

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.

## Marshaling the Takuma Group's strengths to maximize profits and enhance its corporate value

The Takuma Group, which has adopted the goals of “aiming 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” and of achieving an ordinary profit of JPY 10 billion in FY2020, has embraced a vision of building structures capable of consistently earning an ordinary profit of at least JPY 10 billion even as the business environment undergoes a process of significant change, and we are pursuing a variety of business activities to achieve that vision. We believe that we will be able to do so by marshaling the strengths not only of Takuma on a standalone basis, but of the entire Group, and our management is guided by the basic policy of maximizing profits and enhancing corporate value on a consolidated basis. To that end, we are diligently implementing the 12th Medium-Term Management Plan (FY2018 to FY2020), which takes into account changes that are anticipated to occur in the business environment in the future and which adopts as its core theme the need to enhance our corporate capabilities to facilitate the

achievement of our vision and consistent growth afterwards.

## Adapting to changes in the business environment and securing a consistent position in the markets we serve

The Takuma Group's core businesses are the construction of waste treatment plants, energy plants, water treatment plants, and other similar facilities (through its EPC business\*) and the provision of after-sales services for them, including maintenance, operational management, and operation.

In the Group's principal business domain, expectations with regard to renewable energy and its potential to help realize a low-carbon and post-carbon society are rising as the effects of climate change increasingly manifest themselves. Additionally, work is being planned to update superannuated public infrastructure and to extend its service life. At the same time, the business environment is expected to undergo major changes over the medium and long term, including shifts in demand in response to evolving national policies and the structure of society, for

example due to Japan's low birthrate and the shrinking and aging of its population; increased reliance on comprehensive contracts as part of a trend to outsource government services; and increasing sophistication and diversity in customer needs.

In such a business environment, the plants provided by the Group through its EPC business have garnered customer praise and earned the Group a consistent position in the markets it serves. Continuing this trend, customers will begin operating sewage sludge-fueled power plants capable of creating energy while reducing greenhouse gas emissions this year.

As facilities that play an essential role in maintaining people's lives and our customers' business activities, the plants we build are called upon to operate for 20 or 30 years after delivery. In our after-sales service business, we formulate long-term repair plans based on the extensive expertise the Group has accumulated over time so that customers can use those plants longer and more effectively, and we help them realize stable operation over the long term by carrying out optimally planned and timed maintenance based on detailed site inspections. We recently launched our first 20-year long-term operations business at an energy plant, augmenting similar services that we provide for seven waste treatment plants. Our next priority is to build implementation and management structures for a long-term operations business for water

treatment plants and to carve out a path for expanding those businesses.

## Pursuing sustained growth for society and our company based on our founding philosophy of “Serve society through boiler manufacturing”

The 12<sup>th</sup> Medium-Term Management Plan represents the final stage of our current medium- and long-term vision (FY2012 to FY2020), which means that FY2020 is a year during which we will formulate the next long-term vision. The previous medium- and long-term vision sought to improve profitability through the selection and concentration of resources, while the current medium- and long-term vision seeks to reinforce our business foundation for stability and profitability and to achieve a steady expansion in terms of both quantity and quality in order to lead to a strengthening of corporate capability to facilitate steady growth based on our development of structures capable of consistently securing an ordinary profit of at least JPY 10 billion. In formulating the next long-term vision, we will be considering how the Takuma Group can best forge ahead into the future.

At the same time, there is broad concern that the COVID-19 pandemic will impact social and economic activity in an increasingly significant manner for an extended period of time, and there is a growing sense of uncertainty with regard to the future. As we face unprecedented difficulty in forecasting what is to come, it will be critical to strengthen our ability to adapt to change and recover from crisis.

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." This philosophy can also be found in our founding spirit of "Serve society through boiler manufacturing\*," and it means contributing to the world through the goods and services that we create. It also informs Corporate Social Responsibility (CSR), which we have currently embraced as a key issue in the company's management. We will continue to work toward the realization of sustained growth of society and our company in keeping with these principles. In addition to creating new value in the fields of renewable energy and environmental protection, we will strive to address the new challenges arising from the COVID-19 pandemic by working to increase the effectiveness of our compliance, risk management structures, and Business Continuity Plan (BCP).

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, labour, environment, and anti-corruption. We will work to develop our business while understanding and respecting these globally shared principles. In addition, concerning the implementation of the Sustainable Development Goals (SDGs) adopted by the United Nations and the provisions of the Paris Agreement adopted at COP21, the Group is 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.



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. 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 sustainable development of society.

July 2020

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

**Sustainable Development Goals (SDGs)**

Takuma is working to further progress toward the Sustainable Development Goals (SDGs) through its business activities.



