Niterra

Corporate Brochure

https://www.niterragroup.com/english/

E-2603(9)D
Revised March 2026

Becoming a shining power for the earth.

Effective April 1, 2023,
our English company name has changed to "Niterra Co., Ltd."
As a result, NGK SPARK PLUG Group has become the "Niterra Group".

Niterra

Concept behind Niterra

Niterra is a word that we have coined that combines "niteo",
which means "shine" in Latin, and "terra", which means "earth".
It expresses the Group's thoughts and stance of becoming
a company that not only contributes to a sustainable society,
but also brightens the entire global environment.

Top Message

Since its foundation in 1936, the Niterra Group has been exploring the potential of ceramics and contributing to social development while building trust with our customers, driven by the mindset of “Involvement by all" and “Quality Products," which are the starting points for all our manufacturing. By doing so, we have worked to earn the trust of customers in Japan and overseas under the "NGK SPARK PLUG" company name.

However, in an era when the automotive industry is undergoing a once-in-a-century transformation, we believe that in order to achieve solutions to social issues faster than ever before, in our various initiatives we need to bring about change that is not simply an extension of the past.

As part of that effort, in 2023, we changed the English company name from "NGK SPARK PLUG" to "Niterra". This is a coined word that combines the Latin words "niteo," (meaning "shine") and "terra" (meaning "earth"). It expresses the Group's desire and commitment to become a company that brightens the global environment—that truly makes the earth shine.

Using core assets such as ceramic technology that have been cultivated up to now, our Group helps realize a better society by addressing diverse global issues. While maintaining the shared values of the "Niterra Way" that we have cultivated over the years, we will continue to seek solutions to social issues with the highest aspirations.

We sincerely appreciate your continued, generous support of the Niterra Group.

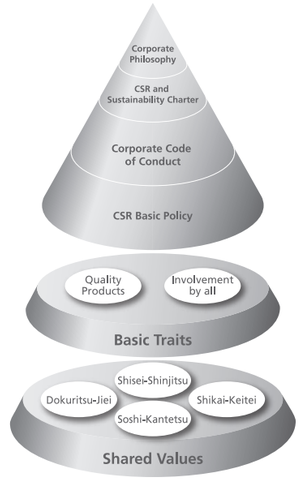
Keiji Suzuki

Representative Director, President

The Niterra Way

We aim to provide real value as a company that is indispensable to the world.

The Niterra Way refers to a set of philosophies that includes values that are shared by the entire Niterra Group, and the actions based on those philosophies, as well as the manner in which those actions are carried out.



Corporate Philosophy

Three elements constitute our corporate philosophy.

1. Commitment

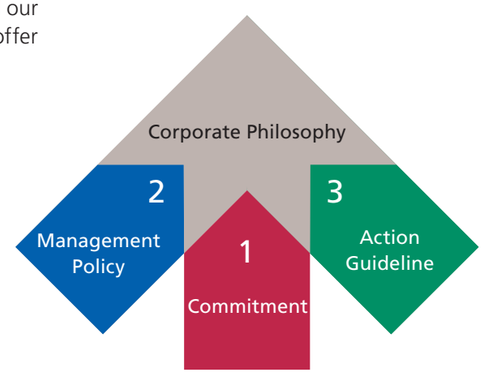
With full use of the most suitable technology and our accumulated experience, we continue striving to offer new values to the peoples of the world.

2. Management Policy

We offer a working environment in which each one of us is encouraged to make full use of his or her personality and capabilities.
With all our power we are dedicated to pursuing management based on trust and confidence.

3. Action Guideline

Ever onward! Always mindful of what is the best course, we swiftly put it into action.



