



Results for the 1st half of the fiscal year ending March 31, 2024

1. This fiscal year results cover period from April to September 2023 of Ferrotec, and period from January to June 2023 of consolidated subsidiaries and companies accounted for using the equity method.
2. This presentation was prepared for the purpose of providing information regarding the company's results of operations for the first half of the fiscal year ending March 31, 2024 and is not a solicitation to purchase securities issued by the company. Please ensure that the decision on whether to make an investment in our company is made at your own risk.
3. These materials were prepared based on information available as of date of the disclosure. All opinions, forecasts and other forward-looking statements are based on management's judgments in accordance with materials available at that time and may be changed without prior notice.

Consolidated Financial Summary

(Million yen)	Q2 FY3/23	Q2 FY3/24	YoY		
	Amount	Amount	Amount	Pct. change (%)	
Net sales	97,505	105,494	7,989	8.2	Net sales: +8.2% YoY Gross income: -0.7% ✓ Sales of semiconductors and other equipment (-5.5%) was covered by electronic devices (+42.3%) and others, but gross income declined.
Cost of sales	62,967	71,182	8,215	13.0	✓ Boosted by consolidating Ohizumi Mfg. and Toyo Knife, respectively. (Sales and income of Ohizumi Mfg. were reflected in net sales and gross income from Q2 FY3/22, Toyo Knife from Q3FY3/22)
Gross income	34,538	34,311	-227	-0.7	
SG&A expenses	17,476	21,276	3,800	21.7	Operating income: -23.6% YoY
Operating income	17,061	13,035	-4,026	-23.6	✓ Semiconductor and other equipment: -33.5% Electronic devices: +14.2%
Non-operating income	7,380	4,621	-2,759	-37.4	Ordinary income: -35.4% YoY
Non-operating expenses	888	2,438	1,550	174.5	✓ Foreign exchange gains: 5.20 billion yen to 1.73 billion yen (-3.47 billion yen)
Ordinary income	23,554	15,217	-8,337	-35.4	✓ Equity in losses of affiliates: +1.07 billion yen (including wafer and other businesses)
Extraordinary income	822	24	-798	-97.1	Net income: -47.5% YoY
Extraordinary loss	768	495	-273	-35.5	✓ Previous extraordinary income (gain on change in equity) was peeled off.
Net income attributable to non-controlling shareholders	1,989	2,923	934	47.0	✓ Extraordinary loss in this term was a loss on valuation of investment securities.
Net income attributable to owners of parent	15,979	8,390	-7,589	-47.5	✓ Non-controlling interests •Silicon parts and quartz crucibles business: 1.4 billion yen •Power semiconductor business: 1.5 billion yen •Cleaning business: 400 million yen
Capital investment*	29,909	36,291	6,382	21.3	
Depreciation	5,596	7,913	2,317	41.4	

Note: Exchange rate Q2 FY3/23=Q2 FY3/24: US\$ ¥124.52 → ¥136.54; RMB ¥19.13 → ¥19.55 (Avg. during period)

Investment amount = Total amount of tangible fixed assets, intangible fixed assets and securities to be acquired, etc.

Sales and Operating Income by Segment

Net sales (¥ in millions)	Q2 FY3/23		Q2 FY3/24		YoY	
	Amount	Pct. of sales (%)	Amount	Pct. of sales (%)	Difference	Pct. change (%)
Semiconductor and other equipment-related	63,791	65.4	60,257	57.1	-3,533	-5.5
Electronic device	23,073	23.7	32,840	31.1	9,767	42.3
Others	10,640	10.9	12,396	11.8	1,755	16.5
Total	97,505	100.0	105,494	100.0	7,988	8.2

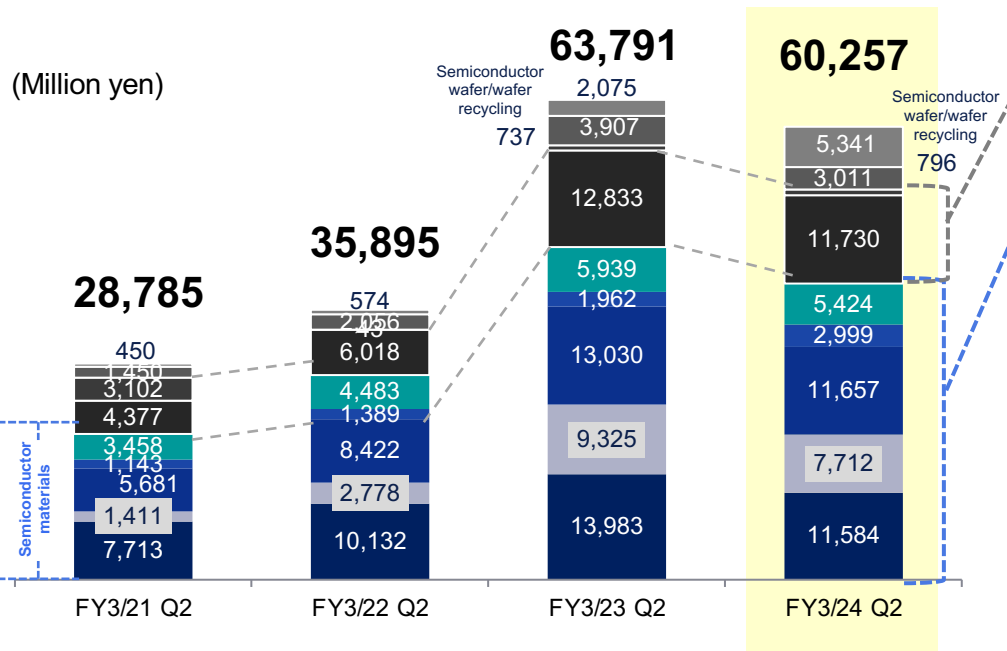
Operating income (¥ in millions)	Q2 FY3/23		Q2 FY3/24		YoY	
	Amount	Profit margin (%)	Amount	Profit margin (%)	Difference	Pct. change (%)
Semiconductor and other equipment-related	11,707	18.4	7,788	12.9	-3,919	-33.5
Electronic device	5,325	23.1	6,080	18.5	754	14.2
Others	398	3.7	-179	-	-577	-
Adjustments	-369	-	-654	-	-285	-
Total	17,061	17.5	13,035	12.4	-4,026	-23.6

Sales by Product

(Million yen)	Q2 FY3/23	Q2 FY3/24	YoY (%)
Semiconductor and other equipment-related	63,791	60,257	-5.5
Vacuum feedthroughs and metal processing	12,833	11,730	-8.6
Quartz	13,983	11,584	-17.2
Silicon parts	9,325	7,712	-17.3
Ceramics	13,030	11,657	-10.5
CVD-SiC	1,962	2,999	52.9
EB-Gun, LED	3,907	3,011	-22.9
Wafer processing (out of scope of consolidation)	84	43	-48.8
Wafer recycling	651	752	15.5
Equipment parts cleaning	5,938	5,424	-8.7
Quartz crucibles	2,074	5,341	157.5
Electronic device	23,073	32,840	42.3
Thermo-electric modules	11,546	10,640	-7.8
Power semiconductor substrates	7,919	16,103	103.3
Ferrofluid, others	485	398	-17.9
Sensor	3,123	5,697	82.4
Others	10,640	12,396	16.5
Total	97,505	105,494	8.2

Transition of sales

- Quartz
- CVD-SiC
- Wafer processing and recycling
- Silicon parts
- Equipment parts cleaning
- EB-Gun
- Ceramics
- Vacuum feedthroughs
- Quartz crucibles



Overview of this segment

▪ In the semiconductor and other equipment-related business, the sales of products for vacuum feedthroughs, metal processing, and semiconductor materials decreased year on year. In contrast, the sales of quartz crucibles and CVD-SiC increased, but this segment's sales declined by 3.5 billion yen.

Vacuum feedthroughs and metal processing, Wafer processing and recycling

• Vacuum feedthroughs and metal processing: -1.1 billion yen; due to the downturn of production of semiconductor equipment.

Stagnation of operation rate of Changshan factory

Semiconductor materials, Cleaning business

[Semiconductor materials (quartz, silicon parts, ceramics, and CVD-SiC)]

- Quartz: -2.4 billion yen; Downturn of production of semiconductors, the significant decrease of orders received due to the accumulation of customers' spare parts as stock, and stagnation of operation of Dongtai and Changshan factories.
- Silicon parts: -1.6 billion yen; Demand shrank due to the downturn of production of semiconductors and semiconductor equipment, but the performance of some special products (Si-Fusion) was healthy, supporting overall performance.
- Ceramics: -1.4 billion yen; The number of orders received dropped, due to the downturn of production of semiconductor equipment and the accumulation of customers' parts as stock.
- CVD-SiC: +1.0 billion yen; Demand and supply were stable. Sales increased due to the increase in production output of Okayama factory.

[Cleaning]

• -500 million yen; Demand declined due to the downturn of production of semiconductors.

