

FURUKAWA

FURUKAWA CO., LTD.

Financial Results Briefing for the Second Quarter Ended September 30, 2022

November 25, 2022

[Number of Speakers]

3

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Greetings from President & Representative Director Minoru Nakatogawa.

Nakatogawa: Hello, everyone. I'm Nakatogawa, President of FURUKAWA CO., LTD. Thank you for taking time out of your busy schedule to attend our financial results briefing today.

Since our founding in 1875, we have undergone significant changes and are now focused on our core businesses of machinery and materials, and we are working to enhance our investor relations to better inform our investors.

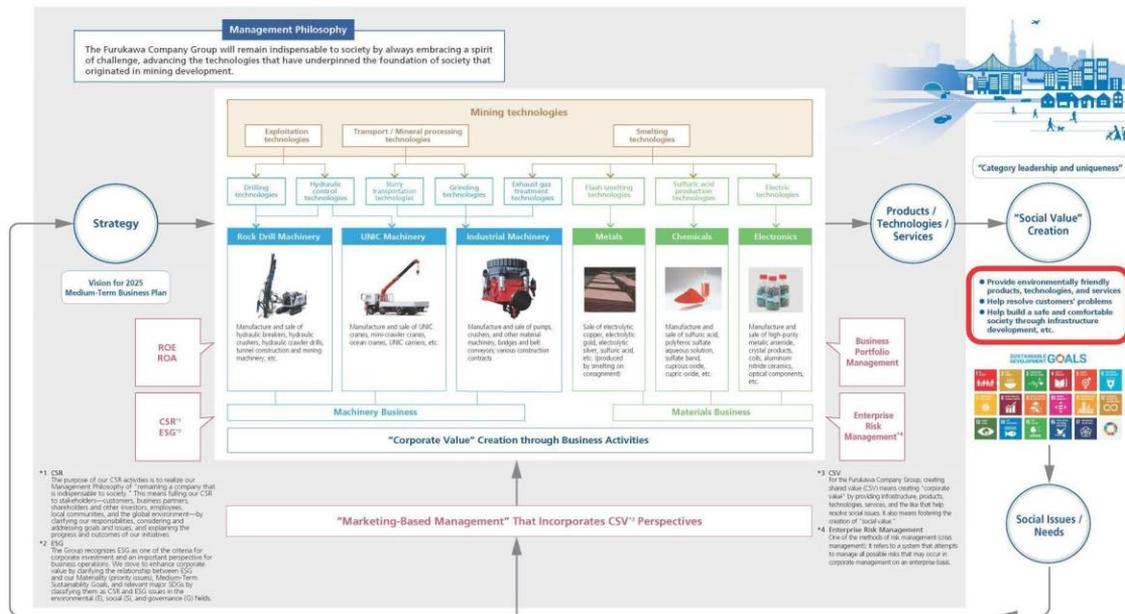
As same as in the previous session, this briefing will be streamed live online.

1. FURUKAWA Company Group's Value Creation Process
 2. Financial Results for the FY2022 Q2 & Financial Forecasts for the FY2022 (Consolidated)
 3. Main Achievements and Issues by Segments
 4. Identified Materiality (Key Issues)
 5. Topics
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- Appendix

1. FURUKAWA Company Group's Value Creation Process



Based on the Group's management philosophy, we have evolved and developed our copper mine development technology into a variety of technologies, with machinery and materials at the core of our business. And now, through marketing management that incorporates a CSV perspective, we aim to create not only corporate value but also social value and continue to be a company that is needed by society.



Before explaining our financial results, I would like to explain our value creation process.

Based on the management philosophy described herein, the Group has evolved and developed our copper mine development technology into a variety of technologies, with machinery and materials at the core of our business.

Among these, we have positioned the machinery business as our core businesses. And now, through marketing management that incorporates a CSV perspective, we aim to create corporate value and social value and continue to be a company that is needed by society.

Among the materiality (key issues) that will be explained later, we have identified three materiality issues related to solving social issues through our business, circled in red in this diagram, and we will contribute to the creation of social value through them.

2. Financial Results for the FY2022 Q2 & Financial Forecasts for the FY2022 (Consolidated)

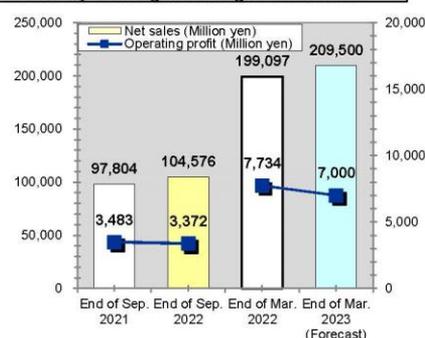
[Financial Results]

		End of Sep. 2021	End of Sep. 2022	Difference	End of Mar. 2022	End of Mar. 2023 (Forecast)	VS End of Mar. 2022 Difference
Net sales	Million Yen	97,804	104,576	6,771	199,097	209,500	10,402
Operating profit	Million Yen	3,483	3,372	-111	7,734	7,000	-734
Operating margin	%	3.6	3.2	-0.3	3.9	3.3	-0.5
Ordinary profit	Million Yen	4,089	5,219	1,129	8,996	6,900	-2,096
Profit attributable to owners of parent	Million Yen	2,311	3,448	1,137	6,477	4,700	-1,777

*The forecast for the fiscal year ending March 2023 remains unchanged from the forecast announced on August 9, 2023, with no change in the total amount of net sales and operating profit. Although foreign exchange gains are expected, the forecast remains unchanged, due to the unpredictability of foreign exchange fluctuations.

[Financial Conditions]

		End of Mar. 2022	End of Sep. 2022	Difference
Total assets	Million Yen	229,727	245,362	15,634
Net assets	Million Yen	100,075	102,212	2,137
Equity-to-asset Ratio	%	42.3	40.4	-1.9
Net assets Per share	Yen	2,505.01	2,602.17	97.16



This is the summary of financial results for Q2 of the fiscal year ending March 2023 and forecast for the fiscal year ending March 2023.

The YoY changes for Q2 of the fiscal year ending March 2023 are a JPY6.7 billion increase in net sales to JPY104.5 billion, a JPY0.1 billion decrease in operating profit to JPY3.3 billion, and a JPY1.1 billion increase in ordinary profit to JPY5.2 billion as a result of JPY2.1 billion in foreign exchange gains and other items recorded under non-operating income. Profit attributable to owners of parent increased by JPY1.1 billion YoY to JPY3.4 billion.

The financial situation is as shown.

The forecast for the fiscal year ending March 2023 remains unchanged from the forecast announced on August 9, 2023, with no change in the total amount of net sales and operating profit, although the segment figures have been revised, and the YoY changes are expected to be a JPY10.4 billion increase in net sales to JPY209.5 billion and a JPY0.7 billion decrease in operating profit to JPY7 billion.

Although foreign exchange gains are expected, the forecast remains unchanged at JPY6.9 billion for ordinary profit and JPY4.7 billion for profit attributable to owners of parent due to the unpredictability of foreign exchange fluctuations.

Consolidated Income Statement

(Unit: Million yen)

	End of Sep. 2021	End of Sep. 2022	Difference
Net sales	97,804	104,576	6,771
Cost of sales	85,162	91,343	6,181
(Gross profit)	12,642	13,232	590
Selling, general and administrative expenses	9,158	9,860	701
Operating profit	3,483	3,372	-111
Non-operating income	1,668	2,975	1,307
Foreign exchange gains	—	2,142	2,142
Other	1,668	832	-835
Non-operating expenses	1,063	1,128	65
Interest expenses	217	248	30
Administrative expenses of inactive mountain	432	401	-31
Other	412	479	66
Ordinary profit	4,089	5,219	1,129
Extraordinary income	107	368	260
Gain on sale of investment securities	45	362	317
Other	62	5	-57
Extraordinary losses	725	1,187	462
Loss on valuation of investment securities	176	—	-176
Demolition expenses of a rental building	466	470	3
Loss on liquidation of subsidiaries	—	348	348
Other	82	368	286
Profit before income taxes	3,470	4,399	928
Income taxes – current	996	1,380	383
Income taxes – deferred	35	-565	-600
Profit	2,439	3,584	1,145
Profit attributable to non-controlling interests	128	136	7
Profit attributable to owners of parent	2,311	3,448	1,137

Recording of a foreign exchange gain from the depreciation of the yen.

Absence of a gain on disposal of disused articles, etc. recorded in the previous fiscal year.

Expenses for the progress of demolition of the FURUKAWA Osaka Building.

Expenses associated with the settlement of two overseas sales subsidiaries in Panama and China in the Rock Drill segment.

Income statement. Net sales and operating profit will be discussed by segment later.

Ordinary profit increased due to the recording of a foreign exchange gain of JPY2.1 billion from the depreciation of the yen in non-operating income and the absence of a gain on disposal of disused articles, etc. recorded in the previous fiscal year.

Gain on sales of investment securities was recorded in extraordinary income. As a result of posting extraordinary losses including expenses for the progress of demolition of the FURUKAWA Osaka Building and expenses associated with the settlement of two overseas sales subsidiaries in Panama and China in the Rock Drill segment, profit attributable to owners of parent increased by JPY1.1 billion to JPY3.4 billion.

Consolidated Balance Sheet & Cash Flow

Consolidated Balance Sheet (Unit: Million yen)

	End of Mar. 2022	End of Sep. 2022	Difference
Assets			
Current assets	96,238	113,121	16,882
Non-current assets	133,489	132,240	-1,248
Property, plant and equipment	90,976	90,042	-934
Intangible assets	376	339	-36
Investments and other assets	42,136	41,859	-277
Total assets	229,727	245,362	15,634
Liabilities			
Current liabilities	59,859	77,579	17,720
Non-current liabilities	69,793	65,569	-4,223
Total liabilities	129,652	143,149	13,497
Net assets			
Shareholders' equity	80,570	81,205	634
Share capital	28,208	28,208	—
Capital surplus	2	2	—
Retained earnings	54,557	56,080	1,523
Treasury shares	-2,197	-3,085	-888
Accumulated other comprehensive income	16,683	17,979	1,296
Non-controlling interests	2,821	3,027	205
Total net assets	100,075	102,212	2,137
Total liabilities and net assets	229,727	245,362	15,634

Increases cash and deposits, and merchandise and finished goods, etc.

