

NEWS RELEASE

Mitsui Mining & Smelting Co., Ltd.

Microwave Chemical Co., Ltd.

Business Partnership Formed by Mitsui Mining & Smelting and Microwave Chemical

Promoting the development of new engineered materials using microwaves

Mitsui Mining & Smelting Co., Ltd. (Head office: Shinagawa-ku, Tokyo; President and Representative Director: Keiji Nishida; hereinafter “Mitsui Kinzoku”) and Microwave Chemical Co., Ltd. (Head office: Suita-shi, Osaka; President: Iwao Yoshino; hereinafter “Microwave Chemical”) are pleased to announce that they have entered into a strategic business partnership under which they will utilize microwave technology to promote the enhancement of production processes and the development of new engineered materials.

In its 2016 Medium-Term Management Plan, Mitsui Kinzoku sets the creation of growth products and businesses as its vision and has been working to create new businesses in a strategic move for the future. As part of these activities, the company has established a private fund for making investments in promising venture companies in Japan and other countries, which are expected to create business synergy with existing business fields (corporate venture capital: CVC), as announced by the company in its news release dated September 1, 2017.

Microwave Chemical is a startup business from Osaka University. The company is working on the development of unique manufacturing processes and the development of new materials that would be difficult with conventional technologies by applying a platform technology created by its development team consisting of specialists in various domains and its accumulated data and expertise created on a development infrastructure for processes from basic research to commercial production. This technology can be applied in diverse fields, such as pharmaceuticals, chemical materials, and food, so the company is promoting joint development projects with manufacturers from all over the world.

The two companies have agreed to form a strategic business partnership, under which Mitsui Kinzoku makes an investment in Microwave Chemical as its first CVC, to implement joint development related to new production processes and new engineered materials utilizing microwaves. This reflects Mitsui Kinzoku’s expectation that it can create a synergy effect with the microwave technology of Microwave Chemical in the development and manufacture of materials, such as engineered materials and electronic materials, at which Mitsui Kinzoku excels.

Under this partnership, Mitsui Kinzoku will strive to enhance the production processes it owns, develop new engineered materials, and increase the speed of its operation under the slogan “Taking full advantage of Material Intelligence.” Microwave Chemical will promote the establishment and commercialization of technologies in new fields through this partnership, which is its first partnership with a company from the non-ferrous metal industry.

[Inquiries]

Investor Relations & Corporate Communications Dept.,

Corporate Planning & Control Sector,

Mitsui Mining & Smelting Co., Ltd.

Phone: +81-3-5437-8028 E-mail: PR@mitsui-kinzoku.co.jp

Administration Department,

Microwave Chemical Co., Ltd.

Phone: +81-6-6170-7595 E-mail: info@mwcc.jp

(Reference)

1) What are microwaves?

Microwaves are electromagnetic waves with a wavelength ranging from 1 mm to 1 m (300 MHz to 300 GHz). They are widely used, from engineering, such as radars, accelerators, to home appliances that are familiar to us such as microwave ovens.

2) Features of microwave chemical process

Applied to the designing of manufacturing on the molecular level, the microwave technology, which is also used for microwave ovens, enables development of new materials, which was technologically difficult to manufacture with conventional methods. It permits energy-saving, highly-efficient, compact manufacturing process.

In the heat transfer process at chemical plants and other material manufacturing sites, each object would conventionally be heated indirectly and entirely for energy transmission. On the other hand, microwave permits direct transmission of energy only to specific molecules or substances. This enables quicker, more even reactions without temperature unevenness compared to conventional methods.

3) Outline of the companies

| | Microwave Chemical Co., Ltd. | Mitsui Mining & Smelting Co., Ltd. |
|--------------------------|---|--|
| 1. Establishment | August 2007 | May 1, 1950 |
| 2. Address | 2-8 Yamadaoka, Suita-shi, Osaka | 1-11-1 Osaki, Shinagawa-ku, Tokyo |
| 3. Paid-in capital | 3,614,345,180 yen (including legal capital surplus)/ (As of October 31, 2017) | 42,129,46,000 yen (As of March 31, 2017) |
| 4. Business descriptions | (1) Research, development and engineering of microwave chemical processes (2) Joint ventures and licensing in relation to product manufacturing using microwave chemical processes (3) Manufacturing and sales of products using microwave chemical processes | (1) Manufacturing and sale of functional engineered materials and electronic materials (2) Nonferrous metal smelting (3) Minerals resource development (4) Precious metal recycling (5) Raw material related businesses (6) Manufacturing and sale of automotive parts/components, etc. |
| 5. Number of employees | 41 | 11,630 (consolidated) |