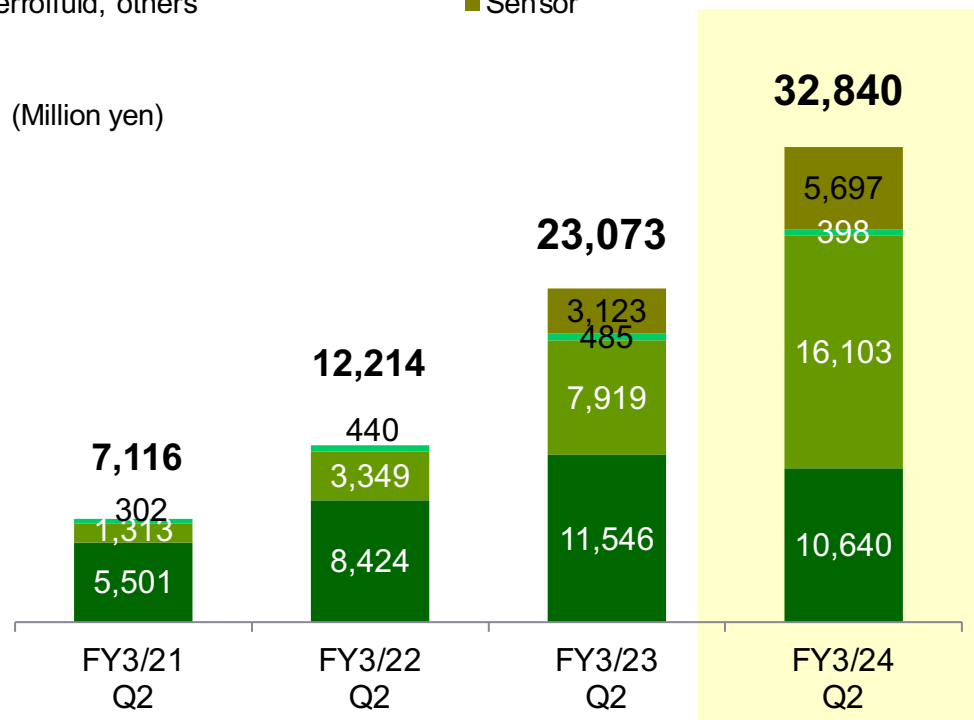
[Quartz crucibles]

• +3.3 billion yen; Inquiries about large-sized quartz crucibles for photovoltaic power generation increased steeply, and sales increased significantly by 158%.

Transition of sales

- Thermo-electric module
- Power semiconductor substrates
- Ferrofluid, others
- Sensor

(Million yen)



Overview of this segment

- In the segment of electronic devices, the sales expansion of power semiconductor substrates kept increasing, and the inclusion of Ohizumi Mfg., which specializes in sensors, produced some effects, so sales increased 9.8 billion yen year on year.

[Thermo-electric modules]

- - 900 million yen; The demand for products for telecommunication equipment and medical examination equipment subsided.

[Power semiconductor substrates]

- +8.2 billion yen; Sales of DCB and AMB substrates kept growing.

Sales increased significantly, thanks to the favorable demand for products for EVs and automobiles and the investment for increasing production output.

[Sensors]

- +2.6 billion yen; Sales increased due to the consolidation of Ohizumi Mfg. (Q2 FY3/23).

Consolidated balance sheet -assets-

(Million yen)	FY3/23 Year-end	FY3/24 End-Sep.	Difference
Current assets	215,341	246,956	31,615
Cash & deposits	103,115	120,052	16,937
Note & accounts receivable	53,276	58,172	4,896
Inventories	49,177	57,367	8,190
Fixed assets	195,306	229,619	34,313
Tangible fixed assets	139,610	171,219	31,609
Buildings and structures	38,080	41,787	3,707
Equipment and machinery	44,171	49,784	5,613
Tools, furniture, and fixture	5,984	6,523	538
Land	4,451	4,767	316
Leased assets (net)	11,009	11,521	511
Construction in progress	35,913	56,835	20,922
Intangible fixed assets	6,949	6,658	-291
Goodwill	2,304	2,202	-102
Investments & other assets	48,745	51,741	2,996
Total assets	410,648	476,576	65,928

[Major factors for increase in current assets]

- Cash and deposits: +16.9 billion yen (FTHD +6.9 billion yen, etc.)
- Trade receivables and inventories increased due to an increase in sales.

[Major factors for increase in tangible fixed assets]

- Continue active investment in each business.
Tangible fixed assets: +31.6 billion yen
(Malaysia FTMM: +5.1 billion yen, Changshan ceramics and silicon parts: +5.7 billion yen, Sichuan power semiconductor substrates: +3.8 billion yen, Yinchuan FTNC quartz crucible and others: +4.6 billion yen, etc.)

[Major factors for increase in investments and other assets]

- Investments in shares of affiliates and others: +3.0 billion yen

Consolidated balance sheet -Liabilities and net assets-

(Million yen)	FY3/23 Year-end	FY3/24 End-Sep.	Difference
Current assets	111,294	112,569	1,275
Notes and accounts payable	40,524	35,973	-4,550
Short-term debt	20,378	23,461	3,083
Current portion of long-term borrowings + bonds	15,825	18,828	3,003
Fixed assets	49,697	92,172	42,475
Bonds	4,083	684	-3,399
Convertible bond-type bonds with share acquisition rights	-	25,000	25,000
Long-term debt	26,432	45,461	19,029
Total liabilities	160,991	204,741	43,750
Net assets	249,656	271,834	22,178
Shareholder's equity	166,955	172,978	6,023
Total accumulated other comprehensive income	16,773	26,958	10,184
Non-controlling interests	65,887	71,865	5,978
Total liabilities & net assets	410,648	476,576	65,928
Equity ratio	44.7%	42.0%	-2.7pt

[Major factors for changes in current and fixed liabilities]

Convertible bond-type bonds with share acquisition rights: +25.0 billion yen	
Long-term debt: +19.0 billion yen	
Total interest-bearing debt: +46.7 billion yen	

[Major factors for changes in net assets]

- Shareholder's equity: +6.0 billion yen (retained earnings: +5.8 billion yen)
- Total accumulated other comprehensive income: +10.2 billion yen (Foreign currency translation adjustment: +9.9 billion yen)
- Non-controlling interests: +6.0 billion yen (power semiconductor substrates: +2.6 billion yen, silicon parts and quartz crucibles: +2.1 billion yen, cleaning: +900 million yen)

[Equity ratio]

Equity ratio: 42.0%

Note: Exchange rate End-FY3/23⇒End-Q2 FY3/24: US\$ \132.70 → ¥ 144.99; RMB \19.01 → \ 19.94 (Avg. during period)

Consolidated cash flow

(Million yen)	Q2 FY3/23	Q2 FY3/24
Cash flow from operating activities	20,988	6,789
Income before income tax	23,608	14,747
Depreciation	5,596	7,913
Foreign exchange loss (-: gain)	-2,000	-609
Changes in notes & accounts receivable (-: increase)	-3,288	-830
Changes in inventories (-: increase)	-5,091	-5,271
Changes in notes and accounts payable-trade (-: decrease)	-2,271	-7,532
Loss on change in equity (-: gain)	249	1,324
Others	4,184	-2,952
Cash flow from investing activities	-28,783	-29,101
Payments for purchase of tangible fixed assets	-24,852	-33,235
Proceeds from sales of tangible fixed assets	168	123
Payments for purchase of intangible fixed assets	-76	-187
Others	-4,023	4,198
Cash flow from financing activities	32,461	41,659
Changes in short-term debt	4,170	2,177
Proceeds from long-term borrowings	14,366	28,322
Payments of long-term borrowings	-3,717	-7,328
Proceeds from share issuance	-1,434	-3,724
Proceeds from issuance of convertible bond-type bonds with share acquisition rights	-	24,898
Proceeds from share issuance to non-controlling shareholders	20,515	-
Others	-1,439	-2,685
Changes in cash and cash equivalents	31,192	23,761
Cash and cash equivalents, beginning of year	52,579	95,905
Cash and cash equivalents, end of year	83,770	119,666

[Operating cash flow]

Income before income taxes + depreciation and amortization: 22.7 billion yen

Changes in notes and accounts receivable, inventories: -6.1 billion yen (Due to an increase in sales)

Changes in notes and accounts payable-trade: -7.5 billion yen

[Investing cash flow]

Purchase of tangible fixed assets: -33.2 billion yen (Malaysia FTMM: 4.7 billion yen, Changshan ceramics and silicon parts: +4.6 billion yen, Sichuan power semiconductor substrates: +3.6 billion yen, Yinchuan FTNC quartz crucibles and silicon parts: 5.4 billion yen, etc.)

[Financial cash flow]

Proceeds from long-term borrowings: 28.3 billion yen

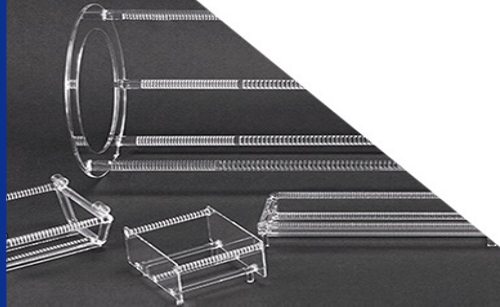
Convertible bond-type bonds with share acquisition rights: 24.9 billion yen



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FY3/24 Full-year Business Forecasts



FY3/24 full-year business forecasts



- Existing transactions decreased due to the downturn of the semiconductor market, the effects of customers' inventory adjustment of parts, etc. We tried to recover the performance by increasing new transactions in China, but profits declined. The sales of power semiconductor substrates and quartz crucibles did not reach the initial forecast, so we revised the forecasts of all kinds of profits downward.

