Contents

Editorial Policy

TOCALO is a specialized manufacturer of surface treatments focused on thermal spraying. We believe that it is important for us to contribute to society through the various functions of coatings, including resource savings, energy savings, and reduction of environmental impact, as well as to engage in efforts to become carbon neutral, including reducing CO_2 emissions. This report has been prepared with up-to-date information—current as of August 2021—that presents a non-consolidated corporate profile and the results of activities of TOCALO for fiscal 2020 (April 2020 to March 2021) in an easy-to-understand manner.

We support sustainable development goals (SDGs).

We will contribute to a bright future for people and nature.

Noriyuki Mifune President and Representative Director

Focusing on ESG Management in the Aim of Realizing a Carbon Neutral Society

I believe the aim of technological development can be summarized as creating a “bright future for people and nature.” When thinking about sustainable growth of corporate value, I am deeply reminded of the importance of this concept.

As such, I have established ESG-focused management as one of our management issues. This is because I believe that an ESG approach is appropriate as a pillar of management for solving social issues.

From a global standpoint as well, awareness of global issues such as environmental problems is increasing as symbolized by the sustainable development goals (SDGs) adopted by the United Nations.

TOCALO is working toward the realization of these goals. For that reason, in fiscal 2021, we established the Environmental Promotion Department as a strategic department in charge of everything from analysis of the current situation to planning of measures in the environmental field. We will promote further reduction of environmental impact by both providing technologies that contribute to the environment through our business and engaging in internal initiatives. We set our fiscal 2030 target for reducing CO_2 at a 46% reduction compared to fiscal 2013 in line with the government's target. We will decide on the road map to get there, including specific measures, within the next two years. Balancing business growth with environmental contribution, we will contribute to the realization of a carbon neutral society.

Contributing to reducing environmental impact with surface modification technologies

One of the ways we contribute to the environment through our business is by providing surface modification technologies, primarily in the energy field. Surface modification technologies contribute to the conservation of energy and resources and the reduction of environmental impact by our customers by adding various characteristics to the surfaces of components. These technologies prevent wear and corrosion of appliances and equipment and also contribute to longer product life and greater efficiency. Further improvement of efficiency is expected in surface treatment of renewable energy appliances and equipment such as wind power generators, hydraulic power generators, and thermal power generators. We are promoting research on surface treatment of appliances and equipment to bring that about. In addition, by utilizing it in carbon-free power generation such as hydrogen and biomass power generation, we will also contribute to the building of a hydrogen or decarbonized society. Our technologies are also used in storage battery manufacturing lines, contributing to greater productivity. We are working to cultivate green growth markets. Research divisions are not working on this alone but are joined by our sales divisions.

Reduction of CO_2 emissions is one indicator of the internal environmental contribution. Currently, 95% (roughly 16,000 tons per year) of the Company's CO_2 emissions come from the use of electricity. As such, we are working on conserving energy at our workplaces and also considering the introduction of renewable energy.

Creating an environment in which diverse human resources can play active roles

In July 2020, we launched a Diversity Promotion Committee in the aim of becoming a company where diverse human resources can play active roles. In April 2021, we introduced a new human resources system that addresses the diversity of our employees.

In addition, during the COVID-19 pandemic, we have been implementing measures to ensure business continuity and protect the health of our employees. We are a manufacturer, so we cannot generate profits unless we manufacture products. The most important thing for us when it comes to business continuity is ensuring that operations are not suspended at our plants. We are carrying out thorough measures for prevention to ensure that infection does not spread within the Company.

Introducing an executive officer system to enhance governance

We are also pouring effort into enhancing governance. We introduced an executive officer system to facilitate swift decision-making by the Board of Directors, strengthen oversight functions, strengthen business execution functions, and increase the efficiency of management. It is set up to allow executive officers to execute operations responsibly. We also communicate closely with overseas offices to ensure governance at the global level.

A bright future for people and nature

I believe that the steady promotion of ESG activities will also lead to the achievement of sustainable development goals (SDGs). In addition, our reason for existence is to contribute to a bright future for people and nature through our technology. In order to remain a company that employees are proud to work at, we will continue to provide technologies and services that contribute to a bright future while making people happy and protecting the wonderful natural environment.

We will work on ESG activities, sharing a group-wide vision.

Hiroshi Goto
Director, Managing Executive Officer

I believe that what the Company should do to realize a sustainable society is contribute to reducing environmental impact in Japan and around the world and improving the efficiency of production activities through our business activities and bring happiness to people. As the company president mentioned in his message, we summarized this thinking into the phrase, “Contributing to a bright future for people and nature,” and set this forth as the Company’s vision starting in fiscal 2021. The entire TOCALO Group, including our subsidiaries and affiliates in Japan and other countries, will work toward achieving this vision. To facilitate that, we hope to make it so that each employee can think for themselves and take action at each work site.

We recognize that there are still many ESG issues that require our focus. However, if this is done unilaterally via top-down instructions or, conversely, if it is left up to the work sites, it will not go well. I hope to solve these issues with the collective strength of the Company, working on ESG activities while sharing what we should do and what direction we are taking with all employees.

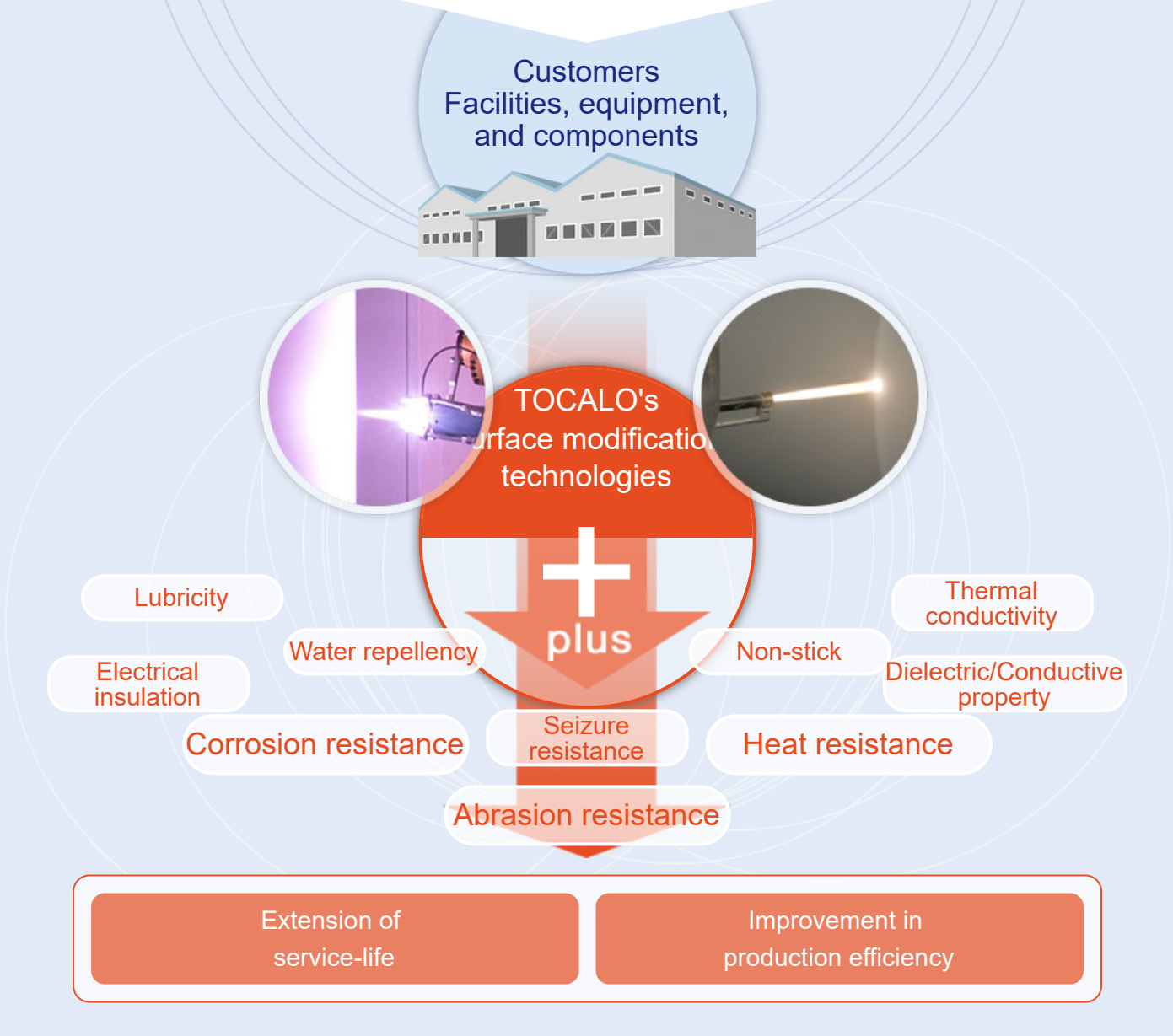
My role as head of the Administrative Division, which labors in the background, is to promote bilateral internal communication. Going forward, I will focus more on instilling the vision within the Company. Our ESG activities are just getting off the ground, so there may be some things that do not go as planned at first. However, through trial and error, we will work on these activities in the aim of reaching the top. That will, in turn, lead to improvement of the Company’s medium- to long-term corporate value.

Through our surface modification technologies, we will continue to fulfill our mission of contributing to a bright future for people and nature.

Contribution to environmental issues

TOCALO's surface modification technologies

Heat resistance, corrosion resistance, abrasion resistance... The surface modification technologies of TOCALO are effectively used to extend the life of industrial equipment and improve production efficiency by providing appropriate characteristics to material surfaces.
TOCALO will continue to pursue surface modification and provide a variety of functions that help to reduce environmental impact and conserve energy and resources.



Example

In wind power generation

Improve facility durability and power generation efficiency

Electricity generated by wind power is renewable energy derived from the forces of nature. In Europe and the USA, infrastructure is already widespread, and it has become increasingly common to see the gigantic propellers also in Japan. However, since bearings used in the generator are built into propellers, there is a concern that sparks could be generated by internal currents, which could cause damage to the bearings. Bearing replacement is almost impossible with a large wind turbine generator, but insulated bearings utilizing our technology can stabilize operation for a long period of time.

On automobile production lines

Contributing to the manufacturing of high-tensile strength steel sheets, which will lead to reduced CO_2 emissions

Improving fuel efficiency is a major challenge pursued by the automotive industry to reduce CO_2 emissions. Therefore, high tensile strength steel sheets that are thin and have sufficient strength are used to reduce the weight of automobile bodies. TOCALO's surface modification technologies are being used to ensure the stable production of high-quality, high-tensile strength steel sheets. For example, on a production line of high-tensile steel sheets, foreign matter readily sticks to surfaces of conveying rolls and pushes against the steel sheets, causing scratches. As a solution to this problem, a thermal spray coating is formed on the roll surface to prevent the adhesion of foreign matter.

In hydroelectric power generation

Supporting a Stable Supply of Electricity by Preventing Sediment Erosion

River water used for hydroelectric power generation contains sediments that erode the turbine blades. This erosion decreases power generation efficiency. A sediment erosion resistant coating newly developed by TOCALO proved to be 19 times stronger than conventional high-Cr cast steel, which is often used for pump parts, in sediment erosion tests. In addition, the coating is designed for the kind of toughness that withstands the impact of large stones.

In biomass power generation

Supporting the Longer Life of Power Generation Facilities Exposed to Severe Environments

Biomass is generally referred to as "renewable, bio-derived organic resources, excluding fossil resources." Common biomass includes food residue and animal manure. Biomass power generation produces electricity by burning these resources directly or by gasifying them. We contribute to the longer life of boiler components by applying high-temperature corrosion resistant coatings to boiler heat transfer tubes exposed to high-temperature combustion gases and wear-resistant coatings to components of flue gas desulfurization equipment that removes sulfur oxides from flue gases.

Helping to Reduce Environmental Impact

Environmental Management

We have established an environmental management system at all of our sites and are making continuous improvements based on proper operation.

Basic Philosophy

Basic Environmental Philosophy

TOCALO recognizes that "continuous improvement of the global environment by preventing pollution" is one of the most important challenges of our time. Our basic environmental philosophy is to contribute to society by protecting the global environment through various functions of surface modification technologies such as resource saving, energy saving, and reduction of environmental impact.

