

We continue to help solve social problems and contribute to the sustained development of the world by creating valuable products and services.

We at Takuma offer our heartfelt condolences for all those who have lost their lives as a result of COVID-19, and we hope that all those suffering from the disease will recover quickly and that the pandemic will be brought under control as soon as possible.

### Management Principles

Inventor Tsunekichi Takuma founded Takuma in 1938 with the philosophy of "Serve society through boiler manufacturing." Since that time the Takuma Group has inherited that philosophy and used it to establish businesses involving the full array of boilers while taking advantage of technologies developed through boilers to enter the environmental sanitation field with facilities such as waste treatment plants and water treatment plants, broadening its businesses with a focus on the fields of energy use and environmental protection, and contributing to society's development and the resolution of social problems. Our Management Principles lie in this founding spirit, and a dedication to contributing to the sustained development of society over the long term through business activities remains the starting point of the Takuma Group as well as a core expression of its unchanging values.

### Takuma Group Strengths

Along with the technologies and expertise that the Takuma Group has accumulated through the repeated improvement of products and services since its founding, the relationships of sincerity and trust that the Group has developed with longstanding customers by providing after-sales service and solutions have been passed down unbroken as the tangible and intangible assets that embody its greatest strengths and the source of its ability to compete successfully.

### Reflections on the 12th Medium-Term Management Plan

Under the 12th Medium-Term Management Plan (FY2018 to FY2020), which represents the final stage in the Group's effort to achieve the medium- and long-term vision for FY2020 that it began in FY2012 of "being an indispensable presence in society as a leading company in the field of renewable energy utilization and environmental protection and of achieving ordinary profit of JPY 10.0 billion in FY2020," we have pursued the theme of increasing our corporate capabilities in order to achieve our corporate vision and subsequently realize steady growth. In addition to working to strengthen and expand our revenue foundation, for example by proposing solutions based on customer needs in our after-sales service business and launching an energy plant O&M\* business for private-sector companies, we safeguarded our market position by continuing to steadily turn robust demand into orders received in our EPC business\*. As a result of these initiatives, we achieved the targets set forth in the financial plan (for consolidated ordinary profit).

### Vision 2030 Long-Term Vision

Global issues that merit concern include the growing seriousness of the problem of climate change; the worsening of the sanitation environment due to rapid population growth and urbanization, particularly in emerging nations; and increasing energy demand. At the same time, domestic challenges like falling internal demand caused by the shrinking and aging of Japan's population, shortages of human resources and future leaders, tight financial conditions affecting



## Message from Top Management



national and local government, and aging infrastructure are triggering major concerns about how a sustainable society can be realized going forward. Based on these social conditions and issues, we formulated Vision 2030 as a long-term vision that would serve as new guidelines for the Group's medium- and long-term management.

In keeping with this vision, the Takuma Group will implement Environment, Social, and Governance (ESG) management, an approach that consists of addressing key ESG-related issues in an effort to achieve sustained growth by resolving issues faced by customers and society through business activities. In pursuing business activities built on a core of ESG management, we will strive to become a great partner for our customers by leveraging the technologies and expertise related to energy utilization and environmental protection that are the Group's strengths, along with the relationships of trust we have developed with customers over the long term. Through the useful technologies and services created through innovation by the Group, which carries on the spirit of a tenacious inventor, we will resolve challenges faced by customers and society, with a focus on the fields of renewable energy utilization and environmental protection. We at the Group will work to achieve ordinary profit of JPY 20.0 billion in FY2030 by addressing key ESG-related issues through our business activities and realizing sustained growth alongside our customers and society. [P29-30](#)

### 13th Medium-Term Management Plan

The Takuma Group launched its 13th Medium-Term Management Plan (FY2021 to FY2023) in April 2021 as the first step towards realizing Vision 2030, our long-term vision. The plan's theme is laying the

foundation for further growth based on the management foundation and business foundation that the Group has built to date.