Medium-to-long-term Management Policy

Vision	Our Mission
We will be a company that brightens the Earth by solving social issues through our unique technologies and ideas Niterra	**By integrating our established ceramics-based assets** with newly developed ones, we will link these assets together, optimize the efficient use of minimal resources, and deliver regenerative and circular solutions to society. ceramics and Beyond, eXceeding imagination

The Niterra Group is active around the world

Number of overseas bases

62

Ratio of overseas employees

About 48%

Spark plug global market share
Oxygen sensor global market share

No.1

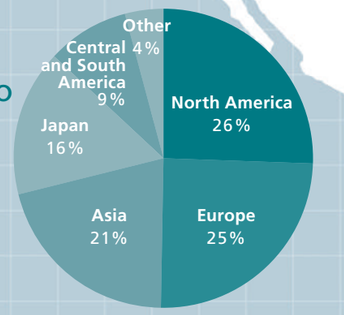
*Niterra research as of March 2024

Number of countries in which Niterra Group products are sold

About 140

Overseas sales ratio

84%



Sales by region

Percentage of employees who have experience being seconded overseas

12.1%

*Generalist (Classified, Considered) only

Sales of the entire Niterra Group

652.9 billion yen

Overall group operating profit ratio

19.9%

- Headquarters
- Technical center
- Manufacturing & Sales organization
- Holding company
- Sales organization
- Other organization

*Figures current as of March 31, 2025, unless otherwise noted.

Business of the Niterra Group

We contribute to the realization of a better society by providing products and services used in a wide range of fields such as automotive parts, semiconductor related parts, medical equipment, and industrial ceramic parts.

Automotive Parts

Next-generation mobility connected by ceramics

We leverage the characteristics of ceramics, with spark plugs and sensors etc., taking great pride in our top global market share, towards the creation of an environmentally friendly mobility society that enriches people's lives.

See **P9** for our products and services

Semiconductor Related Parts

The future IoT society created with ceramics

Realizing a future society of IoT and advanced communications by independently developing and providing parts to support semiconductor development and manufacturing.

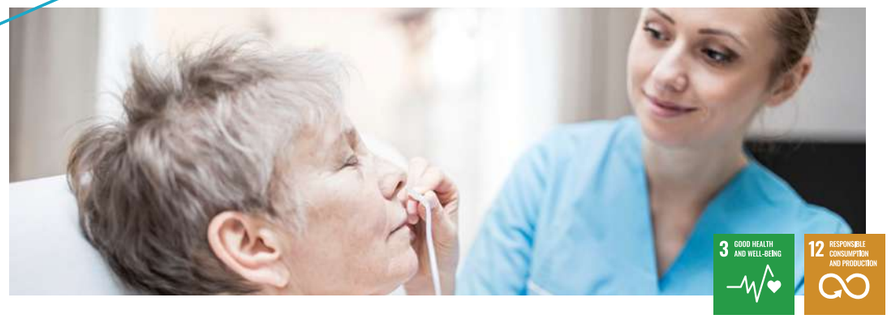
See **P10** for our products and services

Medical Equipment

Creating a healthy and prosperous society alongside patients

We are committed to improving the quality of life of people around the world with products that meet various needs to realize a society in which people enjoy lives of good health and abundance.

See **P12** for our products and services

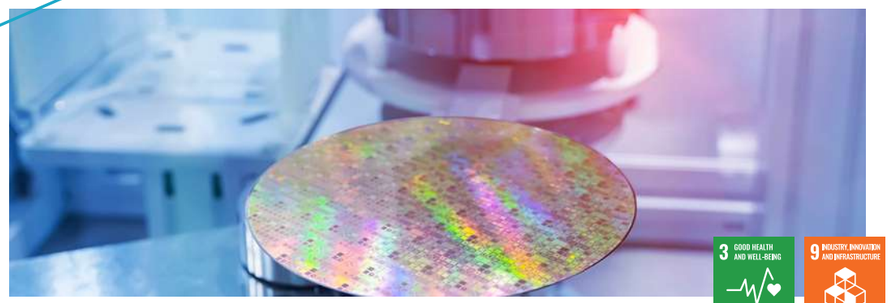


Industrial Ceramic Parts

Supporting global industries with ceramics

We offer optimal solutions for global industries with products that bring together our core technologies, such as piezoelectric elements using ceramics.

See **P11** for our products and services



New Products / Services

Creating a future beyond imagination with technologies that transcend boundaries

We are committed to confronting global challenges and creating a future beyond current human imagination with products and services in new fields that transcend ceramics technologies.

