

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.

Company Motto

Value Technology,
Value People,
Value the Earth



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 society by supplying goods and services that we provide”. 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 the said founding spirit.

*Serve society through boiler manufacturing: It was the Company Motto of Takuma, then Takuma Boiler Manufacturing Co., Ltd., founded by Tsunekichi Takuma, one of the ten great inventors of Japan during the Meiji and Taisho periods (1868-1926).

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 normal business operations.

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Editorial Policy

The CSR Report 2022 is intended to communicate the Takuma Group's efforts to realize sustained growth for itself and society to all stakeholders in an easy-to-understand manner by integrating financial information with non-financial information about topics such as Environment, Social, and Governance (ESG) initiatives in a comprehensive manner. This edition of the Report has been designed to provide an even better understanding by offering enhanced coverage of newly formulated corporate concepts and corporate governance information. 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. Time of issue: October 2022

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 2022

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



■ Management Principles

Tsunekichi Takuma, one of the 10 greatest 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 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. [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”. Those 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.

■ 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. 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 that vision. In addition to working to strengthen our existing businesses by reinforcing such aspects of our management foundation as human resources and engineering capabilities, we are striving to realize sustained growth by accelerating our response to future environmental changes. [P27-30](#)

Although we missed our initial target of ordinary profit of JPY 10.6 billion by a small amount during FY2021, the first year of the plan, we reliably turned continued robust demand for facilities like municipal

solid waste treatment plants and biomass power plants into orders and exceeded the initial target for orders received by setting an all-time record for that metric. We will continue to work to implement the plan.

■ Implementing Environment, Social, and Governance (ESG) management

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 our business activities. [P23-26](#)

—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 not only facilitating a stable supply of power independent of climate impacts, but also reusing and reducing 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. By promoting diversity and utilizing a diverse workforce, we can respond to changes in the business environment in a flexible and timely manner. Furthermore, the deepening of the superficial promises diverse perspectives that will introduce new ways of thinking and ideas to our organization. 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. Under such conditions, Takuma's Management Principles provide a touchstone for reflection when grappling with difficult decisions. Fostering a perspective that asks whether we are valuing the Management Principles in our jobs and whether we are using them to inform decision-making will lead us in a direction that increases the organization's

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.

■ Expectations for the new Harima Factory in 2022

The new Harima Factory will begin operating in December 2022. The new plant will inherit high-quality manufacturing policies to serve as a manufacturing facility characterized by higher productivity and quality as well as people- and environmental friendliness as it responds to an every-diversifying range of customer needs, including demand for larger boilers that operate at higher temperatures and pressures. We expect the new Harima Factory to accommodate a new era by inheriting the site's 80 years of history while combining new production technologies with tradition.

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 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 **P14** 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 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.

*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)

134,092

(Fiscal year ended March 2022)

● Number of employees (consolidated)

4,145

(As of March 31, 2022)

● Our achievements (to date)

Municipal solid waste treatment 360+ facilities
(Japan) **No.1 share in Japan**

Biomass boilers 630+ units **Worldwide**

Industrial waste treatment 120+ facilities **Worldwide**

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

Upflow moving-bed sand filtration systems 2,700+ units **No.1 share in Japan**

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.

Industrial waste treatment plants

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

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.

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.

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.

● Contribution to reducing CO₂ emissions P47

Reduction of about **4 million tons** during FY2021 through Takuma products

● 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:	12.0%
	By facility capacity:	19.2%

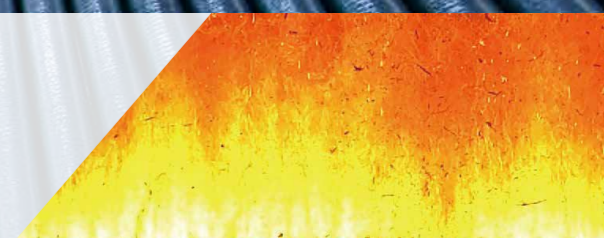
TAKUMA's Technologies

From waste treatment to energy creation

Treating
waste



Creating
heat and electricity



Supplying
power to communities



Recycling
contaminated water



Takuma's technologies that support infrastructure

Since inventing the first domestically produced boiler, Takuma has continued to contribute to the development of society by supporting social infrastructure. Precisely because our businesses are related to the infrastructure upon which life and industry rest, the pursuit of technology is our core social mission. Through our technological capabilities, we will contribute to the resolution of climate change and other social challenges by supplying plants that leverage proprietary combustion technology, waste treatment technology, water treatment technology, and other technologies developed since Takuma's founding.

TAKUMA's Contributions

Serving as a leading company in the environmental field



Proven track record and accumulated trust: Leveraging Takuma's pride to realize a promising future

The track record and trust we have accumulated over more than 80 years 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. Rather than resting on those accomplishments, we will continue to embrace the challenge of realizing the sustainable development of society in these ever-changing times through the collective effort and hard work of our employees.

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.



TAKUMA's History

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

1938

Founding of Takuma Boiler Manufacturing Co., Ltd.

Founder Tsunekichi Takuma invented the first water tube 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.

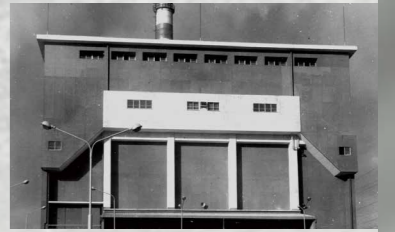


Tsunekichi Takuma

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, 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.

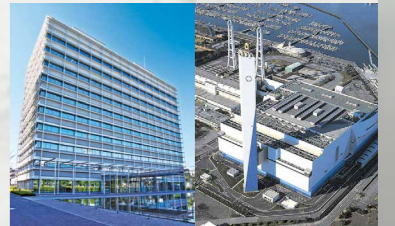


Name change (1972) Mass production of the Vacotin Heater, the world's first vacuum-type hot water heater (1975)

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)

2022

Realizing a sustainable future

A contemporary society continues to change at a dizzying rate, we face complex problems such as climate change and changes in demographic structure. In FY2021, Takuma formulated Vision 2030, a long-term vision that calls on the company to practice ESG management, and the 13th Medium-Term Management Plan, and the company has now come together to work towards the goals set forth in those two documents. Going forward, we will continue to strive to increase our corporate value and realize a sustainable society.



Artist's conception of the new Harima Factory (tentative completion: December 2022)

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

Takuma was founded on the basis of the philosophy of "Serve society through boiler manufacturing". This philosophy reflects the thinking of founder Tsunekichi Takuma, and it has been passed down over the years to today's employees.

Company emblem at the time of Takuma's founding



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.





TAKUMA's WORK

Diversity in the service of innovation

Realizing a synergy of individual employees' diverse personalities and abilities is essential to Takuma's pursuit of ESG management.

We will draw on a culture that prizes friendly competition and hard work to make the most of the potential of our people so that we can pool employees' abilities to create new value for society and customers.