



Third-Party Opinion

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A wide variety of initiatives for the Sustainable Development Goals (SDGs)

Not only efforts to reduce CO₂ and other greenhouse gas emissions, but also recycling slag generated as a by-product, reusing waste such as incinerated ash and scallop shells, and facilitating air and water pollution control in the manufacturing process -- these initiatives all receive high marks for contributing on multiple fronts to the strong support they provide to SDGs. In this report, each initiative and the 17 goals of the SDGs are clearly linked, and the report is very easy to read. I look forward to the continued work on the construction of high-level resource recycling processes through the active use of waste in the manufacturing process and the expansion of slag applications.

Efforts to create an employee-friendly workplace environment

The efforts aimed at becoming a rewarding company can be highly appreciated through the introduction of a new personnel system that makes each employee feel rewarded in their work and emphasizes the importance of occupational safety activities. I think that the diversification of human resources that is also listed in the SDGs is an important initiative to be actively pursued.

Closing remarks

The concept of environmental, social and governance will likely gain more and more attention in the future. This report mentions these efforts, and in the future, we would like to see efforts to further enhance the initiative of each component and the appeal in communicating such initiative.

The management philosophy of "utilizing human power, providing more usefulness from the earth's resources, and contributing to the well-being of human society" is exactly the same idea as the SDGs. We look forward to your contribution to the realization of a sustainable society with innovative technologies and systems.

As a leading ferronickel manufacturer in Japan, Pacific Metals Co., Ltd. has a clear long-term vision to become the world's top ferronickel manufacturer and is deeply engaged in corporate activities. The following are the activities that are particularly appreciated from this Sustainability Report 2019 and the areas that we expect for further development.

Initiatives for sustainable development of ferronickel production

Considering the nickel supply chain, it is expected that demand will continue to expand not only for stainless steel, but also as a raw material component of lithium-ion battery cathodes, currently in the news from work on them garnering a Nobel Prize. Therefore, efforts to promote variety and diversification in ferronickel production from various perspectives are highly evaluated.

In Japan, efforts have been made to develop technologies and human resources under an all-Japan system in collaboration with industry, government, and academia, with the aim of securing stable supplies of resources. As Pacific Metals is a leading ferronickel manufacturer in Japan, we look forward to collaboration in these efforts to accelerate the development of new technologies and diverse human resources, as well as overseas expansion.

Feedback

We would like to express our sincere gratitude to Dr. Chiharu Tokoro for taking her time out of her busy schedule and contributing the third-party opinion to our Sustainability Report 2019. We would also like to express our deep appreciation for Dr. Tokoro's understanding of our business and the business environment in which we have been evaluated, and for evaluating the Sustainability Report.

As Dr. Tokoro has noted, we are promoting variety and diversification of businesses for effective utilization of limited resources based on ferronickel production. In the new medium-term management plan PAMCO-2021, we will further develop and strengthen our efforts. Going forward, we will continue to actively promote the SDGs through our business

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activities and contribute to the sustainable development of society. To that end, the Sustainability Report 2019 issued this time contains SDGs targets for each item.

In addition, we believe that aiming to be a valued company, including the proposed diversification of human resources, is an issue common to all companies, not just our company. We will also promote initiatives to that end.

1949	Separated from Nippon Soda Co., Ltd.'s steel department and established as Nisso Steel Co., Ltd.
1952	Listed on the Tokyo Stock Exchange and Osaka Stock Exchange.
1954	Converted the iron sand and pig iron facility at the Shibata Plant to a ferronickel smelting facility.
1957	Completed Hachinohe Plant and started production of iron sand and pig iron.
1959	Divested the Shibata Plant with the establishment of Pacific Nickel Co., Ltd., which specializes in ferronickel smelting.
1965	Converted part of the Hachinohe Plant's pig iron production facility to alloy iron and ferronickel smelting. Following production start ferromanganese, production of ferronickel began in 1966 and stainless steel in 1968. Installed two large electric furnaces, one 25,000 KVA in 1969 and one 40,000 KVA in 1970 to increase production of ferronickel.
1970	Absorbed Pacific Nickel Co., Ltd. and changed company name to Pacific Metals Co., Ltd. Established the foundation as a top ferronickel manufacturer.
1972	Signed technical assistance contract for construction of ferronickel smelting plant of Aneka Tambang, Indonesia (Antam Project). Acquired first-grade qualification as a water pollution control manager for the first time for a Pacific Metals employee.
1973	Invested in the Rio Tuba Nickel Mining Corporation in the Philippines and developed nickel mine.
1974	Concluded a telemeter system agreement. Acquired first-grade qualification as an air pollution control manager for the first time for a Pacific Metals employee.
1978	Concluded a pollution control agreement.
1980	Acquired industrial waste disposal business permit.
1983	Divested the Iwase Plant, and transferred the grinding material department to Pacific Rundum Co., Ltd.
1984	Spun off the Naoetsu, Toyama, and Narashino Plants, and the cast steel, forged steel, and machinery departments were transferred to Pacific Special Alloy Castings Co., Ltd., Pacific Steel Mfg. Co., Ltd., and Pacific Machinery & Engineering Co., Ltd., respectively.
1985	Renamed Hachinohe Plant to Hachinohe Works.
1992	Established a general and industrial waste final disposal site.
1993	Acquired industrial waste technical manager qualification for the first time for a Pacific Metals employee.
1995	Installed 60,000 KVA ferronickel smelting electric furnace at Hachinohe Works and established 3 furnaces.
1996	Completed Hachinohe Port Kawaragi No. 2 Pier (public).
1997	Established Pacific Energy Center Co., Ltd. Completed raw material transport conveyor line equipment (Kawaragi).
1998	Acquired ISO 9002 certification.

1999	Moved the head office organization to Hachinohe to become a specialized manufacturer of ferronickel.
2000	Registered environmental measurement certification business. Kitanuma Thermal Power Station of Pacific Energy Center Co., Ltd. started supplying electricity.
2003	Completed the "Incineration Ash and Scallop Shell Recycling Facility" for the recycling business. Transited to ISO 9001:2000.
2005	Achieved 1 million tons of ferronickel production. Conducted environmental assessment in accordance with the Aomori Prefecture Environmental Impact Assessment Ordinance. Acquired special management industrial waste disposal business permit.
2006	Completed ferronickel production line expansion work. Completed the "Melting Furnace Fly Ash Recycling Facility" for the recycling business. Eliminated the Shimamori Final Disposal Site for Municipal Solid Waste and Final Disposal Site for Industrial Waste. Installed the second power plant denitration equipment.
2007	Installed drainage monitors in all drains. Installed a small-scale wastewater treatment device at a part of the drainage port.
2008	Opened Philippines Office. Opened Jakarta Office.
2009	Acquired ISO 14001:2004. Completed wet pilot plant equipment. Completed ferronickel production line expansion work.
2010	Installed a dust monitor in the ore yard.
2011	Launched webpage for waste disposal status. Installed drainage port and chimney monitoring cameras.
2012	Acquired OHSAS 18001:2007. Acquired ISO 17025:2005.
2013	Started operations of wastewater treatment facility.
2014	Started integrated management system operation.
2015	Established basic policy on corporate governance code.
2016	Formulated new "Long-term Vision."
2017	Awarded "Excellent Workplace" from the Aomori Industrial Waste Association.
2018	Received the "Mottainai Aomori Award" from the Mottainai Aomori Prefectural Movement Promotion Council (Chairman: Governor of Aomori Prefecture).