The basic policy set forth in the 13th Medium-Term Management Plan is strengthening conventional businesses by reinforcing the Group's management foundation and at the same time accelerating our response to future environmental changes. We will strive to realize sustainable growth alongside customers and society by implementing ESG management through these business activities.

#### 1) Implementing ESG Management

In order to realize sustained growth alongside our customers and society by implementing ESG management as set forth in Vision 2030, our long-term vision, the Group approached the task of formulating the 13th Medium-Term Management Plan by organizing various ESG issues from the dual standpoints of their importance for stakeholders and society on the one hand, and their importance for the Group on the other. This process led to the identification of seven key issues (Materiality) that deserve to be given priority by the Group. [P32-34](#)

Environment	Helping combat climate change Conserving resources and protecting the environment
Social	Strengthening relationships of trust with customers and communities Pursuing partnerships and innovation Promoting activities of human resources Ensuring safety and health
Governance	Strengthening corporate governance

#### 2) Strengthening the Management Foundation

In order to anticipate change and realize additional growth as environmental change gathers pace, for example in the rapid development of digital technologies and the goal of achieving carbon

neutrality by 2050, the Group will work to strengthen its management foundation through active allocation and investment of resources in human resources, digital technologies, and other areas of our operations while accelerating efforts to strengthen conventional businesses and accommodate future environmental changes. [P39-40](#)

#### 3) Financial Targets

In order to achieve the goal of posting ordinary profit of JPY 20.0 billion in FY2030 as set forth in Vision 2030, our long-term vision, the 13th Medium-Term Management Plan sets the achievement of steady growth and a target of cumulative consolidated ordinary profit of JPY 36.0 billion over the course of the plan (FY2021 to FY2023) as the first step in that process. We will work wholeheartedly to achieve those goals. [P37](#)

Takuma has been a signatory to the United Nations Global Compact\* since 2006, and we support its 10 fundamental principles in the four areas of human rights, labor, environment, and anti-corruption. We will work to develop our business while understanding and respecting these globally shared principles. The Takuma Group has been helping resolve social issues with technologies for reducing emissions of greenhouse gases like carbon dioxide through such means as high-efficiency power generation using waste and biomass since before the phrase "renewable

energy" entered into common usage. We believe that initiatives to achieve the Sustainable Development Goals (SDGs) [P14](#) put forth by the United Nations and the COP21 Paris Agreement align extremely well with the Group's businesses.

Finally, in compiling this CSR Report we have sought not only to provide a resource by means of which a broad range of stakeholders can learn more about the Takuma Group's activities, but also to help each and every Group employee think carefully about CSR and bring that perspective to bear in his or her work. Additionally, this year's report provides more detailed coverage of topics like the value creation process and key issues. We at the Takuma Group encourage readers to offer their candid views and advice, which we will carefully review in order that we might better resolve social issues and contribute to the sustained development of society.

July 2021  
Takuma Co., Ltd.  
President and CEO  
Hiroaki Nanjo

南條博昭

\*O&M: Operation & Maintenance

\*EPC business: A business in which Takuma offers a turnkey service extending from plant design to procurement and construction (Engineering, Procurement, and Construction)

\*United Nations Global Compact: The Takuma Group has joined the United Nations Global Compact (UNGC), which is a voluntary effort to create a global framework for implementing sustainable growth by having companies and groups exercise responsible and creative leadership while acting as good members of society.



# At a Glance

TAKUMA's strengths

●Established **1938** ●Consolidated net sales (million JPY) **146,726** ●Number of employees (consolidated) **3,925**  
(Fiscal year ended March 2021)

●Our achievements (to date)

Municipal solid waste treatment **360+** facilities (Japan) **No.1 share in Japan**  
 Biomass boiler **630+** units **Worldwide**  
 Industrial waste treatment **120+** facilities **Worldwide**  
 Boiler **3,200+** units (Including biomass) **Worldwide**  
 Upflow Moving-Bed Sand Filtration System **2,700+** units **No.1 share in Japan**

●Contribution to reducing CO<sub>2</sub> emissions

Reduction of about **4 million tons** from Takuma products during FY2020

### Industrial waste treatment plants

Using advanced incineration technologies, we properly treat toxic substances and help the industry's environmental protection efforts.

