 16.6% | 15% | | |
| ROIC* | 15.8% | 11.9% | 8.0% | | |
| Equity ratio | 49.5% | 44.7% | 40% | | |
| Investment amount** | 35,378 | 62,661 | 96,900 | Approx. 60,000 | TBD |
| Dividend per share (annual) | 50 yen | 105 yen | 100 yen | | |

*ROIC = Net income attributable to owners of parent/(Interest-bearing debt + Net asset). Net asset does not include share acquisition rights or non-controlling interests' equity.

**The investment amount is the total amount of tangible fixed assets, intangible fixed assets and securities to be acquired, etc. It varies depending on M&A investment opportunities.

*Produced by Investment Bridge Co., Ltd. with reference to disclosed material.

In the term ending March 2026, sales are expected to reach 360 billion yen (CAGR during the period from FY 3/2023 to FY 3/2026: 19.5%). Regarding the forecast for each segment, it is projected that the sales of the semiconductor equipment related business will increase from 132,194 million yen to 235.6 billion yen, the sales of the electronic device business will rise from 53,024 million yen to 93,390 million yen, and the sales of the other business will grow from 25,590 million yen to 31,010 million yen.

As their global production system has been enriched steadily, the company considers that if the demand in the semiconductor sector recovers, they will certainly be able to achieve the forecast sales. In the semiconductor equipment related business, the company is steadily proceeding with the enrichment, automation, etc. of the global production system, so they believe that sales will expand rapidly if demand recovers. In the electronic device business, the company is steadily increasing the output of power semiconductor substrates by establishing Sichuan Factory, and full-scale manufacturing is scheduled to be started in 2024.

【4-3 Target Sales by Category】

<Semiconductor material>

Sales grew 52.0% year on year in FY 3/2023 but are projected to decline 14.0% year on year in FY 3/2024.

The semiconductor market was healthy in FY 3/2023, thanks to the expansion of investment in digital technology, the demand for EVs, etc. However, most analysts forecast that the Wafer Fab Equipment (WFE) market will be stagnant in FY 3/2024, so it is assumed that the WFE market will decline in the short term. In the medium/long term, it is still expected that the market will keep growing, so the company plans to keep enhancing the production capacity for each product while predicting the market expansion from FY 3/2026. In detail, the company plans to construct new factories in Malaysia and Kumamoto for quartz, build new factories in Malaysia and Ishikawa

for ceramics, upgrade the equipment in Okayama and Changshan for CVD-SiC, and upgrade the equipment in Changshan for silicon parts.

<Quartz crucibles>

Sales grew 85.3% year on year in FY 3/2023 and are expected to increase significantly by 4.1 times year on year in FY 3/2024.

As quartz crucibles are increasingly adopted in the solar cell market and there is a remarkable trend of the increase in diameter of quartz crucibles in response to the enlargement of wafers, the company is investing for enhancing the production capacity of Yinchuan Plant.

<Thermo-electric modules>

Sales grew 31.9% year on year in FY 3/2023 but are projected to decline 8.2% year on year in FY 3/2024.

It is assumed that the sales of thermo-electric modules for 5G telecommunication devices, bio devices, such as PCR, and semiconductors will peak out in FY 3/2024. However, the sales are expected to grow again in FY 3/2025.







The company plans to develop multiple models of chillers, including the thermo-electric modules (Peltier) type and the compressor type, and promote sales in the fields of semiconductors, machine tools, and medical apparatus.

<Insulated substrates for power semiconductors>

Sales grew 2.4 times year on year in FY 3/2023 and are expected to rise 80.0% year on year in FY 3/2024.

Sales are projected to keep growing, due to the completion of a new factory in Neijiang, Sichuan, China in June 2023, and the enhancement of production capacity of Dongtai Plant. The company plans to expand the monthly output at Dongtai Plant in Shanghai from 1.1 million substrates to 1.6 million substrates for DCB substrates and from 0.2 million substrates to 0.45 million substrates for AMB substrates. As there is a global trend of curtailing power consumption, the company predicts that the demand for DCB substrates will grow further.

【4-4 Situation of construction of major factories and enhancement of production capacity】

| Location | Business | Construction Status | | | | | | | Assumed production capacity (100 million yen) |
|-----------------------------|------------------------------------|--|------|------|------|------|------|------|---|
| | | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | |
| Dongtai and Neijiang, China | Power semiconductor substrates |  | | | | | | | 560 |
| Ishikawa, Japan | Ceramics |  | | | | | | | 140 |
| Changshan, China | Ceramics Silicon parts |  | | | | | | | 150 |
| Yinchuan, China | Quartz crucibles |  | | | | | | | 340 |
| Malaysia | Metal processing, quartz, ceramics |  | | | | | | | 250 |
| Kumamoto, Japan | Material, cleaning |  | | | | | | | TBD |

(From the company's materials)

◎Shareholder Return

The company's basic policy of increasing shareholder returns through sustained earnings growth remains unchanged, but the dividend policy is based on a dividend payout ratio of 20%, which is determined by balancing financial and investment opportunities. Under this policy, the company decided to pay a dividend of 105 yen/share (payout ratio: 16.3%) for FY 3/2023. The company plans to pay a dividend of 100 yen/share (payout ratio: 31.3%) for FY 3/2024. They mentioned that they would like to raise payout ratio to 30% in the medium term.