Environmental Policy

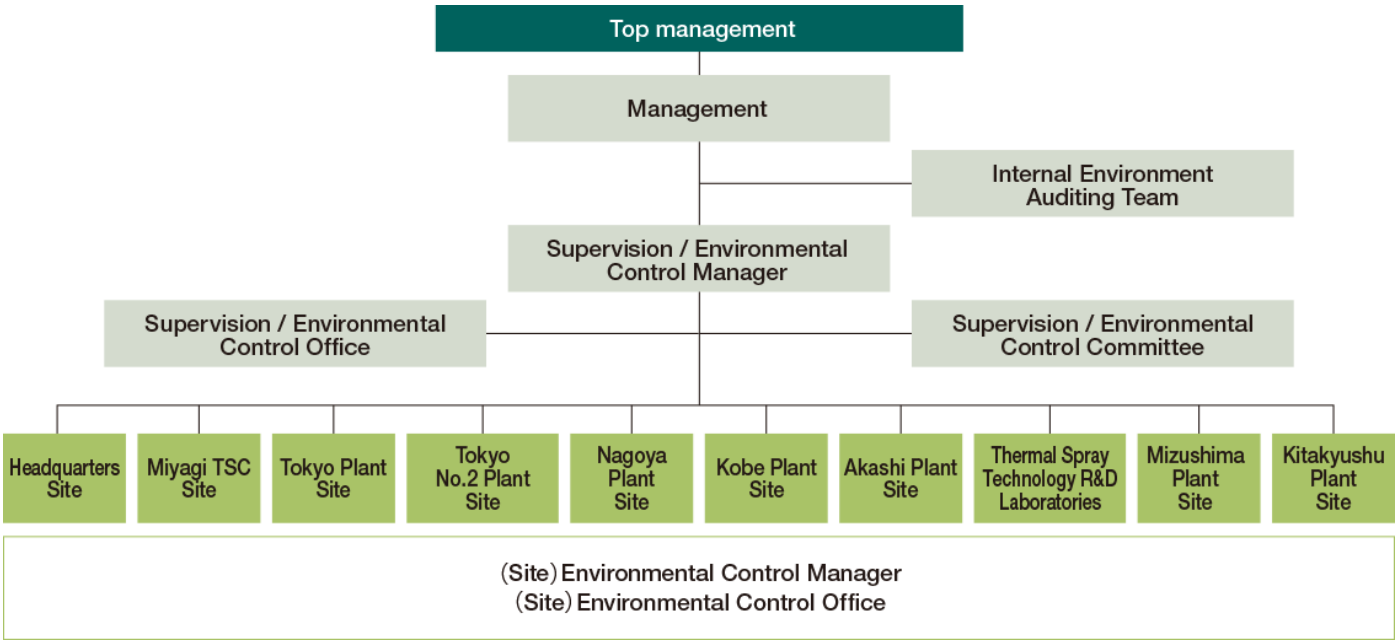
Based on our activities, products, and services focused on surface modification technologies, TOCALO will strive to continuously improve the environment based on the following policy in accordance with our Basic Environmental Philosophy.

1. Constantly recognize the environmental impact of our activities, products, and services, and establish, implement, and maintain an environmental management system.
2. Commit ourselves to preventing environmental pollution, using sustainable resources, and preventing climate change.
3. Commit ourselves to the continuous improvement of our environmental management system.
4. Comply with environmental laws and regulations relating to our operations, products and services, as well as other requirements to which we agree.
5. Based on this environmental policy and the environmental impact of our activities, products, and services, set environmental targets and engage in activities based on the following themes to contribute to the improvement of the environment:
   (1) Energy and resource conservation in business activities
   (2) Environmental contribution through promotion of business activities

To successfully implement this policy, we will set environmental targets and contribute to environmental conservation by bringing together the strengths of all our divisions and all levels of our workforce.

Revised: 5/1/2021

Environmental Management Organization Structure



Promotion of ISO14001

Certified at all sites

We are continually making improvements to our environmental management system to contribute to society and support conservation of the global environment through the conservation of resources and energy and reduction of environmental impact. Since acquiring ISO 14001 certification at all our sites in 2012, we have maintained that certification even when relocating or launching new sites, so our certification rate remains at 100% to this day.

Status of ISO 14001 Certification (Certification Number JQA-EM2253) (In order of registration date)

Acquisition of certification Plants and research laboratories	Expansion of certified sites
Headquarters	Mar. 2002
Thermal Spraying Technology R&D Laboratories	Mar. 2002
Kitakyushu Plant	Sep. 2005
Nagoya Plant	Sep. 2006
Kobe Plant	Sep. 2006
Tokyo Plant (Gyoda Workshop)	Sep. 2007
Mizushima Plant	Sep. 2007
Akashi Plant (including Akashi-Harima Plant)	Sep. 2009
Miyagi Technical Service Center	Aug. 2012
Tokyo Plant No.2 (Suzumi Workshop)	Aug. 2018

History of ISO14001 Certification

2002	March	**The Headquarters and Thermal Spraying Technology R&D Laboratories were the first sites in TOCALO to acquire ISO14001 certification.**
2004	October	The Thermal Spraying Technology R&D Laboratories moved from Higashinada-ku, Kobe City to the Minami-Futami Industrial Park, Akashi City.
2005	September	The registered address of the Thermal Spraying Technology R&D Laboratories was changed to the new address.
		The Kitakyushu Plant was the first plant to acquire certification.
2006	September	**The Nagoya Plant, Kobe Plant, and Akashi No. 3 Plant acquired certification.**
2007	September	**The Tokyo Plant (Gyoda Workshop) and Mizushima Plant acquired certification.**
2009	September	**The Akashi Plant acquired certification. All major TOCALO sites were certified.**
2010	October	Akashi Plant No.3 was relocated and integrated with the Akashi Plant.
2011	July	The Miyagi Technical Service Center was established in Miyagi Prefecture.
	September	**Each sales office acquired certification.**
		Certification of Akashi Plant No.3 was cancelled.
2012	August	**The Miyagi Technical Service Center acquired certification. All TOCALO sites were certified.**
2014	August	The Kobe Plant moved from Higashinada-ku, Kobe City to Nishi-ku, Kobe City. The former plant, where some production processes remained, became the Fukae branch office of the Kobe Plant.
	December	The Akashi-Harima Plant was acquired and placed under the control of the Akashi Plant.
2015	September	The registered address of Kobe Plant was changed to the new address.
2016	February	The Nagoya Plant was relocated from Midori Ward, Nagoya City to Tokai City, Aichi Prefecture.
	September	**The Akashi-Harima Plant acquired certification following the start of full-scale operations.**
		The registered address of the Nagoya Plant was changed to the new address.
2017	August	The Headquarters were relocated from Fukae, Higashinada-ku, Kobe City to Minatojima (Port Island), Chuo-ku, Kobe City.
	September	The registered address of the Headquarters was changed to the new address.
2018	August	**Tokyo Plant No.2 (Suzumi Workshop) was newly certified following the partial relocation (Gyoda Workshop).**
2020	July	The Kita-Kanto Sales Office was relocated.

Scope of Application

The scope of application of the environmental management system applies to the business activities of TOCALO Co., Ltd.

(1) Target organization

TOCALO Co., Ltd.
Headquarters/Miyagi Technical Services Center/Tokyo Plant/Nagoya Plant/Kobe Plant/Akashi Plant/Thermal Spraying Technology R&D Laboratories/Mizushima Plant/Kitakyushu Plant

(2) Certified activities

R&D, manufacturing, sales, and after-sales service of surface modification products using thermal spray and peripheral technologies

(3) Location (physical scope) and scope of activities

The contents are in accordance with matters registered with JQA.

① Organization name: Headquarters, TOCALO Co., Ltd.
Address: 6-4-4 Minatojima Minamimachi, Chuo-ku, Kobe, Hyogo
Scope of activities: Corporate management and support operations at the Headquarters

② Organization name: Miyagi Technical Service Center (Miyagi TSC), TOCALO Co., Ltd.
Address: 21-11 Kitanaka Bessho, Kawauchi, Osato-Cho, Kurokawa-Gun, Miyagi
Scope of Activities: Manufacture, sale, and after-sales service of surface modification products using thermal spray technologies

Organization name: Yamanashi Sales Office, TOCALO Co., Ltd.
Address: 1-1-24 Iida, Kofu, Yamanashi
Scope of Activities: Sales and after-sales service of surface modification products using thermal spray and peripheral technologies

③ Organization name: Tokyo Plant (Gyoda Workshop), TOCALO Co., Ltd.
Address: 1-1-1 Gyoda, Funabashi, Chiba
Scope of Activities: Manufacture and after-sales service of surface modification products using thermal spray and peripheral technologies

④ Organization name: Tokyo Plant No.2 (Suzumi Workshop), TOCALO Co., Ltd.
Address: 606-5 Suzumi-cho, Funabashi, Chiba
Scope of Activities: Manufacture, sale, and after-sales service of surface modification products using thermal spray and peripheral technologies

Organization name: Kanagawa Sales Office, TOCALO Co., Ltd.
Address: 1-14-20 Shinyokohama, Kohoku-ku, Yokohama, Kanagawa
Scope of Activities: Sales and after-sales service of surface modification products using thermal spray and peripheral technologies

Organization name: Kita-Kanto Sales Office, TOCALO Co., Ltd.
Address: 2F, 1086-45 Shimohamada-cho, Ota, Gunma
Scope of Activities: Sales and after-sales service of surface modification products using thermal spray and peripheral technologies

⑤ Organization name: Nagoya Plant, TOCALO Co., Ltd.
Address: 33-3 Nibanwarishimo, Nawamachi, Tokai, Aichi
Scope of Activities: Manufacture, sale, and after-sales service of surface modification products using thermal spray technologies

Organization name: Shizuoka Sales Office, TOCALO Co., Ltd.
Address: Fujioji Bldg.102, 411-1, Motoichiba, Fuji
Scope of Activities: Sales and after-sales service of surface modification products using thermal spray and peripheral technologies

⑥ Organization name: Kobe Plant, TOCALO Co., Ltd.
Address: 1-5 Mitsugaoka, Nishi-ku, Kobe, Hyogo
Scope of Activities: Manufacture and after-sales service of surface-modified products using thermal spray and peripheral technologies

⑦ Organization name: Akashi Plant, TOCALO Co., Ltd.
Address: 14-1, Minamifutami, Futami-cho, Akashi, Hyogo
Scope of Activities: Manufacture, sale, and after-sales service of surface modification products using thermal spray technologies

Organization name: Akashi Plant (Akashi-Harima Plant), TOCALO Co., Ltd.
Address: 15-1 Higashi-Shinjima, Harima-cho, Kako-gun, Hyogo
Scope of Activities: Manufacture and after-sales service of surface modification products using thermal spray technologies

⑧ Organization name: Thermal Spraying Technology R&D Laboratories, TOCALO Co., Ltd.
Address: 14-3 Minamifutami, Futami-Cho, Akashi, Hyogo
Range of Activities: Research and development of surface modification products using thermal spray and peripheral technologies

⑨ Organization name: Mizushima Plant, TOCALO Co., Ltd.
Address: 2-38 Matsue 2-chome, Kurashiki, Okayama
Scope of Activities: Manufacture, sale, and after-sales service of surface modification products using thermal spray technologies

⑩ Organization name: Kitakyushu Plant, TOCALO Co., Ltd.
Location: 1-48 Torigoe-cho, Kanda-cho, Kyoto-gun, Fukuoka Prefecture
Scope of Activities: Manufacture, sale, and after-sales service of surface modification products using thermal spray
technologies

(4) Scope of impact

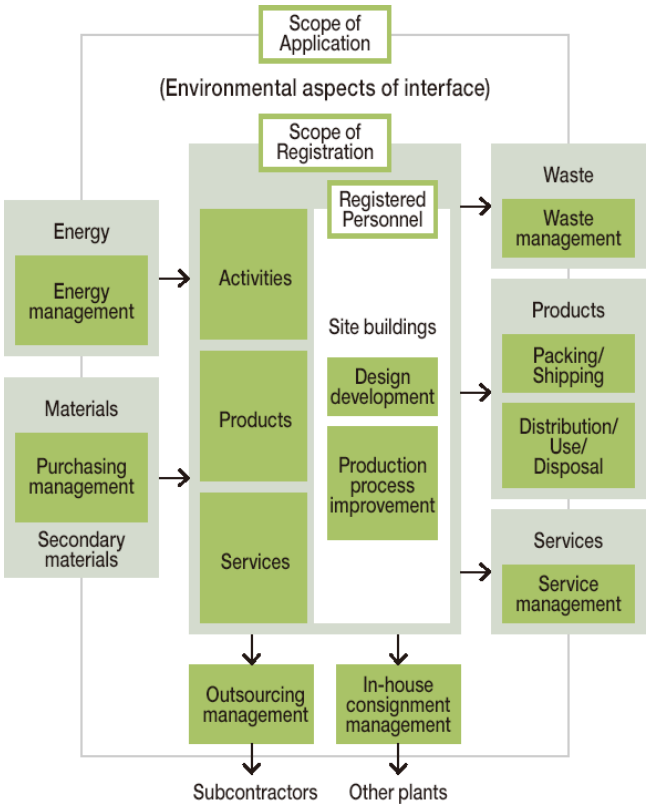
Within the site

①Design and development
②Improvement of production processes

Environmental aspects of the interface are as follows.