### Air-conditioning equipment and clean systems

We provide comfortable, clean environments to customers in the semiconductor industry as well as many locations such as universities, research institutions, and hospitals.

### General-purpose boilers

As the convergence of our combustion technologies, our boilers are a reliable brand that has earned the support of a wide range of industries.

### Municipal solid waste treatment plants

We support the realization of a Sound Material-Cycle Society using advanced waste treatment technologies that meet the needs of local communities.

### Water treatment plants

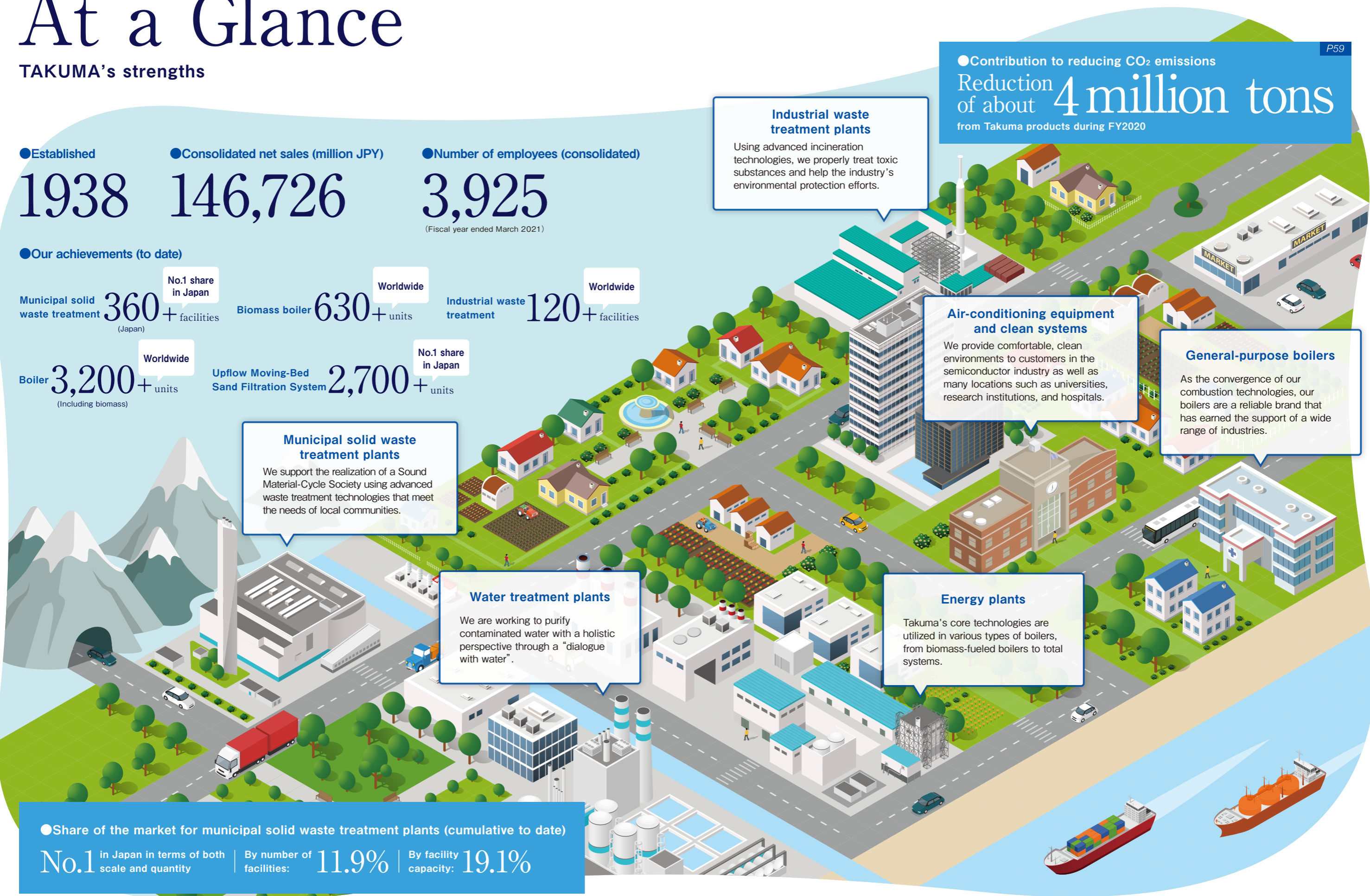
We are working to purify contaminated water with a holistic perspective through a "dialogue with water".

