

Functional Materials Business

Employing advanced metal fabrication technology cultivated over the years of business, JX Nippon Mining & Metals has become a global supplier of treated rolled copper foils used in flexible printed circuit boards, as well as of precision Cu alloy products including titanium copper, Corson alloy, and phosphor bronze - all used in connectors, semiconductor lead frames, and other parts. We are also engaged in precious metal plating and stamping, as well as other processes, on a global scale.



JX Nippon Mining & Metals Corporation
Senior Executive Officer, General Manager, Functional Materials Division, Senior Executive Staff, Technology Group
Hyakuno Manabu

Key Strategies

- Expand applications of the rolled copper foil and advanced copper alloy products, and improve profitability
- Strengthen production capacity to expand business

Review of Fiscal 2021

The spread of COVID-19 and the advances in work-style reforms have resulted in lifestyle changes such as the spread of working from home and online education. This has led to continued demand growth in the core markets for our products, particularly in the fields of electronic devices such as smart-phones, tablets, and PCs, and in communication infrastructure including base stations and data centers. Our treated rolled copper foil and copper alloy strip production facilities, which launched operations in fiscal 2020, continued full production throughout the year, and we successfully increased production and sales to respond to the current expansion in demand. In response to future growth in demand, we will achieve further improvements in efficiency and productivity, and by bolstering Group manufacturing facilities, will increase manufacturing capacity at each of the Group's sites thus expanding our production structures and strengthening our business foundations.

TOPICS

JX Philippines Increases Surface Treatment Capacity in Treated Rolled Copper Foil for FPCs

In January 2022, JX Nippon Mining & Metals Philippines, Inc. (JX Philippines) completed the installation of treated rolled copper foil surface treatment facilities, launching operations in order to meet growing demand for rolled copper foil for flexible printed circuit boards (FPCs). In making this investment, we were able to achieve remote facility launch and start mass production operations even though equipment manufacturer engineers faced difficulties entering the Philippines due to immigration restrictions amid the COVID-19 pandemic.

This investment not only increases the production capacity of the entire JX Nippon Mining & Metals Group, but also contributes to strengthening our BCP by increasing production capacity at JX Philippines, helping to correct overconcentration of production capacity at the Hitachi Works.

JX Nippon Mining & Metals has the largest market share worldwide for these products, and we will continue to build a supply system in line with market trends in order to continue to provide the materials needed by society.



Facilities for treated rolled copper foil surface treatment

Thin Film Materials Business

Employing world-class nonferrous metal manufacturing technologies, we are a supplier of a wide variety of sputtering targets including for semiconductor applications, compound semiconductor materials, high-purity metals, and surface treatment. These and many other materials and services, provided on a global scale, find use cases in end products such as advanced devices, leading-edge IT equipment, medical instruments, and electric vehicles



JX Nippon Mining & Metals Corporation
Executive Officer, General Manager, Thin Film Materials Division, Senior Executive Staff, Technology Group
Suwabe Takeshi

Key Strategies

- Establish a dynamic supply system to meet demand
- Strengthen new products and new business development capabilities
- Promote use of digital technologies for greater efficiency in manufacturing processes

Review of Fiscal 2021

Against the backdrop of growth in the overall size of the market driven by an accelerated digital transformation, the increased online-related demand resulted in growth in semiconductor-related markets. Amid this market expansion, fiscal 2021 saw continued strong demand for our mainstay products, such as sputtering targets for semiconductors, as customers increased production to cope with global tightness in semiconductor supply.

We had already increased our production capacity for sputtering targets for semiconductors in fiscal 2020, and have responded to growing demand by launching full-scale operation at these facilities. Furthermore, in order to meet current and future market needs, we have decided to further accelerate the expansion of our production system and reinforcement of our business foundation by launching construction of new plants around the world. We are also enhancing production capacity at our existing bases in a combined effort to significantly strengthen the production capacity of this product.

TOPICS

Expanded Production Capacity for Sputtering Targets for Semiconductors

Sputtering targets used for semiconductors are a mainstay product for the Thin Film Materials Business, mainly used in ultra-fine interconnects in leading-edge logic and memory chips, and demand for these continues to grow along with the move to a data-driven society. Factors such as telecommuting have resulted in increased demand for communications infrastructure and mobile terminals, and the semiconductor market is seeing accelerated growth. Looking forward, this underlying trend is expected to continue with the development of 5G and digital transformations.

After enhancing capacity by approximately 80% versus fiscal 2020 levels, we will continue our efforts to meet growing demand by enhancing our production facilities for sputtering targets for copper, copper alloys, titanium, and tantalum used in ultra-fine interconnects for semiconductors.



Production equipment used for semiconductor-grade sputtering targets such as electrolysis baths (Isohara Works)