◎ Long-term goals

The company has not revised its numerical goals set in the long-term vision, that is, sales of 500 billion yen and a net income of 50 billion yen in FY 3/2031.

5. Conclusions

The semiconductor market has been deteriorating since the end of 2021, and the assumption that inventory adjustment will continue in the current fiscal year has not changed. Although the short-term forecast has been revised downward due to the delay in inventory adjustment and other factors, it is noteworthy that there is no change in the outlook that semiconductor market will see an expansionary trend again from 2025 to 2026. In the medium/long term, it is unlikely that the trend toward green energy will change. The company is strongly determined to do so and is maintaining an aggressive investment stance this fiscal year without being sidetracked by the immediate future. The fact that the company was able to raise funds in the first half of the current fiscal year is also helping support its management strategy. On the other hand, the company's attitude toward the capital market should also be evaluated, as it should not invest haphazardly, but formulate capital allocation strategies based on an appropriate balance between investment opportunities and financial conditions. The company's stock value will probably be affected by the macro environment in the short term, but we would like to focus on how the company is proactively taking measures that will lead to higher valuations in the medium to long term.

<Reference: Regarding Corporate Governance>

◎ Organization type, and the composition of directors and auditors

| | |
|-------------------|---------------------------------------|
| Organization type | Company with auditors |
| Directors | 9 directors, including outside ones 3 |
| Auditors | 3 directors, including outside ones 2 |

◎ Corporate Governance Report (Updated on October 4, 2023)

Basic policy

While pursuing our corporate principles: “Strong commitment to our customers,” “Excellence in engineering precision solutions,” and “Delivering superior quality, value and service,” our corporate group has drawn up a code of conduct as follows: From a global perspective, Ferrotec always operates in harmony with the international community and acts in good faith with unwavering corporate ethics and social decency, as well as in compliance with the laws of each country as a company that provides products and services that contribute to everyday life of the people all over the world who are related to us; Ferrotec earns customer trust and satisfies our customers by proposing high-quality products and services and providing cost-competitive products and services mainly in the new energy and electronics industries; Considering proactive eco-friendly activities to be one of our high-profile business issues, Ferrotec contributes to solving global environmental problems by adapting ourselves to the requirements of the latest environmental regulations one by one and developing materials and products that can be used in the new energy industry; and Ferrotec contributes to society through manufacturing based on our core technology, continues to be a company whose stakeholders, including customers, shareholders, employees, business partners, and local communities, are looking forward to seeing it grow, and engages in business activities based on social decency, such as laws, social order, and international rules.

Our company not only proactively promotes environmental preservation activities and our corporate group’s governance pursuant to the aforementioned corporate principles and code of conduct, but also strives to continue being a company whose stakeholders look forward to its growth. We have also formulated a quality philosophy saying that we focus on developing new materials and production technologies, such as semiconductor materials, and pursue customer satisfaction improvement by giving top priority to quality, and are moving forward with automation, digitalization, and standardization of our production processes. Our basic business policies are to increase our share in the global market and form a corporate group with a stable profit structure.

Based on the above corporate principles, code of conduct, and basic management policy, the company considers that it is important to improve its corporate value, emphasize the soundness of its business administration to become an enterprise that will be trusted and

supported by stakeholders, including shareholders, customers, business partners, and local communities, and also establish a managerial system responding the rapid changes to the business environment swiftly and accurately.

<Main Reasons for Non-compliance with the Principles of the Corporate Governance Code>

<Supplementary Principle 2-4-1: Ensuring diversity in promotion to core human resources>

As a basic policy for human capital, the group operates under two major policies regarding organizations and human resources. The first is to create a company and organization, in which each employee, regardless of their attributes, can act autonomously and with ambition and have a sense of fulfillment in their work. The second is to localize management, make decisions quickly, and manage the business and the organization according to the characteristics of each region.

While our business is expanding on a global basis, our corporate group drastically strengthens our human resources and organization and proactively employs women, foreign nationals, and mid-career workers with extensive skills and experience to raise our corporate value in the medium/long term. In addition, we actively promote women, foreign nationals, and mid-career hires to managerial positions by comprehensively considering and evaluating such factors as their skills and valuable experience cultivated in companies outside of our corporate group.

We, however, have not disclosed our medium- and long-term policies on promoting women, foreign nationals, and mid-career hires to managerial positions and ensuring diversity, policies on human resources development, policies on internal environment development, and our progress and achievement in this regard.

