

The Sumitomo Business Spirit

Article 1

Sumitomo shall achieve strength and prosperity by placing prime importance on integrity and sound management in the conduct of its business.

Article 2

Sumitomo shall manage its activities with foresight and flexibility in order to cope effectively with the changing times. Under no circumstances, however, shall it pursue easy gains or act imprudently.

"Business Principles" forming the "Rules Governing the House of Sumitomo," formulated in 1928

SMM Group Corporate Philosophy

Sumitomo Metal Mining Co., Ltd. (SMM), in accordance with the Sumitomo Business Spirit, shall, through the performance of sound corporate activities and the promotion of sustainable co-existence with the global environment, seek to make positive contributions to society and to fulfill its responsibilities to its stakeholders, in order to win ever greater trust.

SMM shall, based on respect for all individuals and recognizing each person's dignity and value, seek to be a forward-minded and vibrant company.

SMM Group Management Vision

By developing and employing innovative technology, we shall fulfill our social responsibilities as a manufacturing enterprise.

Based on the principles of compliance, environmental protection and operational safety, the Sumitomo Metal Mining Group shall pursue maximum corporate value through the provision, via its global network, of high-quality materials such as non-ferrous metals and electronics and advanced materials.

SMM History

As the corporation inheriting the original business of the Sumitomo Group, not only have we responded flexibly to the changes in the surrounding environment based on the Sumitomo Business Spirit, we have also driven the business with a progressive stance. The current strengths of our Group have been formed by the various management decisions and solutions to problems which occurred in that process. We will continue to reinforce our strengths and bring about new strengths through our business activities.



1590–1910

Contributing to Japan's society for over 400 years, from the start of copper smelting and refining with *Nanban-buki*



Monjuin Shiigaki

The Sumitomo Business Spirit, which continues to this day, has its origins in the *Monjuin Shiigaki*, written by the founder of the Sumitomo family, Sumitomo Masatomo (1585–1652), in his later years to explain the merchant's frame of mind. At the SMM Group, the Sumitomo Business Spirit is the common spirit among employees and we work to inculcate common goals and standards of action as guideposts for carrying out duties through various educational opportunities.



With the start of operation at the Besshi Copper Mine, noted at the time as one of the world's largest copper mines, Sumitomo's business expands greatly from a focus on the copper smelting and refining business to newly adding the mineral resources business. Over the following 283 years, until 1973, the mining technologies nurtured at Besshi are continually handed down within SMM's globally expanding mineral resources business.



Mineral Resources Business

1691

Open the Besshi Copper Mine

Smelting & Refining Business



Nanban-buki

Soga Riemon, who started dealing in copper in Kyoto around 1596 to 1615, develops Japan's first smelting and refining technology for separating copper and silver, known as *Nanban-buki*, and discloses it broadly to others in the same business. Until then, there had been no technology in Japan to remove the silver from copper ore so copper was sold, and exported, at copper prices while it still included silver. With Soga's technology, it was now possible to sell the copper after separating out the silver.



Start of copper smelting and refining

Overcoming smoke damage

With the modernization of the Besshi Copper Mine, increases in the amount of ore extracted are planned, and the smelter is relocated to the coastal area of Niihama. As a result, agricultural crops in the surrounding area are damaged more and more by the smoke produced by the smelting operations because of the sulfur dioxide gas it contains, becoming severe by 1893. Iba Teigo, the second Director-General, purchases uninhabited islands which don't even have water, and are located about 20 kilometers north of Niihama City to alleviate the smoke damage, and moves the smelter there in 1905. Sumitomo isn't alone in facing this problem of smoke damage; all copper smelters and refineries around the world face the same problem. But after many years and spending huge sums on research, in 1939 Sumitomo becomes the first smelter in the world to bring about zero emissions of sulfur dioxide gas, which was a root cause of the smoke damage, finally solving the problem of smoke damage after 47 years.

In overseas operations today, too, such as in the Philippines, SMM Group works to not only preserve the environment but also aims for co-existence and co-prosperity with local communities by providing support for regional promotion policies which build and preserve a trusting relationship.



1905

Relocation of copper smelting and refining to the Shisakajima Islands

1600

1700

1800

1900

1910

SMM History 1910–2017

Overseas operations and the nickel business were added, completing our unique portfolio

Local communities



Reforestation business

Forests over a large area vanish because charcoal and lumber must be secured to operate the Besshi Copper Mine. After Iba Teigo becomes manager of the Besshi Copper Mine in 1894, large-scale reforestation operations are carried out, reaching a peak of more than two million trees being planted annually. Even today, the SMM Group works at co-existence and co-prosperity with local communities by working on environmental preservation.