See **P13** for our products and services

Representative products

Products that aim to solve social issues in various business fields

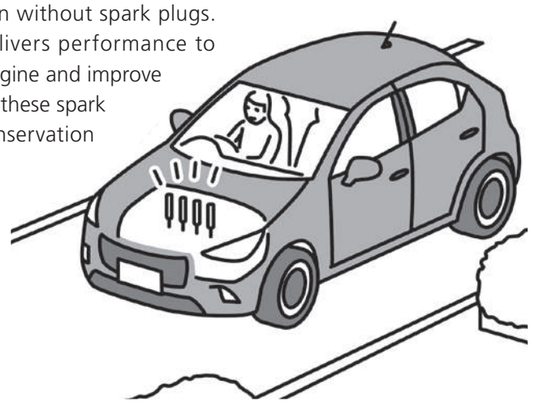
Automotive Parts

Next-Generation Mobility Connected by Ceramics

We leverage the characteristics of ceramics, such as spark plugs and sensors,
taking great pride in our global top market share,
to create an environmentally friendly mobility society that enriches people's lives.

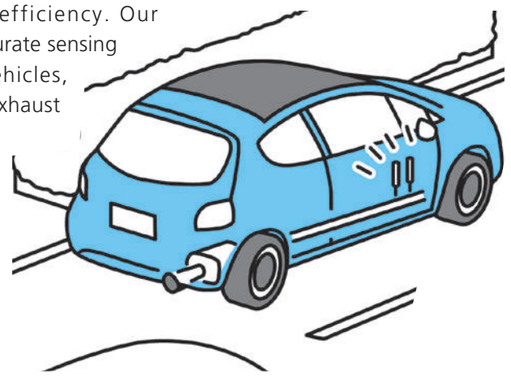
Plugs

Our spark plug was the first to be made in Japan. We now enjoy the top market share in the world. Spark plugs play a crucial role in starting the engine; cars simply cannot run without spark plugs. Our proprietary ceramics technology delivers performance to withstand harsh environments inside the engine and improve fuel efficiency. By improving fuel efficiency, these spark plugs also contribute to environmental conservation by reducing CO_2 emissions.



Sensors

Sensors are core automobile components capable of sensing vibrations and exhaust gases to ensure safe, efficient engine operation. They help to detect engine abnormalities, make exhaust gas cleaner, and improve fuel efficiency. Our proprietary technology achieves fast and accurate sensing even in the harsh environments inside vehicles, enabling us to meet increasingly stringent exhaust gas emission regulations in recent years.



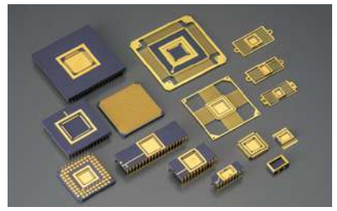
Semiconductor Related Parts

The Future IoT Society Created with Ceramics

Realizing our future IoT society and advanced communications society
by independently developing and providing parts to
support semiconductor development and manufacturing.

Semiconductor Packages

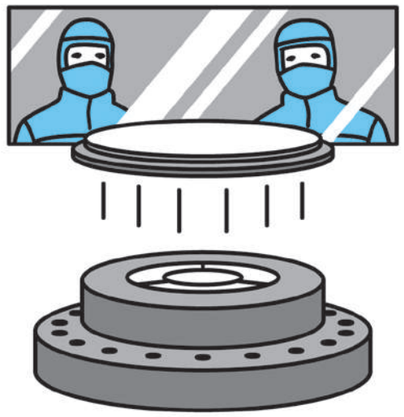
Semiconductor packages are essential for protecting the semiconductors used in all kinds of products, including smartphones, cameras, and cars. Our proprietary technologies protect semiconductors from heat and moisture while transmitting electrical signals to electric circuits thinner than a human hair. They are strongly expected to contribute to our ever-expanding IoT society and to play an active role in next-generation communications.