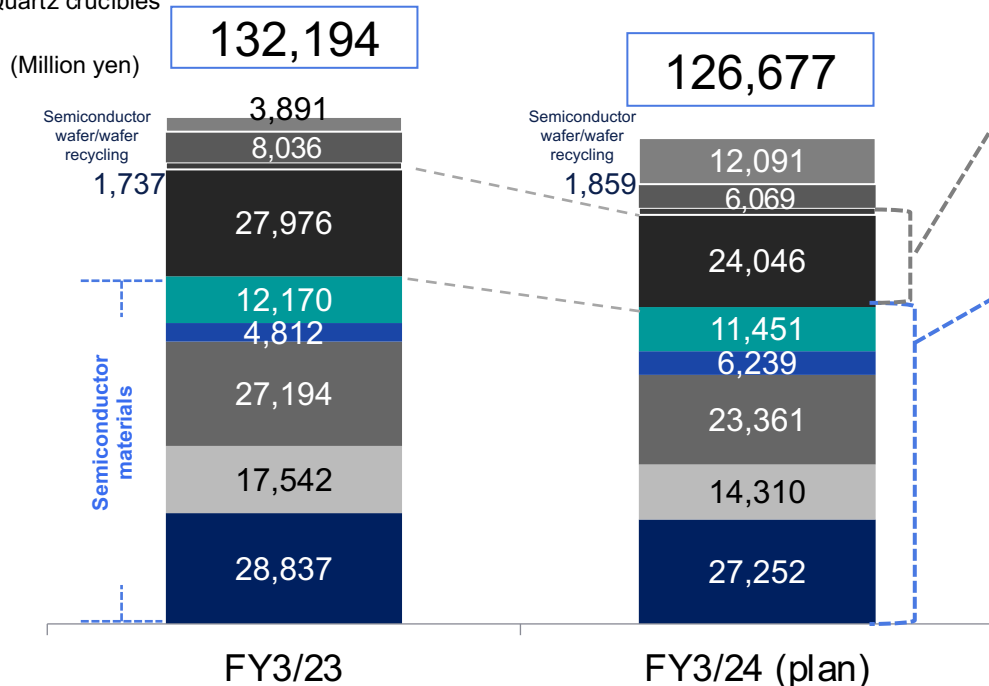
(Million yen)	FY3/23	FY3/24		Initial forecast vs. revised forecast	YoY
	Result	Initial forecast	Revised forecast		
Net sales	210,810	220,000	220,000	-	4.4%
Operating income	35,042	32,500	27,000	-16.9%	-22.9%
Ordinary income	42,448	30,000	28,000	-6.7%	-34.0%
Net income attributable to owners of parent	29,702	18,000	15,000	-16.7%	-49.5%
Depreciation and amortization	12,618	17,400	17,400	0.0%	37.9%
EBITDA	47,660	49,900	44,400	-11.0%	-6.8%
Investment amount*	62,661	96,900	96,900	0.0%	54.6%
Assumed exchange rate (average for the period)	US\$: 132.08 yen RMB: 19.50 yen	US\$: 130.00 yen RMB: 19.00 yen	US\$: 140.00 yen RMB: 19.72 yen	-	-

Note: Investment amount = Total amount of tangible fixed assets, intangible fixed assets and securities to be acquired, etc.

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Transition of sales

- Quartz
- Ceramics
- Equipment parts cleaning
- Wafer processing and recycling
- Quartz crucibles
- Silicon parts
- CVD-SiC
- Vacuum feedthroughs and metal processing
- EB-gun



Overview of this segment

*In the semiconductor and other equipment-related business, the number of orders of products for vacuum feedthroughs, metal processing, and semiconductor materials decreased significantly due to the downturn of the semiconductor market. We tried to recover the performance by increasing Chinese customers and promoting the sale of quartz crucibles and CVD-SiC, but sales are projected to decline 5.5 billion yen, year on year.

Vacuum feedthroughs and metal processing

• Vacuum feedthroughs and metal processing: -3.9 billion yen, due to the downturn of production of semiconductor equipment.

Stagnation of operation of Changshan factory

Semiconductor materials, Cleaning business

[Semiconductor materials (quartz, silicon parts, ceramics, and CVD-SiC)]

- Quartz: -1.6 billion yen; Downturn of production of semiconductors, the significant decrease of orders received due to the accumulation of customers' stock. We tried to recover the sales by promoting sales in China and increasing fire Processing, whose demand and supply are stable, but operation rate declined.
- Silicon parts: -3.2 billion yen; The number of orders decreased rapidly, due to the downturn of production of semiconductors and semiconductor equipment and the accumulation of customers' stock.
- Ceramics: -3.8 billion yen; The number of orders received dropped, due to the downturn of production of semiconductor equipment and the accumulation of customers' stock.
- CVD-SiC: + 1.4 billion yen; Demand and supply are stable. Sales increased due to the increase in production output of Okayama factory.

[Cleaning]

-700 million yen; Demand declined due to the downturn of production of semiconductors.

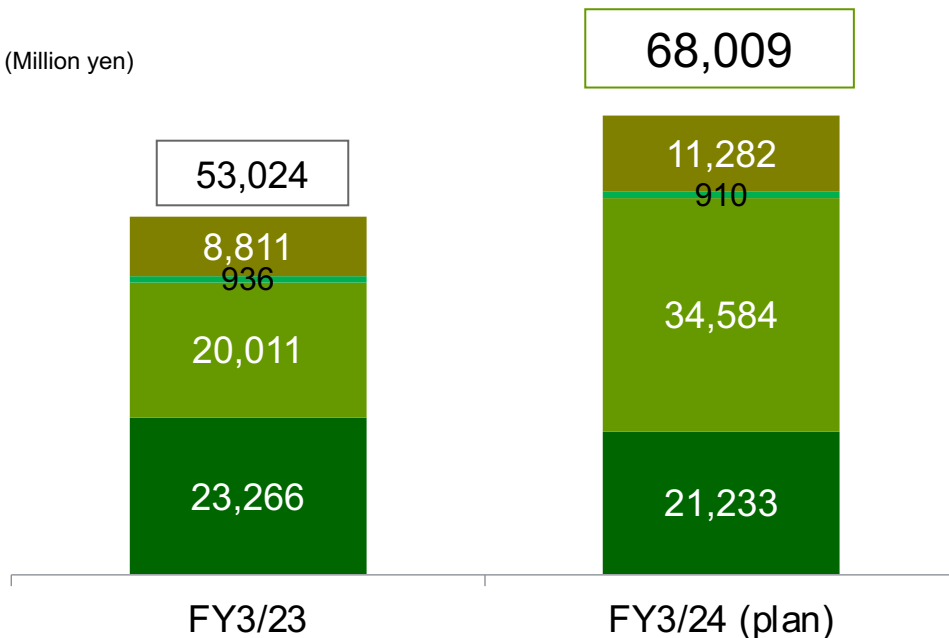
[Quartz crucibles]

+8.2 billion yen; Inquiries about large-sized quartz crucibles for photovoltaic power generation increased steeply, and sales increased significantly by 211%.

Transition of sales

- Thermo-electric module
- Power semiconductor substrates
- Ferrofluid, others
- Sensor

(Million yen)



Overview of this segment

• In the segment of electronic devices, the sales expansion of power semiconductor substrates kept increasing, and the inclusion of Ohizumi Mfg., which specializes in sensors, produced some effects, so sales increased by 15.0 billion yen year on year.

[Thermo-electric modules]

- -3.1 billion yen; The demand for products for telecommunication equipment and medical examination equipment subsided, while inquiries about Chat GPT increased.

[Power semiconductor substrates]

- +14.5 billion yen; Sales of DCB and AMB substrates kept growing.

Sales increased significantly, thanks to the favorable demand for products for EVs and automobiles and the investment for increasing production output.

[Sensors]

- +2.5 billion yen; Sales increased due to the inclusion of Ohizumi Mfg. (Q2 of FY 3/23).

Business forecasts of each segment/product for FY3/24



(Million yen)	FY3/23	FY3/24 Initial forecast	FY3/24 Revised forecast	Initial forecast vs. revised forecast	YoY Pct. change
Semiconductor and other equipment-related	132,194	125,060	126,677	1.3	-4.2
Vacuum feedthroughs and metal processing	27,976	25,250	24,046	-4.8	-14.0
Quartz	28,837	22,420	27,252	21.6	-5.5
Silicon parts	17,542	14,840	14,310	-3.6	-18.4
Ceramics	27,194	20,680	23,361	13.0	-14.1
CVD-SiC	4,812	6,450	6,239	-3.3	29.7
EB-Gun, LED	8,036	6,080	6,069	-0.2	-24.5
Wafer processing (out of scope of consolidation)	236	160	129	-19.4	-45.3
Wafer recycling	1,501	1,620	1,730	6.8	15.3
Equipment parts cleaning	12,170	11,560	11,451	-0.9	-5.9
Quartz crucibles	3,891	16,000	12,091	-24.4	210.7
Electronic device	53,024	70,720	68,009	-3.8	28.3
Thermo-electric modules	23,266	21,360	21,233	-0.6	-8.7
Power semiconductor substrates	20,011	36,010	34,584	-4.0	72.8
Ferrofluid, others	936	1,030	910	-11.7	-2.8
Sensor	8,811	12,320	11,282	-8.4	28.0
Others	25,590	24,220	25,315	4.5	-1.1
Total	210,810	220,000	220,000	0.0	4.4

FY3/24 1st half result and 2nd half estimate by account

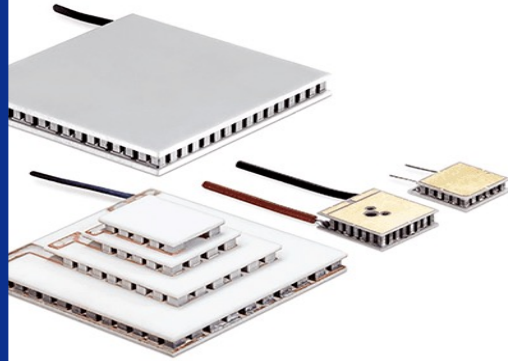


(Million yen)	FY3/24 result for 1 st half		FY3/24 estimate for 2 nd half			
	Amount	Pct. of sales (%)	Amount	Pct. of sales (%)	Difference	Pct. change (%)
Net sales	105,494	100.0	114,507	100.0	9,013	8.5
Gross income	34,311	32.5	36,993	32.3	2,682	7.8
SG&A expenses	21,276	20.2	23,028	20.1	1,752	8.2
Operating income	13,035	12.4	13,965	12.2	930	7.1
Ordinary income	15,217	14.4	12,783	11.2	-2,434	-16.0
Net income	8,390	8.0	6,610	5.8	-1,780	-21.2