### Energy plants

Takuma's core technologies are utilized in various types of boilers, from biomass-fueled boilers to total systems.

●Share of the market for municipal solid waste treatment plants (cumulative to date)

**No.1** in Japan in terms of both scale and quantity | By number of facilities: **11.9%** | By facility capacity: **19.1%**



# TAKUMA's technologies support recycling worldwide.

The Takuma Group possesses advanced technologies related to waste treatment, the creation and supply of energy using under-utilized resources, and the recycling of wastewater.

In order to resolve global-scale environmental issues like climate change and realize a Sound Material-Cycle Society, we operate businesses in the environmental and energy fields, including municipal solid waste treatment plants, energy plants, and water treatment plants.



Treating waste



Creating heat and electricity



Supplying power to communities



Recycling contaminated water

# TAKUMA's pride: Proven track record and accumulated trust

Since our founding, we have provided a variety of products and services to customers in Japan and around the world. The track record and trust we have accumulated to date testify to the essential role we play in the world, and we take pride in having helped resolve issues faced by customers and society throughout our history. We will continue to cultivate the ability to help realize the sustainable development of society.



## What can we do on behalf of the Earth? Protecting the environment and utilizing renewable energy.

We are harnessing a variety of technologies to help resolve these critical global environmental issues, which are set forth in the Sustainable Development Goals (SDGs) adopted by the United Nations. Helping ensure that people worldwide can enjoy affluent and fulfilling lifestyles while safeguarding our planet's abundant environment... we will continue to embrace these challenges.



It all began with one man's pursuit of a challenge.

# Passing on the spirit of "Serve society through boiler manufacturing" to the future

Since Tsunekichi Takuma founded our business in 1938, Takuma, whose story began with the manufacture of boilers, has marked more than 80 years of history in pursuit of its mission of contributing to society through its business.

Today, we have grown into a company that leads its industry in the fields of the environment and energy, and we continue to move forwards to create a sustainable future.

## 1938

### Founding of Takuma Boiler Manufacturing Co., Ltd.

Founder Tsunekichi Takuma invented the first water tube type boiler to be entirely produced in Japan in 1912. The TAKUMA boiler offered performance that exceeded the imported products of the time, and its reputation spread. Takuma Boiler Manufacturing Co., Ltd., was established in 1938. The Company Motto of "Serve society through boiler manufacturing" was formulated, establishing the philosophy that went on to become the foundation of today's Management Principles.



Tsunekichi Takuma

## 1958

### Entry into the environmental and sanitation markets

Takuma established itself as a manufacturer not only of boilers, but also environmental and sanitary equipment, for example by developing waste heat recovery boilers that use waste heat from manufacturing plants, developing modern technology for incinerating solid waste, and entering the water treatment market. In 1963, the company delivered Japan's first 24 hour operating waste incineration plant.



Japan's first 24 hour operating waste incineration plant (1963)

## 1972

### Developing along with industrial society

Takuma worked to develop technologies to respond to various needs as Japan's economy grew rapidly, including demand for energy savings in industry, countermeasures for the growing volume and diversification of municipal waste, and improvements in water quality by water treatment systems. In 1972, Takuma Boiler Manufacturing Co., Ltd. which had grown beyond its principal business of boiler manufacturing, changed its name to today's Takuma Co., Ltd. The company transformed itself into an enterprise that operates a range of multifaceted businesses, including environmental equipment.