Products for Semiconductor Manufacturing Equipment

We offer a variety of components used in the semiconductor manufacturing process. Our electrostatic chucks, which make the most of the electrostatic properties of ceramics and which we produce ourselves from materials development to finishing touches, improve the quality of semiconductors with our unique technology that maintains the surface temperature of silicon wafers* at a uniform level. We will continue to contribute to improving the production efficiency of semiconductors, so essential for the IoT society of the future.

*Materials that form the substrate of semiconductors



Representative products

Products that aim to solve social issues in various business fields

Industrial ceramic Parts

Supporting the world's industries with ceramics

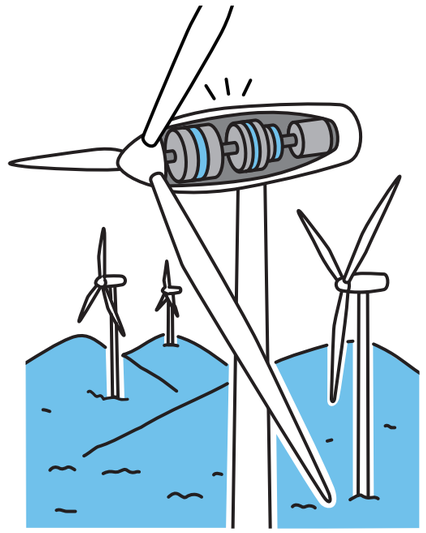
We offer optimum solutions for industries around the world with products that bring together our core technologies, such as piezoelectric elements that use ceramics.

Piezoelectric ceramics

Piezoelectric ceramics are used in various products in various fields, such as medical, automobiles, and semiconductors, which are indispensable in our daily lives, taking advantage of the "voltage to vibration/pressure to voltage" characteristic of ceramics. We also sell lead-free piezoelectric ceramics, which do not contain lead aiming to realize a sustainable society.

Balls for bearings

These bearing balls are used in machine tool parts and inverter motors. They are made of lightweight, high-strength silicon nitride material and are smooth with low friction so that they can be used with a small amount of lubricant. The trend toward higher-performance inverters and motors rotating at higher speeds expands their use in EV and semiconductor manufacturing equipment applications.



Medical Equipment

Creating a healthy and prosperous society by working closely with patients

We are committed to improving the quality of life of people around the world with products that meet various needs to realize a society in which people enjoy lives of good health and abundance.

Medical Oxygen Concentrators and Liquid Oxygen Systems

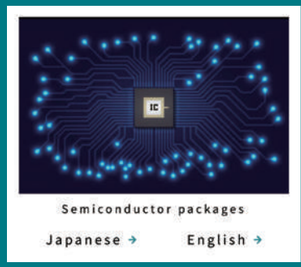
Medical oxygen concentrators and liquid oxygen systems provide high-flow oxygen therapy for patients with Chronic Obstructive Pulmonary Disease (COPD*). A diverse product lineup, including portable and stationary oxygen concentrators and liquid oxygen systems with backup power for outages, caters to a wide range of patient needs. We remain committed to developing oxygen delivery products and services that meet evolving needs and improve patient quality of life.

*A disease caused by a loss of lung function, principally due to smoking, etc. Oxygen inhalation is necessary because the blood can become oxygen-deficient.

Niterra column

Introduction of Our Original Video Contents

To help you better understand our products in depth and clearly, we have published various product introduction videos on the following page:
https://www.niterragroup.com/english/corporate/advertising/
In each video, we introduce the features of the products and the value they provide to society. Please take a look at our dedication to technology and products through these videos.



Representative products

Products that aim to solve social issues in various business fields

New Products / Services

Creating a future beyond imagination with cross-disciplinary technology

We are committed to confronting the world's challenges and creating a future beyond human imagination with products and services in new fields that transcend ceramics technology.

Solid Electrolyte

By leveraging the high safety of ceramics and the material development capabilities of our group, we are working to develop oxide-based solid electrolyte with top-class ionic conductivity. It has excellent stability and temperature characteristics, and is expected to be used in harsh environments such as automobile-related, IoT-related, and outer space, such as high and low temperatures, vibrations, and high vacuum.

