

MiRESSO Co., Ltd. and PACIFIC METALS CO., LTD. Sign Comprehensive Business Alliance Agreement

Pilot Plant for Beryllium Production (BETA) to Be Established within PACIFIC METALS' Production Plant

October 25, 2024
MiRESSO Co., Ltd.
PACIFIC METALS CO., LTD.

MiRESSO Co., Ltd. (Head office: Misawa City, Aomori; Chairman and CEO: Masaru Nakamichi; hereinafter referred to as “MiRESSO”) and PACIFIC METALS CO., LTD. (Head Office: Chiyoda-ku, Tokyo; President and Representative Director: Masayuki Aoyama; hereinafter referred to as “PACIFIC METALS”) have signed a Comprehensive Business Alliance Agreement. MiRESSO will establish a pilot beryllium production plant, “BETA” (Beryllium Testing plant in Aomori) within the production plant of PACIFIC METALS for pilot demonstration of its proprietary low-temperature refining technology, aiming to start production of beryllium by the end of FY2027.



(Pictured on left: Masayuki Aoyama, President and Representative Director, PACIFIC METALS; Right: Masaru Nakamichi, Chairman and CEO, MiRESSO)

1. Purpose and Outline of the Comprehensive Business Alliance

In October 2023, MiRESSO was selected^{*1} by the Ministry of Education, Culture, Sports, Science and Technology for the Small and Medium-sized Business Innovation Research Promotion Project (SBIR Phase 3) in the Nuclear Fusion Field (Project theme: Demonstration of nuclear fusion technologies for fusion prototype reactors, etc.), and has been working on the production and sales of beryllium, which is necessary for fusion energy using new low-temperature refining technology. We are also developing a technology platform business that proposes refining processes and licenses technologies to meet specific challenges in the refining of mineral resources, including in the recycling field, by deploying MiRESSO's low-temperature refining technology as a platform.

PACIFIC METALS produces and sells ferronickel and other main raw materials for stainless steel, and under the priority measure of the “Creation of new businesses that contribute to society,” as outlined in the Medium-term Management Plan “PAMCO-2024,” PACIFIC METALS is aiming to supply metal raw materials necessary for clean energy technology as part of the promotion of new metal smelting projects.

MiRESSO and PACIFIC METALS have signed a Comprehensive Business Alliance Agreement for the purpose of promoting the commercialization of the “beryllium production and sales business” and the “technology platform business for low-temperature refining technology” by pooling the management resources and know-how of the two companies. As part of this Agreement, PACIFIC METALS has agreed to lease part of its production plant (address: 5-2 Toyama Shinden, Kawaragi, Hachinohe City, Aomori) to establish a pilot plant for MiRESSO’s beryllium production.

*1: MiRESSO Co., Ltd. was selected by the Ministry of Education, Culture, Sports, Science and Technology for the Small and Medium-sized Business Innovation Research Promotion Project (SBIR Phase 3) (2 billion yen)
<https://prtimes.jp/main/html/rd/p/000000002.000129969.html>

■ Comment by Masaru Nakamichi, Chairman and CEO of MiRESSO

PACIFIC METALS is based in our hometown of Aomori and has provided us with tangible and intangible support in the past, so entering into a comprehensive business alliance with them is a very encouraging development. We will rent a facility at PACIFIC METALS and get to work on developing a pilot plant for beryllium production.

MiRESSO will contribute to the social implementation of fusion energy by providing a stable supply of beryllium.

■ Comment by Masayuki Aoyama, President and Representative Director of PACIFIC METALS CO., LTD.

MiRESSO is a fusion startup certified by the National Institutes for Quantum Science and Technology in Rokkasho-mura, Aomori Prefecture, and has supported us in our research on smelting using low-temperature refining technology. Beryllium is a metal required for fusion energy generation and beryllium copper products, and demand for beryllium is expected to increase in the future. PACIFIC METALS will put in place a structure to support this project by which it can contribute to the realization of a stable and low-cost supply of beryllium.

2. Overview of BETA

BETA (Beryllium Testing plant in Aomori) will conduct a pilot demonstration of the new low-temperature refining technology and commence full-scale beryllium production and sales of beryllium products by the end of FY2027.

With regard to the development of BETA, MiRESSO has concluded a basic design contract^{*2} with the largest plant engineering company, JGC HOLDINGS CORPORATION, commissioning them to perform the basic design of BETA.

*2: MiRESSO Co., Ltd. signed a basic design contract with JGC HOLDINGS CORPORATION concerning the “BETA” pilot plant for beryllium production.

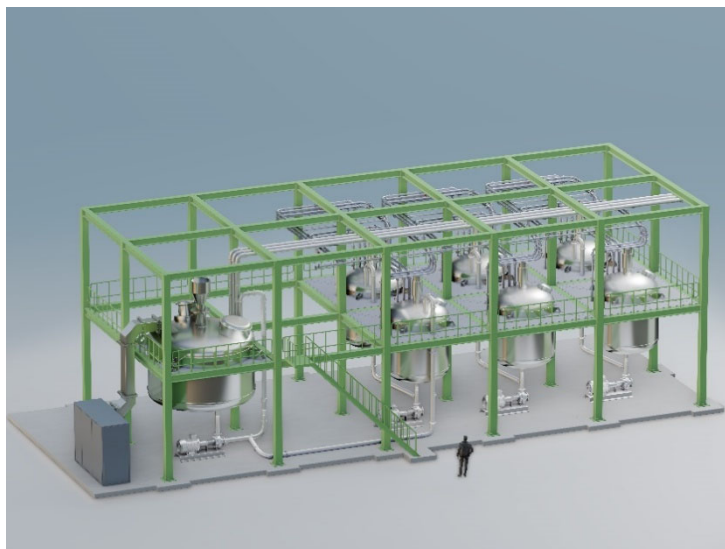
[BETA Details]

Location: 5-2 Toyama Shinden, Kwaragi, Hachinohe City, Aomori

Area: Approx. 300 m²

Start of production: Within FY2027

Rendering of completed building: See below.



(Rendering of completed “BETA” pilot plant for beryllium production)

Drawing on the results of the pilot demonstration with BETA, MiRESSO aims to build a mass production plant with a scale of 100 tons per year of beryllium production in the early 2030s, when the construction of the prototype and commercial reactors to demonstrate fusion energy will be fully underway.

3. Company Details

MiRESSO Co., Ltd.

Representative: Masaru Nakamichi, Chairman and CEO

Location: Misawa City, Aomori

Date of establishment: May 16, 2023

Business details: Beryllium production and sales, and technology platform business

URL: <https://miresso.co.jp/en/>

PACIFIC METALS CO., LTD.

Representative: Masayuki Aoyama, President & Representative Director

Location: Chiyoda-ku, Tokyo

Date of establishment: December 1, 1949

Business details: Production and sales of nickel and other steel products

URL: <https://www.pacific-metals.co.jp/en/>

4. Inquiries regarding this matter

Public Relations Officer, MiRESSO Co., Ltd.

(Email: info@miresso.co.jp)

General Administration Dept., PACIFIC METALS CO., LTD.

(Telephone: +81-3-3201-6681; Inquiry form: <https://www.pacific-metals.co.jp/en/inquiry/>)