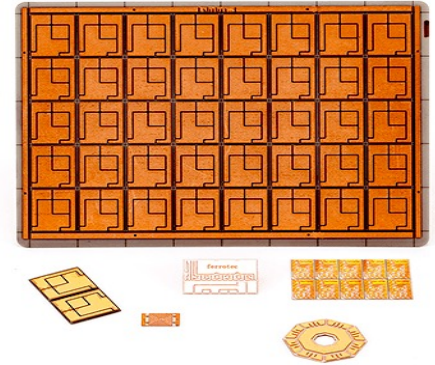
FY3/24 1st half result and 2nd half estimate by product



(Million yen)	FY3/24 result for 1 st half		FY3/24 estimate for 2 nd half			
	Amount	Pct. of sales (%)	Amount	Pct. of sales (%)	Difference	Pct. of sales (%)
Semiconductor and other equipment-related	60,257	57.1	66,420	58.0	6,163	10.2
Vacuum feedthroughs	11,730	11.1	12,315	10.8	585	5.0
Quartz	11,584	11.0	15,667	13.7	4,083	35.2
Silicon parts	7,712	7.3	6,598	5.8	-1,115	-14.5
Ceramics	11,657	11.1	11,703	10.2	46	0.4
CVD-SiC	2,999	2.8	3,240	2.8	240	8.0
EB-Gun, LED	3,011	2.9	3,058	2.7	46	1.5
Wafer processing (out of scope of consolidation)	43	0.0	86	0.1	43	100.0
Wafer recycling	752	0.7	977	0.9	224	29.8
Equipment parts cleaning	5,424	5.1	6,026	5.3	602	11.1
Quartz crucibles	5,341	5.1	6,749	5.9	1,408	26.4
Electronic device	32,840	31.1	35,169	30.7	2,329	7.1
Thermo-electric modules	10,640	10.1	10,592	9.3	-48	-0.5
Power semiconductor substrates	16,103	15.3	18,480	16.1	2,377	14.8
Ferrofluid, others	398	0.4	512	0.4	113	28.4
Sensor	5,697	5.4	5,585	4.9	-113	-2.0
Others	12,396	11.8	12,918	11.3	522	4.2
Total	105,494	100.0	114,507	100.0	9,013	8.5



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Financial Management and Capital Investment

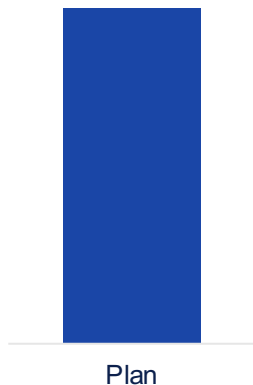


No change to the initial investment plan

- No change to the initial investment plan (96.9 billion yen in FY 3/24, a total of 195 billion yen in the medium-term management plan)
- We will keep discussing the investment in long-term growing fields, such as the segments of semiconductors and automobiles.

FY3/22 to FY3/24 Investment Plan

195.0 billion yen



[Actual investment] *Total amount of tangible fixed assets, intangible fixed assets and securities to be acquired, etc.

1. We invested 35.4 billion yen in FY3/22, 62.7 billion in FY3/23 and 36.3 billion yen in Q2 FY3/24 for a total of 134.4 billion yen.

Plans remain unchanged for the total 195.0 billion yen from FY3/22 to FY3/24 (may fluctuate due to timing of facility payments, M&A deals, etc.)

2. Continue to boost production capacity for semiconductor material products, power semiconductor substrates, etc.
3. Factories in Malaysia and Ishikawa were constructed, and the factory launch in Kumamoto has continued.

[Fund procurement records]

1. Our company's capital increase: 19.3 billion yen (Dec. 2021); Issuance of convertible bonds: 25 billion yen (Jun. 2023)
2. Our company's long-term borrowing from banks: 40 billion yen (22 billion yen in FY3/23 and 18 billion yen in cumulative 2Q of FY3/24)
3. Capital increase by the Chinese subsidiary: 69.5 billion yen (power semiconductor substrates, etc. FY3/22 to FY3/23)

[Continue investment for growth]

1. Accelerate the pace of strengthening of our global manufacturing system (enhance manufacturing bases in Malaysia and Japan).
2. Continue proactive investment in the automobile segment such as power semiconductors.
3. Continue consideration of M&A while taking into account business relevance, growth potential, etc.

Schedule of listing subsidiaries we assumed

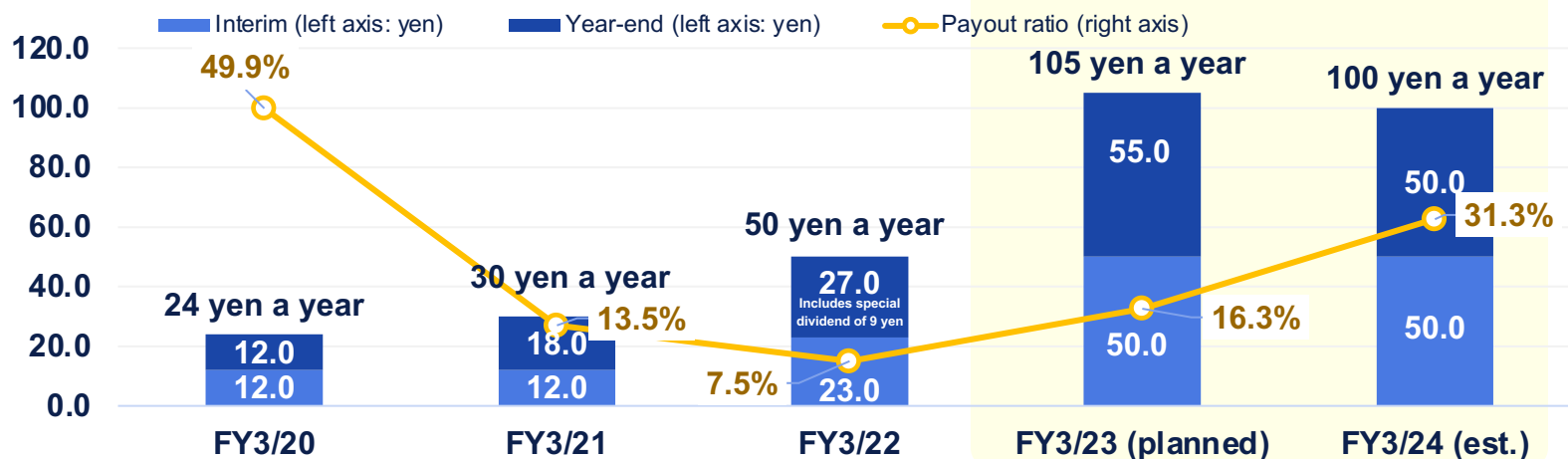
Business	Parts cleaning	Quartz crucibles and silicon parts	Power semiconductor substrates	Silicon wafer (equity method)		
Company name	Ferrotec (Anhui) Technology Development Co., Ltd.	Ningxia Danyuan Juxin Semiconductor Technology Corporation	Jiangsu Ferrotec Semiconductor Technology Co., Ltd.	Hangzhou Semiconductor Wafer Co., Ltd.		
Abbreviation	FTSVA	FTNC	FLH (formerly, FTSJ)	CCMC		
Current investment ratio	50.23%*	60.13%	55.10%	23.05%		
Stock market	ChiNext, Shenzhen	Main-Board, Shenzhen	STAR Market, Shanghai	STAR Market, Shanghai		
Listing advisor	Everbright Securities	Orient Securities Investment Banking	Huatai Securities	Haitong Securities		
Most recent valuation	220.3 billion yen (Market capitalization on Nov. 22)	113.3 billion yen	157.4 billion yen	302.7 billion yen		
Percentage of new shares to be issued	25%	25%	25%	25%		
Progress and schedule	Listing advisor registration			Oct. 20, 2021		
	Application			Aug. 11, 2020	Nov. 4, 2021	—
	Passing the screening			Jun. 28, 2021	Jun. 30, 2023	TBD
	Official approval			May 6, 2022	-	-
	Date of listing (Target)			Dec. 30, 2022	Latter half of 2024 (target)	TBD

*Investment ratio of FTSVA is based on figures after listing.

**Values are calculated based on the share price at the time of the third-party allotment since 2021. 1 yuan = 20.46 yen (2023/9/29TTM)

- The basic policy is to increase shareholder return through sustainable earnings growth.
- Decisions on dividends with an eye on a “payout ratio of 20%” and consideration of the balance between financial and investment opportunities.
- We plan to pay an annual dividend per share of 100 yen in FY3/24 (Interim dividend: 50 yen, Year-end dividend: 50 yen)
- We aim to increase corporate value by focusing on net income and continuing to strengthen ROIC management.