The Besshi Copper Mine in the past (top) and today (bottom)

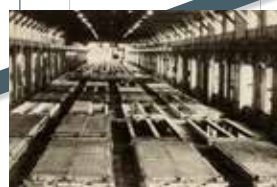


Sumitomo, whose resource business had centered on copper mines, acquires management rights for the newly discovered Kounomai Mine in Hokkaido at a time of growing importance of gold as a resource. This northern mine, known as "the biggest gold mine in the Orient," enhances the resource business portfolio with gold as a new metal.

After WWII, Japan ceases domestic mining operations in the non-ferrous metals industry and switches to smelting and refining with resources completely procured from overseas. In 1961, SMM signs an investment and financing contract with Bethlehem Mine (Canada), which is the start of the company's involvement with overseas mines. Continuing to today, SMM is gaining footholds in mines throughout the world.

SMM launches a nickel smelting and refining business in 1939, a time when new demand is appearing (nickel's discovery was relatively recent, in the 1700s). Subsequently, SMM has come to lead the world in nickel technologies, including the development of the MCLE method and other nickel refining technologies, and in the new millennium, diversifying raw material procurement with the practical implementation of HPAL technology.

Nickel smelting and refining



While the mining business in Japan is undergoing contraction at this time, the electronic materials business comes under attention as a new market. In 1960, SMM begins production of germanium dioxide for use in transistors. Since then, we have provided the market with paste, lead frames, and other electronic materials that leverage metal technologies. At present, we are increasing our production of battery materials using nickel.

Materials Business



Learn about SMM

Value Creation

Management

Review of Operations

Sustainability

Customers



Start of production of materials for automobile batteries

Against the background of rising environmental awareness, the demand is rising rapidly for cathode materials for hybrid and electric vehicle secondary batteries. Through close collaboration with customers, the SMM Group is working to supply high performance, safe battery cathode materials in addition to fulfilling its obligation as a producer of nickel and cobalt, the raw materials of battery cathode materials.

Facing a decline in ore grade after 283 years of operation, the Besshi Copper Mine is closed. With the closure of the Sazare Mine (Ehime Prefecture; copper) in 1979, the curtain closes for a time on SMM's heritage of mining technology. In 1985, however, operation of the Hishikari Mine begins (Kagoshima Prefecture; gold). SMM's technology has begun to chart a new history in a new area.

Start of operations at the Hishikari Mine

1985

1986

Investment in the Morenci Copper Mine

1992

Conversion of nickel refining process to MCLE technology

2001

Entry into the automobile battery materials market

2006

Start of operations at the Pogo Gold Mine

2005

Start of production at the Cerro Verde Copper Mine

2015

Start of operations at the Sierra Gorda Copper Mine

2013

Start of production at Taganito HPAL

2005

Start of production at CBNC

2014

Increase production of battery materials
Increase production of LT/LN

Gold mines

1917

Start the gold mine business

Copper mines

Overseas copper mines

1960

Participation in overseas copper mine development

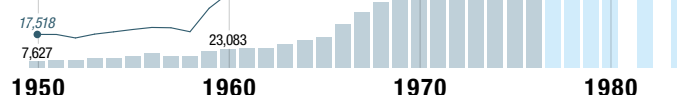
1971

Start of production at the Toyo Smelter & Refinery

1939

Start of nickel smelting and refining

● Copper production (tons)
■ Non-consolidated sales (¥ millions)
■ Consolidated sales (¥ millions)



Acquiring an additional interest in the Morenci Copper Mine

The SMM Group starts participating in management of the Morenci Copper Mine, known as a superior copper mine, in 1986 and, in 2016, acquires an additional 13% interest (our total interest: 25%). This is based on the relationship of trust we have built up over 30 years with the Freeport-McMoRan Inc., the largest copper producing company in the United States, and operator of this mine.

The practical application of the HPAL method on a commercial base

In 2005, we are the first in the world to apply the HPAL method to convert low-grade nickel oxide ore into a nickel resource. In addition to contributing to the realization of in-house procurement and effective use of nickel resources that are also being focused on as a raw material for secondary batteries, we are working on co-existence and co-prosperity with local communities through activities that contribute to society in the Philippines, which is where operations are.



Technology



Local communities