**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 "contribution 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 the Takuma Group companies are all based on the said founding spirit.

**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 assets as well as information, while never using either for improprieties or any unjustifiable purpose other than normal business operations.

**Takuma Group Code of Conduct**

Harmony with society

1. Coexistence with the global environment
2. Coexistence with international society
3. Practice of social contribution activities

Practice of compliance with laws and ordinances as well as sound economic activities

4. Free competition and fair trade
5. Relationship with politics and public administration
6. Policies concerning business entertainment and gift-giving
7. Prohibition of involvement in anti-social activities
8. Appropriate export and import transactions

Respect for basic human rights

9. Prohibition of discriminatory actions
10. Respect for individuality, personality, and privacy of employees
11. Safe work environment

Practice of customer satisfaction

12. Safety of products and services as well as ensuring reliability
13. Policies concerning advertising

Making appropriate disclosure of information

14. Dissemination of corporate information
15. Ensuring reliability of financial reporting
16. Prohibition of insider trading

Protection of corporate assets and information

17. Management and proper use of corporate assets
18. Handling of confidential information
19. Intellectual property protection

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

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

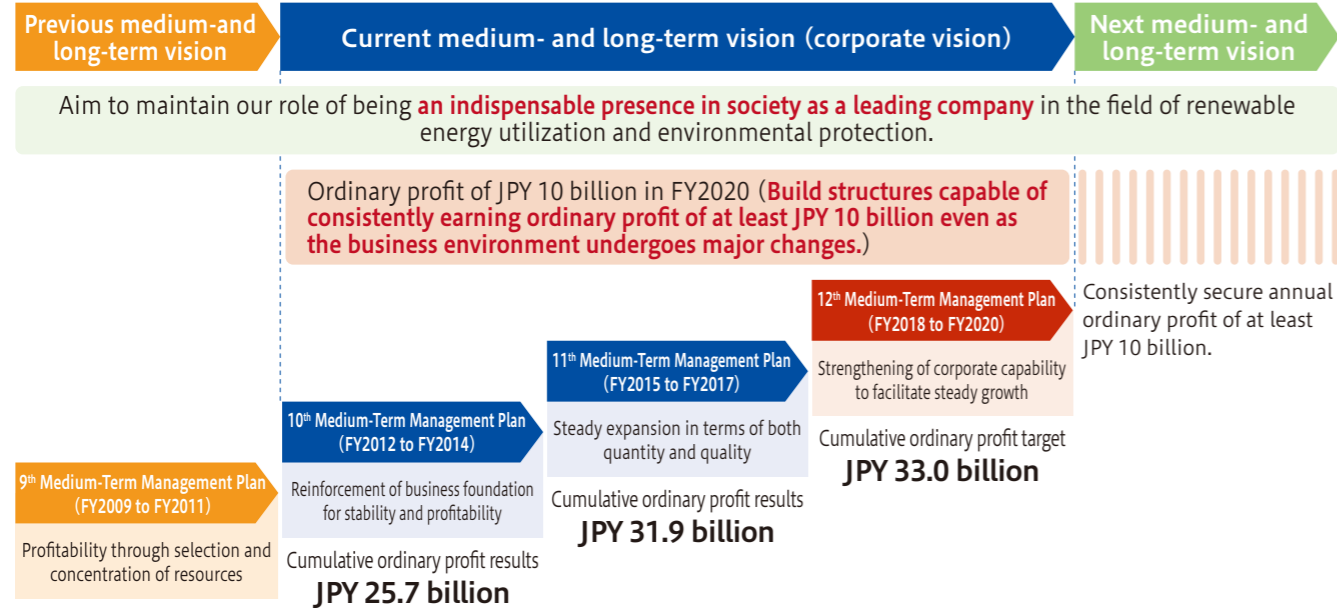
\* United Nations Global Compact:



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.

# 1. Positioning of the 12<sup>th</sup> Medium-Term Management Plan

- The plan represents the final stage of the current medium- and long-term vision (corporate vision), for which FY2020 is the target year.
- During its three years, we will achieve the vision and boost our corporate capabilities to prepare for steady growth in the future in response to future changes that are forecasted to occur in the business environment.



# 2. Policies of the 12<sup>th</sup> Medium-Term Management Plan

## 1 Strengthening and expanding our revenue foundation

Many of the Group's products are used for a long period of time, for example for 20 or 30 years from the time of delivery. Offering high-quality after-sales service in an ongoing manner so that customers can use those products more effectively and over a longer period of time contributes to both customers' and the Group's profits, helping to create a foundation for stable, long-term earnings.

We will work to further strengthen and expand our revenue foundation by continuing to provide high-quality solutions throughout the plant and product life cycle as we meet customers' diversifying needs in an individualized manner.