①Energy management
②Purchasing management
③Outsourcing Management
④In-house subcontracting management of other plants
⑤Waste management
⑥Distribution, use, and disposal of products after use
⑦Service management

Scope of Potential Impact



Compliance with Environment-Related Laws and Regulations

Identifying laws and regulations to be observed and confirming the status of compliance

TOCALO compiles a list of environmental laws and regulations to be observed and regularly checks the status of compliance. Details of compliance include notifications to the government, appointments, and regulatory values. To date, we have not been subjected to fines or punishment in relation to environmental laws.

Major environmental laws and regulations related to TOCALO's business

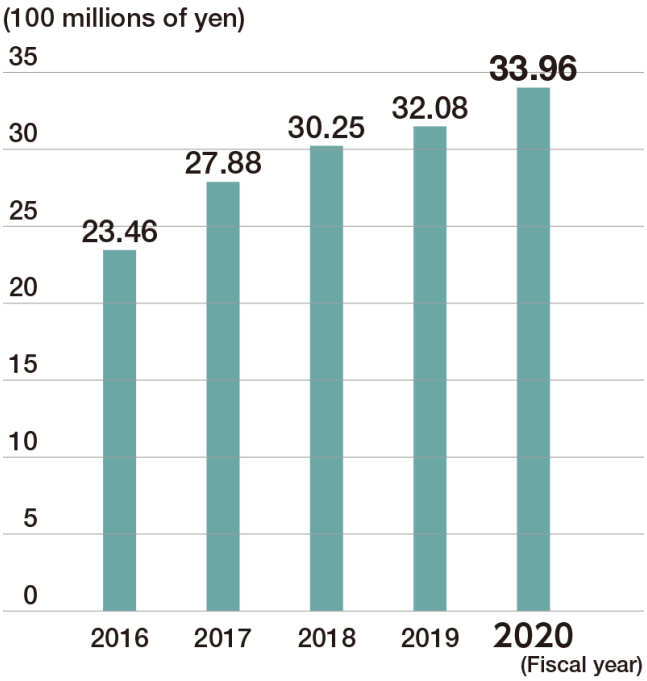
Waste Management and Public Cleaning Law	Air Pollution Control Law
Water Pollution Control Law	Sewerage Law
Soil Contamination Countermeasures Act	Septic Tank Law
Noise Regulation Law	Vibration Regulation Law
Offensive Odor Control Law	Factory Location Law
Act on Rational Use and Proper Management of Fluorocarbons	Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof ("PRTR Law")
Poisonous and Deleterious Substances Control Law	Fire Service Act
Industrial Safety and Health Act	High Pressure Gas Safety Act
Law Concerning the Promotion of the Measures to Cope with Global Warming	Act on the Rational Use of Energy

Environmental Accounting

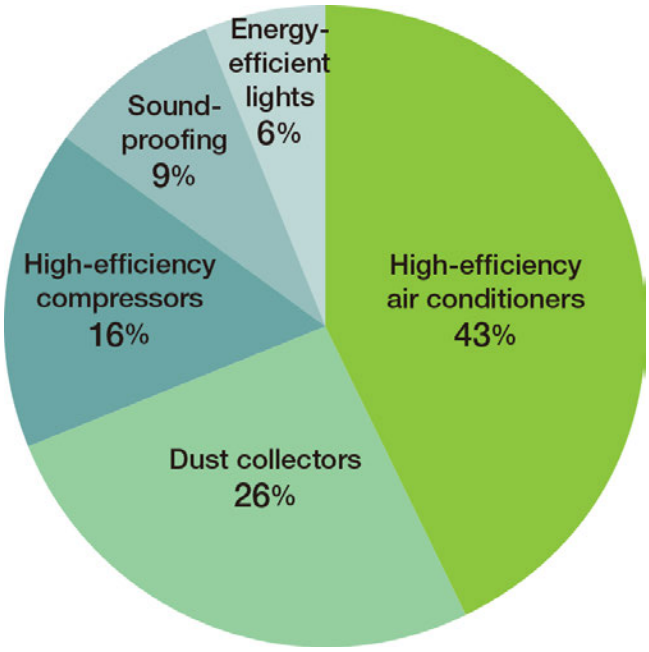
We focused on investing in environmental facilities, such as wastewater and waste gas treatment systems, and noise-prevention measures at new plants.

The graph below shows the cumulative amount of environment-related capital expenditures since 2002, when we first acquired ISO 14001 certification. Our main environmental facilities include dust collectors that do not emit dust, soundproofing equipment that shields noise from dust collectors, and energy-saving equipment.
In fiscal 2020, we introduced highly efficient air conditioning and compressors, reinforced our dust collectors and noise-proofing equipment, and switched to energy-saving lighting.

Cumulative Environmental Investments



Breakdown of capital expenditures



Environmental Education and Training

We provide general education for all employees.

We systematically conduct education and training on the operation of the environmental management system and how to respond to emergencies, as required by law.
The main themes are "Environmental Policy," "Significance of Operating an Environmental Management System," and "Waste Handling", which are taught with initiatives in each workplace.
Through such education and training, we are working to raise awareness and the level of understanding.

In the classroom

Targets and Results

We have established two major themes and are working on environmental activities by setting targets at each site.
We have set a CO_2 reduction target for fiscal 2030 of 46% lower than the level in fiscal 2013 in accordance with government targets. We have been preparing specific measures so that we can start efforts in this regard in fiscal 2023.

Results in Fiscal 2020 and Targets for Fiscal 2021

Results in Fiscal 2020 and Targets for Fiscal 2021

Of the 33 targets, 26 were achieved.

Across TOCALO, we set independent targets at each of our sites and worked toward achieving them based on the themes of (1) conserving energy and resources in our business activities and (2) contributing to the environment through the promotion of business activities. As a result, 5 targets related to energy conservation and 2 related to business activity promotion were not achieved, while 26 other targets were achieved.

We will focus on energy and resource conservation in our business activities, contributing to the environment through the promotion of our business activities, and preventing climate change.

In fiscal 2021, we will continue to focus on (1) energy and resource conservation in our business activities, and (2) contributing to the environment through the promotion of our business activities, and (3) preventing climate change. All of our bases will set goals and conduct activities in the same direction.

:Achieved :Not Achieved

Site	Environmental Target	Target for Fiscal 2020	Fiscal 2020 Results	
Energy and resource conservation in business activities				
Headquarters	Promoting the utilization of subsidies for energy conservation	Distributing guidance on subsidy information regarding energy-saving equipment: 1 case/year or more	Ending of case ongoing since last year in July, ending of one other case in January	☺
Miyagi	Promotion of energy- and resource-saving activities	[Addition] Recycling operations regarding used abrasive materials: 1,200 kg/four months (December to March) or more	1,225 kg/four months	☺
Tokyo	Promotion of energy- and resource-saving activities	Switching over to energy-saving equipment: 3 cases per year or more	4 cases	☺
	Promoting activities to reduce the defect rate	Volume of reworked thermal spray materials: 3.8% of total usage volume or less	2.40%	☺
	Promoting activities to reduce the defect rate	Rate of occurrence of nonconformities and complaints: 0.08% or less	0.02%	☺
Tokyo No.2	Promotion of energy- and resource-saving activities	Improvement of loss through introduction of energy-saving equipment and facility maintenance: 3 cases/year or more	3 cases	☺
	Promotion of energy- and resource-saving activities	Reduction in material consumption by improving thermal spraying method: 20 kg/month or above	18.3 kg/month	☹
	Promotion of energy- and resource-saving activities	Reduction of air consumption based on air gun improvements	Reduction from 20 m^3/h to 12 m^3/h	☺
	Promoting activities to reduce the defect rate	Number of nonconformities in quality control: 36 cases/year or less	14 cases	☺
Kobe	Reduction in electric power consumption	Implementation of electric power-saving measures 1 case/year or more	Two proposals were examined but could not be implemented.	☹
	Promotion of energy- and resource-saving activities	Measures for reuse of water resources	Two proposals were examined but could not be implemented.	☹

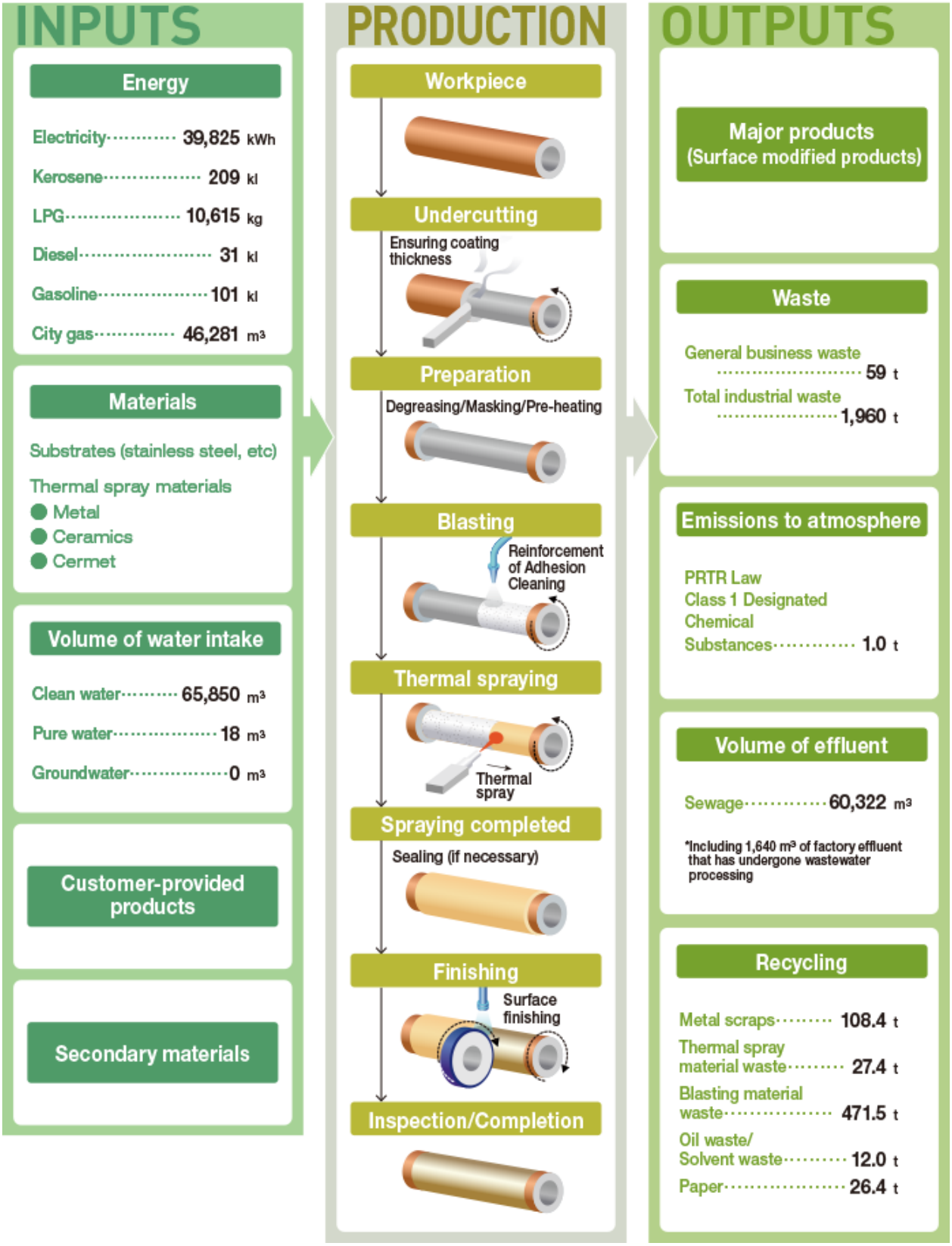
Akashi	Reduction in electricity consumption	Proposal of improvements or improvement plans regarding all defective parts related to air leaks	As planned	
	Promotion of recycling of thermal spray materials by Thermal Spray 1 Department	Recovery rate of A materials: 63% or more at Akashi Plant overall, 15.2% or more at No. 4 Plant	Akashi Plant: 66.4% No. 4 Plant: 19.4%	
	Promotion of recycling of thermal spray materials by Thermal Spray 2 Department	Recovery rate of B materials: 20% or more	26.90%	
	Promotion of recycling of thermal spray materials by Thermal Spray 3 Department	Recovery rate of C materials: 4.4% or more	6.30%	
	Promotion of recycling of thermal spray materials by Thermal Spray 4 Department	Recovery rate of D materials: 1.5% or more	1.30%	
Mizushima	Reduction in electric power consumption	consumption rate of 12.29 or less	Consumption rate of 10.25	
	Reduction in nonconformities	Preparation of preventive action manuals: 12 cases/year	16 cases	
Kitakyushu	Reduction in nonconformities	Number of occurrences of nonconformities regarding Thermal Spray I Unit: 5 cases/month, cumulative rate of occurrences of nonconformities: 0.35% or less	0.16%	
	Reduction in nonconformities	Number of occurrences of nonconformities regarding Thermal Spray II Unit: 10 cases/month, cumulative rate of occurrences of nonconformities: 1.50% or less	1.27%	

