

August 2, 2018

Press Release

## Increase in Production Capacity of Atomized Copper Powder for MLCC

Approx. 50% increase in production capacity with capacity increase at Kamioka Plant and construction of a new plant at Hikoshima Smelting

Mitsui Mining & Smelting Co. Ltd. (President: Keiji Nishida; "Mitsui Kinzoku," hereinafter) is pleased to announce that it has decided to increase the production capacity of atomized copper powder for MLCC<sup>\*1</sup> by approx. 50%.

As a leading manufacturer of copper powder for the external electrodes of MLCCs, Mitsui Kinzoku produces copper powder by applying two methods. Namely, it produces fine copper powder by applying the water atomization method<sup>\*2</sup> ("atomized copper powder" hereinafter) and ultra-fine copper powder that is refined using the wet reduction method ("wet copper powder" hereinafter). The atomized copper powder is manufactured at the metal powder plant of Kamioka Mining and Smelting Co., Ltd. (Hida-shi, Gifu; "Kamioka" hereinafter) in the Engineered Powder Division in the Engineered Materials Sector while wet copper powder is produced at the engineered powders plant of Hikoshima Smelting Co., Ltd. (Shimonoseki-shi, Yamguchi; "Hikoshima" hereinafter) in the above division.

Demand for MLCCs has recently been increasing rapidly, due in part to the increase in the number of automobiles equipped with electronic systems (ADAS<sup>\*3</sup> and xEV<sup>\*4</sup>), the functional enhancement of smartphones (5G compatibility), and the introduction of the Internet of Things to home electronic appliances. This has led Mitsui Kinzoku to judge that production capacity of atomized copper powder needs to be increased to accommodate future increases in demand.

Mitsui Kinzoku has decided to construct a new atomized copper powder plant at Hikoshima, in addition to increasing the production capacity of Kamioka, to increase the combined atomized copper powder production capacity of the two locations by approx. 50%. The capacity increase at Kamioka is scheduled to be completed in April 2019 while the new plant at Hikoshima is planned to begin operating in April 2020.

With regard to wet copper powder, an additional production plant for the ultra-fine copper line is being constructed at Hikoshima to boost the production capacity by approx. 40%, as announced in the press release dated February 1, 2018. The new line will start operation in September 2018.

Under its slogan Material Intelligence, Mitsui Kinzoku will be striving to ensure stable quality and sufficient supply to customers by taking advantage of its powder control technologies for regulating particular diameters, distribution, forms and surface treatments and will take further actions to expand its production capacity in response to demand trends.

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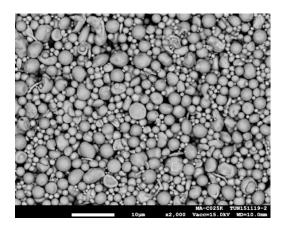


Photo: Atomized copper powder

(Notes)

\*1 MLCC: Multi-Layer Ceramic Capacitor.

\*2 Water atomization method: A method with which metal powder is produced by spraying and colliding water at a high pressure against a molten metal melted at a high temperature.

\*3 ADAS: Advanced Driver Assistance System.

\*4 xEV: Collective name of electrified vehicles (EVs, hybrid vehicles, and plug-in hybrid vehicles)

(Reference)

Hikoshima Smelting Co., Ltd.

(1) Location:	Shimonoseki, Yamaguchi Prefecture, Japan
(2) President:	Akira Nishijima
(3) Established:	May 1986
(4) Capital:	460 million yen
(5) Investment:	Mitsui Kinzoku (100%)
(6) Business Activities:	Manufacturing of zinc ingots, zinc oxysulfate, ultra-fine powder,
	materials for batteries and others

Kamioka Mining and Smelting Co., Ltd.

(1) Location:	Hida, Gifu Prefecture, Japan
(2) President:	Tetsuya Kawatani
(3) Established:	May 1986
(4) Capital:	4,600 million yen
(5) Investment:	Mitsui Kinzoku (100%)
(6) Business Activities:	Manufacturing and sales of zinc, lead ingots, products related to lead
	ingots, metal powder, and catalysts for purification of exhaust gas