MITSUI
KINZOKU

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NEWS RELEASE

Decision to Enhance Production Capacity of SiC Wafer Abrasives

Mitsui Mining & Smelting Co., Ltd. (President: NOU Takeshi) announces that it has decided to enhance the production capacity of NANOBIX™, an abrasive for SiC wafers*1 produced by Engineered Powders Division.

A SiC (Silicon carbide) wafer, or a material used for power devices, is such a hard material that it needs to be polished for long hours with a superb abrasive technology to make the material's surface flat and smooth at the atomic level. The NANOBIX™, SiC wafer polishing materials produced at the Company's Miike Engineered Powders Plant (Omuta-shi, Fukuoka), is used for making the surface of SiC wafers extremely flat and smooth in a short time without causing any damage to its crystals.

In recent years, demand for high-performance SiC wafers has been growing due to the full-scale application of SiC power devices*2 for electric vehicles, among other products. In addition, polishing processes need to be as efficient as possible, reflecting an increase in the processing area of SiC wafers. With demand for NANOBIX™ surging recently, in response, the Company has decided to bolster the production capacity of the material to more than 50 tons per year within fiscal 2023. Looking ahead, the Company will contribute to the popularization of SiC power devices by continuously enhancing production capacity and maintaining a stable supply for NANOBIX™, the market for which is expected to continue to grow.

We will contribute to the realization of a sustainable society by implementing our vision for 2030, "Building new businesses －and the future－ with our material intelligence," based on our purpose, "We promote the well-being of the world through a spirit of exploration and diverse technologies."

[About Miike Engineered Powders Plant]
Location: 2081 Tousen, Omuta-shi, Fukuoka

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Glossary

*1. SiC wafer

A SiC (silicon carbide)-based material used for the production of semiconductor devices. Precise polishing is required to make the material adaptable for power devices.

*2 SiC power device

A new power device having the characteristics of being more pressure-resistant than traditional Si-based power devices and being operative under high-temperature conditions. The device is suitable for applications such as electric vehicles and renewable energy that require pressure resistance.

(Reference)

Example of NANOBIX™ use