

# Serving the next 50 years of customers Creating the next 100 years of society

Takuma started out as a boiler manufacturing company that was founded in 1938 based on a philosophy of contributing to society through its technology.

We have continued to offer support day in and day out to customers and communities by manufacturing essential facilities that will serve them for more than 50 years, including low-environmental-impact waste incineration facilities, biomass power plants, and clean centers that play a key role in their areas.

What will be required of us in the future? We must create a sustainable society with a vision that stretches out to 100 years in the future, for example by going beyond conventional approaches to address climate change and realize a cyclical economy, by leveraging technologies and services to manufacture the essential facilities that will serve the next 50 years of customers as a leading company in the area of the environment and energy.

Serving the next 50 years of customers.  
Creating the next 100 years of society.

That summarizes Takuma's corporate value, and our mission. We will continue to play an essential role for customers and society as a whole by creating essential products and services for the future while embracing a philosophy that has remained unchanged since the days of our founding.



## Founding Spirit (from 1938)

### Serve society through boiler manufacturing

This philosophy served as the Company Motto of Takuma, then Takuma Boiler Manufacturing Co., Ltd., which was founded by Tsunekichi Takuma, one of the 10 great inventors of Japan during the Meiji and Taisho periods (1868-1926). The central tenet is to contribute to society through corporate activities such as the manufacture, sale, and service of boilers.

## Company Motto (from 1992)

### Value Technology, Value People, Value the Earth

The previous Company Motto, "Serve society through boiler manufacturing", was replaced with the above in 1992, reflecting recognition that the company was operating a multifaceted business as a manufacturer of not only boilers, but also environmental sanitation systems like waste treatment facilities and water treatment equipment. It captures Takuma's stance of leveraging the personality and ability of each employee to refine technologies that consistently lead the industry and then using them to safeguard the Earth's environment.

## Management Principles

Takuma will strive for social contribution, corporate value enhancement, long-term corporate development and the satisfaction of all stakeholders by providing goods and services that are needed and recognized as valuable in society.

The founding spirit of Takuma was "Serve society through boiler manufacturing", which in present-day language means "to contribute to customers and society as a whole through the goods and services we create". This spirit can also be applied to the concept of Corporate Social Responsibility (CSR) that in recent years has become a vital issue for corporate management. The management principles of Takuma and the Takuma Group companies are all based on said founding spirit.

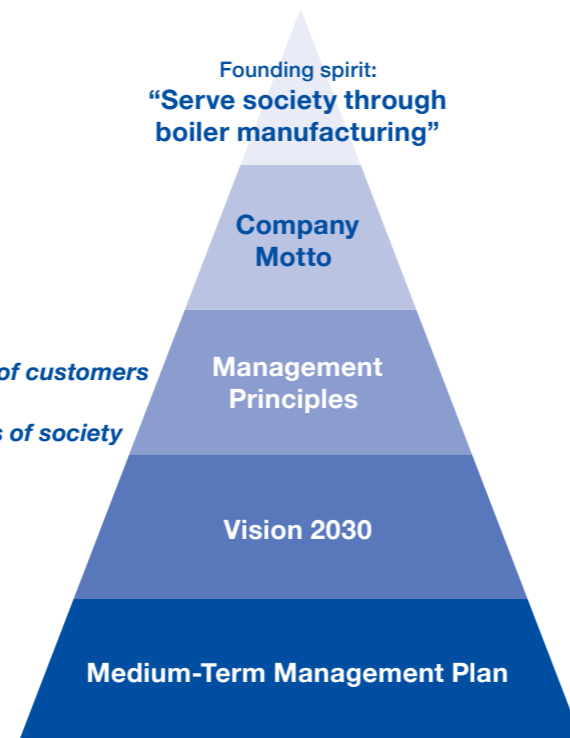
## Our Founder Tsunekichi Takuma



Takuma's roots stretch back to Tsunekichi Takuma's invention of the world's highest-performance boiler in 1912 and subsequent success at manufacturing it in Japan. The technical thinking and vision behind the development of the first boiler to be produced in Japan as created by Tsunekichi have been passed down as the DNA of today's Takuma.