Name change (1972) Start of mass production of the "Vacotin Heater", the world's first vacuum-type hot water heater (1975)

## 1985

### Building a resilient management foundation

Takuma continued to reform itself, formulating its first Medium-Term Management Plan in 1985 in order to accommodate abrupt changes in the economic environment. In 1992, the company introduced a new Company Motto of "Value Technology, Value People, Value the Earth" replacing the former motto of "Serve society through boiler manufacturing". Capping the track record and trust it had established to date, the company delivered the largest waste incineration plant in Japan in 1998. The facility continues to operate to this day.



Completion of the Amagasaki Head Office Building (1995) Delivery of the Shin-Koto Incineration Plant (1998)

## 2001

### Embracing global challenges and building a new era

Seeking to make further progress in the fields of renewable energy and environmental protection, Takuma supplied technologies for using energy from a variety of waste types and biomass as well as technology for rendering waste harmless. We established local subsidiaries overseas and continue to bring our technologies to customers not only in Japan, but also worldwide, particularly in Asia.



Delivery of an Energy from Waste plant in Europe (2010) Construction of the Takuma Solar Power Plant (2013)

## 2021

### Realizing a sustainable future

As contemporary society continues to change at a dizzying rate, we face complex problems such as climate change and changes in demographic structure. Takuma formulated Vision 2030, its long-term vision, as well as the 13th Medium-Term Management Plan in FY2021, identifying the implementation of ESG management as a priority. We will continue to work towards further increasing our corporate value and realizing a sustainable future through business activities that leverage the Group's strengths.



### Company emblem at the time of Takuma's founding

The company emblem at the time of Takuma's founding stylized the company's name (Takuma) with a triangular shape that combined the three core areas of its operations: research, manufacturing, and installation. The design expresses the company's philosophy at the time, which focused on giving top priority to the continuous improvement of quality and on contributing to customers and society.





TAKUMA's Work

## The power to change the world

As society's values and needs continue to diversify, respecting the personality and potential of each and every employee so that they can make the most of their abilities is an essential part of creating new value.

Takuma has a culture which encourages employees to embrace challenges in new fields and to work together to refine their skills, which allow us to contribute to society by resolving customers' and society's issues.





In 2020, we opened the

# New TAKUMA Building

Construction of the New TAKUMA Building (Training Center) at Takuma's Head Office was completed in October 2020.

The new facility, which consists of a Solution Lab that provides remote support for operation management of facilities such as municipal solid waste treatment plants and biomass power plants, which are flagship Takuma businesses, as well as a Training Center designed to enhance employee education and skill development, makes extensive use of wood building materials like Cross-Laminated Timber (CLT) to create a relaxing workplace environment in which occupants are surrounded by the warmth of wood.

In addition to a hybrid structure that combines elements of wood and steel construction, the building has high seismic performance due to the adoption of a seismic isolation structure, and it can be used as a regional disaster prevention site in the event of an earthquake or other natural disaster.



**Entrance hall** The first step takes you into a wood-themed space. Not only floors and walls, but also ceilings make active use of wood materials, creating a relaxing ambiance that surrounds occupants with the warmth of wood.



**Solution Lab** The Solution Lab offers customers safety and a sense of assurance by providing remote support for operation management of municipal solid waste treatment plants, biomass power plants, and other facilities. We increased the reliability of our remote monitoring system by moving it from the Head Office Building to the seismically isolated new building.



## New value creation initiatives start at the New TAKUMA Building

The New TAKUMA Building makes extensive use of wood materials not only in its structure, but also in its interior furnishings. Wherever people go in the building, they will find themselves in a space imbued with the warmth of wood.