Contributing to the environment by promoting business activities				
Headquarters	New promotions aimed at cultivating new projects	Promotions of new projects: at least 14 cases/month in first half and 12 cases/month in second half, with target of 156 cases/year	152 cases	
Miyagi	Promotion of new proposal activities	Promotion of new proposal activities: score of 120 points/year or more	258 points	
	Establishment of environment contributing technologies	Establishment of elemental technologies in development of thermal spray parts: 36 cases/year or more	32 cases	
Tokyo	Promotions of new TD proposal activities	Application of new TD specifications: 12 cases/year or more	12 cases	
Tokyo No.2	Promotion of new proposal (sales activities)	Number of orders received for new items: 480 cases/year or more	575 cases	
Nagoya	Promotion of new business activities	Receipts of orders for newly evaluated products: 60 cases/year or more	60 cases	
Kobe	Proposals regarding long service life coatings	Item introductions at sales meetings from each plant: 36 cases/year or more	38 cases	
Akashi	Proposals of long service life coatings to customers	Number of new visits: 16 cases/month or more, 192 cases/year or more	222 cases	
R&D	New development	Initiatives for new development: 60 cases/year or more	60 cases	
	New development	Monthly implementation of coating development based on new thermal spray processes	Monthly implementation	
Mizushima	Orders for new products	Number of new product orders received: 96 cases/year or more	110 cases	
Kitakyushu	Promotion of development of new projects	New customer registrations: 1 case/month or more, or receipts of orders for new projects from existing customers: 1 case/month or more	29 cases	

Others				
Kobe	Reduction of waste	Reduction of industrial waste (sludge)	Reduction equipment was introduced but effects could not be seen.	

Material Balance

We strive to reduce environmental impact by ascertaining and analyzing the actual status of how much resources and energy are used in our production processes and what kind of environmental impacts are generated.



INPUT

Trend regarding volume of energy use

	Fiscal 2018	Fiscal 2019	Fiscal 2020
Electricity (MWh)	39,817	40,155	39,825
Kerosene (kl)	217	229	209
LPG (kg)	12,807	13,161	10,615
Diesel (kl)	34	31	31
Gasoline (kl)	100	108	101
City gas (m^3)	25,017	30,611	46,281

Trend regarding volume of use of materials

* Not including substrates

	Fiscal 2018	Fiscal 2019	Fiscal 2020
Thermal spray materials (t)	291.5	325.2	297.2
Other materials (t)	59.9	72.6	55.7

OUTPUT

Trend regarding volume of waste emissions

	Fiscal 2018	Fiscal 2019	Fiscal 2020
General business waste (t)	60	70	59
Total industrial waste (t)	1,776	1,841	1,960

Trend regarding volume of emissions to atmosphere

	Fiscal 2018	Fiscal 2019	Fiscal 2020
PRTR Law Class 1 Designated Chemical Substances (t)	3.1	2.5	1.0

Trend regarding volume of water intake

	Fiscal 2018	Fiscal 2019	Fiscal 2020
Clean water (m^3)	63,525.0	63,610.0	65,850.0
Pure water (m^3)	29.8	19.8	18.1
Groundwater (m^3)	0.0	0.0	0.0

Trend regarding volume of effluent

* The numbers in parentheses are the volume of factory effluent that has undergone wastewater processing

	Fiscal 2018	Fiscal 2019	Fiscal 2020
Sewage (m^3)	58,896.0（2,330.4）	58,059.0（2,528.0）	60,322.0（1,640.1）

Trend regarding volume of recycling

* Not including thermal recycling

	Fiscal 2018	Fiscal 2019	Fiscal 2020
Metal scraps (t)	145.8	90.6	108.4
Thermal spray material waste (t)	24.1	28.6	27.4
Blasting material waste (t)	569.1	570.8	471.5
Oil waste/Solvent waste (t)	11.2	9.2	12.0
Paper (t)	29.9	19.2	26.4

Measures to Reduce Environmental Impact

We at TOCALO are constantly aware of the environmental impact of our business activities, products, and services, and strives to prevent environmental pollution and continuously improve our environmental performance through energy conservation, waste reduction, and appropriate management of hazardous substances.

- Global Warming Prevention
- Appropriate Management of Chemical Substances
- Reduction of Waste
- Air-pollution countermeasures
- Soil and Water Pollution Countermeasures
- Noise Countermeasures

Global Warming Prevention

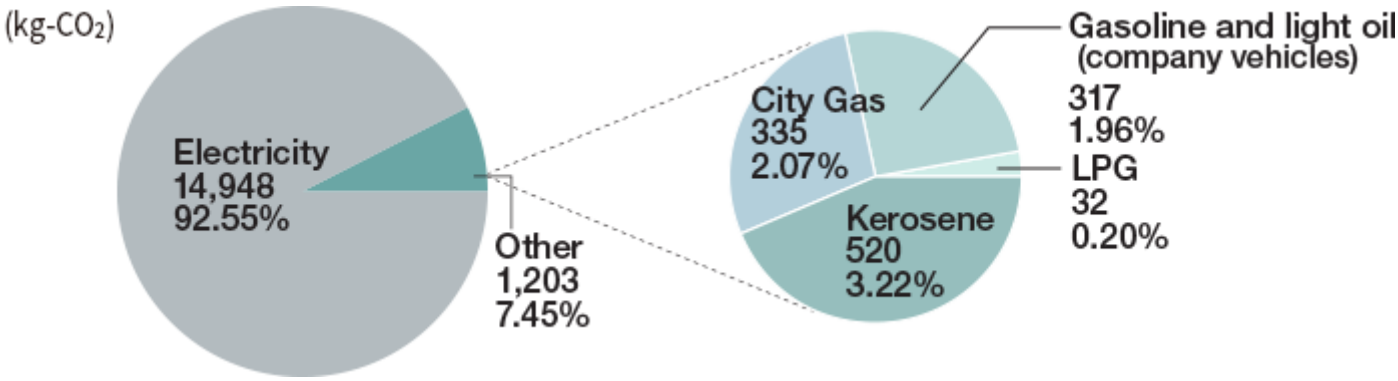
In addition to implementing thorough energy-saving measures, we are promoting the introduction of energy-saving equipment.

Our main sources of energy are kerosene, diesel oil, LPG and city gas, which are primary energy sources derived from fossil fuels, and electricity, which is a secondary energy source. In terms of CO_2 equivalent, electricity and kerosene accounted for 92.55% and 3.22%, respectively, and 95.77% of the total, thus these two energy sources accounted for most of our CO_2 emissions.
In particular, the highest consumption is electricity. This is calculated by allocating the CO_2 emitted by the electric power supplier to the user's consumption and multiplying the consumption by a factor that converts it to CO_2 emissions. This factor is published annually by the electric power supplier. However, CO_2 emissions will increase even with the same amount of electricity used if nuclear power generation decreases and thermal power generation increases due to the fact that the factor is largely influenced by the power generation methods of the electric power supplier.

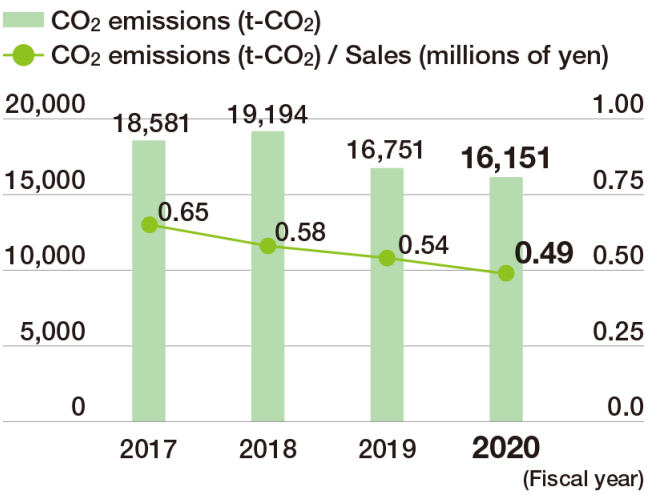
At TOCALO, in addition to implementing detailed power savings as a regular component of efficient business operations, we are introducing energy-saving equipment and upgrading aging equipment to eco-products.

In fiscal 2020, our electricity usage/sales ratio was lower compared with fiscal 2019, so the electricity-conservation effects from initiatives such as the introduction of energy-saving equipment have become apparent.

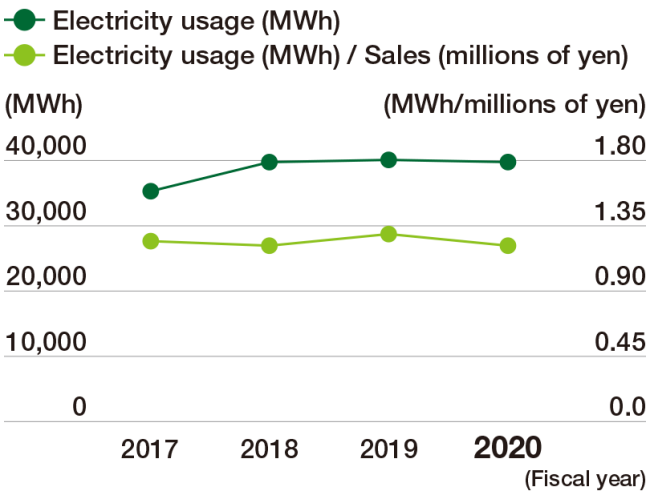
Breakdown of Energy Consumption in Fiscal 2020 (CO_2 Equivalent)



Changes in CO_2 Emissions



Changes in Electricity Usage



CO_2 emissions in fiscal 2020 decreased from the previous year.
Despite the fact that electricity consumption, which accounts for the majority of our energy consumption, remains almost unchanged, our CO_2 emission rate has fallen because the CO_2 emission factor announced by the electric power companies has fallen.

TOPICS1

We analyze the driving data of each driver, which leads to improved fuel efficiency.

Vehicle information is collected by utilizing a telematics service (in-vehicle equipment with communication and GPS functions) introduced company-wide, and then we analyze driving data for each driver to improve fuel efficiency. By analyzing driving distance, fuel efficiency, long-time idling, the number of sudden accelerations, and the ratio of constant-speed driving time of each driver, we can provide guidance on fuel-efficient driving and safe driving to each driver.