Variation of dividend per share



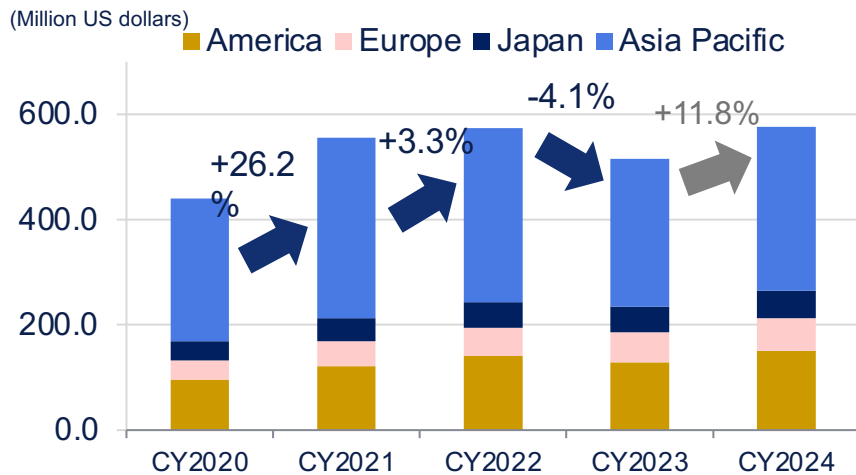


Progress of Medium-term Management Plan (No change from May 31, 2023 announcement)

Situation of the semiconductor market

- We expect demand for semiconductors to be an adjustment phase in CY2023, but we forecast the market is expected to grow again by CY2024.
- We expect to return to CY2022 levels by CY2025 in WFE (Wafer Fab Equipment) market size.

Market forecast in each region

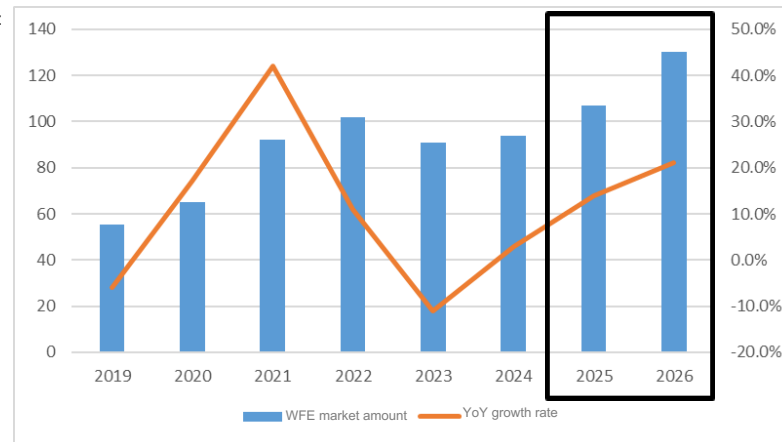


	CY2020	CY2021	CY2022	CY2023	CY2024
Total IC	440.4	556.0	574.1	515.1	576.0

Forecast of WFE (Wafer Fab Equipment) market

	2019	2020	2021	2022	2023	2024	2025	2026
WFE market amount	55.5	64.9	92.3	102.0	91.0	94.0	107.0	130.0
YoY growth rate	-6%	17%	42%	11%	-11%	3%	14%	21%

Amount: bn US\$



*Prepared by our company based on the data published by the WSTS Japan Council (Jun. 2023).

*Prepared by our company based on materials of a certain securities firm.

Business growth

- Continue to thoroughly pursue growth and to proactively make investments.
- Promote the strengthening of non-semiconductor businesses while enhancing competitiveness and increasing market share of existing businesses.
- Newly establish and strategically strengthen the automotive sector (figures to be disclosed from the 1Q of FY3/24 and make it a disclosure sector from FY3/25).
- Accelerate the pace of business and product diversification through product development and M&As.

Strengthening of our global manufacturing system

- Start operation of Malaysia base at an early stage.
- Promote “reshoring” by launching Ishikawa factory and Kumamoto factory.

Strengthening of management foundation

- Continue to strengthen quality control.
- Promote digitization, automation, AI utilization, and visualization.
- Continue to strengthen personnel.

Finance/Shareholder return

- Ensure an appropriate balance between investment opportunities and the financial standing, focus on net income and continue to strengthen ROIC management.
- Basic policy is to increase shareholder return through earnings growth and maintain payout ratio of 20%.

KPIs in the medium-term management plan

(Million yen)	Medium-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	27,000	45,000	60,000
Operating margin	16.9%	16.6%	12.3%	16.7%	16.7%
Net income	26,659	29,702	15,000	25,000	36,000
ROE	26.9%	18.9%	15% (target)		
ROIC*	15.8%	11.9%	8% (target)		
Equity ratio	49.5%	44.7%	40% (target)		
Investment amount**	35,378	62,661	96,900	Approx. 60,000	TBD
Dividend per share (annual)	50.0 yen	105.0 yen	100.0 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.

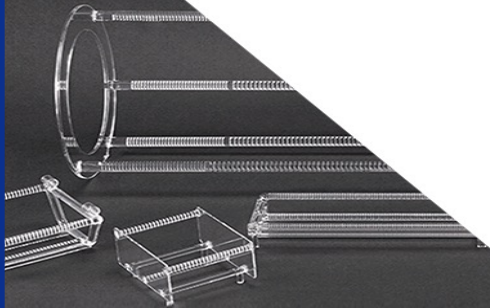
**The investment amount is the total amount of tangible fixed assets, intangible fixed assets and securities to be acquired, etc. It varies depending on M&A investment opportunities.



Ferrotec
Ferrotec Holdings Corporation



Progress of Priority Products



Semiconductor material: Seeing strong demand, we are boosting our production capacity

*The strategic products are quartz, ceramics, CVD-SiC, and silicon.

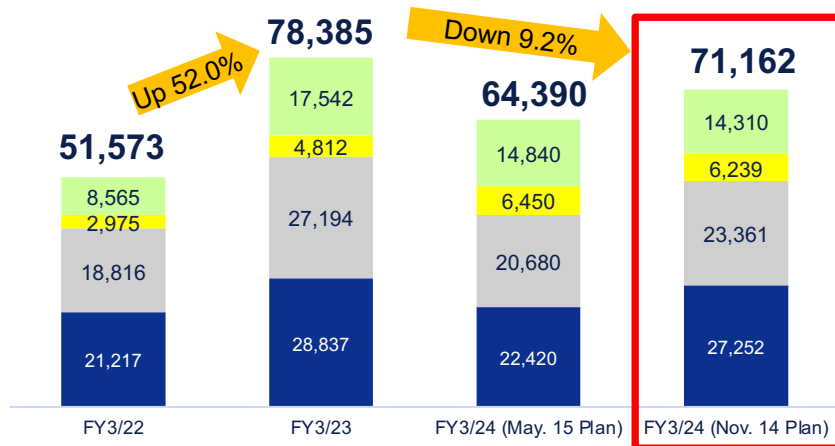


FY3/24 Sales Down 9.2% YoY

Variations in sales (FY3/22 to FY3/24)

(Million yen)

■ Quartz ■ Ceramics ■ CVD-SiC ■ Silicon



- FY3/24 sales increased 10.5% compared to the plan announced on August 14 (gradual recovery trend)
- The WFE (Wafer Fab Equipment) market year-on-year growth rate is expected to decline by 11% in 2023 (FY3/24) and increase by 3% in 2024 (FY3/25).
- We will continue to expand the production capacity of each product in anticipation of market expansion from 2025 onward (FY3/26).

Quartz: New factories in Malaysia (Kulim) and Kumamoto

Ceramics: New factories in Malaysia (Kulim) and Ishikawa

***CVD-SiC: Okayama and Changshan (new factories)**

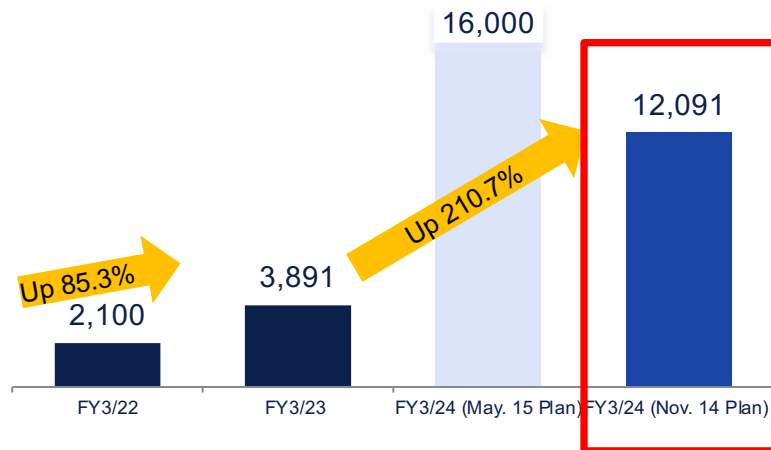
Silicon: Production to be increased in Changshan and Malaysia (Johor)



*In Yinchuan, we are conducting the quartz crucibles business for semiconductors and solar cells.

Variations in sales (FY3/22 to FY3/24)

(Million yen)

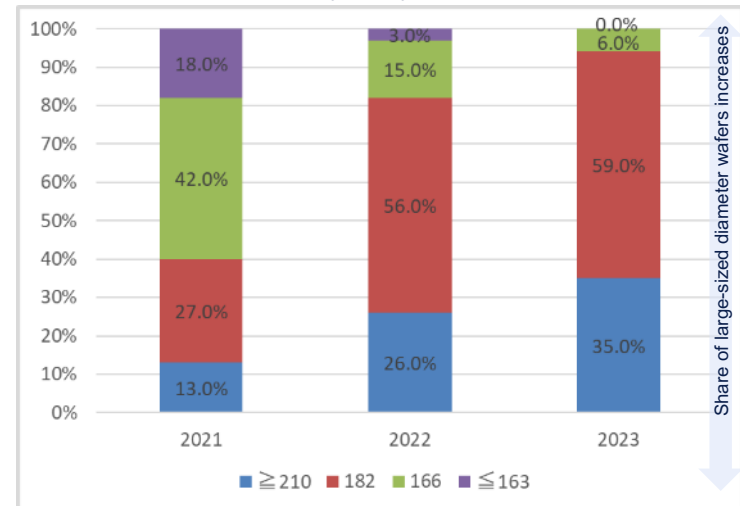


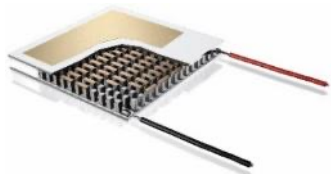
Sales increased in FY3/24, up 210.7% year-on-year, but sales increase is expected to adjust because of supply and demand slowdown in the solar cell market in the second half.