The Solution Lab, which was moved from the Head Office Building following the completion of the New TAKUMA Building, provides 24-hour remote support for operation management of municipal solid waste treatment plants, biomass power plants, and other customer facilities. We increased the reliability of our remote monitoring system by moving it to this seismically isolated structure. Additionally, we have created space designed to spur free and imaginative thinking in the Solution Lab, and we are working to enhance our services and improve quality by actively utilizing that space.

Training rooms feature a creative design that allows them to be subdivided into separate spaces or opened up to create larger, integrated spaces so that they can be used not only for large-scale training, but also meetings and other functions.



The lobby makes extensive use of wood materials.



Spaces are designed to encourage free, imaginative thinking.

In addition to conference rooms and training rooms that accommodate staff from Takuma as well as multiple Group companies and to promote energetic discussions and free, imaginative thought by both employees and outside visitors, the New TAKUMA Building incorporates a space designed to trigger ideas through spontaneous conversation into each floor's foyer. Conference rooms and training rooms, which are also used by Group companies, accommodate a diverse range of workstyles with videoconferencing and other equipment.

Additionally, adoption of a seismically isolated structure gives the facility a high level of earthquake resistance, and the building provides disaster prevention functionality that will allow it to help coordinate responses to earthquakes and other natural disasters.

The recently completed New TAKUMA Building is already creating new connections between Takuma, its customers, and regional society.



Training sessions are held in training rooms and a seminar room. Training rooms can be configured in a variety of ways depending on the amount of space required.



Along with open-feeling conference rooms that offer panoramic views of the pond next to the building, each floor's foyer prompts free, unconstrained discussion.



## The building's hybrid structure, which combines elements of wood and steel construction, is designed to coexist harmoniously with the environment

The starting point for the concept underlying the new building was the idea of a "building that coexists harmoniously with the environment by giving shape to Takuma's Company Motto of 'Value Technology, Value People, Value the Earth'".

In formulating the building's basic plan, personnel studied how the building could make active use of wood materials, which are intimately connected to the field of renewable energy, a core business for Takuma, particularly with regard to biomass power plants, while drawing on proposals from the construction company. The result was a hybrid structure that combines elements of wood and steel construction while incorporating seismic isolation, giving it a beautiful appearance as well as being earthquake resistant.

In addition to providing a high level of satisfaction to users, the building has earned praise for its architectural features, including by being selected during the construction process for inclusion in the Ministry of Land,



Wood-rich exterior appearance

Infrastructure, Transport and Tourism's FY2018 Sustainable Building Leading Program (Leading Wood Structures) as a next-generation wood structure and by receiving the "Prize for Timber Utilization at the Award for Innovative Timber Utilization 24th" following its completion.



### New TAKUMA Building (Training Center)

Completed: October 2020  
 Size: Six stories above ground  
 Total floor space: 3,334m<sup>2</sup>  
 Structure: Wood + steel construction with a seismically isolated foundation  
 Many of the building's wooden elements were manufactured by MEIKEN LAMWOOD Corp.  
 Design and construction: Takenaka Corporation

### Message from the New TAKUMA Building (Training Center) Project Team Secretariat

#### We are making improvements on a daily basis to ensure the new building provides a pleasant experience.

As the department responsible for orchestrating a smooth construction process and managing the facility after its completion, the General Affairs Department, to which I belong, helps operate the building through small, cumulative improvements, for example in how the facility's air conditioning systems are operated and in the layout of its furnishings, in response to daily feedback from building users. I am pleased that the building, which serves as a symbol of Takuma's businesses, has been generating results as an effective promotional tool since its completion, as evidenced by growing coverage of our company by television stations, magazines, and other media. In addition to providing robust

support for customer needs through remote monitoring of customers' plants, the New TAKUMA Building is playing a key role in Takuma's employees' education and skill development. Going forward, we will continue our current approach to managing the facility while pursuing operational improvements in a way that satisfies all stakeholders.

Naoki Tsujita  
 General Affairs Department, Corporate Services Division  
 New TAKUMA Building (Training Center)  
 Project Team Secretariat

