

Q&A at the Explanation Meeting on the Business Creation Sector

Note:

SE = solid electrolyte

DOE = Design of Experiments, this methodology is applied to build a development facility for identifying and resolving issues in advance by verifying customer designs.

■Q&A Session

【SE】

- Q. With regard to solid electrolytes, while collaborations between your competitors and automakers have been announced for sulfide-based solid electrolytes, Mitsui Kinzoku explained today that it is a top runner in this field. Could you please elaborate on that?
- A. Due to confidentiality agreements, we cannot comment on our customers' situations. However, we firmly believe that our company is in no way inferior to our competitors. Our materials are used as standard components by nearly all players worldwide. Solid electrolytes are utilized in three layers—the cathode, separator, and anode—each requiring different properties. The most critical property is oxidation resistance in the cathode during redox reactions. For example, in liquid-based lithium-ion batteries, the liquid decomposes and generates gas when charged 4.5 volts or higher, which is why voltage control is performed during use. Similarly, oxidation resistance is the most crucial requirement for solid electrolytes. Our solid electrolyte has an argyrodite-type crystal structure, providing high oxidation resistance even at around 10 volts and enabling compatibility with various cathode materials. For the separator layer, high density is more important than reducibility, while the anode side, conversely, requires high reducibility. We would like you to understand that we have achieved precise design control for all of these layers, which is why our material is widely adopted.
- Q. If automakers proceed with the mass production of vehicles equipped with all-solid-state batteries as planned, could you please provide details on the timing of Mitsui Kinzoku's decision regarding investment in mass production, as well as your outlook for the contribution to sales and profits and the corresponding timeline?
- A. Although the outlook is still uncertain, we anticipate that market penetration of vehicles equipped with all-solid-state batteries will begin around 2027 to 2030. As practical applications emerge, greater clarity will follow. Accordingly, we intend to make decisions around fiscal year 2027, during our 2025-2027 Medium Term Business Plan, while continuing customer communication and global marketing activities. For example, whether we will independently undertake the SE business at a scale of several thousand tons is not something we can realistically comment on lightly. As part of our strategic business model, we may form vertical partnerships with various partners and are also considering the integration of diverse technologies. Furthermore, we are currently holding discussions on various topics, such as the handling of solid electrolytes and other materials that are highly sensitive to humidity. Our decisions will be made based on the outcomes of these discussions.
- Q. Could you share your views on whether China might become a competitor in A-SOLiD™, or whether there would be no competition at all?
- A. China has clearly been moving to establish a national-level all-solid-state battery business over the past two years, actively investing in personnel and equipment while pursuing development around the clock. While we took a uniform approach globally under both the 2019-2021 and 2022-2024 Medium Term Business Plans, our current policy is to focus on key customers while carefully identifying suitable partners. We intend to maintain communication with our Chinese customers, carefully review the information, and respond appropriately.

【Functional porous material】

- Q. Regarding the functional porous material business, the release mentions that a pilot plant will be launched in the first half of 2026. Specifically, which fields are expected to take the lead? Several applications under development are listed—among them, which field is likely to launch first and appears most promising for the future? Could you also share the long-term outlook for each application?
- A. Since functional porous materials have a wide range of potential applications, we are considering a pilot plant equipped to produce composite products that incorporate materials such as MOFs, monoliths, and zeolites. While we believe it is still too early to disclose progress or forecasts for specific individual material businesses, for example, we aim to establish a system capable of mass-producing monoliths, to some extent, that can be used for the recovery of precious metals, which are not currently recovered industrially. In addition, regarding CO₂, which has been attracting much attention, we plan to build a system at the pilot plant that can produce a variety of materials and supply those most suitable for specific applications.
- Q. Regarding lithium recovery materials from salt lakes, a company announced about two years ago that it had begun demonstration testing. Do you consider this company a competitor? If there are any differences in materials, technologies, or other aspects, please explain.
- A. Since many details were not disclosed in the other company's release, we cannot provide a detailed explanation, but we assume that the materials they use differ clearly from ours. Our partner is directly engaged in lithium recovery, and we plan to conduct a detailed investigation to clarify performance differences between our partner and the company that issued the release. Given our partner's strong reputation in the market, we believe they may have an advantage, but we intend to carry out a thorough technical comparison.

【Others】

- Q. The profit and loss of the Business Creation Sector reflect various costs and R&D expenses relative to sample revenues, and I expect a net negative profit contribution of around 6 to 8 billion yen. Could you please explain the composition of this figure, and which businesses are expected to drive the targeted 10 billion yen profit contribution?
- A. The expenses of ongoing activities at the R&D Center and market co-creation are managed separately from those of business promotion. In business promotion, mainly for solid electrolytes (SEs), we are now producing a substantial volume of samples. Sample revenues are expected to reach several billion yen in fiscal 2025, contributing positively to earnings in business promotion. On the other hand, in response to this positive outlook, we also intend to increase spending on ongoing activities. Please understand that we are targeting a zero deficit for the Business Creation Sector in 2030, with 10 billion yen in profit contribution balanced by 10 billion yen in expenditures for ongoing activities.

【HRDP®】

- Q. Regarding the transfer of HRDP® to the Engineered Materials Sector on October 1, could you please explain specifically how personnel, facilities, and other resources were transferred?
- A. Marketing and customer communication for HRDP® have strong synergies with the customers of the Copper Foil Division in the Engineered Materials Sector. We decided to transfer it to the Sector because we determined that managing it under the Engineered Materials Sector would facilitate global marketing more effectively. However, we have kept the locations of equipment and personnel communication unchanged for now, as changing them immediately could cause delays in business operations. The business infrastructure, including General Affairs and other departments, is located in Ageo and will be shared, while business promotion itself will be managed by the HRDP Business Development Division of the Engineered Materials Sector. As for the personnel involved, we are currently communicating under the new structure, taking into account individual preferences and management's intentions. Going forward, the Engineered Materials Sector will discuss and manage the ideal organizational structure as a whole.

- Q. Is HRDP® included in the target of over 10 billion yen in profit contribution for 2030?
- A. HRDP® is included, with an expected contribution profit of approximately 3 billion yen.