- The trends to increase the quartz crucible diameter sizes to support the increase in wafer diameter sizes as well as to expand the introduction volume in the solar cell market have become striking. We are investing to increase production capacity in our Yinchuan factory.

Forecast of market share by solar cell wafer size (in mm)

*The figures for 2022 to 2023 are a forecast. Prepared by our company based on information from PV Infolink.



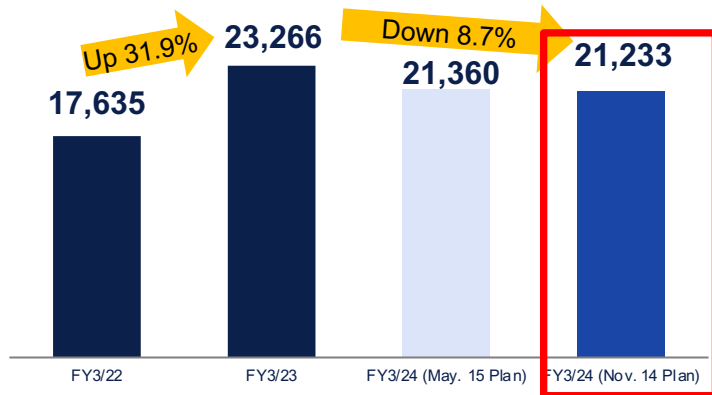


Thermo-electric modules



New product: Cooling chiller

(Million yen) Variations in sales (FY3/22 to FY3/24)

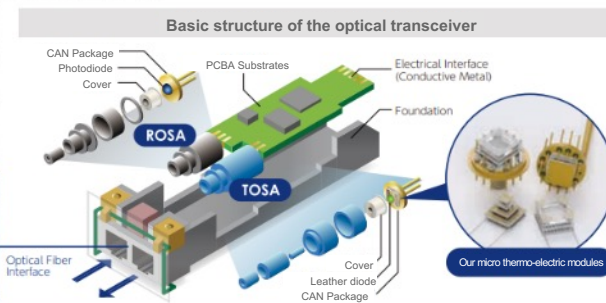
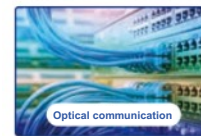
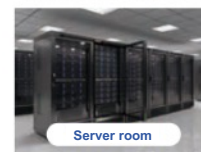


Sales increased in FY3/24, down 8.7% year-on-year.

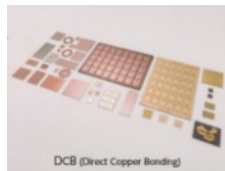
- In FY3/24, sales of PCR testing equipment, consumer electronics, and the semiconductor field have reached a peak (sales are expected to increase again from FY3/25).
- Demand for optical transceivers for generation AI is expected to grow from FY3/25 onward.
- In terms of our new cooling chiller, we have prepared a lineup of multiple models with a thermo-module (Peltier) method and compressor method. We are working to expand sales in the fields of machine tools and medical equipment in addition to the field of semiconductors.

Current Status of Thermo-electric Modules Expansion and Future Outlook

Our micro thermo-electric modules are used in optical transceivers (100GB, 400GB, 800GB, and 1.6TB*planned) for large-volume data transmission due to the popularization of generation AI. The top share in micro thermo-electric modules.



In optical communications, TOSA transmits data and ROSA receives data; the laser diode in the TOSA converts electrical signals into optical signals for transmission, and the photodiode in the ROSA converts the received optical communications into electrical signals. Such a device that converts electrical and optical signals is called an optical transceiver.

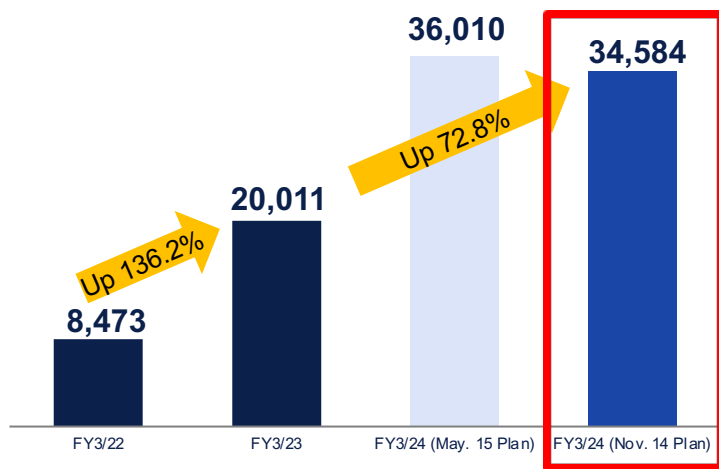


*Research institute for power semiconductors in Dongtai (to strengthen development of next-generation products)

*A new factory in Malaysia (Johor) will be completed in 2024.

(Million yen)

Variations in sales (FY3/22 to FY3/24)

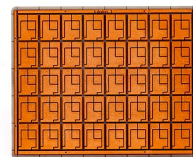


Sales increased in FY3/24, up 72.8% year-on-year.

- FY3/24 sales decreased 4.0% compared to 8/14 calculations, slight slowdown expected in the second half.
- A new factory in Neijiang will be completed in July 2023. A factory in Malaysia (Johor) will be completed in 2024.
- Production capacity:
 - ① **Factories in Shanghai and Dongtai** increased from 1.1 million substrates to 1.6 million substrates for DCB substrates and from 200,000 substrates to 450,000 substrates for AMB substrates.
 - ② A factory in Neijiang, Sichuan increased from 500,000 substrates to 400,000 million substrates for DCB substrates
 - ③ **Johor** factory increased from 300,000 substrates to 200,000 million substrates for DCB substrates
- We will enhance the measures for selling DPC substrates with high heat resistance and high strength for optical communication, power LED products, etc.

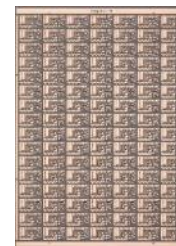
★**Demand for DCB substrates will further increase due to the global trend to reduce power consumption.**

*Sales of AMB substrate will reach a certain level for automotive applications.



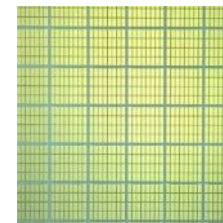
DCB substrates
(Direct Copper Bonding)

Material: Alumina ceramics



AMB substrates
(Active Metal Brazing)

Material: Silicon nitride



DPC substrates
(Direct Plated Copper)

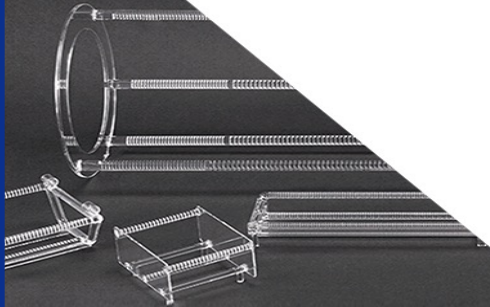
Material: Alumina ceramics, etc. and metallization (Ni, etc.)



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Recent Topics



- FTNC (Yinchuan, China), which handles silicon parts for semiconductor manufacturing equipment, whose demand is expected to grow in the medium term, and quartz crucibles solar cells.



Silicon parts



Quartz crucibles



FTNC Corporate Profile

Corporate name	Ningxia Dunyuan Juxin Semiconductor Technology Corporation
Capital stock	Approx. 3.7 billion yen
Location	Yinchuan, China
Business description	Manufacturing and sale of components for producing semiconductors, such as quartz crucibles and silicon parts
Our capital contribution ratio	60.1%: (Invested by the 100% consolidated subsidiary of our company)
Target market	Main Board of Shenzhen Stock Exchange

Kumamoto Factory (Ozu-machi); we completed the groundbreaking ceremony and the signing ceremony for the location agreement with the prefecture.

- Construction of a factory in Kumamoto, which is the center of Silicon Island Kyushu. (to be completed around August 2024)
- Our business is manufacturing quartz, a component for semiconductor manufacturing equipment, and equipment parts cleaning services.



Sep. 13, 2023 Groundbreaking ceremony

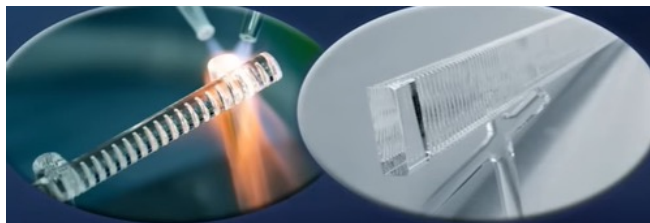


Rendering of Kumamoto Factory



Oct. 13, 2023 Signing ceremony (Kumamoto prefectural office)

Quartz (Fire processing/Machining)



Equipment parts cleaning



In the Ishikawa area, we plan to construct the new third factory following the second one **Ferrotec**

We plan to construct the third Ishikawa factory in Kawakita-machi, Ishikawa, to increase the production output of fine ceramics as components for semiconductor manufacturing equipment and machineable ceramics as jigs for inspecting wafers. (to be completed in 2024)



Ishikawa 2nd factory (Hakusan) was completed on November 2022



Rendering of Ishikawa 3rd factory (Kawakita)

Fine ceramics



Machinable ceramics



Start operation of a factory for semiconductor manufacturing equipment materials and services in Malaysia (Kulim)

■ We established Ferrotec Manufacturing Malaysia, a subsidiary for manufacturing our products, inside Kulim Hi-Tech Park, Kedah, Malaysia (near to the Penang Island) in April 2022. Its factory is scheduled to be completed around January 2024.