Reversible SOC System

We are currently working on the development of a "reversible SOC system" that utilizes the fuel cell technology we have developed over the years. This system produces hydrogen through water electrolysis and generates electricity through fuel cells, all in a single cell stack. The development of this system will make it possible to address the social issue of increasing surplus electricity with the increase in the ratio of renewable energy, and is expected to contribute to the realization of a decarbonized, hydrogen-circulating society.

Efforts of our group

Solid oxide fuel cells (SOFC)

Solid oxide fuel cells (SOFC) are new, earth-friendly power generating devices that generate electricity through a chemical reaction between hydrogen and oxygen. Our Group is undertaking the development of cell stacks for power generation. Above all, our Group is rising to the challenge of developing compact, high-output, next-generation SOFCs. We anticipate that these will contribute to the decarbonized society of the future.

Niterra and CCU Contributing to carbon neutrality.

With the urgent need to realize a carbon-neutral society,
Carbon dioxide Capture and Utilization is one technology gaining attention.
This involves the recovery of CO_2 emitted from factories and reusing it as a resource.
Niterra is working as a company to realize a carbon-neutral society.

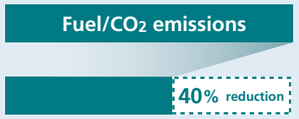
Utilizing all the technological capabilities of Niterra

Various cutting-edge technologies are essential for CCU. The diversity of our technology plays an active role here. For example, for the recovery and concentration of CO_2, we use "oxygen concentrator" technology, which is actively used in the medical field. For the production of hydrogen, we use the technologies that we have cultivated through the development of solid electrolytes. The diverse expertise we have accumulated over the years is accelerating the realization of CCU.

Technologies used in CCU

Oxygen Enriched Combustion

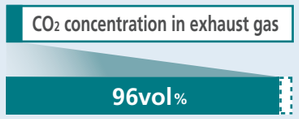
With the technology cultivated in oxygen concentrators, it is possible to increase the oxygen concentration of combustion support gas and reduce the amount of fuel gas used and thus the CO_2 emissions. In addition, CO_2 can be easily recovered by increasing the concentration of CO_2 in exhaust gas.



*Oxygen concentration 100%

CO_2 recovery/concentration

With the technology cultivated in oxygen concentrators, it is possible to recover the CO_2 in the exhaust gas and concentrate it to a concentration that is easy to use. We are also considering the liquefaction of highly concentrated CO_2 for transportation.



Hydrogen Production

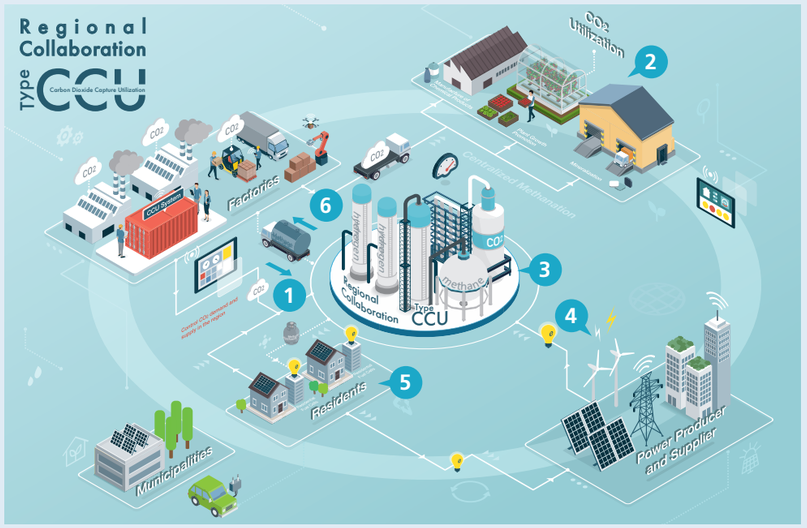
It is possible to produce hydrogen from electricity and water in SOEC using ceramics by utilizing the technologies cultivated for solid electrolytes. Highly efficient hydrogen production is possible by combining waste heat such as from methanation.