## Takuma's Philosophy

Concept  
**Serving the next 50 years of customers**  
**Creating the next 100 years of society**



## Takuma Group Ethics Charter

Takuma and the Takuma Group companies believe that it is essential for the sound development of the group that all of the directors and employees remain aware of our social responsibilities and the circumstances surrounding us as well as act in response to social ethics complying with applicable related laws and ordinances. Bearing the above in mind, we have established and will promote this Ethics Charter as our code of conduct, aiming to realize our Management Principles.

1. We shall strive for a proactive social contribution while establishing a harmonious coexistence with the global environment as good corporate citizens.
2. We shall act in good faith in accordance with sound business custom, while complying with applicable laws and regulations and committing ourselves to fair, transparent and free competition, as well as conducting lawful business activities.
3. We shall never have any relationship with antisocial forces or such organizations, which may pose a threat to the social order and security of civil society.
4. We shall respect fundamental human rights and never practice discrimination.
5. We shall strive to provide high quality products and services, based on our advanced technologies, to attain high acclaim and confidence from our customers.
6. We shall strive to disclose corporate information to shareholders and investors through Investor Relations (IR) and other activities on a timely and equitable basis.
7. We shall strive to protect corporate properties as well as information, while never using either for improprieties or any unjustifiable purpose other than business operation.

## Related Information (Corporate Website)



Corporate Information



IR



Sustainability

## Editorial Policy

The CSR Report 2023 is intended to communicate the Takuma Group's consistent effort to implement environment, social, and governance (ESG) management to all stakeholders in an easy-to-understand manner by integrating financial information with non-financial information about topics such as the Group's ESG initiatives in a comprehensive manner. In particular, this edition of the report offers expanded sustainability-related information with a focus on human capital in an effort to provide an even deeper understanding of Takuma's initiatives to realize sustained growth. We will use this report as a communications tool to deepen dialog with stakeholders, further improve CSR activities, and increase our corporate value.

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Coverage	This report applies to Takuma Co., Ltd., and its affiliates in principle.
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## Message from Top Management

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

October 2023  
President and CEO,  
Takuma Co., Ltd.



### Progress towards implementing the Vision 2030 Long-term Vision and 13th Medium-Term Management Plan

The Takuma Group recently formulated Vision 2030, its long-term vision setting forth medium- and long-term management policies, and launched its 13th Medium-Term Management Plan (FY2021 to FY2023) in April 2021 as the first step towards realizing this vision. Under it, we will strengthen conventional businesses by reinforcing the Group's management foundation and at the same time strive to achieve sustained growth by accelerating its response to future environmental changes.

#### P23-24

During FY2022, the second year of the plan, orders received remained high, despite falling slightly below the initial target. Net sales rose 8.5 billion yen from the previous fiscal year thanks to steady progress on the construction of previously ordered plants. Operating profit rose 3.8 billion yen to 13.8 billion yen as a result of an increase in net sales and improved profitability, while ordinary profit rose 4.0 billion yen to 14.6 billion yen. Profit attributable to owners of parent rose 2.1 billion yen to 9.6 billion yen.

#### P25-26

The New Harima Factory began operating in January 2023. The new factory will inherit high-quality manufacturing policies to serve as a manufacturing facility characterized by improvements in productivity and quality, environmental performance and disaster resilience, sustainability, and people- and environmental friendliness as it responds to an every-diversifying range of customer needs, including demand for larger boilers and the ones that operate at higher temperatures and pressures. The new Harima Factory will accommodate a new era by inheriting the site's 80 years of history while combining new production technologies with tradition. Thanks to the cooperation of everyone involved and the creativity and diligence of each and every Takuma employee, the construction of the new factory overcame a variety of challenges, including coordinating the necessary permits with government agencies, planning and arranging the layout of production equipment, relocating equipment to the new factory while continuing production at the old facility, and contending with the COVID-19 pandemic, soaring building material costs, and a labor shortage in the construction industry. We believe that the valuable experiences gained in the course of building the new factory will drive further improvements in our future operations.