We also found that there was a significant difference in fuel efficiency between hybrid and gasoline-powered vehicles, and, therefore, allocated hybrid vehicles to our drivers who travel long distances in order to reduce the overall gasoline consumption of our sites overall. We believe this approach will enable us to visualize the benefits of fuel-efficient vehicles, and provide us a good source of information for making decisions on introducing vehicles.

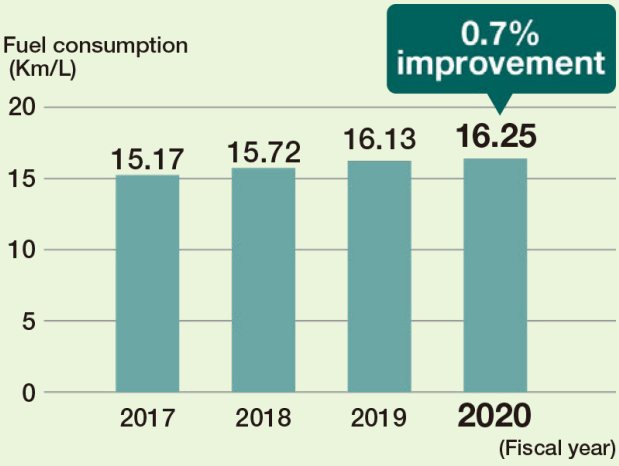
Although our hybrid-vehicle introduction ratio is currently 24.5%, we plan to sequentially make all of our company vehicles hybrid vehicles going forward. We are aiming to transition to all hybrid vehicles, electric vehicles, and so on within the next five years.

Hybrid-vehicle introduction ratio

Fiscal 2019	Fiscal 2020
19.7%	21.1%

Average Fuel Consumption of Sales Vehicles

* Although up to fiscal 2019 the calculation period was May of the reporting year to April of the following year, in fiscal 2020, this was changed to April of the reporting year to March of the following year.



Sales company vehicle (hybrid vehicle)

VOICE　Management and operation of commercial vehicles during COVID-19 crisis

Hiromi Sasaki (Technology Section, Miyagi Technical Service Center)

The Miyagi Technical Service Center is a base that mainly carries out sales activities and technological development operations.
Half of the employees are in sales positions, and the sales representatives manage various commercial vehicles.

Restrictions on outings related to the COVID-19 crisis became prolonged, so instead of visiting clients, we established means of information interchange based on the use of web conferencing systems and so on. Meanwhile, our commercial vehicles were being used substantially less often, so the management and operation of these became an issue.

Although we have adopted hybrid vehicles for 90% of our commercial vehicles in light of their fuel efficiency and environmental performance, when the frequency of use decreases, the battery performance declines. As such, there were many instances in which the engine would not turn on when we needed to use a vehicle. In light of this, we used the running monitoring functions of vehicle management systems to identify vehicles that had not been used for a certain period of time, and then achieved improvements by making it a rule to run such vehicles.

Since sales activities based on IT utilization are increasingly becoming commonplace, we have been considering reducing the number of commercial vehicles that we own with the aim of reducing CO_2 emissions.
I would like to thank all of the employees of the Miyagi Technical Service Center who are proactively cooperating with environmental activities. I intend to consider what I can do as the Environmental Management Secretariat, and will aim to carry out better and better activities so that we can reduce the environmental impact of the base overall.

TOPICS2

New Headquarters Building: Initiatives for Energy Conservation and Reduction of Environmental Impact

Completed in 2017, the new headquarters has double pane windows on the south side of the building and a mechanism for discharging air between the panes in order to reduce indoor temperature increases. In addition, multi-stage air conditioners and LED lighting, which offer superior energy-saving performance, are fully used to create an environmental-friendly building.

As a result, energy consumption per floor area of the new headquarters building has been kept to about 50% of that of the old headquarters.
Furthermore, we have adopted an air supply & exhaust system that enables sufficient ventilation for the headquarters building.

Based on the ideas set forth in the Building Administration Act, the ventilation requirement is 30 m³ per person per hour, and at the office floors of the headquarters building where people are stationed, this standard has been met as can be seen below.

2F office floor: 106 m³ per person per hour (actual value)
3F office floor: 95 m³ per person per hour (actual value)

- **Building envelope of high thermal insulation**
- **1.7-times higher insulation performance than ordinary office buildings, and an inner sash and air flow system that further enhance insulation performance**
- **Introduction of various energy-saving equipment in office rooms with long operating hours**
- **Measurement and calculation of power consumption by BEMS (Building Energy Management System) was introduced to support energy-saving operation of facilities and equipment.**

Headquarters

Appropriate Management of Chemical Substances

In accordance with the PRTR Law, we report the amounts of chemical emissions and transfers.

In fiscal 2020, TOCALO reported the amount of designated chemicals released into the environment and transferred in accordance with the PRTR Law (Pollutant Release and Transfer Register: Chemical Substance Release and Transfer Notification System) for 8 substances. In regard to emissions, the regulatory standards under the act have been met.

Release and Transfer Volume of PRTR Law, Type 1 Designated Chemicals in fiscal 2020

	Released amount (kg)				Transferred amount (kg)	
	Emission into the atmosphere	Release into public waters	Discarding into the soil at place of business	Landfill disposal at place of business	Transferring to sewerage	Transferring off-site (industrial waste)
Chrome and trivalent chrome compounds	6.0	0	0	0	0	4,730
Cobalt and its compounds	3.0	0	0	0	0	1,390
1-2-4 trimethylbenzene*	0	0	0	0	0	0
Toluene	POINT 1 930	0	0	0	0	530
Nickel	7.3	0	0	0	0	6,480
Nickel compounds	1.8	0	0	0	0	POINT 2 0
Vanadium compound	0	0	0	0	0	2,000
Boron compounds	0	0	0	0	7.3	4,800

* Although 1-2-4-trimethylbenzene is contained in kerosene at a level of about 1.5%, it is considered to be consumed by combustion. Emissions into the air are derived from detergents for color checks used in inspections.

POINT 1 Emissions into the atmosphere have resulted in 930 kg of toluene.
This is a substance contained in organic solvents (thinners, etc.), and the value is calculated by estimating the amount of volatile organic compounds (VOCs) evaporated by natural drying from the amount used.

POINT 2 As for nickel compounds, we usually use materials supplied by our customers, and the residual amount after use and collected powders from the dust collectors are returned to our customers. Therefore, the transferred amount is zero.

Reduction of Waste

We are properly disposing of all types of waste, from general waste to specially controlled industrial waste.

(1) General waste

Paper constitutes the majority of business-related general waste. With the cooperation of paper manufacturers, we are committed to the reuse and recycling of paper and are striving to reduce them by chemically dissolving them while maintaining confidentiality.

(2) Industrial waste

Waste oil accounted for the largest portion of our industrial waste emitted at 42%. It is derived from cooling water that is added to grinding oil for use as a coolant with wet grinders (machines for roll grinding). More than 90% of the water is tap water and, after disposal, it is used at cement factories and elsewhere to adjust combustion temperature.

This was followed by waste plastics (13%), sludge (13%), waste alkali (11%), slag (7%), and glass and ceramics (6%).

Sludge contains a large amount of dust generated from thermal spraying. Although thermal spray dust is dry, it is treated as sludge with strict disposal standards.

Waste plastics include material containers and secondary materials, as well as waste paper and wood scraps that contain oil.

Most of the alkaline waste is washing solution from TD treatment that contains a small amount of sediment. It is weakly alkaline due to its boron content. Depending on the situation, it may be treated as sludge.

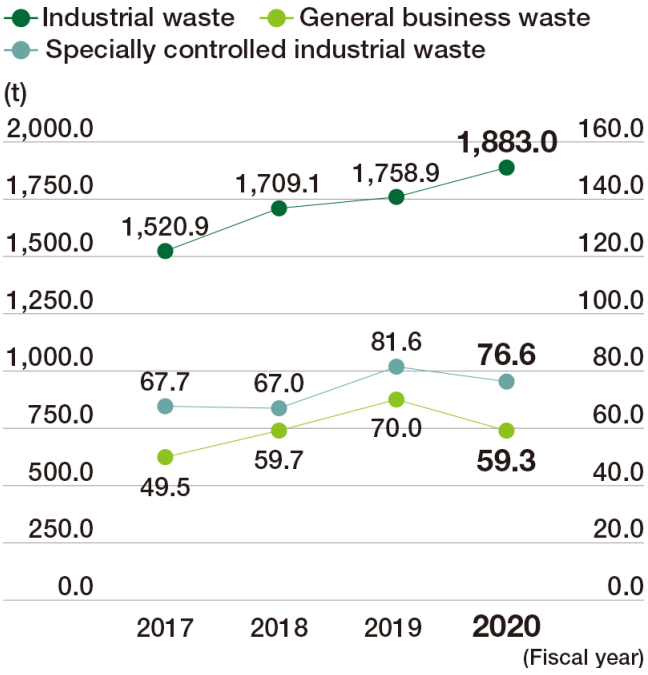
Sludge is a mineral residue, but wet sludge in waste treatment is more strictly controlled. At TOCALO, residues that may get wet are disposed of as sludge even if they are not currently wet.

Glass and ceramic scraps contain ceramic-based grinding materials that cannot be recycled, in addition to refractory bricks.

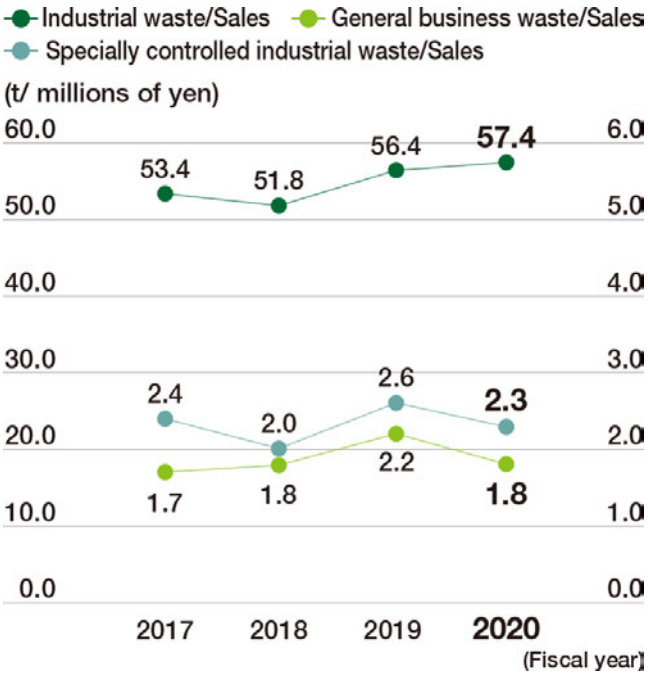
(3) Specially controlled industrial waste

Most of the dust generated by thermal spraying using chromium-containing materials (such as stainless steel) is collected by dust collectors. In cases when it exceeds the regulatory limit in dissolution tests, it is disposed of as specially controlled industrial waste.

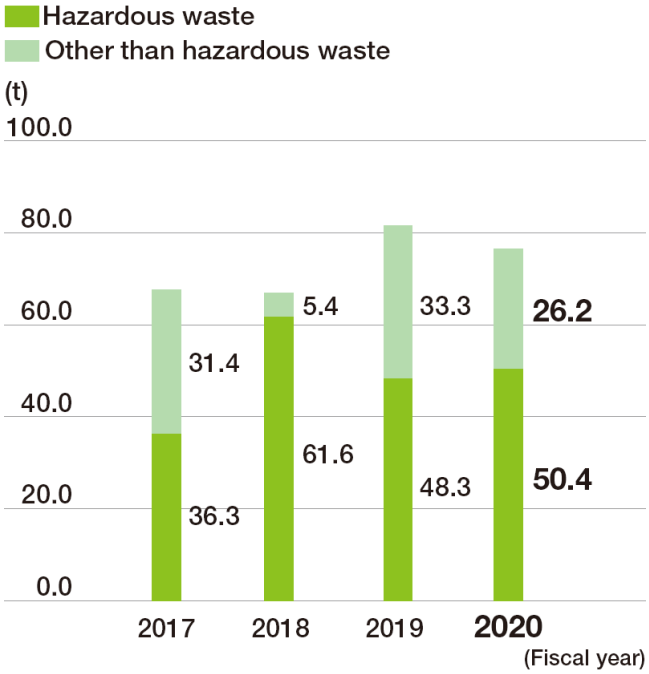
Changes in Total Waste Emissions



Changes in Total Waste Emissions/Sales



Breakdown of specially controlled industrial waste



Use of environmentally-friendly containers for bento boxed meals

The Act on the Promotion of Resource Circulation for Plastics was promulgated on June 11, 2021, and is set to enter into force within one year from that date. In July 2021, we at TOCALO began holding meetings with the contracted business operators of our bases with a view to switching the materials of the containers, forks, and spoons used for our lunchtime bento boxed meals, from plastics to environmentally-friendly alternative materials.
In the case of disposable containers, we are now steadily moving forward with transitioning to alternative materials such as bioplastics, and are aiming to complete the transition by the time that the act enters into force.