Decreases due to amortization of buildings, structures, etc.

Interest-bearing debt (Unit: Million yen)

	End of Mar. 2022	End of Sep. 2022	Difference
Short-term	8,331	24,343	16,011
Long-term	57,339	56,034	-1,305
Total	65,671	80,378	14,706

Expected to decrease to JPY61.5 billion by the end of March 2023.

Consolidated Cash Flow (Unit: Million yen)

	End of Sep. 2021	End of Sep. 2022	Difference
Cash flows from operating activities	1,224	-7,191	-8,415
Cash flows from investing activities	-3,148	-597	2,551
Cash flows from financing activities	-2,093	11,706	13,800
Cash and cash equivalents	13,973	19,181	5,207

- Consolidated cash flow from operating activities was negative, mainly due to an increase in inventories and a decrease in payables as a result of the concentration of copper ore purchases in H1.
- In terms of cash flow from financial activities, we raised short-term loans for working capital, resulting in a positive cash flow.

Next is the balance sheet.

Total assets increased by JPY15.6 billion to JPY245.3 billion and net assets increased by JPY2.1 billion to JPY102.2 billion. The main factors are as stated. Interest-bearing debt increased by JPY14.7 billion from the end of the previous fiscal year to JPY80.3 billion but is expected to decrease to JPY61.5 billion by the end of March 2023.

Consolidated cash flow from operating activities was negative JPY7.1 billion, mainly due to an increase in inventories and a decrease in payables as a result of the concentration of copper ore purchases in H1. In terms of cash flow from financial activities, we raised short-term loans for working capital, resulting in a positive cash flow of JPY11.7 billion.

Financial Results by Segment (Consolidated)



(Unit: Million yen)

Net sales	End of Sep. 2021	End of Sep. 2022	Difference	End of Mar. 2023 (Forecast)	VS End of Mar. 2022 Difference
Machinery	38,650	39,933	1,282	82,100	5,161
Industrial	8,632	7,862	-769	18,600	876
Rock Drill	15,412	18,003	2,591	35,600	4,689
UNIC	14,606	14,067	-539	27,900	-405
Materials	57,756	61,964	4,207	121,800	3,636
Metals	50,335	53,903	3,567	106,400	3,404
Electronics	3,584	3,600	15	7,000	-271
Chemicals	3,836	4,461	624	8,400	503
Real Estate	1,036	1,067	31	2,000	-115
Other	360	1,610	1,249	3,600	1,720
Total	97,804	104,576	6,771	209,500	10,402

	End of Sep. 2022	VS End of Sep. 2021 Difference
LME Copper Price	8,634 \$/ton	-907 \$/ton
JPY rate per US\$	134.0 ¥/\$	24.2 ¥/\$

	FY2022 (Forecast)	VS FY2021 Difference
LME Copper Price	8,067 \$/ton	-1,624 \$/ton
JPY rate per US\$	137.0 ¥/\$	24.6 ¥/\$

Operating profit	End of Sep. 2021	End of Sep. 2022	Difference	End of Mar. 2023 (Forecast)	VS End of Mar. 2022 Difference
Machinery	2,093	1,882	-210	5,200	520
Industrial	337	13	-324	1,500	103
Rock Drill	404	1,057	653	2,500	1,382
UNIC	1,351	811	-539	1,200	-965
Materials	1,091	1,175	84	1,300	-1,049
Metals	452	492	40	500	-440
Electronics	228	321	92	300	-366
Chemicals	410	361	-48	500	-243
Real Estate	361	424	62	700	-43
Other	-30	-59	-29	-100	-117
Adjustment	-32	-50	-18	-100	-45
Total	3,483	3,372	-111	7,000	-734

Regard to exchange rate sensitivity. Operating income increase annually about ¥100 million due to ¥1 week to US dollar.

- Increase about ¥60 million in Machinery business (mainly Rock Drill)
- Increase about ¥40 million in Metals segment

Regarding results by segment, sales for Q2 of the fiscal year ending March 2023 decreased in the Industrial Machinery and UNIC segments but increased mainly in the Rock Drill and Metals segments, resulting in an overall increase in sales.

The overall machinery business sales increased by JPY1.2 billion to JPY39.9 billion, and the overall materials business sales increased by JPY4.2 billion to JPY61.9 billion.

Operating profit increased mainly in the Rock Drill segment but decreased in the Industrial Machinery and UNIC segments, resulting in an overall decrease in operating profit.

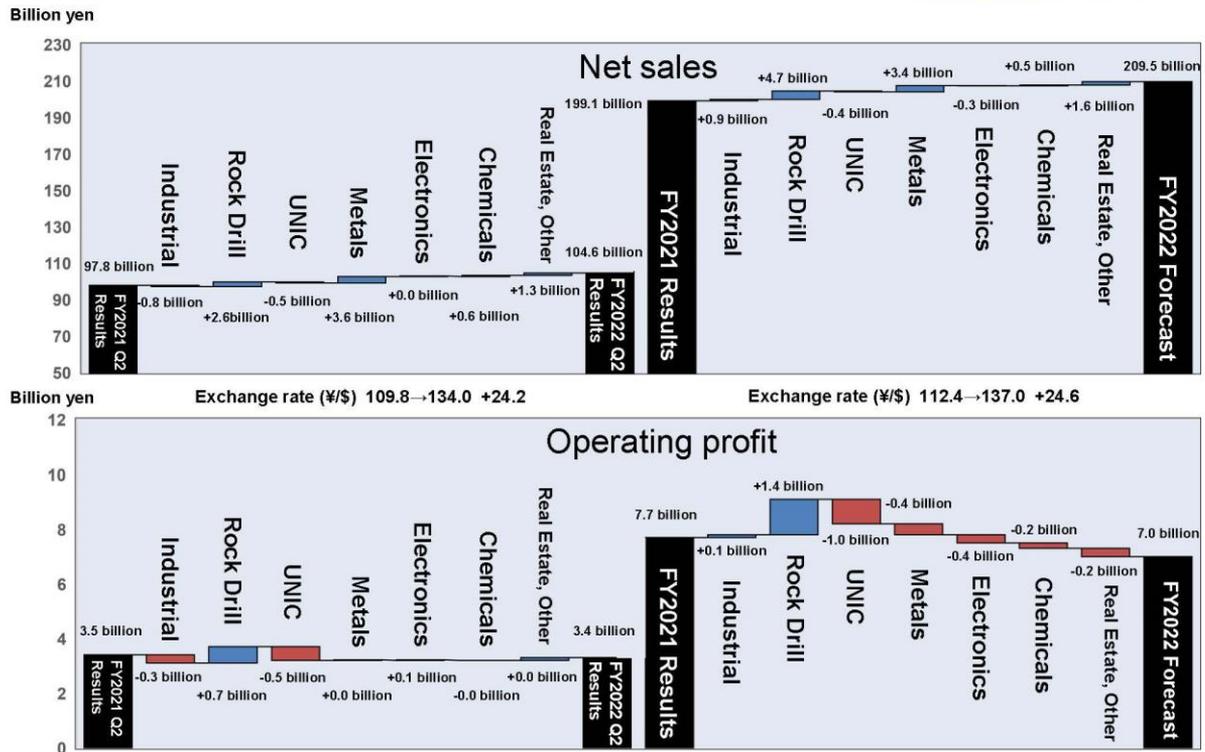
The machinery business as a whole saw a decrease in operating profit of JPY0.2 billion to JPY1.8 billion, and the materials business as a whole saw a slight increase to JPY1.1 billion.

Net sales for the fiscal year ending March 2023 are expected to increase mainly in the Rock Drill and Metals segments.

Operating profit is expected to increase mainly in the Rock Drill segment but to decrease in the UNIC segment and the three materials business segments, and overall operating profit is also expected to decrease.

Actual copper prices and exchange rates, as well as assumptions and exchange rate sensitivities, are shown in the table.

Change in Earnings by Segment (Consolidated) /YoY Comparison



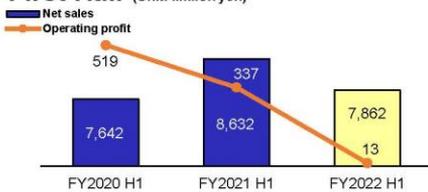
The graph shows changes in earnings by segment.

The left side of the graph shows the YoY change in H1 results, and the right side shows the YoY change in the full-year forecast. The center of the page also shows the exchange rate for H1 and the exchange rate forecast for the full year.

Divisional Breakdown (Industrial Machinery Segment)



First Half (Unit: Million yen)



Full-year (Unit: Million yen)



- Main factor of first half results

[Net sales] ¥-0.8 billion

- Sales of pump plants increased but those of material machinery decreased, and those of bridges decreased due to differences in the number of construction projects, amounts, and periods of construction. As for large projects, sales of enclosed hanging conveyor (SICON®), for the construction of the Shin-Kobotoke Tunnel on the Chuo Expressway, etc. were recorded in line with the progress, but sales decreased with the completion of the construction of materials handling facilities for Onahama port bulk terminal.

[Operating profit] ¥-0.3 billion

- Decreased due to decrease in sales

[Backlog of order] ¥+3.6 billion

	End of Sep. 2022	vs End of Sep. 2021
Backlog of order	¥12.7 billion	¥3.6 billion

[Fluid equipment]
Morigasaki Water Reclamation Center, etc.
[Material machinery]
Crusher plant for Nippon Steel Slag Products, new quarry plant for Ryukyu Cement, etc.
[Bridges]
Construction of Shimizu IC third viaduct, etc.