Synthetic Methane Production

Methane, the main component of city gas, can be produced through methanation from recovered CO_2 and hydrogen. We can convert energy inputs into renewable energy and achieve carbon neutrality.

Pursuing social value with "Regional CCU™".

"Regional CCU™" is a concept that uses CCU to aim for carbon neutrality throughout an entire community. Starting with companies that emit CO_2, we will circulate the flow of carbon recycling while making the most of local characteristics. At the same time as reducing CO_2 emissions to virtually zero, we will solve community social issues and revitalize local societies. This will in turn be connected to the concept of sustainable cities that will be part of the next generation. We hope to realize such a vision of the future through "Regional CCU™". The target is 2030. We will continue to work toward this goal in cooperation with other companies and local governments.



1. Separating and recovering CO_2 from exhaust gas discharged from factories
2. Delivering and using recovered CO_2 for sources of demand such as factories that use CO_2 and promoting plant growth
3. Reacting CO_2 with hydrogen to produce methane, the main component of city gas
4. Locally generated renewable energy is used for the electricity used to produce hydrogen
5. Enables the effective use of surplus power generated from household solar power generation
6. e-methane is delivered to factories and households in the region where fuel is required.

Captured CO_2 is returned as a fuel that does not rely on fossil fuels.

Proud Technologies of the Niterra Group

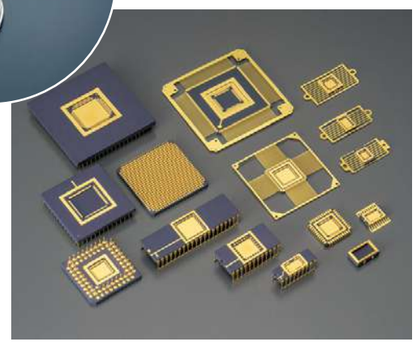
Ceramics and Beyond. Core technology honed through manufacturing

The Niterra Group has a wide variety of specialized technologies.
Blending various materials such as ceramics with nano-level particle sizes, creating shapes freely, baking at high temperature, detecting invisible matter...
for environment and energy, mobility, and semiconductors,
many different technologies have been refined in a wide range of manufacturing, including ceramics, with the potential to be used globally.
These technologies are expected to contribute to solving the problems facing the world.

Representative core technologies of the Niterra Group

Ceramic Material Technology

We develop the materials used in manufacturing in-house. In addition to maximizing the strengths of ceramics, combining them with resins and metals brings out new performance. We also mix different types of ceramics to create ceramics with unprecedented properties.



Ceramic Molding Technology

We have the know-how to freely process ceramic materials. One of these areas is molding technology. Of the many different molding technologies such as extrusion molding and press molding, sheet lamination is one of our core technologies.It has contributed greatly to the evolution of electronic equipment and smart devices.

Functions

Harsh Environment Resistance

Our oxygen sensing technology is useful in the regulation of automobile exhaust gas. A ceramic sensor must withstand high temperature exhaust from the engine and water splashing inside the exhaust pipe. We have achieved performance that can stably and accurately sense oxygen concentrations in such harsh environments.

Heater Control

Ceramic heaters that can heat up rapidly, rising up to about 1,000°C in 1 second. We have established technology that can stably control the electrical resistance required for heaters, and provide high-quality, highly efficient heaters.These are also installed in "Electro-static chucks" used as semiconductor manufacturing equipment.

Power Generation Technology

Fuel cell SOFC contributing to carbon neutrality. Electricity is generated using zirconia, a material through which oxygen ions move through ceramics. To put this into practical use, Morimura SOFC, a group company, has developed a "stack" that consists of multiple layers of cells composed of sheets of zirconia. It is our aim to achieve global top-level power generation efficiency.