Recycling of miscellaneous recyclable paper at Headquarters (Kobe City)

Kobe City has been implementing an initiative for the recycling of used paper (miscellaneous recyclable paper) that is emitted by business operators targeting the business operators of Port Island and Rokko Island, and the TOCALO Headquarters (within Kobe City Port Island) has been participating in this initiative since March 2020. A large amount of shredder dust is generated at the Headquarters, and this is recovered and transported to designated locations in Kobe City by contracted transport companies.

Air-pollution countermeasures

Dust generated in the thermal spraying process is safely collected without being released into the atmosphere.

TOCALO's main products modify surfaces by way of thermal spraying. In thermal spraying, powder or wire is used as a material, which is fed into a combustion flame or plasma jet to melt and spray to form a coating. During the process, powders that were not melted or were not deposited even if melted and sprayed become dust. Dust collectors do not release this dust directly into the atmosphere but collect it safely.(Photo)

Cartridge-type dust collector

Since thermal spraying is a dry method, there is no need for waste liquid treatment, and the dust collection method is mainly dry. Airborne dust in a thermal spray booth is drawn into the dust collector via a duct and filtered through filters made of woven and nonwoven fabrics in the device. As a fine dust layer that collects on the filter surface becomes thicker, the filter gets clogged, causing pressure loss to increase and dust collection efficiency to decrease. Therefore, dust is intermittently removed with compressed air (a pulse jet) to restore efficiency.

Among the various types of collected dust, that which can be reused is recycled, whereas that which cannot be recycled is treated as industrial waste.
The generation of sulfur oxide (SOx) has not been confirmed.

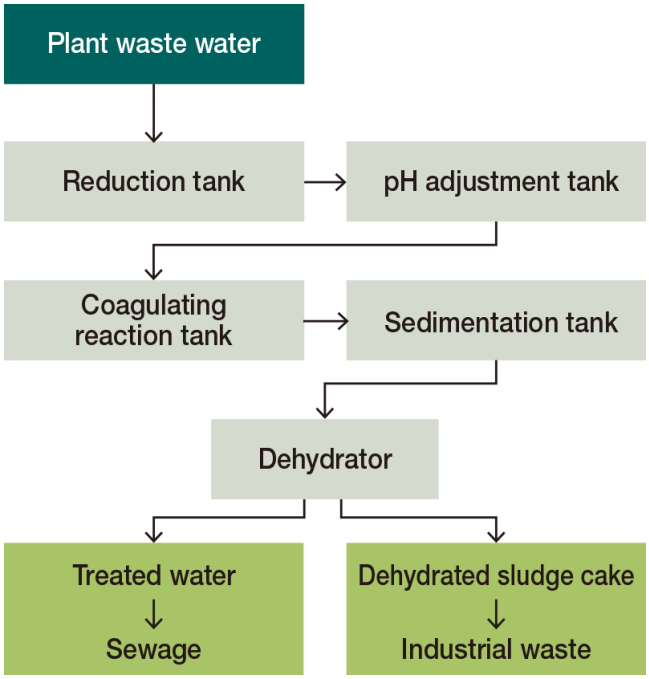
Soil and Water Pollution Countermeasures

We strive to take sufficient measures because the soil and water quality directly affect surrounding local areas.

At the Kobe Plant, we apply surface modification technologies other than thermal spraying. Wastewater that requires detoxification treatment is discharged into the sewage system after being detoxified at a coagulating sedimentation treatment facility. In the event of an accidental leak of plant wastewater, we have installed pipes and concrete walls to prevent and quickly and visually detect leaks. In addition, we have prepared anti-dispersants to prevent leaks from spreading. The equipment is controlled under a rigorous system that complies with applicable laws and regulations, and by conducting periodic monitoring and measurements.

The site of the former Kobe Plant, which had been leased since our foundation in 1951, exceeded some standards in soil surveys and, though it posed no health risks, notification was required upon any changes to its form or nature. Soil improvement lifted the requirement on March 20, 2019. The leased land was returned at the end of March 2019.

Plant Wastewater Treatment Steps (coagulating and sedimentation treatment facility)



Noise Countermeasures

Noise barriers have been installed and noise measurements are also carried out regularly.

The main types of equipment that generate noise of a concerning level are air compressors, dust collectors, and other blowers. However, in addition to this equipment, there are other noise sources, and we are taking steps to avoid disturbing the neighborhood by implementing soundproofing measures such as installing these facilities inside buildings and installing special soundproof walls.
In addition, we regularly measure noise levels to ensure that our facilities and equipment are within regulatory limits.

Noise measurement using specialized equipment

Together with Customers and Suppliers

We are aiming to be a company trusted by customers and are striving to provide products and services that satisfy customer requirements.
We also want our business partners to grow alongside us through activities based on our partnerships.

- Enhance Customer Satisfaction
- Acquisition of ISO 9001 Certification
- Acquired JIS Q 9100, Nadcap Certification (for the aerospace industry)

Enhancing Customer Satisfaction

We are working daily to deliver inspiration to customers.

We believe that the high value-added one-of-a-kind products that we at TOCALO deliver satisfy and inspire our customers because of our high level of quality control and good services. We strive to communicate the necessary information to our customers honestly and sincerely every chance we get, from proposal, order receipt, and delivery to after-sales service.

We are committed to quality control as well as research and development. In addition to operating a quality management system that is compliant with both ISO 9001 and JIS Q 9100 for the aerospace industry, we also hold QA-presentation competitions to announce the results of quality control efforts, and technology report-presentation competitions to announce the results of new research. These tournaments are designed to raise the level of both technologies and quality management across the company. We also established the Quality Headquarters, headed by a director, to strengthen our management system.

In 2017, we moved our headquarters to the Kobe Biomedical Innovation Cluster (KBIC; Chuo-ku, Kobe City), and have been focusing on market development in medical fields while collaborating with manufacturers in the same area. We also actively participate in exhibitions on the themes of “Medicine,” “Environment and Energy,” and “Transportation Equipment.” In fiscal 2020, TOCALO exhibited at total of 5 exhibitions. As a problem-solving company, we are proactively working to identify customer issues and work with customers to realize better products and services.

Exhibition scene (fiscal 2020 Agro Innovation 2020)

Exhibitions in Fiscal 2020

- Nagoya Automotive Components & Processing Technology Expo in October 2020
- Agro Innovation 2020 in November 2020
- Highly-Functional Ceramics Expo in December 2020 (plus participation in simultaneously-held online exhibition)
- Manufacturing Fair2020　Online　Digest (online exhibition)
  Gunma Virtual Expo (online exhibition; free of charge) (https://www.gunma-virtualexpo.jp/)
  →See here for details
  * The link destinations are external websites, so the information may be altered.

VOICE　Making attractive proposals to customers even amid restrictions on face-to-face sales

Tomoko Hasegawa (Sales Department, Tokyo Plant Suzumi Workshop; Kanagawa Office)

I am based at the Tokyo Plant, and carry out sales with the steel industry, including steel plants, as my main customer. Although sales for the steel industry are based on visiting worksites and asking about issues while looking at actual items together with customers, in order to prevent the spread of COVID-19, I have been avoiding face-to-face sales and have mainly been carrying out sales online.

Initially, not only I but also my customers were confused by the substantial environmental changes in which face-to-face sales ended up becoming restricted. This was not only because both sides were not used to web conferencing, but also because there are cases in which it is impossible for situations to be understood in detail without directly visiting manufacturing worksites and hearing explanations there.

After repeatedly engaging in trial and error, I am now able to swiftly respond to the requests of customers, and this includes starting meetings online within 10 minutes whenever customers urgently request a meeting.

I believe that through the use of web conferencing, I will be able to engage in sales with increasingly far-away customers in the future. Going forward, I will carry out sales activities while utilizing the advantages of both face-to-face sales and web conferencing and continuing to put the customer first.

Acquisition of ISO 9001 Certification

All plants have acquired certification.

We continually improve our quality management system in order to improve customer satisfaction and earn social trust through quality assurance.

Status of ISO 9001 certification

ISO 14001-Certified Plant	Registered Date	Registration Number	Certified Activities
Kitakyushu Plant	Jul. 1998	JQA-2470	Thermal spray processing for industrial machinery parts, equipment parts for the chemical industry, and parts for FPD and semiconductor manufacturing equipment
Tokyo Plant	May 1999	JQA-QM 3344	Surface treatment processing for industrial parts (thermal spray processing and other peripheral technologies)
Akashi Plant	Oct. 1999	JQA-QM 3810	Surface treatment processing for industrial parts (thermal spray processing and other peripheral technologies)
Kobe Plant	May 2003	JQA-QMA 10001	ZAC processing of parts for FPD and semiconductor manufacturing equipment and general industrial machinery parts TD processing of insert block molds for automobile forming mold
Mizushima Plant	Dec. 2011	JQA-QMA 14492	Surface treatment processing for industrial parts (thermal spray processing and other peripheral technologies)
Nagoya Plant	Nov. 2017	JQA-QMA15690	Surface treatment of parts for general industrial and aerospace industries (thermal spraying)

Quality control system

Plant	Implementation Items	Certified Activities
Considering orders	• Interviews • Review of customer requirements • Preliminary verification test	• Gathering information through interviews to realize customer requirements • Analysis of the use environment for each customer • Proposal

Orders (processing instructions)	• Processing directives
	  ◦ Drawing
	  ◦ Purchase specifications
		• Input customer requirements into processing directives (attachment of drawings, purchase specifications, etc.)

Manufacturing	• Incoming inspection • Purchasing process control • Manufacturing process control • Shipment inspection	• Incoming inspection (prevention of non-conforming parts and materials into the manufacturing process based on source management) • Purchasing management (purchase of conforming products from selected suppliers) • Manufacturing process (management of individual processes based on 5Ms to provide stable product quality) • Shipment inspection (provision of products that meet customer requirements)
Shipment	• Traceability management	• Management of process history by product identification
After-sales service	• After-sales follow-up	• Quality surveys of tie-ups in engineering, manufacturing and sales by visiting customers • Sincere response to customer complaints

Acquired JIS Q 9100, Nadcap Certification (for the aerospace industry)

The Nagoya Plant has acquired certification for the aerospace industry.

JIS Q 9100 was established to manage the quality of aerospace defense products, which requires advanced quality control. To satisfy requirements specific to the aerospace industry, the Nagoya Plant acquired certification in November 2008. The Akashi Plant was also certified in 2014, but the aircraft-related work was consolidated at the Nagoya Plant, and the certification was returned at the end of March 2020.
Nadcap is an international certification system under which the Performance Review Institute (PRI), an NPO in the United States, reviews special process operations in the aerospace and defense industry.

JIS Q 9100 and Nadcap Certification

	ISO 14001-Certified Plant	Registered Date	Registration Number	Certified Activities
JIS Q 9100	Nagoya Plant	Nov. 2008	JQA-AS 0044	Surface treatment of aerospace components (thermal spraying)
Nadcap		Mar. 2014	967616467	Surface treatment of aerospace components (thermal spraying)

Together with Our Employees

Our company complies regarding the payment of wages above the minimum levels set in each region, and in our Corporate Ethics Guidelines, we state the obligations we have to employees and our determination to meet those obligations so that employees can maximize their abilities and achieve self-fulfillment.
Furthermore, we comply regarding maintaining working conditions above the standards set forth in laws and ordinances, etc. We hold labor-management gatherings that include company-side management and the management of labor unions around six times per year, and repeatedly engage in talks with the aim of realizing higher and higher quality work environments and treatment.