- Main factor of full-year forecast

[Net sales] ¥+0.9 billion

- While sales decreased in material machinery and large projects. Sales are expected to increase in pumps, fluid equipment, bridges, and environmental products. In addition, the casting business of this segment was spun off and transferred to a new company on October 3. We expect a decrease in sales in H2 for the casting business as it will be moved to the other segment, but we forecast an increase in overall sales.

[Operating profit] ¥+0.1 billion

- Operating profit is expected to increase, mainly due to higher sales of pumps and environmental products.

- Ref: Features, destinations, market share, etc. of the main products

Pumps

[Features] Pumps products superior in the durability and abrasion resistance which was amassed through mine development.
[Destinations] Shield tunnel construction sites, sewage treatment plants, etc.
[Market share] Sewage Pumps 60% Slurry Pumps 40%

Material machinery

[Features] Supports section plants including machine manufacturing and sales.
[Destinations] Quarries, limestone mines, steel works, etc.
[Market share] Crushers 15%

Infrastructure division

[Features] Comprehensive capability to undertake all the processes from the design of construction work to its execution.
[Destinations] New construction of steel bridges, construction of conveying earth and sand, etc.
[Attention] Belt conveyors attract attention which instead of dump trucks to transport earth and sand. Inquiries of Sicon®, an environmentally friendly enclosed hanging conveyor, are increasing.

I will explain the details by segment. As for the gray references at the bottom of the page, please refer to them when you have time as they describe the features, destinations, market share, etc. of the main products of each segment.

Industrial Machinery segment.

As for the YoY changes in H1, net sales decreased by JPY0.8 billion. Sales of pump plants increased but those of material machinery decreased, and those of bridges decreased due to differences in the number of construction projects, amounts, and periods of construction. As for large projects, sales of enclosed hanging conveyor (SICON), for the construction of the Shin-Kobotoke Tunnel on the Chuo Expressway, etc. were recorded in line with the progress, but sales decreased with the completion of the construction of materials handling facilities for Onahama port bulk terminal.

Operating profit decreased by JPY0.3 billion due to the decrease in sales.

Backlog of orders totaled JPY12.7 billion, up JPY3.6 billion YoY. The orders received included the Morigasaki Water Reclamation Center and others for the fluid equipment, the crusher plant for Nippon Steel Slag Products and the new quarry plant for Ryukyu Cement and others for the material machinery and the construction of Shimizu IC third viaduct and others for the bridges.

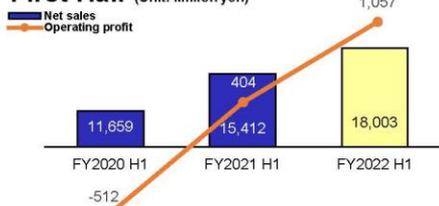
Regarding the full-year forecast and YoY changes, net sales increased by JPY0.9 billion, while sales decreased in material machinery and large projects. Sales are expected to increase in pumps, fluid equipment, bridges, and environmental products.

In addition, the casting business of this segment was spun off and transferred to a new company on October 3. We expect a decrease in sales in H2 for the casting business as it will be moved to the other segment, but we forecast an increase in overall sales.

Operating profit is expected to increase by JPY100 million, mainly due to higher sales of pumps and environmental products.

Divisional Breakdown (Rock Drill Segment) FURUKAWA Forest & Passion 150

First Half (Unit: Million yen)



- Main factor of first half results

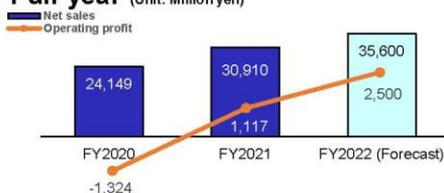
[Net sales] Japan ¥6 billion ¥-0.1 billion, Overseas ¥12 billion ¥+2.7 billion

- Domestic sales decreased due to lower shipments of tunnel drill jumbos.
- Overseas sales increased due to higher shipments, mainly to North America, and the weaker yen also had the effect of increasing sales.
- In addition, shipments of spare parts increased in Japan and North America.

[Operating profit] ¥+0.7 billion

- Operating profit increased, mainly due to an increase in shipments overseas, as well as an increase in sales due to the yen's depreciation.

Full-year (Unit: Million yen)



- Main factor of full-year forecast

[Net sales] Japan ¥13 billion ¥-0.2 billion, Overseas ¥22.6 billion ¥+4.9 billion

- Sales are expected to decrease slightly in Japan but an increase in overseas sales mainly due to increased shipments in North America and the weaker yen.

[Operating profit] ¥+1.4 billion

- Operating profit is expected to increase, mainly due to increased shipments overseas and the positive effect of the weaker yen.

- Ref: Features, destinations, market share, etc. of the main products

Hydraulic breakers

[Features]

Wide range of models from small to super large size.
High-quality and high-striking power.

[Destinations]

Strip mine such as quarries, etc.
Civil engineering work and at construction sites, etc.

[Market share]



Hydraulic breakers

Hydraulic crawler drills

[Features]

Accurate and speedy drilling technology suitable for the rock conditions.

[Destinations]

Strip mine such as limestone mines, etc.
Infrastructure work in overseas, etc.

[Market share]



Hydraulic crawler drills

Tunnel drill jumbos

[Features]

Many proven results in mountain tunnel and large tunnel constructions.

[Destinations]

Mountain tunnel construction sites,
dam headrace construction sites, etc.

[Attention]



Tunnel drill jumbos

Next is the Rock Drill segment.

As for the YoY changes in H1, net sales decreased by JPY0.1 billion in Japan and increased by JPY2.7 billion overseas. Domestic sales decreased due to lower shipments of tunnel drill jumbos, while overseas sales increased due to higher shipments, mainly to North America, and the weaker yen also had the effect of increasing sales. In addition, shipments of spare parts increased in Japan and North America, resulting in an overall increase in sales.

Operating profit increased by JPY0.7 billion, mainly due to an increase in shipments overseas, as well as an increase in sales due to the yen's depreciation.

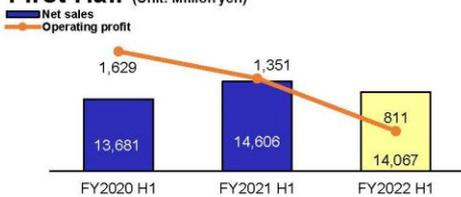
As for the YoY changes in the full-year forecast, sales are expected to decrease by JPY0.2 billion in Japan and increase by JPY4.9 billion overseas, with a slight decrease in Japan but an increase in overseas sales mainly due to increased shipments in North America and the weaker yen.

Operating profit is expected to increase by JPY1.4 billion, mainly due to increased shipments overseas and the positive effect of the weaker yen.

Divisional Breakdown (UNIC Segment)



First Half (Unit: Million yen)



- Main factor of first half results

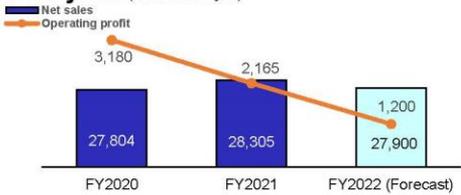
[Net sales] Japan ¥9.5 billion -2.0 billion, Overseas ¥4.6 billion ¥+1.4 billion

- In Japan, sales declined due to delays in crane mounting caused by truck production delays and production cutbacks. Overseas, overall sales increased due to increased shipments of mini-crawler cranes in Europe and the US, and UNIC cranes in Southeast Asia, Oceania and the Middle East, as well as the positive effect of the weaker yen on sales.

[Operating profit] ¥-0.5 billion

- Operating profit was decreased by ¥0.5 billion, and while overseas profit increased due to increased shipments and the weaker yen, domestic profit decreased overall due to lower sales and a worsening cost ratio caused by price hikes of raw materials such as steel products.

Full-year (Unit: Million yen)



- Main factor of full-year forecast

[Net sales] Japan ¥20.2 billion ¥-1.9 billion, Overseas ¥7.7 billion ¥+1.5 billion

- Sales are expected to recover gradually in Japan in H2 from the impact of reduced truck production and other factors, but a decrease in sales in H1 will remain. Overseas sales are expected to increase due to the remaining increase in H1, but overall sales are expected to decrease.

[Operating profit] ¥-1.0 billion

- Operating profit is expected to decrease, due to decrease in profit from lower domestic sales and the impact of raw material price hikes.

- Ref: Features, destinations, market share, etc. of the main products

UNIC cranes

[Features]	Wide range of models such as various boom lengths etc. which correspond to customer needs.
[Destinations]	Construction and civil engineering sites, material handling, rental companies, etc.
[Market share]	<p>UNIC cranes</p>

Mini-crawler cranes

[Features]	Show the power in narrow ground, rough ground and indoor worksites.
[Destinations]	Narrow or rough ground such as a graveyards, etc. Indoor worksites, etc.
[Market share]	<p>Mini-crawler cranes</p>

UNIC carriers

[Features]	Wide range of models such as car transporter type, heavy machine transporter type, etc.
[Destinations]	Car dealer, transportation company, road construction company, etc.
[Market share]	<p>UNIC carriers</p>

UNIC segment.

As for the YoY changes in H1, net sales decreased by JPY2 billion in Japan and increased by JPY1.4 billion overseas. In Japan, sales declined due to delays in crane mounting caused by truck production delays and production cutbacks. Overseas, overall sales increased due to increased shipments of mini-crawler cranes in Europe and the US, and UNIC cranes in Southeast Asia, Oceania and the Middle East, as well as the positive effect of the weaker yen on sales.

Operating profit was decreased by JPY0.5 billion, and while overseas profit increased due to increased shipments and the weaker yen, domestic profit decreased overall due to lower sales and a worsening cost ratio caused by price hikes of raw materials such as steel products.