*Business operation oriented toward clients in Southeast Asia (quartz, ceramics, metal processing/assembly, etc.)



Our bases in Malaysia and Singapore



Scene of topping-out ceremony on May 2023



Rendering



Quartz



Ceramics



Metal processing/assembly

- We plan to manufacture power semiconductor substrates to meet the needs for local production and local consumption from Japanese and European power semiconductor makers.



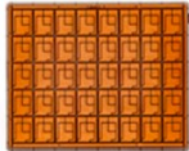
Groundbreaking Ceremony at Johor factory on Nov. 2



Planning to build a new production base in Johor

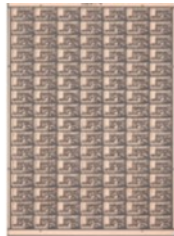
The New Factory Outline	
Investment amount	Approx. 13.7 billion yen (694,600 yuan)
Construction site	Johor Bahru, Johor, Southern Malaysia
Investment targets	Factory buildings, machinery equipment, etc.
Production capacity	DCB substrates: 300,000 substrates/month AMB substrates: 200,000 substrates/month
Schedule	To be completed in Sep. 2024 or later

Insulating substrates for power semiconductors



DCB substrates (Direct Copper Bonding)

Material: Alumina ceramic



AMB substrates (Active Metal Brazing)

Material: Silicon nitride

Silicon parts for semiconductor manufacturing equipment will also be manufactured on the same site.



China: We are increasing production capacity by constructing our new factories

Changshan,
Zhejiang

Second factory: Increasing production output



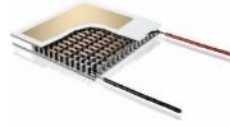
Third factory: To be completed in 2023



Quartz



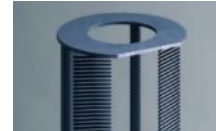
Metal
processing



Thermo-electric
modules



Ceramics



Silicon parts



CVD-SiC

Neijiang, Sichuan

To be completed on July 2023

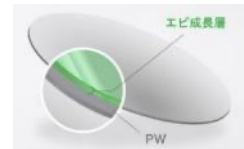


Lishui, Zhejiang

Completed in 2022



Power semiconductor
substrates



Si epitaxial wafer

- Timely disclosure: 1. The Tender Offer for the Share Certificates of Ohizumi Mfg. Co., Ltd.
2. The Establishment of a New Company for the Sensor Business in Lishui, Zhejiang, China

Disclosed on November 10, 2023

Notice of the Commencement of the Tender Offer for the Share Certificates of Ohizumi Mfg. Co., Ltd. (Securities Code: 6618)

Announced the tender offer for share certificates to make a consolidated subsidiary (shareholding ratio: 51.0%) Ohizumi Mfg. (6618: TSE Growth) a wholly owned subsidiary

Purchase price: 1,300 yen per share

Acquisition cost: Approx. 5.9 billion yen assuming 1,300 yen (plan)

Thermistors/Temperature sensors



Disclosed on November 14, 2023

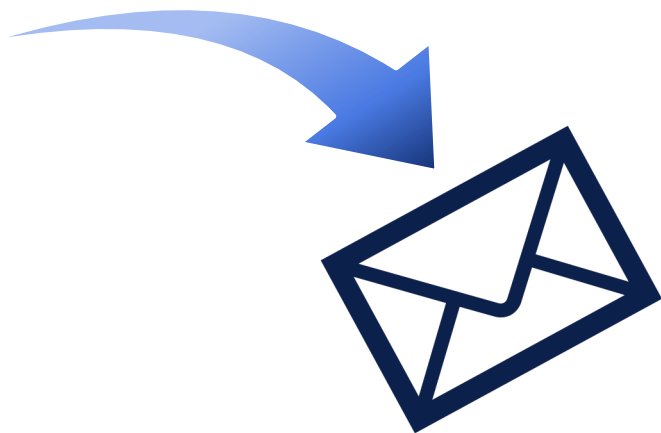
Notice of the Establishment of a New Company (Specified Subsidiary) for the Sensor Business in Lishui, Zhejiang, China

We establish a new company (specified subsidiary) for the sensor business in Lishui, Zhejiang, China as a joint venture between Shanghai Shenhe Investment Co., Ltd. (abbreviation “FTS”), which is a subsidiary managing the business in China, and enterprises affiliated with Lishui City.

The New Company for the Sensor Business Outline

Corporate name	Ferrotec (Zhejiang) Information Technology Co., Ltd.
Capital stock	2 billion yuan (approx. 41.5 billion yen)
Location	Economic Development Zone, Liandou District, Lishui City, People's Republic of China
Business description	Manufacturing and sale of electronic materials, such as sensors, development of related technologies, etc.
Our capital contribution ratio	We are 51.0%: (100% owned by a consolidated subsidiary), Lishui Nancheng New District Investment and Development Co., Ltd.: 29.0% Lishui Gaoke Financial Investment Shareholding Company: 20.0%

Our IR news is posted on the web portal "IRSTREET" in Japanese and English, and delivered by e-mail.
Please check the link below.



■ Sign up in Japanese

[https://ircms.irstreet.com/member_registration/new_u.php?site=1&language=1&brand_selection=0®ist_brand_select\[\]=85](https://ircms.irstreet.com/member_registration/new_u.php?site=1&language=1&brand_selection=0®ist_brand_select[]=85)

■ Sign up in English

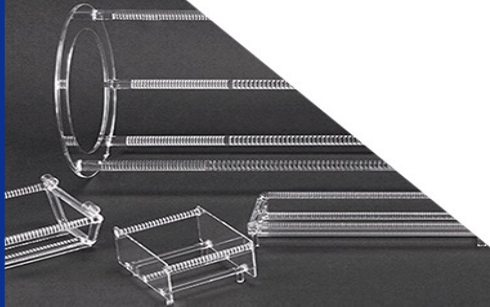
[https://ircms.irstreet.com/member_registration/new_u.php?site=2&language=2&brand_selection=0®ist_brand_select\[\]=85](https://ircms.irstreet.com/member_registration/new_u.php?site=2&language=2&brand_selection=0®ist_brand_select[]=85)



Ferrotec
Ferrotec Holdings Corporation



Appendix



Jigs and consumables for semiconductor manufacturing equipment (our mainstay material products)



Quartz



Silicon parts



Ceramics



CVD-SiC

Our strengths: Not only capital investment-linked products (vacuum feedthroughs), but also a lineup of **repeat consumables (materials)** and services (cleaning and wafer recycling) **linked to the production and operation of semiconductor device manufacturers**



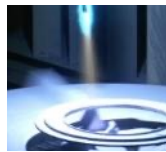
Vacuum feedthroughs

*Semiconductor and FPD production equipment parts (Market share: 65% (largest))



Metal precision machining

*Growth forecast due to increase in future customers (factories) in China



Equipment parts cleaning

*Focus on the Chinese market



Quartz crucibles

*For semiconductors and solar cells



Wafer recycling

*Focus on the Chinese market (New business launched in FY3/22)

Businesses at equity-method affiliates



Silicon wafers

*Monthly production capacity: 6-inch: 420 thousand, 8-inch: 450 thousand, 12-inch: 30 thousand (increased from 100 thousand to 200 thousand)



SiC wafers

*Development and mass-production (New business launched in FY3/22)

Line-up of our electronic device-related products

Thermo-electric modules



*As temperature adjustment devices, thermo-electric modules are increasingly used in the fields of automobiles, semiconductor manufacturing equipment, communications, medical biotechnology, consumer products, etc.
(Market share: 36% (largest))



Usage increased for PCR tests
Necessary to check the existence of pathogens that cannot be observed with a microscope by using DNA amplification

Insulating substrates for power semiconductors



*In response to **the global trend of power consumption reduction**, the demand from clients needing power semiconductors is growing.
(DIRECT COPPER BONDING technology for bonding a copper circuit to an alumina ceramics substrate)

Application of power semiconductors



Ferrofluid



*Used in a wider range of fields, including automobile speakers, high quality sound TV speakers, and smartphone vibration
(Market share: 80% (largest))

Temperature sensors (thermistors) *Ohizumi Mfg.



*Thermistors are semiconductor ceramics that change resistance significantly according to temperature changes. They are broadly used as temperature sensors for automotive devices, home appliances, optical communications, etc. The demand for them is growing thanks to the electrification of vehicles and digitalization.

Sales expansion policy for automotive devices in response to the growth of the EV market

- We expect sales to increase to about 27.7 billion yen in FY3/24 due to the growth of power semiconductor substrates and temperature sensors thanks to an increase in demand for electric vehicles (EVs).
- We will consider a further strategic expansion against a background of favorable conditions in terms of an expansion in the EV market and progress in autonomous driving.