#### P17-20

### Towards sustained growth

Currently, we are facing a variety of social issues. Medium- and long-term trends posing global issues include the increasingly serious problems of climate change and rising energy demand accompanying population growth and economic growth in developing nations. Challenges in Japan include falling domestic demand due to the shrinking and aging of the population, labor shortages, financial pressure on both national and local governments, and aging of public infrastructure. Furthermore, impacts stemming from the COVID-19 pandemic and Russia's invasion of Ukraine have added to the uncertainty surrounding humankind's drive to realize a sustainable society. Against this backdrop, the question of how to achieve sustained growth into the future is a key challenge.

Tsunekichi Takuma, one of the 10 great inventors of the Meiji and Taisho periods, founded Takuma in 1938 with the philosophy of "Serve society through boiler manufacturing". Since that time the Takuma Group has inherited this 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.

#### P15-16

Takuma's Management Principles state, "Takuma will strive for social contribution, corporate value enhancement, long-term corporate development and the satisfaction of all stakeholders by providing goods and services that are needed and recognized as valuable in society". These 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.

Along with the technologies and expertise that the Takuma Group has accumulated through the repeated improvement of products and services in keeping with these values, 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.

## Implementing ESG management P27-30

The Group is implementing ESG management, which seeks to satisfy all stakeholders and realize sustained growth for the Group by strengthening initiatives that address ESG issues through its business activities.

### Environment

Vision 2030, which sets forth a long-term vision for the Group as it should exist in 2030, includes this statement: “Aim to maintain our role of being an indispensable presence in society as a leading company in the field of renewable energy utilization and environmental protection by realizing sustained growth alongside our customers and society through implementation of ESG management”. Reducing environmental impacts by increasing adoption of renewable energy will be an essential part of steps to combat climate change. The generation of power using biomass and unutilized waste products as fuel will make a particularly significant contribution to the development of a Sound Material-Cycle Society by facilitating not only the stable supply of power independent of climate impacts, but also the reuse and reduction of waste. By converting biomass and waste into energy with the biomass power plants and

municipal solid waste treatment plants we supply, we will help both reduce emissions of greenhouse gases like carbon dioxide and facilitate the long-term, stable supply of power.

### Social

Human resources who contribute to each and every of our departments and worksites will play an essential role in realizing Takuma’s sustained growth. To realize this goal, we formulated the Policy on Human Resource Development and the Policy on Takuma’s Internal Environment Improvement in June 2023. P63-66 By promoting diversity and utilizing a diverse workforce, we can respond to changes in the business environment in a flexible and timely manner. By fostering mutual recognition and respect of diversity, the organization can accept diverse human resources, leverage their abilities, and create an environment in which employees are assigned to the positions that best suit them. Creating workplaces where each employee takes ownership by becoming an engaged and interested party, where colleagues collaborate closely and honestly share common purpose, and where everyone puts into action decisions made through thorough discussion will serve to strengthen growth and competitive capability.

### Governance

At a time when the business environment in which the Group operates is forecast to experience continued uncertainty about the future, momentary lapses have the potential to turn into crises that shake management to its core. When facing such crises, it is appropriate to reflect on Takuma’s Management Principles. Fostering a perspective that asks whether we are valuing the Management Principles in our jobs and whether we are using them to shape decision-making will lead the organization in the correct direction and help increase its performance. By ensuring that the Management Principles permeate our organization, we can both resolve social issues and increase our profitability so as to realize sustained growth for society and the company alike.

Takuma has been a signatory to the United Nations Global Compact\*<sup>1</sup> 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 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) put forth by the United Nations\*<sup>2</sup> and the COP21 Paris Agreement align extremely well with the Group’s businesses. P34-40

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 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. 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.

\*<sup>1</sup> 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.

\*<sup>2</sup> Sustainable Development Goals: 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.