As for the YoY changes in the full-year forecast, sales are expected to decrease by JPY1.9 billion in Japan and increase by JPY1.5 billion overseas, with a gradual recovery in Japan in H2 from the impact of reduced truck production and other factors, but a decrease in sales in H1 will remain. Overseas sales are expected to increase due to the remaining increase in H1, but overall sales are expected to decrease.

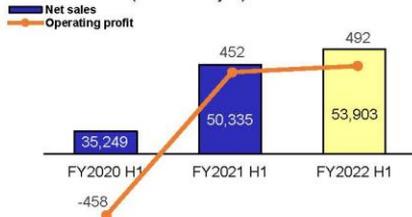
Operating profit is projected to decrease by JPY1 billion, due to the expected decrease in profit from lower domestic sales and the impact of raw material price hikes.

Although we are raising product prices to compensate for the cost increase, we expect the backlog of orders before the price revision to remain in the current fiscal year.

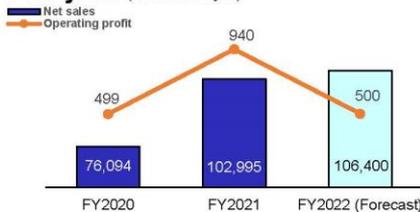
Divisional Breakdown (Metals Segment)



First Half (Unit: Million yen)



Full-year (Unit: Million yen)



- Ref: Features, destinations, market share, etc. of the main products

Electrolytic copper

- [Features]** It has been responsible for supplying electric copper since founding, and produce 70,000 tons a year. Electric wires, copper elongation products, home appliances, communication equipment, automobiles, etc.
- [Destinations]** we have terminated the consignment contract with Onahama and have reached a point of drastic review of the consignment smelting business. Reduce exports which are unprofitable.
- [FY2023]**

- Main factor of first half results

[Net sales] ¥+3.6 billion

- Net sales increased by ¥3.6 billion, with higher unit prices offsetting a decrease in the sales volume of copper.
- Gold sales increased due to higher volumes and unit prices.
- Copper ¥+0.4 billion (Volume ¥-3.4 billion, Unit price ¥+3.8 billion)
- Gold ¥+3.1 billion (Volume ¥+1.4 billion, Unit price ¥+1.7 billion)

	FY2022 Q2	vs FY2021 Q2
LME Copper Price	8,834 \$/ton	-907 \$/ton
JPY rate per US\$	134.0 ¥/\$	24.2 ¥/\$

[Operating profit] ¥+0.0 billion

- Net gain/loss from metal price fluctuations – the table on the right – was positive, with a decrease in profit for copper and an increase in profit for gold.

Net gain/loss from metal price fluctuations

	End of Sep. 2022	vs End of Sep. 2021
Operating profit	¥490 million	¥40 million
Include price effects	¥520 million	¥-210 million
Copper	(¥-120 million)	(¥-740 million)
Gold	(¥620 million)	(¥540 million)

- Main factor of full-year forecast

[Net sales] ¥+3.4 billion

- Copper sales are expected to decrease due to lower volume despite higher unit prices. Gold sales are expected to increase due to higher volume and unit prices. However, future fluctuations in metal prices cannot be foreseen, so the H2 forecast does not reflect these factors.

[Operating profit] ¥-0.4 billion

- Although the weaker yen is expected to improve the balance of consignment smelting, price gains from future exchange rate and even metal price fluctuations are not expected, so the H2 forecast does not reflect this factor and is set at almost zero.

	FY2022 (Forecast)	vs FY2021
LME Copper Price	8,067 \$/ton	-1,624 \$/ton
JPY rate per US\$	137.0 ¥/\$	24.6 ¥/\$

- We have reached a point in time for a drastic review of the consignment smelting business with the termination of the consignment contract with Onahama Smelting and Refining Co., Ltd. (At the end of March 2023)

- From FY2023 onward, operating profit will be secured by reducing unprofitable exports and focusing on domestic sales. Due to the decrease in production volume, we expect a reduction in the volatility of earnings due to metal price fluctuations.
- (*For details, please refer to page 18 of the presentation material for the financial results for the fiscal year ended March 2022.)

Metals segment.

As for the YoY changes in H1, net sales increased by JPY3.6 billion, with higher unit prices offsetting a decrease in the sales volume of copper. Gold sales increased due to higher volumes and unit prices. Overall, revenues also increased, and the factors for the increase/decrease are as noted.

Operating profit increased slightly. As shown in the table on the right, net gain/loss from metal price fluctuations was positive 0.5 billion, with a decrease in profit for copper and an increase in profit for gold. The weaker yen also contributed to an improvement in the consignment smelting balance.

As for the YoY changes in the full-year forecast, net sales are expected to increase by JPY3.4 billion. Copper sales are expected to decrease due to lower volume despite higher unit prices. Gold sales are expected to increase due to higher volume and unit prices. However, future fluctuations in metal prices cannot be foreseen, so the H2 forecast does not reflect these factors.

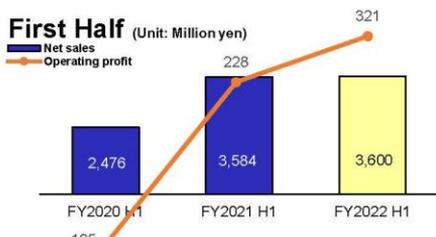
Operating profit is expected to decrease by JPY0.4 billion. Although the weaker yen is expected to improve the balance of consignment smelting, price gains from future exchange rate and even metal price fluctuations are not expected, so the H2 forecast does not reflect this factor and is set at almost zero.

As we have already disclosed in a timely manner, at the end of March 2023, we have reached a point in time for a drastic review of the consignment smelting business with the termination of the consignment contract with Onahama Smelting and Refining Co., Ltd. From FY2023 onward, operating profit will be secured by reducing unprofitable exports and focusing on domestic sales. Due to the decrease in production volume, we expect a reduction in the volatility of earnings due to metal price fluctuations.

Based on the assumptions announced at the beginning of the fiscal year, copper price of USD9,400 and exchange rate of JPY120, operating profit in the Metals segment is expected to improve from zero in the initial full-year forecast to JPY0.4 billion in FY2023 and beyond.

For details, please refer to page 18 of the presentation material for the financial results for the fiscal year ended March 2022, held in May, later. This estimate does not take into account fluctuations in earnings due to changes in foreign exchange rates or metal prices.

Divisional Breakdown (Electronics Segment)



- Main factor of first half results

[Net sales] ¥+0.0 billion

- Demand for high-purity metallic arsenic was stable for use in compound semiconductors. Sales of aluminum nitride increased due to higher demand for thermal management components and semiconductor manufacturing equipment components.
- Sales of coils decreased due to the impact of automobile production cutbacks.

[Operating profit] ¥+0.1 billion

- Operating profit increased, with the increase due to higher sales of high-purity metallic arsenic and aluminum nitride.



- Main factor of full-year forecast

[Net sales] ¥-0.3 billion

- Net sales are expected to decrease by ¥300 million, with volume declines in high-purity metallic arsenic and crystal products due to lower demand for semiconductors in H2. Sales of coils are expected to decrease due to lower volume and other factors, reflecting lower automobile production.

[Operating profit] ¥-0.4 billion

- Operating profit is expected to decrease by ¥0.4 billion, resulting in an operating loss for the full year due to the impact of higher electricity and raw material prices, in addition to lower profit due to lower sales in H2.

- Ref: Features, destinations, market share, etc. of the main products

High-purity metallic arsenic

[Features] We have been mass-producing the world's purest high-purity metal arsenide at 99.999995% (7N5). We also boast the global top share.

[Destinations] PC, smartphones, infrared luminous parts, red LD and LEDs, etc.

[Market share]



High-purity metallic arsenic

Aluminum nitride

[Features] The heat-dissipating materials, high thermal conductivity, insulation, heat uniformity, corrosion resistance, was made by our proprietary technologies such as molding, sintering and processing.

[Destinations] Semiconductor manufacturing equipment components, high-power LEDs, resin-based heat-dissipation sheets, etc.

[Full production] Awareness as an excellent heat-dissipating materials is spreading, and full production continues due to growing demand. We are investing in increased production.

Electronics segment.

As for the YoY changes in H1, sales remained almost flat, and demand for high-purity metallic arsenic was stable for use in compound semiconductors. Sales of aluminum nitride increased due to higher demand for thermal management components and semiconductor manufacturing equipment components. Sales of coils decreased due to the impact of automobile production cutbacks.

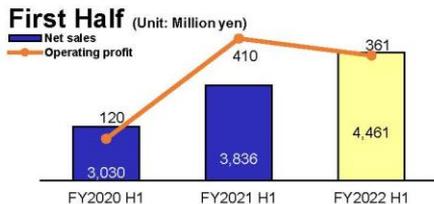
Operating profit increased by JPY0.1 billion, with the increase due to higher sales of high-purity metallic arsenic and aluminum nitride.

As for the full-year forecast, net sales are expected to decrease by JPY300 million, with volume declines in high-purity metallic arsenic and crystal products due to lower demand for semiconductors in H2. Sales of coils are expected to decrease due to lower volume and other factors, reflecting lower automobile production.

Operating profit is expected to decrease by JPY0.4 billion, resulting in an operating loss for the full year due to the impact of higher electricity and raw material prices, in addition to lower profit due to lower sales in H2.

Divisional Breakdown (Chemicals Segment)

First Half



- Main factor of first half results

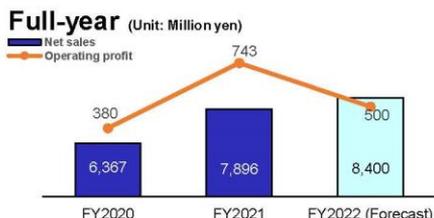
[Net sales] ¥+0.6 billion

- The sales of cupric oxide increased due to higher unit prices from higher copper prices and strong demand for use in substrates. Sales of cuprous oxide increased due to higher unit prices from higher copper prices and a recovery in demand for ship-bottom paints.

