Tantalum and Niobium Business

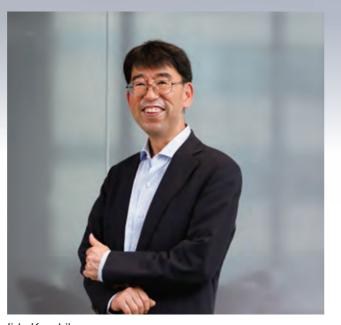
TANIOBIS GmbH (hereinafter "TANIOBIS"), our Germanybased Group company, is one of the world's leading manufacturers of tantalum and niobium materials, with manufacturing and sales locations all around the globe. Primarily driven by TANIOBIS, we contribute to evolution of the IoT/AI society through stable supply of such products as metal powders used in capacitors and semiconductor materials, high-purity oxides for SAW devices and optical lenses, chlorides for semiconductors, and advanced powder materials.

Key Strategies

- In addition to improving productivity and quality in our existing businesses, strengthen our customer-oriented business model
- Generation of items and acceleration of commercialization in new businesses for the expansion of our business foundations

Review of Fiscal 2020

In our existing businesses, sales of high-purity tantalum powder for capacitors have been sluggish since 2019 as a result of inventory adjustments by some major customers. However, this drop in demand has bottomed out as a result of working from home during the COVID-19 pandemic, leading to solid growth in fiscal 2021. Additionally, demand for high-purity tantalum powder for sputtering targets increased thanks to the strong semiconductor market. On the other hand, the market for alloy additives for aircraft engines and gas turbines in which niobium is used has experienced a significant downturn. Further, in new business development, we have been working to expand our business foundations by promoting initiatives targeting product development and the creation of synergies through close cooperation between TANIOBIS and JX Nippon Mining & Metals, as well as with the Toho Titanium Co., Ltd. Group and a range of start-ups. Through these activities, we are meeting the various demands of several customers and creating steady results ahead of market launch.



Iida Kazuhiko Executive Officer, General Manager Tantalum and Niobium Division, Senior Executive Engineer, Technology Group JX Nippon Mining & Metals Corporation

Outlook for Fiscal 2021

Given the factors of expanded demand from working from home as well as for PCs and communications infrastructure, we expect to see an upswing in tantalum powder for use in capacitors and sputtering targets for semiconductors-both mainstay products for TANIOBIS. However, the future remains uncertain for niobium, but the aircraft industry is starting to see a recovery. Under these circumstances, TANIOBIS will promote customer sales activities that integrate sales and technology to further expand its market share and to optimize the product mix and reduce costs at each site, as well as promote the stable procurement of raw materials. We are actively working towards net zero CO₂ emissions through measures such as switching over to 100% renewable energy at the Goslar plant. In new businesses as well, we will promote the early commercialization of new products under development, with a focus on minor metals and functional powders.

TOPICS

Promotion of Customer First Project

As of fiscal 2020, we have developed the Customer First Project—a customer-focused business model—that utilizes the advanced technology and outstanding production processes of TANIOBIS in order to promote customer-centric sales, development, and manufacturing. We have established technical centers at each of our manufacturing locations, and are working to discern customer needs by developing and improving products while taking their opinions on board. This approach has garnered high praise from customers because it provides a one-stop sales, research, and production service with increased convenience, and it has been effective for expanding sales. Looking forward, TANIOBIS will contribute to bringing about a IoT/AI society by meeting market expectations through ensuring a stable supply of high-quality advanced powder materials centered around tantalum and niobium.



TANIOBIS GmbH Goslar plant

Mineral Resources Business

Since acquiring equity at the Caserones Copper Mine in 2006, we have taken a central role in its development, with copper concentrate production beginning in May 2014. We have also invested in some of the world's largest copper mines, including Los Pelambres and Escondida. The amount of copper produced (total equity base) reached about 190,000 tons in fiscal 2020.

Key Strategies

- Establish a Stable Operating System and Enhance Business Value in response to the acquisition of all interests of the Caserones Copper Mine
- Seek and promote new projects (exploration, development, and operation) with a prospect of supplying raw materials to our midstream and downstream businesses

Review of Fiscal 2020

For the Caserones Copper Mine, in February 2021 we acquired all of its interests held by joint investors Mitsui Mining & Smelting Co., Ltd. and Mitsui & Co., Ltd. In operations, as measures to prevent the spread of COVID-19, we expanded our cafeteria facilities to enable social distancing and rearranged operations of personnel transportation; however, the production amount decreased compared to fiscal 2019. In addition to the Caserones Copper Mine, the Los Pelambres Copper Mine and the Escondida Copper Mine in which we are investing, we have also continued with operations while ensuring COVID-19 prevention measures are in place. The facility expansion plan for the Los Pelambres Copper Mine is re-scheduled to be completed in the second half of 2022 based on the impact of the temporary suspension to prevent the spread of COVID-19.

TOPICS

Acquisition of All Interests of the Caserones Copper Mine

In February 2021, we acquired a full interest of the Caserones Copper Mine. As a result, we have acquired 100% of the rights for high-grade and clean copper concentrates of the Caserones Copper Mine, which is becoming more valuable as a raw material for smelters because the copper grade in concentrates is decreasing and impurities are increasing worldwide. Increasing the supply of clean copper concentrates will increase the processing capacity of smelters, allowing them to process more materials to recycle. Thus, securing the high quality copper concentrates from Caserones is extremely important for our smelters, and contributes to the competitiveness of our Metals & Recycling Business.



Narui Eiichi

Executive Officer, General Manager Mineral Resources Division, Senior Executive Engineer, Technology Group JX Nippon Mining & Metals Corporation

Outlook for Fiscal 2021

While continuing with our measures to prevent the spread of COVID-19 in the Caserones Copper Mine, we will further improve our profitability by implementing action plans for key issues in operation that could increase operation level and promote cost improvements.

Regarding to the Los Pelambres Copper Mine, we will focus on the completion the expansion plan started in fiscal 2019. Also, with a prospect of starting businesses, we will move forward with the investigation and study of various minerals around the world including minor metals and silicified ore in order to achieve stable supply of raw materials based on future needs in our midstream and downstream businesses.



Caserones Copper Mine