## 2 Achieving sustained growth

Over the 80 years since the Group's founding, we have built a reputation as an essential part of society by providing products that are recognized for their value utilizing our technologies which are the core part of our company.

We will create customer value by continually developing unique technologies, services, and business models based on Takuma's strengths such as the technologies, track record, experience, and expertise that we've accumulated through our business activities to date. In addition, we will work to secure sustained growth by securing and creating competitive advantages as we respond quickly to changes in the business environment, such as evolving customer needs and emerging social issues.

## 3 Increasing productivity, for example by reforming business processes

The nature of the Group's businesses is undergoing major evolution as the business environment changes, for example due to changes in social structure such as the shrinking and aging of

Japan's population and the emergence of more advanced and diverse customer needs as well as social issues.

We will strive to improve productivity, make effective use of human resources, and further increase the level of value we provide by fundamentally reviewing and rebuilding business processes that have become increasingly complex in order to accommodate these changes while focusing on businesses with higher added value (which will help us create and provide value).

## 4 Using human resources effectively

We will work to hire and train the diverse workforce that will be essential as we develop the Group's businesses going forward. At the same time, we will strive to create an environment that keeps individual employees engaged in their work and able to make full use of their skills and abilities (by cultivating a healthy workplace culture, reforming individual awareness, and facilitating fulfilling workstyles).

## 5 Continuing to pursue compliance management

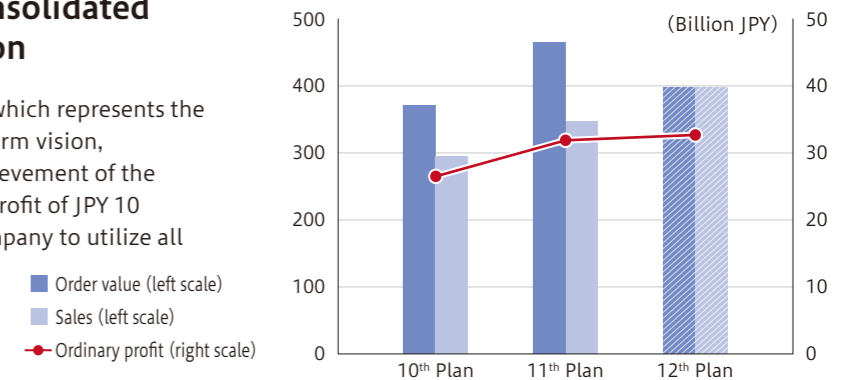
The Group considers compliance to be a key foundation of its corporate activities, and we've worked to spread awareness and foster adoption of good practices by including compliance as a policy in the last several Medium-Term Management Plans.

Awareness of the importance of compliance has steadily taken root among our employees thanks to ongoing awareness-raising and educational activities, and we will continue to pursue such initiatives to ensure that the trust we've built up in our quality and integrity remains unshakable. In addition, we will work to further spread and improve compliance awareness throughout the Group by effectively implementing and utilizing mechanisms such as our internal reporting system and CSR awareness survey.

# 3. Financial Target

## Target: 3-year cumulative consolidated ordinary profit of JPY 33 billion

The 12<sup>th</sup> Medium-Term Management Plan, which represents the final stage of our current medium- and long-term vision, establishes the above targets to guide our achievement of the vision's goal of consistently earning ordinary profit of JPY 10 billion while simultaneously directing the company to utilize all its resources to build a robust business and management foundation in response to future changes in the business environment.



	10 <sup>th</sup> Medium-Term Management Plan results	11 <sup>th</sup> Medium-Term Management Plan results				12 <sup>th</sup> Medium-Term Management Plan		
	2012 to 2014	2015	2016	2017	Total	2018	2019	FY2018 to FY2020
Order value	371.0	99.9	191.0	177.1	468.0	179.8	148.8	JPY 400 billion (approx.) (3-year cumulative total; reference value)
Sales	296.5	113.0	116.3	118.1	347.5	121.9	134.4	Target: JPY 33 billion (3-year cumulative total)
Ordinary profit	25.7	9.6	11.6	10.6	31.9	12.3	10.3	

# 4. Core Business Units and Emphasis of Future Activities

## Municipal Solid Waste Treatment Plant Business

### Business Environment

- As facilities age, there is ongoing robust demand for renewal and service life elongation.
- Volume is growing for DBO projects as well as O&M services for existing facilities.

### Emphasis of Future Activities

- Strengthen the profitability of our plant operation business.
- Further strengthen initiatives to prolong the service life of facilities.