History and Milestones

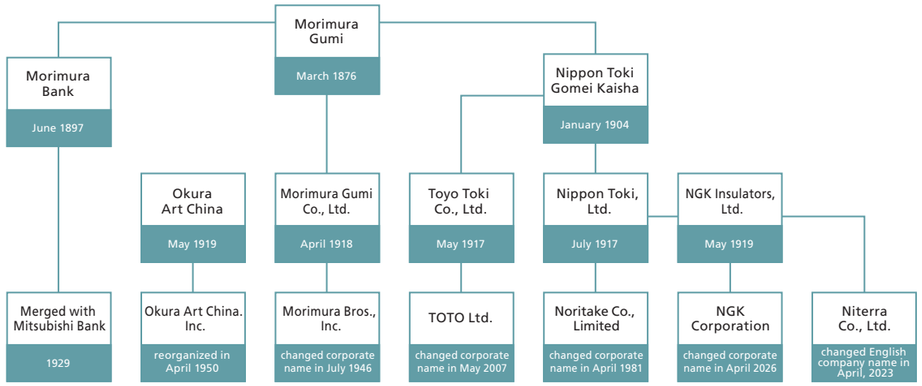
Ichizaemon Morimura

Inherited Vision

NGK SPARK PLUG (*) was founded in 1936. However, our roots can be traced back more than 140 years to the Morimura Gumi which was established in 1876 by Ichizaemon Morimura, the forefather of the Morimura Group.

Our founding father Ichizaemon Morimura was an honest and passionate merchant. Determined to reclaim wealth which had flowed overseas, Ichizaemon embraced the challenge of foreign trade for the prosperity of Japan. Eventually, the Morimura Gumi began to manufacture ceramics and the Morimura Group was born, ultimately leading to the founding of numerous prominent companies including Niterra.

Development of Morimura Group



Magoemon Ezoe
(First president of Niterra)

Uniform products through participation by all employees

"Suppose that we produce only 1 defective product per 1,000 products.
To the customer who purchases that 1 product, our defect rate is 100%."

As our business evolved from tableware to industrial products, we faced even stricter demands for product uniformity.

In order to constantly realize the performance needed by customers and to eliminate discrepancy among products, Magoemon Ezoe expected a high level of discipline and sense of participation to produce quality products. Employees at all workplaces devoted themselves to manufacturing which fulfilled such expectations. Even today, the philosophy of producing quality products with participation by all employees is still alive at Niterra.

History of our products and technologies

1936
NGK SPARK PLUG CO., LTD.(*) was established

1937
Started the manufacture of NGK spark plugs.

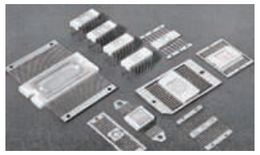
NGK spark plug

1959
Expanded overseas

CERAMICA E VELAS DE IGNICAO NGK DO BRASIL LTDA.

1967
Started the manufacture of ceramic substrates and IC packages
Started the manufacture of ultrasonic transducers.

Ultrasonic transducers



Ceramic IC packages

1982
Started the manufacture of oxygen sensors for automobiles.

Oxygen sensors for automobiles

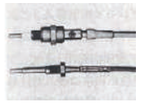
1984
Started the manufacture of balls for bearings.

Balls for bearings

1989
Started sales of electro static chucks.

Electro static chucks

1999
Started sales of oxygen concentrators for home oxygen therapy.



Temperature sensors for automobiles

2000
Strengthened new business development

Solid oxide fuel cells (SOFC)

2018
Acquired 100% ownership of CAIRE Inc.

2019
Four Morimura Group companies (Noritake Co., Limited, TOTO Ltd., NGK Insulators, Ltd., and Niterra Co., Ltd.(NGK SPARK PLUG CO., LTD. at the time)) have established the joint venture,"Morimura SOFC Technology Co., Ltd."
*Currently a joint venture of five companies, including Morimura Bros., Inc.

2020
Established CECYLLS Co., Ltd.

2024
Developed a Reversible SOC System

*changed English company name in April, 2023

Towards a Sustainable Society Sustainability Action

Today, society demands business activities that will help realize a sustainable society, for example by contributing to international norms and goals such as the United Nation's Sustainable Development Goals (SDGs). To date, we have contributed to society by pursuing businesses around our flagship internal combustion engine products. Going forward, we will work to broaden the scope within which we contribute to society by pursuing solutions to social issues through existing offerings such as oxygen concentrators and lead-free piezoelectrics as well as products and services in new areas such as fuel cells, and by communicating information about those efforts both inside and outside the company.