[Operating profit] ¥-0.0 billion

- Operating profit declined slightly, with the increase due to higher sales, but also due to higher raw material prices and other factors.

Full-year



- Main factor of full-year forecast

[Net sales] ¥+0.5 billion

- Overall net sales expected to increase, with cupric oxide continuing to experience strong demand for use in substrates and cuprous oxide expected to see a recovery in demand for use in ship-bottom paints, while higher copper prices will also have the effect of increasing sales.

[Operating profit] ¥-0.2 billion

- Although an increase in profit is expected due to higher sales, we expect a decrease in profit due to the impact of a worsening cost ratio caused by higher raw material prices for cupric oxide, cuprous oxide and sulfuric acid.

- Ref: Features, destinations, market share, etc. of the main products

Cuprous oxide

[Features] Antifoulant for ship-bottom paints to prevent barnacle build-up.

[Destinations] Ship-bottom paints manufacturer.

[Market share]



Cuprous oxide

Cupric oxide

[Features] High precision plating raw materials used for oxidation catalysts or printed circuit boards such as PC, etc.

[Destinations] Packaged boards (for PC and server processors), etc.

[Full production]

Increased demand for package boards due to the miniaturization and high performance of electronic devices.
Full production with existing equipment. Considering increasing production investment.

Sulfuric acid

[Features] uses the sulfur roasting method to produce sulfuric acid with very little impurity, and can be used as a food additive.

[Destinations] Each industry such as chemicals, electronic devices, steel, food processing, etc.

[Basic material]

Demand is always stable as an indispensable basic material for each industry.

Chemicals segment.

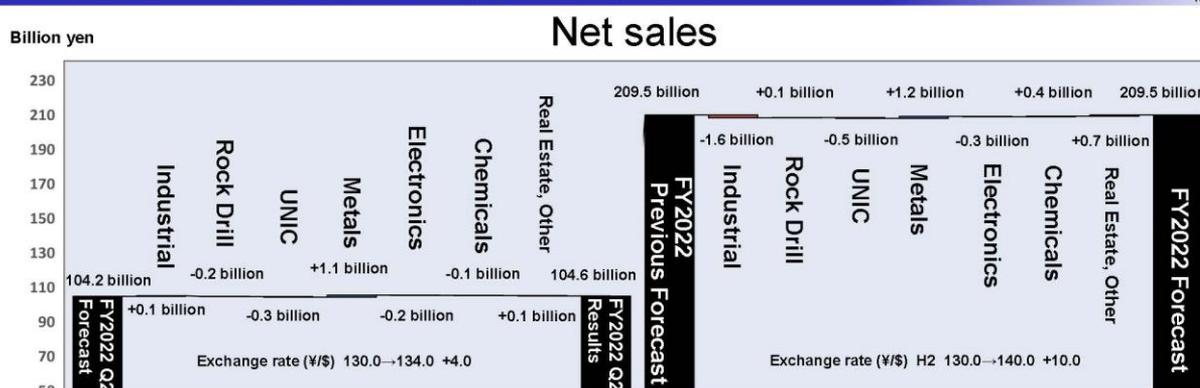
As for the YoY changes in H1, sales increased by JPY600 million. The sales of cupric oxide increased due to higher unit prices from higher copper prices and strong demand for use in substrates. Sales of cuprous oxide increased due to higher unit prices from higher copper prices and a recovery in demand for ship-bottom paints, and overall, sales also increased.

Operating profit declined slightly, with the increase due to higher sales, but also due to higher raw material prices and other factors.

As for the YoY change in the full-year forecast, we expect overall net sales to increase by JPY500 million, with cupric oxide continuing to experience strong demand for use in substrates and cuprous oxide expected to see a recovery in demand for use in ship-bottom paints, while higher copper prices will also have the effect of increasing sales.

Operating profit is expected to decrease by JPY200 million. Although an increase in profit is expected due to higher sales, we expect a decrease in profit due to the impact of a worsening cost ratio caused by higher raw material prices for cupric oxide, cuprous oxide and sulfuric acid.

Change in Earnings by Segment (Consolidated) /Compared to Previous Forecast (Net Sales)



Segment	Main factors of change in sales forecast for the full year. (Compared to previous forecast announced on August 9, 2022.)
Industrial	Sales are expected to increase in pump plants, but decrease in material machinery due to lower purchasing power in the quarrying industry. We expect some delays due to large projects. In addition, the casting business was spun off and transferred to a new company on October 3, and sales in H2 from the casting business will be transferred to the other segment, resulting in lower sales in this segment.
Rock Drill	Japan ¥+0.5 billion Sales will increase in tunnel drill jumbos and hydraulic crawler drills. Overseas ¥-0.4 billion Sales expected to increase in North America but decrease in Europe.
UNIC	Japan ¥-0.2 billion, Overseas ¥-0.3 Sales will decrease slightly both in Japan and overseas due to a decline in shipments of UNIC cranes.
Metals	Although higher copper and gold prices are expected to increase revenues, future fluctuations in metal prices cannot be foreseen, so price increases are not reflected in the H2 forecast.
Electronics	In H2, we expect sales of high-purity metallic arsenic and crystal products to decline due to lower demand for semiconductors.
Chemicals	In H2, we expect a slight increase in sales for each product.

Next is the change in net sales by segment from the previous forecast announced on August 9. The following is a brief explanation of the main factors of increase/decrease in sales forecast for the full year.

The forecast for the Industrial Machinery segment has been revised to negative JPY1.6 billion. Sales are expected to increase in pump plants, but decrease in material machinery due to lower purchasing power in the quarrying industry. We expect some delays due to large projects.

In addition, the casting business was spun off and transferred to a new company on October 3, and sales in H2 from the casting business will be transferred to the other segment, resulting in lower sales in this segment.

The Rock Drill segment is largely unchanged. In Japan, sales will increase in tunnel drill jumbos and hydraulic crawler drills. Overseas, we expect sales to increase in North America but decrease in Europe.

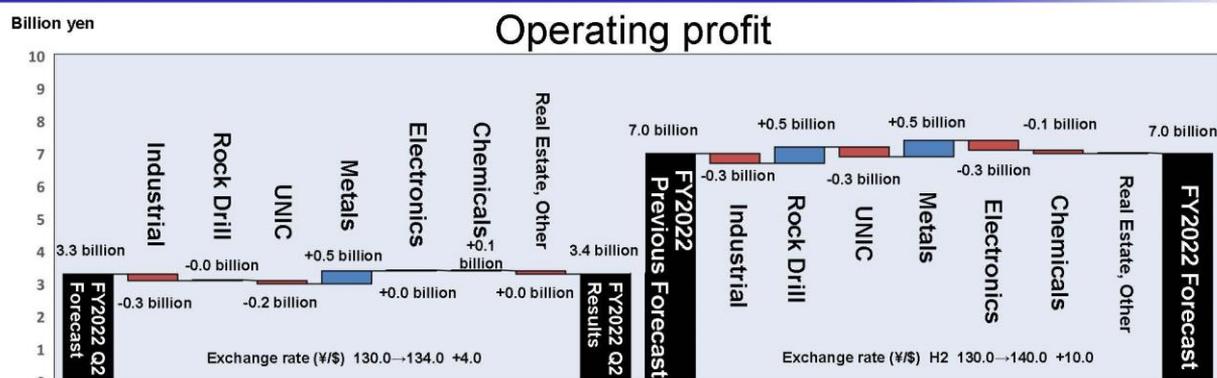
The forecast for the UNIC segment has been revised to negative JPY0.5 billion. Sales will decrease slightly both in Japan and overseas due to a decline in shipments of UNIC cranes.

In the Metals segment, sales increased by JPY1.1 billion in H1 mainly due to higher gold prices. The H2 forecast has not been reviewed. Although higher copper and gold prices are expected to increase revenues, future fluctuations in metal prices cannot be foreseen, so price increases are not reflected in the H2 forecast.

The forecast for the Electronics segment has been revised to negative JPY0.3 billion. In H2, we expect sales of high-purity metallic arsenic and crystal products to decline due to lower demand for semiconductors.

The forecast for the Chemicals segment has been revised to positive JPY0.4 billion. In H2, we expect a slight increase in sales for each product.

Change in Earnings by Segment (Consolidated) /Compared to Previous Forecast (Operating Profit)



Segment	Main factors of change in operating profit forecast for the full year. (Compared to previous forecast announced on August 9, 2022.)
Industrial	Sales and profits will increase at pump plants. In material machinery, lower sales and profits are expected due to large projects.
Rock Drill	The increase in product prices is expected to compensate for the increase in raw material prices, and the change in the exchange rate to a weaker yen in H2 will also contribute to the increase in earnings.
UNIC	The decrease in profit was due to lower sales, the expected impact of raw material price hikes and other factors.
Metals	Profit increased by ¥0.5 billion in H1 mainly due to higher gold prices. Although the weaker yen is expected to improve the consignment smelting balance in H2, since price gains from exchange rates and metal price fluctuations are not expected in the future, the forecast for H2 does not reflect these factors and is set at almost zero.
Electronics	We expect an operating loss in H2 due to lower profit from lower sales and the impact of higher electricity and raw material prices.
Chemicals	The forecasted decrease in profit is due to the impact of a deterioration in the cost of sales ratio resulting from higher raw material prices for cupric oxide, cuprous oxide, and sulfuric acid.

Next is the change in operating profit versus the previous forecast by segment. As with sales, only key points will be briefly discussed.

The forecast for the Industrial Machinery segment has been revised to negative JPY0.3 billion. Sales and profits will increase at pump plants. In material machinery, lower sales and profits are expected due to large projects.

The forecast for the Rock Drill segment has been revised to positive JPY500 million. The increase in product prices is expected to compensate for the increase in raw material prices, and the change in the exchange rate to a weaker yen in H2 will also contribute to the increase in earnings.