Our lineup of products that can be expanded business for automotive use



Power semiconductor substrates

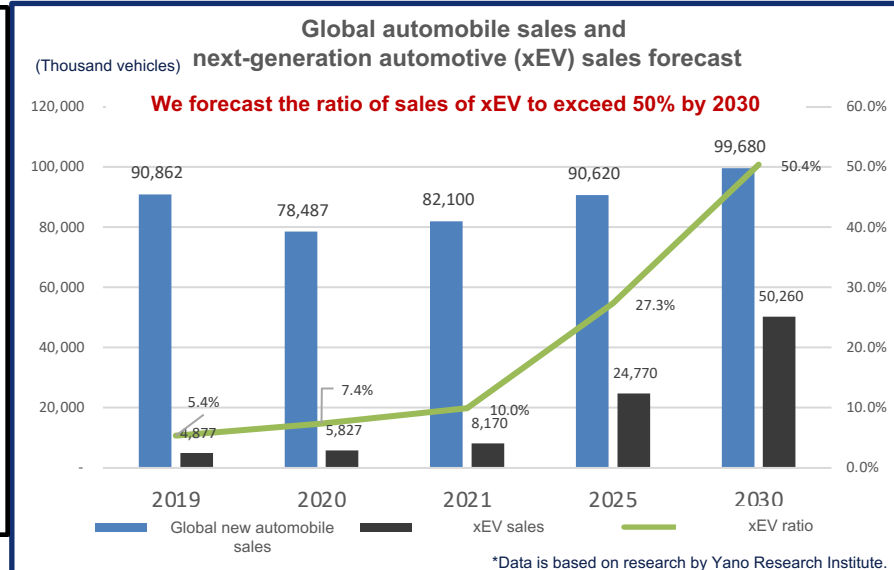
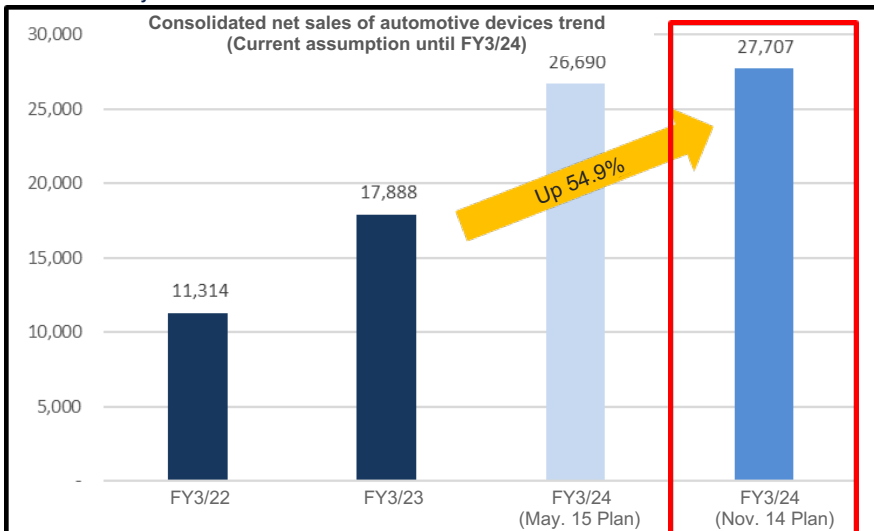


Thermo-electric modules



Sensors

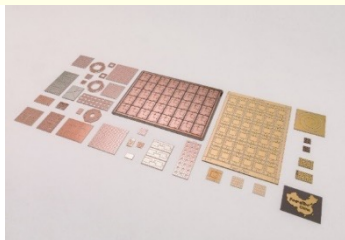
Amount: Million yen



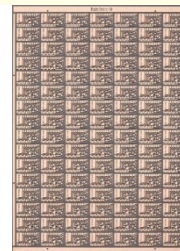
*The above figures are for those which correspond to net sales for automotive devices among the electronic devices business.

Fortification of our business portfolio: Business expansion in the non-semiconductor manufacturing equipment field

In the electronic device business, the manufacturing of “insulating substrates for power semiconductors” became a major business following the global energy-saving trend, like “thermo-electric modules,” temperature-control devices, which are increasingly adopted in many fields.



- DCB substrates
- Alumina ceramics
- Industrial machinery and home appliances



- AMB substrates
 - Silicon nitride and aluminum
 - Electric vehicles (EVs) and railroad cars
- *Demand expanded steeply due to the growth of the EV market

- The following two companies, which have become consolidated subsidiaries, aim to expand their businesses in the medium term.
 - Ohizumi Mfg. Co., Ltd. promotes temperature sensors for automotive devices and air-conditioners and thermistors (elements) in the optical communication field.
 - Toyo Knife Co., Ltd. will further cultivate Japanese and Chinese markets for industrial knives mainly in the information industry.

Thermistor

Electronic devices

Semiconductor ceramics sensitive to temperature changes

Thermistors are semiconductor ceramics that change resistance significantly according to temperature changes. By utilizing this characteristic, thermistors are broadly used as temperature sensors for automotive devices, home appliances, optical communications, etc. The demand for thermistors is growing thanks to the electrification of vehicles and digitalization. Ohizumi Mfg. supplies high-quality thermistors to global first-tier enterprises as the largest maker in the niche market of thermistors.

“Thermistor” is a word coined from “thermally sensitive

OHIZUMI



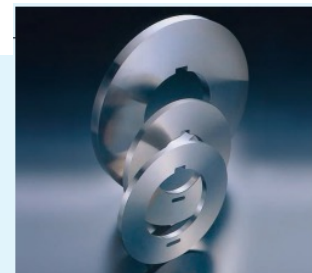
Both companies will enhance their production capacities and promote automation (maximizing the synergy with Ferrotec).

Industrial knife

Other

Toyo Knife Co., Ltd. manufactures knives for machinery for manufacturing electronic components of smartphones, automobiles, cardboard, etc. Based on the technologies and quality nurtured since 1925 as its strengths, it provides knives for machinery suited for all kinds of materials, including those in the information industry, steel, paper, lumber, and food ingredients, to meet the requests from customers.

東洋刃物株式会社
TOYO KNIFE CO., LTD.



“Digitalization, automation, and visualization” of production sites throughout our corporate group

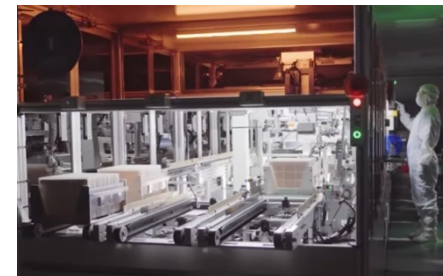
- Various systems, including ERP and MES, have been installed in production bases in China, thereby visualizing and streamlining production processes, and improving quality (utilization of AI and adoption of robots).
⇒To enhance the investment in automation also in the new bases in Japan and Malaysia (cross-sectoral promotion)



Automatic conveyance system



Automatic warehouse system



Automatic inspection equipment

To promote the DX of manufacturing processes to improve productivity and quality

Strengthening human resources: Secure outstanding human resources and deploy measures to develop human resources in Japan and overseas.

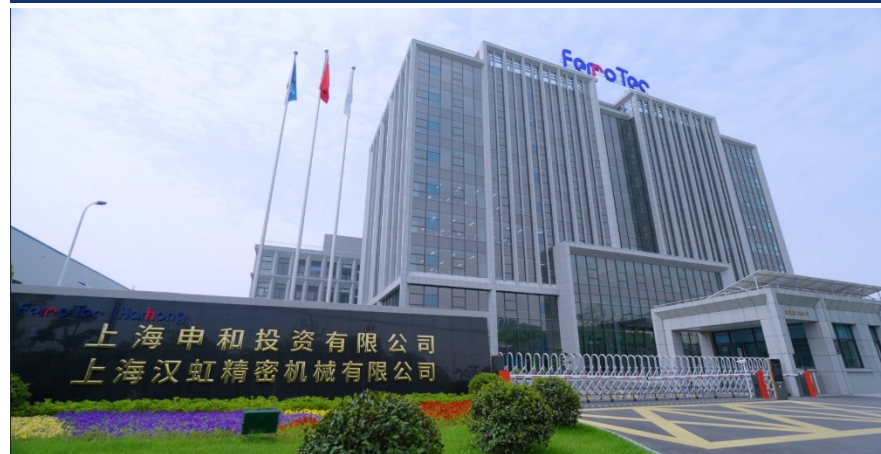
- ◆ We will strengthen branding and strive to secure excellent human resources in areas where business is expanding (Japan, China, Malaysia, etc.)
- ◆ We will position 2023 as a “year of learning” within our group. We will work to build a corporate culture in which we are always learning about the latest technologies and knowledge to innovate technologies and create new products.

Japan: We will strengthen branding from June onward focused on areas where we are expanding business such as Ishikawa and Kumamoto to secure excellent human resources (improve the recognition of our group with TV commercials and station signage advertisements).



China: We will construct a new building in Shanghai to integrate the functions of our Chinese headquarters. We will enhance R&D personnel recruitment in Shanghai and branding in China.

*We will strengthen relationships with universities and research institutions in China to secure excellent human resources.



Our long-term target remains the same as last time at 500 billion yen in net sales.

Our long-term target remains unchanged.

Net sales of **500** billion yen and a net income of **50** billion yen in **FY2030**



- The forward-looking statements in this document are based on information available as of the date of publication of this document and assumptions concerning uncertain factors affecting future results.
- Actual results may differ materially from these forecasts due to various factors. Such factors include, but are not limited to, international conditions, economic conditions, product supply and demand trends, raw material prices, market conditions, and exchange rates.
- Quantitative targets and capital investments in these materials represent medium-to long-term strategies and visions, and are not performance forecasts. We undertake no obligation to update any information with respect to these matters.
- For official forecasts, please refer to the disclosure of financial results based on the Tokyo Stock Exchange Regulations.

<Inquiries>

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