# At a Glance

TAKUMA's strengths in numbers

## Consolidated net sales

JPY **142,651** million

(Fiscal year ended March 2023)

Consolidated employees

**4,247**

(as of March 31, 2023)

Established

**1938**

## Business composition

Our primary business is the design, construction, and provision of after-sales service for municipal waste treatment plants, energy plants, and similar facilities around the principal themes of the environment and energy.

Package Boilers Business **12%** P39

Overseas Environment and Energy Business **1%** P38

Domestic Environment and Energy Business **81%** P34

Water Treatment Plants/Other **8%**

Energy Plants **24%**

Equipment and Systems Business **6%** P40

Municipal Solid Waste Treatment Plants (engineering, procurement, and construction) **20%**

Municipal Solid Waste Treatment Plants (after-sales service) **29%**

Consolidated net sales for the fiscal year ended March 2023

JPY **142.6** billion

Our achievements (to date)

## No.1 share in Japan

Municipal solid waste treatment plants **370+** facilities (in Japan)

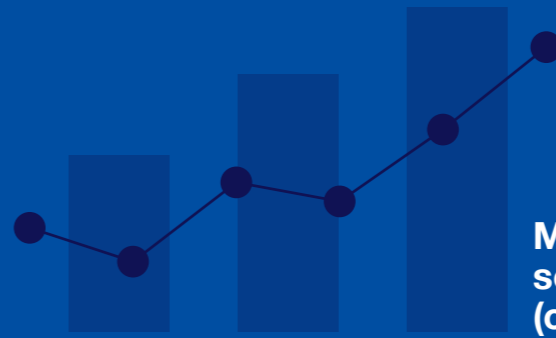
Upflow moving-bed sand filtration systems **2,800+** units

## Worldwide

Biomass boilers **630+** units

Industrial waste treatment plants **120+** facilities

Boilers (including biomass) **3,200+** units



Market share for municipal solid waste treatment plants (cumulative to date)

**No.1**  
in Japan in terms of both scale and quantity

By Takuma products

about **4** million tons

Reduced

Contribution to reductions in CO<sub>2</sub> emissions (FY2022)

P53

By number of facilities

**12.0%**

By facility size

**19.0%**



# Takuma's Technologies

From waste treatment to energy creation



## Passing on the technologies that underpin development to the future

The technologies that have been passed down at Takuma can be traced back to founder Tsunekichi Takuma's invention of the first water tube-type boiler to be manufactured in Japan.

Since that time, our technologies have continued to contribute to the development of society in every era by underpinning industry in the spirit of "Serve society through boiler manufacturing".

The plants we supply are responsible for operating continuously over multiple decades. We will continue to fulfill our social mission by passing on technologies that transcend any single era.



Treating  
waste



Creating  
heat and electricity



Supplying  
power to communities



Recycling  
contaminated water

# Takuma's People

## Transforming human potential into the ability to embrace challenges and create solutions

Reflecting our belief in human potential, we at Takuma are working to resolve societal issues by functioning as a single, unified team that transcends departmental and occupational barriers.

How can we realize a sustainable society?

How effectively can we contribute to people's lives?

No matter how far IT and AI progress, the source of value creation will always be people.

We will continue to pursue new value through synergies with individual employees' diverse personalities and skills.

Number of female employees on the main career track and in management positions

(As of March 31, 2023)

**36**

Percentage of male employees taking advantage of parenting leave

(FY2022)

**32.3%**

Customer satisfaction

(FY2022)

**88.5**

(out of 100) points

**TAKUMA**

# Takuma's History

It all began when one man embraced a challenge

A timeless commitment to “Serve society through boiler manufacturing”



Company emblem at the time of Takuma's founding

Over the 85 years since Takuma's founding in 1938, we have contributed to society through the manufacture of boilers.

Founder Tsunekichi Takuma's dedication to that mission was Takuma's point of departure.

The essence of our job will remain unchanged 50, and even 100, years in the future.

From person to person, from era to era...

Those of us living now will pass on the baton of Takuma's philosophy.

The company emblem established 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, which focuses on giving top priority to the continuous improvement of quality and on contributing to customers and society.

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.