Creating an Environment in Which All Employees Can Thrive　Respect for Human Rights
Occupational Health and Safety Initiatives　Work-Life Balance

Creating an Environment in Which All Employees Can Thrive

Initiatives to Support Balancing Work and Childcare

- Childcare and caregiver leave
- Shorter working hours and leave for childcare and nursing
- Children's nursing care and caregiver holiday leave

Initiatives to create a comfortable work environment

- Correspondence education program
- Awards and incentive programs

Initiatives to create an environment in which all employees can fully demonstrate their abilities

- Re-employment program for retired employees
- Stress checks
- Introduction of refreshment leave
- Introduction of flextime systems
- Implementation of a system of paid leave on an hourly basis
- Introduction of telework

Introduction to correspondence education

Data regarding human resources

- **Proportion of all employees who are women (non-consolidated)**
  14.2% (125/881 people) as of end of March 2021
- **Proportion of executives who are women (non-consolidated)**
  9.1% (2/22 people) as of end of March 2021
- **Ratio of temporary employees (consolidated)**
  18.5% (163/881 people) as of end of March 2021
  Temporary employees consist of directly-hired employees such as part-time employees and contract employees, and do not include dispatched employees.
- **Voluntary separation rate (non-consolidated)**
  1.76% (15/852 people) fiscal 2020
  (Excluding mandatory retirements, etc. among full-time employees such as regular employees and contract employees)

Respect for Human Rights

Eliminating All Discrimination among Employees

The Compliance Handbook expressly stipulates that the company shall respect the fundamental human rights of employees and shall not discriminate against or harass individuals for reasons unrelated to the performance of one's duties. This includes race, nationality, ethnicity, beliefs, religion, age, sex, sexual orientation, physical characteristics, presence or absence of disability, internal position, type of employment, property, place of origin, marital status, or any other reason that may harm the dignity of the individual. Furthermore, instructions have been given stating that reasons unrelated to the performance of duties cannot be made selection criteria during the new hiring of employees.

Prevention of Harassment

To prevent harassment, we held harassment training for all employees in 2020. The first training for managers was conducted in fiscal 2019.
In order to raise awareness regarding compliance, the Compliance Handbook is distributed to all employees, and the Clean Line Committee has been established as a contact point for whistleblowing and consulting regarding harassment and other matters.

- **Employment rate of persons with disabilities**
  2.44% (non-consolidated) (end of March 2021)

Industrial Safety and Health Initiatives

We are also focusing on ensuring safety in the event of a disaster.

We strive to maintain and improve a comfortable work environment that gives consideration to safety and health, as well as enhance various systems related to welfare in compliance with the Labor Standards Act and the Industrial Safety and Health Act. Parallel to this, each business site has established its own measures to ensure safety and minimize damage in the event of a disaster.

In order to prevent occupational accidents from occurring, the entire company is making concerted efforts to vigorously promote safety and health measures.
As one of our initiatives in this regard, we receive tutelage and advice regarding health issues and health & safety from an outside director who is a specially-appointed professor of the Osaka University Campus Life Health and Counseling Center.

Safety and Health Policy of 2021

TOCALO's safety and health policy is based on the principle that “safety takes precedence over everything.” It serves as a guide for “maintaining and improving work environments” and “achieving zero accidents and zero injuries,” by showing due consideration to safety and health in ways that safeguard and enhance the health of all employees.
We will strive to create a bright and rewarding workplace by:

1. Complying with laws and regulations related to safety and health related to our business and relevant internal regulations
2. Continuing industrial health and safety activities (inspections, patrols, and education) and striving to raise awareness of health and safety
3. Aiming to reduce the hazards that cause accidents and disasters by promoting visualization and risk assessments based on 5S-activity initiatives, and analysis of workplace injuries
4. Showing due consideration to mental health so that employees can work in a healthy state of mind
5. Thoroughly carrying out health & safety education for new employees
6. Promoting the safety activities of on-site partner companies and subcontractors

Heat Stroke Countermeasures at Manufacturing Sites

In recent years, summer heat has become increasingly severe, and temperatures at manufacturing sites have been higher than before, increasing stress on employees. The higher the temperature gets, the greater the risk of heat stroke becomes, so this could adversely affect the health of our employees.
To prevent such risks, we are firstly improving our air-conditioners. Air-conditioners are adopted at most of our flat panel display (FPD) and semiconductor processing plants (FPD and semiconductors make up just over 50% of total sales), and we are actively introducing them at other worksites as well.

Measures other than air-conditioning are implemented at sites as required, such as exhausting steam generated in operations to the outside, reducing outdoor heat input through the use of heat-shielding coating, and installing large-scale air blowers. In addition, for personnel, we are promoting rehydration and salt supplementation with salt candies, installing spot coolers, and introducing air-conditioned clothing. With these measures in place, many of the workers at sites say that the work has become easier, which has also led to more efficient work. However, there are some sites where countermeasures are not yet sufficient, and further improvements are necessary. We will continue to consider the health of our employees and take appropriate measures at each business site.

Approach to mental health

For employee mental health care, we implement stress checks once per year as is required by law, and give feedback on the results to individuals. We also perform diagnoses on company structures and identify issues regarding structures, and this helps us to improve workplaces.
In addition, we have set up a contact point for consultations that is separate from the stress checks. We have established a system that enables our employees to consult with specialists with peace of mind without having to go through the company, by contracting with SOMPO Health Support Co., Ltd.

Initiatives for raising safety awareness

At each office, a meeting of the Health and Safety Committee is held each month, risks regarding workplaces are assessed, and feedback on the results is given to employees. An effort is made to share the information from the committee meetings at company-wide health and safety meetings in which all offices participate every other month. Furthermore, an effort is made to raise safety awareness by providing education on entering the company to new employees that is centered on safety education, and focusing on foreman training that is based on guidance from external consultants.

Work-Life Balance

Promotion of diversity

In July 2020, we established a Diversity Promotion Committee in order to create a work environment for diverse human resources. Members of the promotion committee are selected from each base who are diverse in terms of age, gender, and job position, and then groups are formed and activities are carried out regarding various themes. The opinions of employees on issues and improvement measures are gathered through the holding of regular meetings and questionnaires.
Currently, promoting the active participation of women has been set forth as a priority issue, and we have been striving to be a company where it is comfortable for women to work. We have thus been endeavoring to improve our work environments in a forward-looking manner.
→See here for details
*The link is for an external website so there may be changes.

In addition to reducing long working hours and promoting use of paid holidays, we have also enhanced our childcare-leave system and are raising awareness of the options our workforce has.

In order to realize a balance between work and life, not only are we reducing extended working hours and encouraging employees to take annual paid leave through collaborative efforts between labor and management, but we have also established a childcare-leave system to help employees balance work and child-rearing amid Japan's rapidly declining birthrate and aging population. In addition, we are improving the work environment in consideration of health management during and after birth.
We are working to reform work styles and workplace culture in consideration of the employees who need to both work and care for family members, and are raising awareness of the options our workforce has.

Average paid-holiday utilization rate

* Paid-holiday utilization rate = number of paid holidays utilized/number of paid holidays granted (not including portion carried over from previous fiscal year) × 100
Average paid-holiday utilization rate = total of paid-holiday utilization rates of all employees/number of all employees × 100
Fiscal 2020 result-calculation period: April 2020 to March 2021

Fiscal 2019	Fiscal 2020
Approx. 70%	Approx. 66%

Use of Caregiver Leaves

* Caregiver leave: for taking care of a family member who needs nursing care for at least two weeks

	Fiscal 2019	Fiscal 2020
Number of eligible employees	0	0
Number of utilizing employees	0	0

Use of Childcare Leaves

* Childcare Leave: for taking care of a child under 1 year old living together

	Fiscal 2019	Fiscal 2020
Number of eligible employees	Male 25	Male 19
	Female 7	Female 8
	Total 32	Total 27
Number of utilizing employees	Male 0	Male 0
	Female 7	Female 8
	Total 7	Total 8

Use of Nursing Leaves

* Nursing leave: for taking care of a family member in need of care

	Fiscal 2019	Fiscal 2020
Male	4	4
Female	3	2
Total	7	6

Use of Care Leaves

* Care leave: for raising children until they reach the start of elementary school attendance

	Fiscal 2019	Fiscal 2020
Male	18	12
Female	7	2
Total	25	14

Initiatives regarding human resource development

Our company has established education & training rules in order to promote self-development and mutual development, and enable the development of creativity through the performance of professional duties.
We first of all provide education to new employees and mid-career professionals for the acquisition of basic concepts and knowledge & skills regarding the company and work. Subsequently, education at individual workplaces, managerial education, supervisor education, specialized education, and so on are provided at the appropriate times as necessary.

VOICE　An excellent place for actively engaging in work and hobbies!

Kensuke Nagai (Manager, Environmental Division, Environmental Promotion Department; Manager, Planning and Administration Department, Thermal Spraying Technology R&D Laboratories)

In April 2021, I was appointed as the ISO 14001 general environmental management supervisor, and started general environment-related operations.

I ordinarily oversee event operations at the Thermal Spraying Technology R&D Laboratories, and the largest event of the year for me is a competition involving presentations of technical reports in which announcements are made regarding new technological development by all offices and domestic subsidiaries. Overseeing this competition, which can be considered a report on the outcomes of the past year, gives me a feeling of tension and preparing for it is difficult. Nevertheless, it is very rewarding, and the presentations by employees ranging from younger employees to veterans are very stimulating for me.

On a personal note, due to the aftereffects of an accident that I experienced around age 20, I still have a disability related to my right leg, and am certified as having a grade-four physical disability. When I was 45 years old around 15 years ago, I happened to learn about vehicles called go-karts and became obsessed with them, so I joined the TOCALO go-kart club. Currently, I provide guidance to the members of the go-kart club as a supervisor, compete in endurance races as part of the TOCALO team.

TOCALO has workplaces where persons with disabilities like me can work without worrying about handicaps related to disabilities, and there are many club activities through which employees can enjoy their hobbies. Going forward, I intend to engage in my work and hobbies with seriousness and enjoyment.

Together with Local Communities

We are aiming to be a company that enjoys the familiarity of local residents based on cleanup activities in the surrounding areas, local events, participation in youth development programs, and the promotion of sports.

Community Cleanup Activities Contributing to the Development of Young People

Community Cleanup Activities

Shrinking of activities due to impact of COVID-19

Due to the impact of COVID-19, in fiscal 2020, the local cleanup activities at TOCALO shrank in size, and we incorporated measures to prevent the spread of the disease such as wearing masks and avoiding close contact. We once again worked while paying close attention to traffic by wearing orange-colored bibs that are highly visible even from far away.

Prior to the COVID-19 crisis, at the Miyagi Technical Service Center, during the snow-free period from April to November, we were conducting activities such as picking up garbage in the industrial park and along general roads in the vicinity, weeding around the plant, and redesigning signs to encourage safe driving in the industrial park four times a year.
At the Thermal Spraying Technology R&D Laboratories, we were cleaning the green area of the neighboring Akashi Kaihin Park. When we asked the Akashi Kaihin Park Office for permission to enter for cleaning the park, we received generous consent and the park office posted TOCALO's cleanup activities on its website.

Furthermore, our sites conduct activities according to their local needs. The Kobe Plant is struggling with a large amount of garbage that is thought to be used fireworks and BBQ waste left in nearby parks, and the Akashi Plant conducts monthly activities in line with the cleaning activities of the local industrial parks. At the Kobe Plant, nearby companies told us that they have started their own cleanup activities following our example, and this has been giving us encouragement.

Cleanup activities near Kobe plant

Cleanup activities near thermal spraying technology R&D laboratories

Contributing to Development of Young People

Supporting Akashi-jyoki Gakudo Soft Baseball Tournament

In fiscal 2020, the Akashi-jyoki Gakudo Soft Baseball Conference, of which we have been a special sponsor since its launch in fiscal 2012, was canceled due to the impact of COVID-19. The tournament started around the time when TOCALO acquired the naming rights for Akashi TOCALO Baseball Stadium. We hope that the outstanding performances by the participating boys and the accompanying cheers of support will resume soon.