The forecast for the UNIC segment has been revised to negative JPY300 million. The decrease in profit was due to lower sales, the expected impact of raw material price hikes and other factors.

In the Metals segment, profit increased by JPY500 million in H1 mainly due to higher gold prices, and the H2 forecast has not been revised. Although the weaker yen is expected to improve the consignment smelting balance in H2, since price gains from exchange rates and metal price fluctuations are not expected in the future, the forecast for H2 does not reflect these factors and is set at almost zero.

The forecast for the Electronics segment has been revised to negative JPY0.3 billion. We expect an operating loss in H2 due to lower profit from lower sales and the impact of higher electricity and raw material prices.

The forecast for the Chemicals segment has been revised to negative JPY100 million. The forecasted decrease in profit is due to the impact of a deterioration in the cost of sales ratio resulting from higher raw material prices for cupric oxide, cuprous oxide, and sulfuric acid.

3. Main Achievements and Issues by Segments

Segment	Main achievements	Main issues
Industrial	<ul style="list-style-type: none"> - The orders received for the crusher plant for Nippon Steel Slag Products and the new quarry plant for Ryukyu Cement as large-scale section plant construction projects. - In bridge construction, we received a Safety Management Order Winner Award and a Certification as a Company with Excellent Construction Performance by Kanto Regional Development Bureau, Ministry of Land, Infrastructure and Transport for two consecutive years. 	<ul style="list-style-type: none"> - To expand sales of new generation machines of rubber liner slurry pumps. - To strengthen sales of steel structure products other than steel bridges in steel segments. - To promote sales of SICON®, an environmentally friendly enclosed hanging conveyor. - To promote sales for new high-efficiency screens.
Rock Drill	<ul style="list-style-type: none"> - The development of an attachment drill for the quarrying market in Southeast Asia and its market launch in Indonesia. - The product lineup of hydraulic crawler drills has been restructured, and the concentrated production of mainstay models and the development for commonality of machines has been initiated. - We have strengthened development of high value-added products for tunneling sites, such as fully automatic drill jumbos and automatic rock bolters. - The domestic organization has been reorganized for the purpose of concentrating sales of hydraulic crushers for the demolition market in the Tokyo metropolitan area. 	<ul style="list-style-type: none"> - Strengthening overseas service systems of LCS, lifecycle support, such as training drill technicians and dealer supports. - Formulation of commercialization of customer support services, such as promoting DX to shift from product sales to service sales. - The consolidation of overseas sales subsidiaries. The dissolution of the sales subsidiaries in Panama and China was resolved in H1 of FY2022, and efforts are underway to complete the liquidation.
UNIC	<ul style="list-style-type: none"> - The development of a minor-changed machine, large size, with improved lifting performance for the UNIC crane G-FORCE series. - The development of a new disassembly specification for mini-crawler cranes. - The market launch of super-large-sized UNIC crane, which is in high demand in the Chinese market. 	<ul style="list-style-type: none"> - To reduce production costs and optimize parts procurement under soaring raw material prices. - To consider truck electrification. - To review overseas dealers in regions with weak sales capabilities and to establish sales routes in untapped areas. - To support technical training, sales training, etc. for overseas dealers. - To review our overseas strategy, including the Russian market where we have suspended sales.

Next, we summarize and discuss the main achievements and issues by segment.

First is the machinery business. The main results of the Industrial Machinery segment were the orders received for the crusher plant for Nippon Steel Slag Products and the new quarry plant for Ryukyu Cement as large-scale section plant construction projects. And in bridge construction, we received a Safety Management Order Winner Award and a Certification as a Company with Excellent Construction Performance by Kanto Regional Development Bureau, Ministry of Land, Infrastructure and Transport for two consecutive years.

The main tasks are to expand sales of new generation machines of rubber liner slurry pumps, to strengthen sales of steel structure products other than steel bridges in steel segments, to promote sales of SICON, an environmentally friendly enclosed hanging conveyor, and to promote sales for new high-efficiency screens.

One of the main achievements of the Rock Drill segment is the development of an attachment drill for the quarrying market in Southeast Asia and its market launch in Indonesia. The product lineup of hydraulic crawler drills has been restructured, and the concentrated production of mainstay models and the development for commonality of machines has been initiated. We have strengthened development of high value-added products for tunneling sites, such as fully automatic drill jumbos and automatic rock bolters. In addition, the domestic organization has been reorganized for the purpose of concentrating sales of hydraulic crushers for the demolition market in the Tokyo metropolitan area.

Major issues include strengthening overseas service systems of LCS, lifecycle support, such as training drill technicians and dealer supports, formulation of commercialization of customer support services, such as promoting DX to shift from product sales to service sales, and the consolidation of overseas sales subsidiaries. The dissolution of the sales subsidiaries in Panama and China was resolved in H1 of FY2022, and efforts are underway to complete the liquidation.

The main achievements of the UNIC segment were the development of a minor-changed machine, large size, with improved lifting performance for the UNIC crane G-FORCE series, the development of a new disassembly specification for mini-crawler cranes, and the market launch of super-large-sized UNIC crane, which is in high demand in the Chinese market.

The main challenges are to reduce production costs and optimize parts procurement under soaring raw material prices, to consider truck electrification, to review overseas dealers in regions with weak sales capabilities and to establish sales routes in untapped areas, to support technical training, sales training, etc. for overseas dealers, and to review our overseas strategy, including the Russian market where we have suspended sales.

Main Achievements and Issues by Segments



Segment	Main achievements	Main issues
Metals	<ul style="list-style-type: none"> - The decision to terminate the consignment smelting contract with Onahama Smelting and Refining Co., Ltd. at the end of March 2023. From FY2023, unprofitable exports are expected to be significantly reduced. 	<ul style="list-style-type: none"> - Respond to customers who wish to be supplied even after the termination of the consignment smelting contract with Onahama Smelting and Refining Co., Ltd. - Fluctuations in earnings due to international market trends and ore purchase terms, although the range of fluctuation will decrease from FY2023 onward compared to FY2022 due to lower production.
Electronics	<ul style="list-style-type: none"> - For aluminum nitride, for which demand is strong, an investment of approximately ¥1 billion is being made to increase production. - A high-performance aluminum nitride with higher thermal conductivity than current products is being introduced to the market. - Sales of diffractive optical elements, DOE, increased for laser processing applications. 	<ul style="list-style-type: none"> - To consider further investment to increase production in anticipation of increased demand for aluminum nitride. - To study production increase of high-purity metallic arsenic.
Chemicals	<ul style="list-style-type: none"> - Higher sales of sulfuric acid, mainly for use in the manufacture of chemicals. - Higher sales of cupric oxide for plating for high-end PCs and servers. 	<ul style="list-style-type: none"> - Delay in passing on higher raw material prices to products.

Next is the materials business.

The main achievement of the Metals segment was the decision to terminate the consignment smelting contract with Onahama Smelting and Refining Co., Ltd. at the end of March 2023. From FY2023, unprofitable exports are expected to be significantly reduced.

As our main issues, we will respond to customers who wish to be supplied even after the termination of the consignment smelting contract with Onahama Smelting and Refining Co., Ltd. In addition, there will be fluctuations in earnings due to international market trends and ore purchase terms, although the range of fluctuation will decrease from FY2023 onward compared to FY2022 due to lower production.

The Electronics segment's main achievements are as follows. For aluminum nitride, for which demand is strong, an investment of approximately JPY1 billion is being made to increase production, and a high-performance aluminum nitride with higher thermal conductivity than current products is being introduced to the market. Sales of diffractive optical elements, DOE, increased for laser processing applications.

The main issues are to consider further investment to increase production in anticipation of increased demand for aluminum nitride, and to study production increase of high-purity metallic arsenic.

The main results of the Chemicals segment were higher sales of sulfuric acid, mainly for use in the manufacture of chemicals, and higher sales of cupric oxide for plating for high-end PCs and servers.

The main issue is that there is a delay in passing on higher raw material prices to products.

Recognizing these achievements and challenges, we intend to present specific strategies in the next mid-term management plan starting next fiscal year.

Rock Drill Segment Strengthening and rebuilding of the overseas marketing capabilities



- Market-specific strategy From an emphasis on volume to an emphasis on profit

Market	Region	Strategies / Measures
The markets to target	North America	<ul style="list-style-type: none"> - Expand sales of large machines for both hydraulic crawler drills and hydraulic breakers. Approximately 80% of the hydraulic crawler drill market and 90% of the market in the western region of North America is for large machines. Large hydraulic crawler drills will shift to North American specifications. - Strengthen our rebuilt hydraulic breaker business and expand sales of parts. - Decided to establish a logistics and after-sales service base in the western region of our sales subsidiary in North America. Reduce transportation costs and delivery lead time. 
	Europe	<ul style="list-style-type: none"> - Expanding sales of medium and large-sized hydraulic breakers. - Expanding the number of dealers from two to four to expand sales of hydraulic breakers in the UK. The UK is still developing among the four major European markets of France, Italy, Germany, and the UK. - Hydraulic crawler drills will be focused on the German market. 
The market to be created	Southeast Asia	<ul style="list-style-type: none"> - As a measure to induce customers from pneumatic drills to hydraulic crawler drills, the attachment drill, AHD709, was introduced to the market. - Reorganize and newly establish dealers by the customer segments of quarry and mining in each country market. 
The markets to consolidate and eliminate	South America, China, India, (Korea)	<ul style="list-style-type: none"> - Decided to dissolve its sales subsidiaries in Panama. (The liquidation is scheduled to be completed around December 2022.) - Decided to dissolve its sales subsidiaries in Shanghai, China. (The liquidation is scheduled to be completed around August 2023.) - Considering dissolving the sales subsidiary in India. - Still assessing the business role of the sales subsidiary in Korea.