Social Contribution Activities

Sponsorship of the Nagoya Women's Marathon

We became a Gold Sponsor of the Marathon Festival Nagoya Aichi in 2021 out of a desire to support all people who chase their dreams and to contribute to the revitalization of local communities. Through this event, we remain committed to helping realize a better society by addressing issues faced by not only our region, but also Japan and the world.

Hosting a family musical event

To help children who will lead the next generation grow culturally and artistically, Niterra has hosted a family musical event at the NTK HALL every year since 2013. Guests include children from elementary schools and kindergartens located close to Niterra and from facilities such as residential institutions in Aichi Prefecture. Employee volunteers participate as event staff. Going forward, we will continue to undertake activities that help children to have hopes and dreams.

Family musical event at the Hikosen Theater Company

Overview

Company Profile

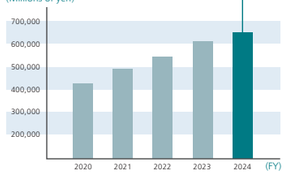
Company Name:	Niterra Co., Ltd.
Establishment:	October 26, 1936
Capital:	47,869 million yen
Headquarters:	URBANNET NAGOYA NEXTA Bldg. 1-1-1 Higashisakura, Higashi-ku, Nagoya 461-0005
Employees:	Non-Consolidated: 3,195 (as of March 2025) Consolidated: 15,644 (as of March 2025)
Business:	1. Manufacturing and selling spark plugs and related products for internal-combustion engines. 2. Manufacturing and selling technical ceramics and applicable products.
Branch Offices:	Japan:Tokyo, Osaka, Nagoya, Hiroshima, Fukuoka, Sendai, Sapporo, Utsunomiya Overseas: Asia/Oceania, North America, Latin America, Europe, Middle East/Africa

Financial Highlights

Revenue

652,993

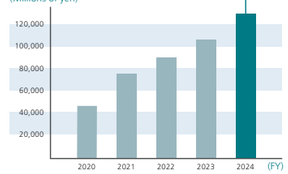
(Millions of yen)



Operating profit

129,660

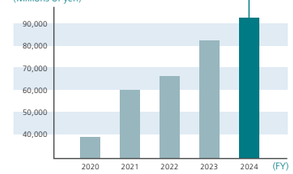
(Millions of yen)



Profit attributable to owners of the parent

92,625

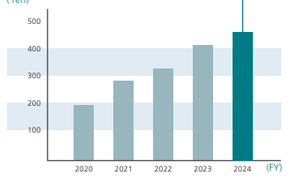
(Millions of yen)



Earnings per share

466.34

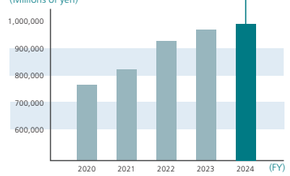
(Yen)



Total assets

990,966

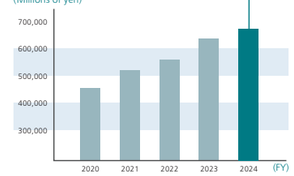
(Millions of yen)



Total equity

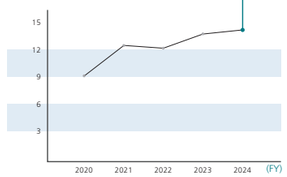
674,722

(Millions of yen)



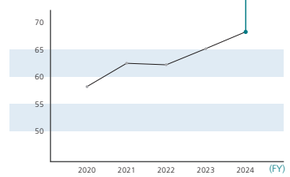
ROE (Return on equity)

14.1%



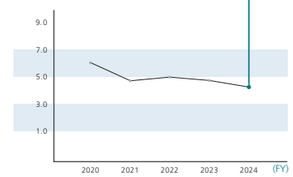
Equity ratio

68.1%



R&D expenses ratio

4.3%



*In the March 2020 term, Niterra began to use IFRS-based accounting.