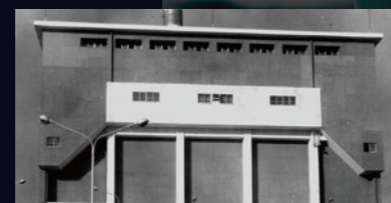


Tsunekichi Takuma

1958

## Entry into the environmental and sanitation markets

Takuma established itself as a manufacturer not only of boilers, but also of 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, 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)

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”, inheriting the spirit of the former motto of “Serve society through boiler manufacturing”. Capping the track record and trust it had established to date, the company delivered one of the largest waste incineration plants 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)

2023

## Looking towards 2030

Contemporary society faces complex issues as part of a dizzying process of change, including climate change and evolving population demographics. In FY2021, Takuma formulated Vision 2030, a long-term vision that calls on the company to practice ESG management, and began working to implement its three-year 13th Medium-Term Management Plan. We will continue to work to increase our corporate value while realizing a sustainable society.



New Harima Factory (2023)

A wide-angle photograph of the Takuma Harima Factory building. The building is modern, with a prominent glass-enclosed walkway connecting two sections. The left side has a corrugated metal facade, and the right side is mostly glass. The sky is blue with scattered white clouds. The word 'TAKUMA' is visible in large white letters across the center of the image.

**TAKUMA**

In January 2023, the rebuilding of the factory and administrative buildings at Takuma's Harima Factory in the city of Takasago, Hyogo Prefecture, was finished, completing the facility's rebirth as a new factory. The new administrative building (Harima Office) includes the Supply Lab, a new after-sales service facility.

Over the 80 years since it first began operating in 1942, the Harima Factory has inherited extensive experience and advanced manufacturing technologies as a boiler production center. By incorporating the latest large-scale equipment and promoting automation of manufacturing work, the

new factory has put in place production structures that can accommodate an ever-diversifying array of customer needs, including larger boilers and the ones that operates at higher temperatures and pressures. Moreover, we are working to streamline energy use and realize resilience in the face of potential natural disasters across the entire facility.

The Harima Factory will continue to strive to meet the needs of customers and society as a sustainable, people- and environment-friendly production center while embracing the challenge of delivering the technological innovation demanded by our era.

HARIMA

Feature 01 | Start of Operations at the New Harima Factory

### Overview of the New Harima Factory plan

- **Facility size (upon completion in January 2024)**  
Structure: Steel frame / Number of buildings: 9  
Number of stories: 2 / Building footprint: 23,994 m<sup>2</sup>  
Total floor space: 28,507 m<sup>2</sup>
- **Overall schedule**  
FY2019: Basic plan  
June 2021: Start of construction of new factory  
January 2023: Start of operation at new factory and Supply Lab  
January 2024: Planned completion of work in all areas

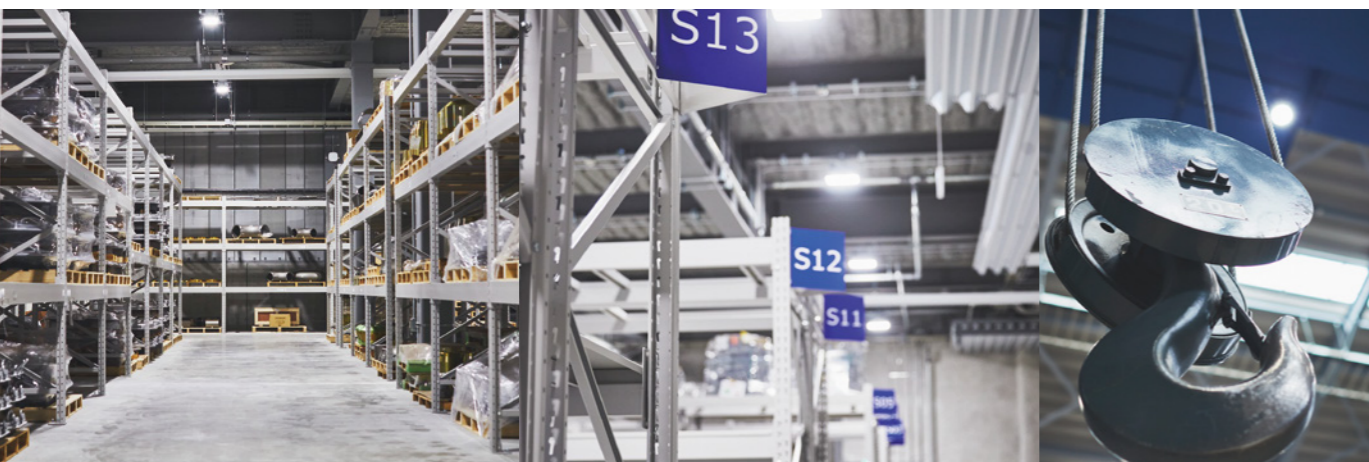
## New factory building and Harima Office start operating