In the future, in order to contribute to the medium/long-term enhancement of corporate value in line with the expansion of the global corporate scale, the company will proactively have discussions to set policies for personnel development and the internal environment and disclose the progress of them, under its basic policy on human capital.

<Supplementary Principle 3-1-3: Disclosure of initiatives on sustainability and business strategies, such as investment in human capital and intellectual property>

Following our corporate principles: “Strong commitment to our customers, excellence in engineering precision solutions, and delivering superior quality, value and service,” our company has framed a basic policy on materiality and sustainability in 2021 because we consider ESG (Environment, Social, and Governance) to be extremely important for medium- and long-term improvement of our corporate value. We will build an organizational structure, enlighten our employees, and set quantitative goals for promoting ESG. Regarding investment in human capital and intellectual property, our Japanese subsidiaries proactively promote young employees to the position of executive officer and flatten their organizations. Meanwhile, our Chinese subsidiaries actively invest in intellectual property by, as necessary, founding research institutes related to semiconductors, employ a greater number of human resources who have degrees equivalent to doctor’s degrees, and granting their employees awards and rewards for superb patent applications. We will monitor quantitative goals that we set and announce our progress with them via our website, IR material, and other means.

<Supplementary Principle 4-2 (1): Objective and transparent management remuneration system>

The Remuneration Committee, of which the majority is composed of outside directors, was established as an advisory committee to the Board of Directors. The Remuneration Committee deliberates and decides on the content of each director's compensation, including monthly compensation and performance-linked compensation, in accordance with the company's decision-making policy and reports its decisions to the Board of Directors.

To ensure fairness and transparency, the company has set up a remuneration committee with outside officers as the majority of the members. Through this committee, the company has set medium/long-term remuneration percentages, such as the introduction of restricted stock remuneration as well as the target percentages for fixed remuneration and variable remuneration to achieve sustainable growth. The President and CEO, whom the Board of Directors has entrusted with determining the amount of remuneration for each director, decides the amounts of remuneration upon convening the remuneration committee, consulting with its members, and respecting the committee's recommendations.

However, the company has not set an appropriate ratio between cash compensation and stock compensation in the consolidated compensation and will diligently consider an appropriate executive compensation system centered on the Compensation Committee, referring to the opinions of outside experts who attend the Compensation Committee meetings when necessary.

<Main Disclosure Based on the Principles of the Corporate Governance Code>

<Principle 2-3: Issues related to sustainability, mainly social and environmental issues>

The semiconductor manufacturing process has a significant environmental load, and solving this is a challenge for the entire industry. The company sells products such as thermo-electric modules, which are CFC-free temperature control devices, and power semiconductor substrates and ferrofluids that effectively reduce power consumption. The company also relies on clean energy, using solar panels in power generation at our plants in Japan and China. Thus, our business activities contribute to reducing greenhouse gases, leading to environmental pollution reduction. In March 2023, the "Sustainability Committee" was established as a committee under the Company's Board of Executive Officers to check the status of sustainability initiatives, review and deliberate on them, and report to the Board of Directors and other relevant bodies when necessary in order to examine and promote sustainability on a company-wide basis. The number of university students in financial distress is increasing due to the COVID-19 crisis. Therefore, the company supports the Akira Yamamura Scholarship Foundation, which provides scholarships to engineering students to develop talented human resources who can contribute to society in the future.

<Principle 2-4: Ensuring diversity, including active participation of women>

Believing that working with employees who have different experiences and senses of values within a company is an advantage in ensuring sustainable business growth especially when companies operate globally like our company, we endeavor to ensure diversity, including active participation of women, based on our policy of entrusting each of our local subsidiaries with management of their own companies.

<Supplementary Principle 4-11-1: View on the balance between the knowledge, experience, and skills of the board of directors as a whole, and on diversity and appropriate board size>

Our company's Board of Directors believes that a board of directors needs to be composed of directors with diverse perspectives and experience, and diverse and advanced skills for supervision of business execution and important decision-making. It also thinks that our auditors need to possess diversity and superior skills like the directors because they are obliged to attend board meetings and give their opinions as required. With regard to outside executives, we believe that we need outside directors who have voting rights in board meetings, in addition to outside statutory auditors, and it is essential that both the auditors and directors are highly independent so that a double check function, which consists of supervision by the Board of Directors and audits by the auditors, can work properly.

Furthermore, we intend to appoint independent outside directors who have management experience at other companies and ensure that their skills are comprehensive by selecting them based on a balance of knowledge, experience, and abilities required by the Board of Directors as a whole.

We have posted a skill matrix, a list of such elements as the knowledge, experience, and skills of each of our directors and auditors, on our website: (<https://www.ferrotec.co.jp/esg/sdgs.php>)

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