

EBARA IR Day 2021 Main Questions and Answers
Summary of Q&A at EBARA IR Day 2021 held on July 8, 2021

Session 1: CMP Technology Trends and Production System

Q: Why is EBARA CORPORATION ("EBARA") strong in the metal CMP process? Your plan is to gain further share in non-metal oxide film CMP process going forward. Please tell us the details.

A: The most significant reason is that EBARA's equipment configuration is more suitable to metal CMP processes.

EBARA has a certain level of share in non-metal CMP in installed base, but there are some technical issues to overcome. Technological development has been already completed for these issues.

Q: Your plan is to expand the production system at the Kumamoto Plant by 1.5 times compared to 2020, but revenues are forecasted to grow by 40% (compared to the previous year) by December 2021. Is this correct?

A: The third line started its operation at the Kumamoto Plant. It is possible to add the fourth line as needed.

Q: How much room for growth does EBARA's CMP system have in the back-end process? Also, are there any opportunities for new kind of demand?

A: Assembly processes take place after devices are manufactured, and the further miniaturization during the assembly process will become more and more difficult going forward, and 3D lamination method will be used instead to increase the bit-count. In that case, metal CMP processes will be needed. In addition, high-level wafer flatness is required in the area where oxide films are layered, and EBARA's CMP already has a technology to solve this issue.

Q: It was mentioned that CMP demand will increase due to structural changes in semiconductors. Please tell us specific examples of such changes and their impact on CMP.

A: 3D lamination requires more CMP processes in the back-end process. As new device structures are adopted in logic and NAND, always new layers are added. When the new layers are added, it is necessary to add planarization processes in order to avoid distortions in the circuit, etc., and there will be demand for CMP always.

Questions which were answered later due to time constraints.

Q: Please tell us the number of CMPs used in semiconductor manufacturing lines. Has the CMP technology advanced in the last five years or so along with the advancement of semiconductor device technologies? Or has the number of CMPs used increased?

A: Both trends exist in logic and memory manufacturing lines using the cutting-edge technologies. We forecast the investment to expand semiconductor manufacturing capacity will increase this year.

Q: What is EBARA's forecast of the order for new CMP processes in FY2021?

A: Forecast of this year's order is not high.

Q: What is the status of inquiries for plating equipment?

A: We have received inquiries from several companies.

Q: International research institutes are indicating gate advancement and more complicated wiring in their roadmaps. How many CMP processes do you expect to increase?

A: We forecast two cases, one is increase in number of CMP processes and the other is not significant change in those.

Session 2: Digital Transformation (DX) Initiatives

Q: It is quite impressive that EBARA Elliott has taken various efforts and producing great results, as presented during the case study of Offensive DX.

Are the estimates presented with proposals to customers accurate compared to the actual cost? Is the variation risk of business performance getting lower?

A: Estimates are linked to BOM and ERP. We have built a separate database for estimates ten years ago and kept enhancing it as we use it.

Accuracy of estimation has also improved.

Q: Mr. Kowase mentioned that he joined EBARA when the company was considering ERP deployment. What are EBARA's specific issues from his perspective as someone with experiences at other companies? What part of the business will be most benefitted by ERP?

A: We will categorize business processes in the EBARA Group to several patterns, and create one system for each pattern. For example, there have been many systems for planning, development, and operation in the past, but once they are consolidated into a single system, this will allow us to enjoy cost advantages worldwide. At the same time, by standardizing operations, we can ensure global governance. It has significant effects not only on the IT side but also on the business side.

SAP pilot projects are underway. HR organizations have actually deployed it and started to see positive effect.

Q: I expect to see contribution to Fluid Machinery System Business ("FMS") from the perspective of increasing profitability. Even though today's presentation was on EBARA Elliott, do you think we can expect FMS as a whole to get a positive impact on its profitability?

A: We plan to deploy best practices horizontally, so that not only FMS, but also the Environmental Engineering ("EP") and Precision Machinery ("PM") Businesses will get positive impact.

Session 3: EBARA's Waste to Chemical Initiatives
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Q: It is said that the standard capacity is assumed to be at 30,000 tons per year in the development of a plant with ICFG. How much should we expect in terms of order value? And how much plastic is needed to run a plant on a commercial basis?

A: The order value is expected to be between JPY7 to 10 billion per unit, although there is a slight difference depending on the location.

To give you an example, 60,000 tons of waste plastics are treated annually at a waste plastics gasification and treatment facility using EUP (Ebara Ube Process) which is in commercial operation in Kawasaki City. It is possible to collect waste of this volume in urban areas.

Q: Is there any need to develop a plant which can be commercially profitable with a processing volume lower than 30,000 tons per year? Do you expect a sufficient market for 30,000-ton class plants?

A: If there is a demand, we can provide a solution. For example, it is quite conceivable that existing industrial waste management companies shift to operate ICFG plants in line with the trend of chemical recycling. If it happens, we can respond without problems by scaling down as long as there is a demand of 50 tons per day.

Overall, however, about 100 tons per day is advisable from output perspective for industrial waste management companies as well.

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