Next, regarding the strengthening and rebuilding of the overseas marketing capabilities of the Rock Drill segment, which has been one of our group's priority issues, we are shifting our market-specific strategy from an emphasis on volume to an emphasis on profit, and I will explain the strategy and measures.

The markets to target are North America and Europe. In North America, we will expand sales of large machines for both hydraulic crawler drills and hydraulic breakers. Approximately 80% of the hydraulic crawler drill market and 90% of the market in the western region of North America is for large machines. Large hydraulic crawler drills will shift to North American specifications. We will also strengthen our rebuilt hydraulic breaker business and expand sales of parts.

In addition, it has been decided to establish a logistics and after-sales service base in the western region of our sales subsidiary in North America. This will reduce transportation costs and delivery lead time.

In Europe, in addition to expanding sales of medium and large-sized hydraulic breakers, we are expanding the number of dealers from two to four to expand sales of hydraulic breakers in the UK, which is still developing

among the four major European markets of France, Italy, Germany, and the UK. Hydraulic crawler drills will be focused on the German market.

The market to be created is Southeast Asia. As a measure to induce customers from pneumatic drills to hydraulic crawler drills, the attachment drill, AHD709, was introduced to the market. We will reorganize and newly establish dealers by the customer segments of quarry and mining in each country market.

The markets to consolidate and eliminate are South America, China, and India. The Company has decided to dissolve its sales subsidiaries in Panama and Shanghai, China. The liquidation is scheduled to be completed around December 2022 and August 2023, respectively. For India, we are considering dissolving the sales subsidiary. As for Korea, we are still assessing the business role of the sales subsidiary.

In the Rock Drill segment, we will continue to promote selection and concentration and shift to a business strategy for growth.

4. Identified Materiality (Key Issues)



- Identified the materiality (key issues) related to sustainability initiatives.

We reviewed the CSR priority issues identified in 2013, and identified 10 materiality key issues based on the Basic Policy on Sustainability Initiatives established in December 2021, dividing them into proactive CSV issues (3 items) and defensive CSR/ESG issues (7 items), as described here.

Basic Policy on Sustainability Initiatives	
The Furukawa Company Group has positioned efforts toward sustainability as one of its most important management issues. In addition to contributing to help realize a sustainable society, the Group is committed to achieving sustainable growth and increasing mid-to long term corporate value by resolving social issues through its business.	

Materiality (key issues) related to sustainability initiatives	
Proactive: CSV issues Resolving social issues through business related to materiality (key issues)	
<ul style="list-style-type: none"> - Providing environmentally friendly products, technologies and services. - Contributing to the resolution of customer issues. - contributing to the creation of a safe and comfortable society, including infrastructure development. 	
Defensive: CSR/ESG issues Establishing a robust corporate foundation for growth related to materiality's (key issues)	
E(Environment)	<ul style="list-style-type: none"> - Promotion of climate change countermeasures in business activities. - Promotion of biodiversity preservation activities.
S(Society)	<ul style="list-style-type: none"> - Development of a safe and rewarding work environment that takes health into consideration. - Recruitment and development of diverse human resources. - Promotion of management that respects human rights.
G(Governance)	<ul style="list-style-type: none"> - Development of a enterprise risk management system. - Thorough compliance.

*More information on the materiality identification can be found in the news release on our website. <https://www.furukawakk.co.jp/info/2022/>

Next, the Group identified the materiality (key issues) related to sustainability initiatives, which were resolved at a meeting of the Board of Directors held in November of this year.

We reviewed the CSR priority issues identified in 2013, and identified 10 materiality issues based on the Basic Policy on Sustainability Initiatives established in December 2021, dividing them into offensive CSV issues and defensive CSR/ESG issues, as described here.

Regarding offensive CSV issues, we have identified three items as materiality related to solving social issues through our business: providing environmentally friendly products, technologies and services, contributing to the resolution of customer issues, and contributing to the creation of a safe and comfortable society, including infrastructure development.

In terms of the defensive CSR/ESG issues, seven items were identified as materiality related to the development of a management foundation for growth and classified as ESG.

For environment, there are two items: promotion of climate change countermeasures in business activities and promotion of biodiversity preservation activities. For society, the three items are the development of a safe and rewarding work environment that takes health into consideration, the recruitment and development of diverse human resources, and the promotion of management that respects human rights.

For corporate governance, two items were identified: the development of an enterprise risk management system and thorough compliance.

More information on the materiality identification can be found in the news release on our website, which was issued on November 11, 2011.

5. Topics



- The credit rating obtained from Japan Credit Rating Agency, Ltd. was raised to BBB+

The credit rating obtained from Japan Credit Rating Agency, Ltd. was raised to BBB+ from BBB on October 7, 2022.

As a result, we have achieved our rating target in FY2025, the last year of our 2025 Vision "FURUKAWA Power & Passion 150" of BBB+ or higher. We will continue to seek to establish a strong financial base to enable us to raise the necessary funds regardless of financial conditions.

	Before the change	After the change
Long-term issuer rating	BBB	BBB+
Outlook	Positive	Stable
CP	J-2	J-2 (Deferred)

The reasons for the rating (Summarized from the news release by Japan Credit Rating Agency)

1. In the past, the Metals segment accounted for a large share of profits, but now the machinery business has become the mainstay of the Company's operations, with many products holding a high market share.
2. Profitability of the Rock Drill segment improved due to a shift in sales strategy from a focus on volume to a focus on profit. The Metals segment is expected to see a decrease in unprofitable exports due to the end of consignment smelting to Onahama Smelting and Refining Co., Ltd., and a more stable performance due to a reduction in the scale of operations. In the Industrial Machinery segment, profitability is improving by undertaking all processes from design to construction, and the UNIC segment is expected to secure a certain level of profit in the future due to its high market share. Thus, the Company is making steady progress in strengthening its earning power, and its financial position is improving compared to previous years, backed by solid profits.
3. Although profits are expected to decline in the fiscal year ending March 2023, performance is expected to improve from the fiscal year ending March 2024 onward. Profitability in the Metals segment is expected to improve, demand in the UNIC segment is expected to recover over the medium term, and demand in other segments is generally strong, which will continue to contribute to profits.
4. The Company's financial position has been improving, with the capital adequacy ratio hovering in the 30% range from the fiscal year ended March 2015 to the fiscal year ended March 2020, but rose to the 40% range in the fiscal years ended in March 2021 and March 2022. The Company is expected to maintain its ability to generate solid cash flow, and there is little concern that its financial position will deteriorate significantly.

Next are the topics for H1 of FY2022.

The credit rating obtained from Japan Credit Rating Agency, Ltd. was raised to BBB+ from BBB on October 7, 2022. As a result, we have achieved our rating target of BBB+ or higher, as indicated in our 2025 Vision.

We will continue to seek to establish a strong financial base to enable us to raise the necessary funds regardless of financial conditions.

The reasons for the rating by Japan Credit Rating Agency, Inc. are summarized from the news release.

One. in the past, the Metals segment accounted for a large share of profits, but now the machinery business has become the mainstay of the Company's operations, with many products holding a high market share.

Two. Profitability of the Rock Drill segment improved due to a shift in sales strategy from a focus on volume to a focus on profit. The Metals segment is expected to see a decrease in unprofitable exports due to the end of consignment smelting to Onahama Smelting and Refining Co., Ltd., and a more stable performance due to a reduction in the scale of operations.

In the Industrial Machinery segment, profitability is improving by undertaking all processes from design to construction, and the UNIC segment is expected to secure a certain level of profit in the future due to its high market share. Thus, the Company is making steady progress in strengthening its earning power, and its financial position is improving compared to previous years, backed by solid profits.

Three. Although profits are expected to decline in the fiscal year ending March 2023, performance is expected to improve from the fiscal year ending March 2024 onward. Profitability in the Metals segment is expected to improve, demand in the UNIC segment is expected to recover over the medium term, and demand in other segments is generally strong, which will continue to contribute to profits.

Four. The Company's financial position has been improving, with the capital adequacy ratio hovering in the 30% range from the fiscal year ended March 2015 to the fiscal year ended March 2020, but rose to the 40% range in the fiscal years ended in March 2021 and March 2022. The Company is expected to maintain its ability to generate solid cash flow, and there is little concern that its financial position will deteriorate significantly.

Topics



- The third-party evaluations of the Group's products and technologies that help to solve customer needs and social issues.

Beginning with the development of copper mines, our group has practiced marketing management to provide products, technologies and services that help to solve customer needs and social issues based on the technologies that have supported the social infrastructure. In our continuous efforts, the products and technologies of our machinery business received high evaluations and awards by the third-party.

<p>- The BOLTINGER, a rock bolting machine won the Infrastructure Technology Development Award and Engineering and the Japan Construction Machinery and Construction Award (Rock Drill segment)</p>  <p>The BOLTINGER, a rock bolting machine equipped with a six-meter joint bolt placing device. (Jointly developed with Taisei Corporation.)</p>	<p>- Japan's first tunnel drill jumbo using remote technology won the Japan Construction Machinery and Construction Award. (Rock Drill segment)</p>  <p>Tunnel drill jumbo using remote technology. (Jointly developed with HAZAMA ANDO CORPORATION and MAC.)</p>	<p>- We have received a Safety Management Order Winner Award and Certification as a Company with Excellent Construction Performance for two consecutive years in bridge construction. (Industrial Machinery segment)</p>  <p>Route 17 Shin-omiya Bypass pedestrian bridge. One of the bridge constructions that were awarded for Excellent Safety Management Order Winner Award.</p>
<p>- The BOLTINGER, a rock bolting machine, and the robot for installing steel arch supports, both received the Minister of Land, Infrastructure, Transport and Tourism Award at the 10th Robot Award. (Rock Drill segment)</p>   <p>The BOLTINGER, a rock bolting machine equipped with a six-meter joint bolt placing device. (Jointly developed with Taisei Corporation.)</p> <p>The robot for installing steel arch supports. (Jointly developed with Maeda Corporation and MAC.)</p>		

*For detailed information on each award, please refer to the news releases posted on our website. <https://www.furukawakk.co.jp/info/2022/>

As other topics, we will introduce the third-party evaluations of the Group's products and technologies that help solve customer needs and social issues.