### Accommodating growing renewable energy and energy-from-waste demand

The new factory building streamlines work processes and saves labor by adopting an optimal equipment layout in line with production processes and sharing information with production management tools in order to boost productivity.

It also uses digital tools to record and analyze work performed by high-value-added technicians and utilizes that data to improve the technical capabilities of junior workers in order to ensure craftsmen's skills are passed down so that Takuma can continue to realize high-quality manufacturing.

To fulfill its mission of serving as a people- and environment-friendly facility, the Harima Office incorporates a courtyard where workers can relax and refresh themselves, and its emergency power supply, stockpile of emergency supplies, flood countermeasures, and improved seismic resistance ensure it can function as a shelter in times of disaster. In addition to improved environmental performance thanks to use of natural sunlight, improved insulation, and utilization of rainwater, the facility uses 100% renewable energy to help reduce greenhouse gas emissions.



## Supply Lab after-sales service facility

Many of the plants delivered by Takuma serve as infrastructure or as the foundation of companies' business activities, and they are required to deliver stable performance over many years. We launched the Supply Lab as a way to develop after-sales service facility for maintaining sufficient stock of spare parts that are essential to stable operation and for supplying them promptly even in the event of an abrupt halt due to problems caused by deterioration over time or failure of a facility so that customers can operate plants with peace of mind over an extended period of time.

The Supply Lab uses information and communication technology (ICT) to consolidate information about spare parts stored at plants nationwide. In this way, we strive to manage an appropriate inventory of special-purpose parts with long lead times and parts that can be shared among plants. Furthermore, the Supply Lab works with Takuma's Solution Lab, a facility at Takuma's Head Office which provides remote monitoring and operational support for plants, as part of an extensive after-sales service regime that's informed by both operational and maintenance perspectives.

### MESSAGE

The design of the new factory is based on an overall facility plan conceived to realize a sustainable, people- and environment-friendly production center while taking into account disaster readiness imperatives. It provides a work environment that takes into consideration greenery, light, indoor temperature, and ventilation while incorporating measures designed to prevent power loss and other damage in the event of flooding along with functionality that allows it to serve as a shelter in the event of a disaster. Despite the impact of the COVID-19 pandemic along with building material and labor shortages during its design and construction, the new factory was able to start operations in January 2023 thanks to the hard work of everyone involved with the project. Today, We are moving ahead with Phase 2 of the construction project, which is scheduled to be complete in January 2024. We welcome your expectations with regard to the new facility.

**Shinya Ikoma**  
New Harima Factory Project Team  
Deputy General Manager,  
Civil & Architectural Engineering Department,  
Takuma Co., Ltd.



We are deeply grateful for having been blessed with the ability to complete construction work under favorable conditions thanks to the understanding and cooperation of nearby residents. We were able to get the facility up and running after its completion without major incident. In the future, we look forward to streamlining production using equipment that incorporates new functionality.

Furthermore, we will give top priority to safety and quality going forward as we look to enhance the facility by incorporating new technologies while faithfully carrying on the skills of predecessors who earned customers' trust; continuing to realize work improvements; and putting in place an environment that promotes the activities of a diverse workforce at the factory.

**Toshio Hamada**  
General Manager,  
Harima Factory,  
Takuma Co., Ltd.

