## **Q&A Summary of the IR Business Briefing of Furukawa Electric Co., Ltd.**

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Contents: Functional Products business

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- Q: Under the previous Mid-term plan, Functional Products was not a main target for investment, but in the current Mid-term plan, due in part to being a growing business, it has been targeted for active investment. What is the status of progress in product adoption by customers?
- A: The previous policy was not necessarily that we would not invest in functional products. Rather, the previous Mid-term plan focused on investing in development. Because adoption by customers has increased, leading to higher volumes, we decided to invest (in increasing production of tape for semiconductor process). The market environment has been challenging recently, but our positioning with customers has not fallen. While using the customers' open production lines, we are testing newly developed products.
- Q: The tape for semiconductor process customers up to now have mainly been South Korean manufacturers, but have you made any progress in expanding your customer base as was mentioned in the past?
- A: Semiconductors can be largely divided into memory and logic domains. The South Korean manufacturers are active in the memory domain. In the logic domain, we are delivering a range of products to multiple customers.

- Q: I believe the reason you decided to invest in increasing production of tape for semiconductor process is that your customer base is expanding. Are you making steady progress? Also, approximately how many customers do you have?
- A: In total, we have over 100 customers. I am unable to provide specific names, but they cover a broad range of the industry.
- Q: According to the briefing materials, net sales of tape for semiconductor process have been declining since FY19. Why have net sales declined despite the positive market environment from FY19 through FY21?
- A: Following the adoption of financial standards for revenue recognition from FY21, we are no longer able to record provided materials as sales, making it appear in the graph that revenue is declining. If we were able to record provided materials as revenue, net sales would have increased from FY20 through FY21. Also, net sales declined in FY20 due to the extraordinary demand that occurred in FY19. In terms of actual demand, it has increased from FY19 through FY21.
- Q: Why does the trend for thermal management product net sales differ compared to other products?
- A: Thermal management products are mainly used for data center (DC) servers. They have a major advantage in that the design and price are decided directly with the end user. The lower net sales in other businesses recently are mainly due to inventory adjustments occurring within the long supply chain. The recent situation and future outlook are generally in line with the graphs shown in the provided materials, and the market itself has not fallen to the same extent as the drop in net sales. (Based on this explanation,) thermal management products are unique.
- Q: What business opportunities will arise for you in the event the use of generative AI expands in the future?
- A: To date, the thermal management business in particular has focused on AI. With AI, there is extremely high localized heat generation, and it is difficult to achieve cooling. We have already started deliveries of 3D vapor chambers, and sales for AI will likely increase in the future.
- Q: I understand that you will (improve your ability to) gather information and establish a

system for responding to a market slowdown and sudden recovery. Specifically, how will you respond to such events?

- A: We will prepare a system that can immediately respond to market growth or contraction. To achieve this, we believe that information will be extremely important. It will be necessary to formulate plans after grasping the product trends among end users. Concerning inventories within the supply chain, we will work to quickly obtain information and respond. Also, in order to respond to order volatility, it will be necessary to automate production, and we have started to take steps toward creating a system that can withstand volatility.
- Q: Profits appear to be under pressure in the copper foil business, but what is the status of earnings given the impact of the demand environment and higher electricity costs. Also, what measures will you implement going forward to improve profits?
- A: Including for copper foil, the applications (markets) for each business are exactly the same. We are certain that by grasping the status of deliveries in the supply chain and realizing improvement through the consideration of efficient production methods, we will be able to improve earnings.
- Q: Have electricity costs impacted the financial results in recent years in the copper foil business? Assuming electricity costs remain at the current level, will it continue to be difficult to generate profits?
- A: Compared to other businesses, electricity costs have a large impact on the copper foil business, and the situation is extremely tough. Electricity costs are particularly high in Japan, and although they are rising in Taiwan as well, they are still lower compared to Japan. It is difficult to compete over price with overseas manufacturers, so we need to compete in areas other than price. We are tenaciously working to pass on the higher costs to the customer. At the same time, due to competition, we are not always able to pass on the higher costs. Therefore, we are looking for ways to reduce costs together with the customer and then benefit from the lower cost. In other words, we are also working to reduce the cost rate while keeping the sales price unchanged.
- Q: Concerning the profit targets in the 2025 Mid-term Plan, the Functional Products segment achieved operating income of JPY 14.0 billion in the banner year FY17. You need to add a further JPY 5.0 billion to this result in order to achieve the Mid-term plan target. What businesses will most contribute to higher profits following the normalization of the currently

## weak market conditions?

- A: The accumulation of profits is based on the normalization of market conditions. Although there is not just one business that will contribute to profits, tape for semiconductor process and thermal management products are expected to achieve particularly strong growth.
- Q: In the tape for semiconductor process market, additional vendors (for the main customers) have entered the market over the past few years. How is the competitive environment?
- A: Competition is unavoidable, and we are working with customers to develop advanced processing methods directed at the future. We are doing the same thing in areas other than tape for semiconductor process, and it has gone well for several products. We will work to prevent new entry into the market.
- Q: In the copper foil business, after profitability declined due to the production line disruptions caused by the fire at the Taiwan plant in 2019, you are now waiting for demand to recover. Going forward, you will increase the weight of products for high frequency applications, but will it be necessary to invest in increasing production capacity? How will you increase operating ratios directed at achieving the 2025 Mid-term Plan?
- A: Presently, we have no plans to invest in increasing copper foil production capacity, and we will first change the product mix. We should be able to generate profits on par with past years if demand returns. Recovering the demand to previous levels is an important first step. We have taken steps to enable existing facilities to support the product mix. The current operating levels are at about 60% of full production (aimed for in the 2025 Midterm Plan).
- Q: In order to continue the copper foil business, how will you allocate management resources, and how will you increase ROIC? Hopefully, you will improve it through independent actions rather than simply relying on demand, but what strategies are you considering?
- A: First, we will increase operating income. Also, we will improve CCC through inventory control. Furthermore, we will fully recoup the investment in the case of CAPEX. These will lead to higher ROIC. We will strengthen our relationship with customers and develop new products with the aim of shifting to products that are at the center of the cutting-edge applications of the customer. For thermal management products, we will shift from heat pipes to 3D vapor chambers, and going forward, we will evolve toward even more different products. As a result of our independent actions (development), it will be important for

our products to be positioned at the center of the cutting-edge applications of the customer.

- Q: Within the Functional Products business, how large are net sales for generative AI? The domain is rapidly growing, but have you received any inquiries? What type of customers are you selling your products to?
- A: From the start of this year, customer investments have greatly increased, and rapid growth has begun. In particular, discussions for thermal management products are often conducted directly with the end user. Our main customers are hyperscale DC. The disclosure of information is strictly controlled by the customer, so I cannot provide any sales figures, but the growth is rapid.
- Q: Regarding thermal management products for generative AI, what is the status of competition, and are you a front runner with competitive advantages?
- A: Not all of our products are mainstream with customers. However, starting several years ago, we have conducted joint development with some customers, and we are in a good position.

Q: Are those customers the same as your existing thermal management product customers?

A: Yes.

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