Akashi-jyoki Gakudo Soft Baseball Tournament to date and Akashi TOCALO Baseball Stadium
* TOCALO is a special sponsor.

Accepting interns

Although we had been accepting interns annually since fiscal 2007, we were unable to do so in fiscal 2020 due to the impact of the COVID-19 crisis.
In usual years, we accept one or two interns from the German University of Helmut Schmidt. They spend more than a month in summer at the Thermal Spraying Technology R&D Laboratories, and they experience our research and development work on thermal spray technology and our business activities. We also deepen mutual understanding regarding German and Japanese cultures through exchanges during both work and private time with our employees. We are looking forward to the time when we can resume accepting interns.

Activities of overseas interns (fiscal 2019)

Budget for Community and Social Contribution Activities

We set a budget for community and social contribution activities (annual), and as part of this, we donated to initiatives such as supporting preventing the spread of the infectious disease COVID-19. Furthermore, in August 2020, we began giving foreign students scholarships for the Global Business Course at the University of Hyogo.

For Shareholders and Investors

We promote IR activities from the perspective of our shareholders and investors, with a basis of prompt and accurate information disclosure.

Information Disclosure Policy　Main IR Activities　Dividend Policy

Information Disclosure Policy

We strive to disclose information in an easy-to-understand manner through shareholder newsletters and our website.

We strive to earn the trust of our shareholders and investors by disclosing corporate information, such as management policies and financial data promptly, accurately, and fairly from the perspective of these shareholders and investors.
In disclosing information, we comply with statutory disclosure standards and disclosure rules set forth by the stock exchanges.

IR associated tools

- Securities reports and quarterly reports
- Financial Results (Quarterly)
- Newsletter for Shareholders

The latest Newsletter for Shareholders can be viewed on this page.

- Fact Book
- Company briefing materials for investors
- IR information on our website

Investor relations information can be found in detail on this page.

IR information on the website

Fact Book

Newsletter to Shareholders

Main IR Activities

We are also focusing on briefings for individual investors.

We hold corporate briefings for investors and meetings with analysts and domestic/overseas institutional investors to provide opportunities for direct dialogues between shareholders & investors and top management as a part of our proactive communications.
We also participate in asset management expos on an ongoing basis to improve our name recognition, broaden our corporate recognition, and expand our investor and fan base.

We also actively provide IR information on our website. In addition to enabling the viewing of various disclosure materials, we are posting our video commercials with the aim of providing communication that gives people a sense of familiarity with the content of our business.

President Mifune giving a presentation at Nikkei IR & Individual Investor Fair Online 2020

Investor Expo exhibition brochure

Dividend Policy

Our dividend was JPY 35 per share in fiscal 2020.

We consider the return of profits to shareholders to be an important management policy, and strive to continuously pay stable dividends that are based on the outcomes of our business performance. At the same time, we actively strive to enhance shareholder returns.
In fiscal 2020, we paid a dividend of 35 yen per share (including an interim dividend of 12.5 yen). As a result, the dividend payout ratio (consolidated) was 38.9%. Retained earnings will be allocated to R&D and capital investment, which are indispensable for business growth and strengthening corporate structure, in order to enhance our medium-to long-term share value through business development and expansion.

Business Continuity Activities

Risk Management

Implementing thorough measures regarding disasters, etc.

Our risk management system is based on our CSR Committee's cross-sectional oversight of the status of risk management and examination of company-wide measures. A Business Continuity Plan was issued on April 1, 2010 and is updated annually.

With regard to risks related to compliance, responses to antisocial forces, the environment, disasters, quality, information security, credit management, investment & financing, and export management, we acquaint and provide each department in charge with rules, guidelines, and manuals. In the event of an unexpected situation, an Emergency Management Headquarters will be established immediately to implement countermeasures in accordance with our Emergency Management Protocol.

In addition to the above, the Board of Directors promptly appoints directors to be responsible for responding to risks that have newly arisen, and establishes systems for responding appropriately.
We also conduct annual disaster prevention drills in preparation for emergencies. Our main sites conduct fire drills and large-scale disaster response drills envisioning situations such as an earthquake or tsunami. At the same time, we also stockpile emergency meals and other supplies at all of our sites in order to be prepared for disasters.

Countermeasures to Prevent the Spread of COVID-19 —Safety for Employees and Customers—

COVID-19, which is prevalent worldwide, has affected Japan as well and transformed our lives.
Under these circumstances, TOCALO is implementing measures to prevent infections with an emphasis on the following concepts.

Prioritizing the safety of employees and their families, customers, and business partners.

Ensuring thorough risk management for business continuity.

In February 2020, in accordance with the basic policies announced by the government, our company began measures to prevent infections, such as avoiding the three Cs (closed spaces, crowded places, and close-contact settings) and wearing masks, while maintaining the operations of our plants. On March 1, we established the COVID-19 Countermeasure Headquarters headed by our President, and then implemented measures related to commuting to work, sales activities, and internal operations based on “not getting COVID-19,” “not passing on COVID-19,” and “not bringing in COVID-19.” In order to continue our business and protect the health of employees, we have been revising these measures according to the situation, and we are still implementing them as of August 2021.
During the COVID-19 crisis, we have been doing our utmost to work closely with our customers and fulfill their requests while paying sufficient attention to safety. Going forward, we will continue to work hard to contribute to society with surface modification technologies.

Specific Countermeasures

TOCALO Initiatives (January 2020 to end of August 2021)

(Scope of Report: TOCALO Domestic Facilities)

1/2020 to 3/2020
— Confirmation of COVID-19 infection and prompt launch of measures to prevent spread of infections in Japan

1/16 First confirmation of infection in Japan

February

- Donation of masks to subsidiaries in China
- Checking of employees' temperatures before work every day
- Promotion of staggered work hours
- Voluntarily refraining from going on business trips
- Promotion of web conferencing
- Guidance on wearing masks

March

3/9 Expert Meeting calls for “avoiding 3Cs”

- Establishment of COVID-19 Response Headquarters
- Refraining from visits as much as possible
- Formulation of Work Attendance Standards as COVID-19 countermeasure
- Promoting avoidance of 3Cs at dining halls
- Allowing driving to work to avoid public transportation

4/2020 to 5/2020
— Issuance of state of emergency declaration, enhancement of measures

April

4/7 Issuance of state of emergency declaration in seven prefectures
4/16 Expansion of state of emergency declaration to all of Japan, with 13 prefectures as Prefectures under Specific Cautions

- Telework Promotion
- Distribution of 50 masks per employee, request for thorough wearing of masks
- Training of new employees shifted to online training

May

5/27 Lifting of state of emergency declaration

- Resumption of customer visits (with prior approval from customers required)

6/2020
— Responding to “new normal” and flexible shifting of measures

June

6/19 Government announcement of phased easing

- In response to the easing of measures by the government, our measures were reviewed (wearing of masks, telework, staggered work hours, business trips, commuting by car, etc.).
- Donations were made to seven domestic medical institutions.

— 7/2020 to 12/2020 Start and end of Go To Travel

July

7/22 Start of Go To Travel campaign (excluding Tokyo)

- Strengthening of measures accompanying spread of infections (regarding wearing of masks, business trips, etc.)

September

- Having company partly cover expenses for PCR tests and antibody tests following business trips and construction if requested (including family members)

December

12/15 Decision for nationwide suspension of Go To Travel

- Recommending commuting by car in order to avoid public transportation
- Discouraging company visits by guests
- Online implementation of ISO 14001 internal audit regarding some offices

— 1/2021 to 3/2021 Second state of emergency declaration and start of vaccinations

January

1/8 Issuance of state of emergency declaration in four prefectures

February

2/17 Start of COVID-19 vaccinations in Japan

March

3/21 Lifting of state of emergency declaration

- Allowing of business trips, including outside of prefecture, as necessary
- Allowing of visits by guests

4/2021 to 6/2021
— Third state of emergency declaration, strengthening of measures

April

4/5 Application of semi-state of emergency measures in three prefectures
4/25 Issuance of state of emergency declaration in four prefectures

- Strengthening measures (wearing of masks, etc.)
- Installing disinfection devices and CO_2 measurement devices in closed spaces whenever possible
- Recommending telework, staggered work hours, commuting by car, etc.
- Voluntarily refraining from going on business trips
- Discouraging company visits by guests

May

- Permission for taking of compensated half holiday or compensated holiday on day of vaccination (and the next day onward in the case of fever)

June

6/20 Lifting of state of emergency declaration in all prefectures except Okinawa

- Establishment of period of isolation measures following returns to Japan from overseas business trips

7/2021 onward
— Fourth state of emergency declaration and holding of Tokyo Olympics & Paralympics

July

7/12 Issuance of state of emergency declaration in Tokyo
7/21 Start of Tokyo Olympics

August

8/2 Issuance of state of emergency declaration in four prefectures, application of semi-state of emergency measures in five prefectures
8/24 Start of Tokyo Paralympics

- Measures still ongoing

Work Style

Staggered work hours

We implemented this to avoid the 3Cs during commuting. It also helped to reduce the density of locker rooms and dining halls.

Web conferencing

We actively implemented web conferences in order to avoid the 3Cs. With this, we can also interact with people far away immediately and see their faces. This led to more efficient business operations.

Telework

We introduced telework actively to divisions/departments capable of such a workstyle. We were able to participate in web conferences from home as well and were able to use time effectively.

Driving to work

Although driving to work was not permitted except for some business locations, it was temporarily allowed as a countermeasure for COVID-19.

Daily operations

Temperature measurement and disinfection

Alcohol disinfectant bottles were set out in various locations for the practicing of frequent disinfection. The temperatures of both employees and visitors were measured, and safety measures were taken.

Kitakyushu Plant

Wearing masks

We have distributed masks to all employees, and have decided that masks should be worn during work at all times except in the following situations: (i) when walking alone during commuting, (ii) when alone in an isolated room, and (iii) when eating, smoking, and taking breaks. We have implemented measures to ensure that a distance of at least two meters is maintained from the nearest person, and this has included making marks on the ground for standing positions at locations where masks are removed.

Tokyo Plant Suzumi Workshop

Cafeteria

We removed seats from one side of tables and prevented face-to-face seating during meals. At some sites, we divided employees into two groups and staggered lunch times.

Headquarters

Business Sites

Use of conference rooms

In order to avoid the 3Cs, we held meetings with large numbers of people online, and we set certain amounts of space between seats in conference rooms. In addition, we moved the desks of our offices to make use of vacant conference rooms.

Kobe Plant

Desk layout

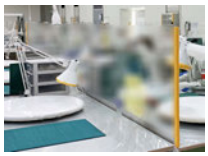
We rearranged desks to avoid face-to-face seating and create space in between them. Between the desks, shields were installed to prevent spread of droplets.

* The shield is marked with a dotted line in the photo.

Headquarters

3C countermeasures among workers

Manufacturing sites have relatively more distance between workers, but there are also cases in which people work at a close distance. In such case, 3C avoidance measures were taken with vinyl sheets, etc., and careful consideration was given to the safety of workers and products.



Tokyo Plant
Gyoda
Workshop

* The photograph has been partially edited out of consideration for confidentiality.

Launch of Environmental Promotion Department

Kosaku Hiyama

General Manager Environmental Promotion Dept.

Thank you for reading our Environmental Report. We recently launched the new Environmental Promotion Department. What must truly be valued? We believe the old way of doing things is insufficient to address the problems of society as a whole on a global scale while meeting the needs of our customers. While leveraging our experience up to now, a new approach is also necessary. Going forward, in addition to changing the surface through our business and surface modification technologies, including thermal spraying, we hope to change the form of things, including improving our environmental approach and organizational structure.

We are committed to contributing to society through our surface modification technologies while taking measure of our proprietary technologies from the customer's perspective and judging our company from a global perspective. Thank you in advance for your continued support.

Editor's Postscript

Thank you for reading TOCALO's 2021 Environmental Report.

TOCALO has set out on a mission to contribute to a bright future for people and nature. We hope to also enhance the Environmental Report toward that end.

We will move forward so that we can continue to meet your expectations. Your frank opinions and feedback are appreciated. Thank you for your continued support of TOCALO.