Beginning with the development of copper mines, our group has practiced marketing management to provide products, technologies and services based on the technologies that have supported the social infrastructure.

The awards were given in recognition of the fact that the product, which we jointly developed to address our customers' issues, has mechanized a series of tasks, dramatically improved safety and productivity, and greatly improved the burden on workers and the working environment at the harsh site in mountain tunnel excavation works in the Rock Drill segment.

The BOLTINGER, a rock bolting machine equipped with a six-meter joint bolt placing device, was jointly developed with Taisei Corporation and won the Infrastructure Technology Development Award by Japan Institute of Country-ology and Engineering and the Japan Construction Machinery and Construction Award by Japan Construction Machinery and Construction Association. In addition, Japan's first tunnel drill jumbo using remote technology, which was jointly developed with HAZAMA ANDO CORPORATION and MAC, won the Japan Construction Machinery and Construction Award by Japan Construction Machinery and Construction Association.

In addition, the above-mentioned BOLTINGER, and the robot for installing steel arch supports, jointly developed with Maeda Corporation and MAC, both received the Minister of Land, Infrastructure, Transport and Tourism Award at the 10th Robot Award by the Minister of Land, Infrastructure, Transport and Tourism, etc.

In the Industrial Machinery segment, as I mentioned earlier, we have received a Safety Management Order Winner Award and Certification as a Company with Excellent Construction Performance by Kanto Regional Development Bureau, Ministry of Land, Infrastructure and Transport for two consecutive years in bridge construction.

Furthermore, four out of the eight projects that were awarded for excellent safety management order were highly evaluated for their outstanding technical and construction management skills and received the excellent construction award, the outstanding construction engineer award, and the distinguished service award for difficult construction work.

For detailed information on each award, please refer to the news releases posted on our website.

6. Reference Materials

- Approach to climate change and decarbonization and our efforts.

Our response to disclosures based on the TCFD and equivalent frameworks.

- With a phased approach we will move forward with disclosures in line with the TCFD framework by using our responses to the CDP regarding risks and revenue opportunities related to climate change. We have responded to CDPs from this fiscal year, which had not been previously responded to.

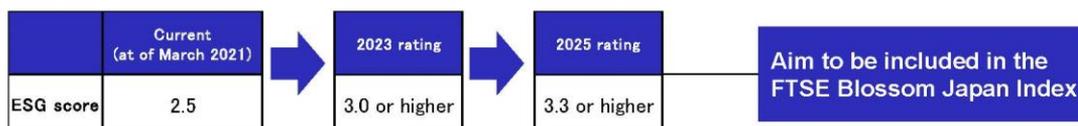
Efforts toward decarbonization (carbon neutrality, and net zero)

- We are currently developing a plan to implement CO2 reductions in line with the government's announced CO2 reduction targets of a 46% reduction in CO2 emissions by FY2030 compared to FY2013 and achieving carbon neutrality by FY2050.
- Regarding carbon neutrality, we are considering converting electricity, which accounts for about 80% of our CO2 emissions (FY2020 CO2 emissions 20,903t | Scope 1&2), to electricity derived from renewable energy sources. We will aim for early disclosure, including plans to reduce CO2 emissions from non-electricity sources, which account for about 20% of our CO2 emissions.
- As for net-zero emissions, we are proceeding with Scope 3 calculations and considering measures to absorb CO2 through the use of Company-owned forests, etc., with the aim of achieving net-zero emissions in the future.

- Continue to intend to enhance the disclosures required for ESG ratings, and to strive for inclusion in the FTSE index issues.

We will continue to strengthen our ESG initiatives and disclosures required by the FTSE Blossom Japan Index and FTSE 4Good Index, which is used by the GPIF as an index.

The FTSE ESG rating score for 2021 was 2.5 overall, but by 2025, the 150th anniversary of the Company's founding, we aim to achieve an overall score of 3.3 or higher and become an index stock.



Pages 24 through 27 are for reference information, which we hope you will see later.

Just to mention a few key points, on page 24, we are progressively disclosing risks and revenue opportunities related to climate change in line with the TCFD framework, and we have responded to CDPs from this fiscal year, which had not been previously responded to.

Regarding decarbonization efforts, as noted, we are in the process of developing a reduction plan in line with the government's announced CO2 reduction targets.

Reference Materials

[Capital Investment (Consolidated)]

(Unit: Million yen)

Capital investment	FY2020	FY2021		FY2022	
		(Q2)	(Full-year)	(Q2)	(Annual forecast)
Machinery	2,637		2,669		3,000
Industrial	1,253		1,703		1,300
Rock Drill	437		247		900
UNIC	946		718		800
Material	827		696		1,700
Other	679		1,413		400
Total	4,144	3,072	4,778	918	5,100

Increased due to construction of a new office building at Oyama Works, etc.

Increased due to the establishment of new medical waste disposal facilities (Expansion of incinerator, total approx. ¥2.6 billion from FY2022 to FY2024) at Gunma Kankyo Recycle Center Co., Ltd., etc.

Increased due to the establishment of aluminum nitride production equipment (Total approx. ¥1.0 billion) in the Electronics Segment, etc.

Acquisition of buildings in the Real Estate Business, etc.
Head Office relocation work costs in the Other, etc.

[Depreciation and Amortization (Consolidated)]

Depreciation and amortization	3,879	1,931	4,003	2,047	4,100
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[Research and Development Expenses (Consolidated)]

Research and development expenses	1,164	738	1,336	712	1,400
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On page 25, capital investment is as described, and in the Industrial Machinery segment, we are planning a three-year plan to expand an incinerator at the Gunma Kankyo Recycle Center, where medical waste is treated.

【Metal Products, Foreign Exchange Rate (Consolidated)】

		FY2020	FY2021		FY2022	
			(Q2)	(Full-year)	(Q2)	(Q3, Q4 Forecasts)
Overseas market price of copper (Average)	¢/pound	312.0	432.8	439.6	391.6	340.2
	\$/ton	6,879	9,541	9,691	8,634	7,500
JPY rate per US\$ (Average)		106.06	109.80	112.38	133.97	140.00

Production and marketing of Furukawa Metals & Resources Co.,	FY2020	FY2021		FY2022	
		(Q2)	(Full-year)	(Q2)	(Q3, Q4 Forecasts)
Copper production (t)	74,386	35,942	71,149	34,785	70,146
Copper sale volume (t)	81,998	38,712	77,402	35,517	75,866

<About copper production>
 We have been reviewing our consignment ratio at the joint smelter and have been gradually reducing our copper production from 88,004 tons per year in FY2017. Copper production after FY2023 is expected to be about 46,600 tons per year, due to terminate the consignment contract with Onahama Smelting and Refining Co., Ltd. (At the end of Mar. 2023)

【Employee (Consolidated)】

	End of Mar. 2021	End of Mar. 2022	End of Sep. 2022	vs End of Mar. 2022
Number of consolidated employee (Persons)	2,752	2,804	2,851	47

On page 26, regarding the production of copper, it is 70,000 tons for the current fiscal year, but is expected to be about 46,600 tons per year from next fiscal year onward.

That is all for today's explanation.

I would like to ask all our shareholders and investors for their continued support of FURUKAWA CO., LTD.

Question & Answer

Abe [Q]: I'm Abe from Daiwa Securities. I have several questions, so if possible, please answer each question in a question-and-answer format.

First, except for the Rock Drill and valuation gains in Metals segments, I think the results were lower than planned. Is it correct to say that the factor for this is the delay in price pass-through? If there are any changes in terms of demand, please let us know.

Nakatogawa [A]: First, in the Industrial Machinery segment, as I mentioned earlier, demand for material machinery has declined. Initially, we had anticipated that there would be an increase in demand at quarries and lime mountains, but due to recent conditions, this was not as much as expected, and the drop in demand is the main reason for this.

As for UNIC, we have a large backlog of orders, but truck shipments have been delayed, and although we have revised prices, some of the old prices are still in effect, so there is a delay in passing on prices.

As for the Electronics segment, demand for semiconductors has been declining, and this has led to a drop in demand from customers who use our high-purity metallic arsenic. We expect this in H2 as well.

In the Chemicals segment, there is a fair amount of demand, but the main reason is that we have not yet been able to catch up with the corresponding price raise, although we have raised prices to some extent.

Abe [Q]: Secondly, to follow up on what you just said, what is the overall cost impact compared to the previous year, and how much of that has been passed on, if you have such figures?

Nakatogawa [A]: Overall, roughly, we are projecting an operating profit of JPY7 billion for this fiscal year. The increase in raw materials will be roughly JPY1.9 billion to JPY2 billion, whereas the price increase is expected around JPY1.5 billion to JPY1.6 billion, overall.

Abe [Q]: Next, regarding the UNIC segment, you mentioned truck production trend a little earlier, but from your company's perspective, what are your assumptions about future trends, taking into account the current situation?

Nakatogawa [A]: Regarding the shipment of truck chassis, we see that when shipments seem to be getting better, they drop off again. Since truck manufacturers are inevitably supplied with parts from China, there is also the impact of the Chinese lockdown.

However, as I mentioned earlier, the trend is that the market is gradually improving, and Hino Motors, despite the incident, has been able to obtain certification, so I am hopeful that the market will recover in H2, or at the latest in April or May of the next spring.

Abe [Q]: Lastly, you mentioned that you were increasing production of aluminum nitride while also obtaining customer approvals. What progress has been made since then?

Nakatogawa [A]: As I recall, we were talking about receiving certification and shipping by the end of FY2023, but we are still in the process of installing the equipment and carrying out construction work. The construction work is progressing as planned, so the schedule remains unchanged.