## Boiler Plant Business (Japan)

### Business Environment

- FIT demand remains robust.
- The number of plants targeted for maintenance is increasing as facilities are completed and transferred to customers.
- There is growing demand for plant operational management and O&M.

### Emphasis of Future Activities

- Capture new orders for FIT biomass plants.
- Strengthen our maintenance structures.
- Scale our waste management expertise horizontally to other businesses.

## Waste Treatment Plant Business (Overseas)

### Business Environment

- There is a growing need for proper waste management and energy utilization against a backdrop of growing urbanization, increase of waste volume, and diversification of waste characteristics.

### Emphasis of Future Activities

- Build structures to facilitate collaboration with partner companies.
- Build schemes for entering new markets.

## Water Treatment Plant Business

### Business Environment

- There is growing demand for sludge incineration plants that conserve and create energy.
- There is increasing use of PPP/PFI arrangements in the sewer business.

### Emphasis of Future Activities

- Strengthen the competitiveness of our sludge-fueled power system.
- Scale our waste management expertise horizontally to other businesses.

## Boiler Plant Business (Overseas)

### Business Environment

- Demand for biomass power plants in Southeast Asia remains robust.
- Our flagship bagasse-fired boiler plants continue to experience intense competition.

### Emphasis of Future Activities

- Capture orders continually by creating competitive advantages.
- Strengthen the ability of our local subsidiary (SIAM TAKUMA) to carry out its business operations.

## Package Boiler Business

### Business Environment

- We are continuing to see a certain level of demand in Japan, particularly in terms of renewal demand.
- The need for energy-conserving boilers is increasing overseas, particularly in developing nations.

### Emphasis of Future Activities

- Maintain and expand our domestic business.
- Expand our overseas business.

\*DBO: Design, Build, Operate / O&M: Operation & Maintenance / PPP: Public Private Partnership / PFI: Private Finance Initiative  
FIT: Feed-in Tariff / Bagasse: Fiber remaining after sugarcane is crushed

## 5. Progress in Implementing the 12<sup>th</sup> Medium-Term Management Plan

In this section, members of Takuma's management team present progress in implementing the goals of the 12<sup>th</sup> Medium-Term Management Plan, which began in FY2018.

Increasing customer satisfaction by enhancing our technological capabilities and strengthening our corporate capabilities to accommodate change in the business environment

### Hideki Takeguchi

Director & Senior Managing Executive Officer  
Executive Manager, Engineering Group



Strengthening our corporate capabilities so that we can secure stable annual ordinary profit of at least JPY 10 billion regardless of how the business environment in which we operate changes in the future remains the central theme of our current Medium-Term Management Plan. Our Engineering Group is responsible for strengthening the technological capabilities that are central to achieving that goal, specifically our capabilities in areas such as planning, design, purchasing, construction, manufacturing, and research and development. The plants we deliver bring together these technological capabilities, and to provide plants that satisfy our customers, it is important that we improve upon them, along with the human abilities of those who are involved in associated processes.

We operate in the dual business fields of the environment and energy, and under the current Medium-Term Management Plan we have identified, and are working toward, the targets that need to be achieved by each department in order to enhance our technological capabilities and foster the development of professionals so that we can expand in those fields. This fiscal year is the final year of the current Medium-Term Management Plan,

which makes it a year in which we must lay the groundwork for the next Medium-Term Management Plan. I look forward to closing out the final fiscal year of the current plan by generating solid results and starting to develop the next plan.

With regard to the policy of "strengthening and expanding our revenue foundation" as set forth in the current Medium-Term Management Plan and our effort to strengthen our after-sales service business to achieve it, we are working to develop technologies for increasing the ease with which facilities can be maintained and managed as well as technologies for plant monitoring and operation, including advanced technologies such as ICT and AI. Furthermore, we will add a Supply Chain Lab to the Harima Factory, which we plan to renovate and update in 2022, to serve as an after-sales service facility that can maintain a reliable inventory of maintenance-critical parts and supply them rapidly.

In this way, Takuma will work actively to construct, maintain, manage, and operate plants in the environmental and energy fields and to help realize the Sustainable Development Goals that society is pursuing by protecting the environment, realizing a recycling-based society, and reducing CO<sub>2</sub> emissions.

### TOPICS Building a new factory and after-sales service facility

#### • Takuma had decided to update the Harima Factory and build a Supply Chain Lab.

We are planning to further enhance productivity and quality at the Harima Factory while carrying on the high-quality manufacturing policies developed over the last 77 years and to transform the facility into a sustainable factory that is kind to both workers and the surrounding environment.

As part of the development and enhancement of our after-sales service structures, the new factory will include a Supply Chain Lab in an effort to build structures to maintain a reliable inventory of parts that are essential to the operation of customers' facilities and supply them rapidly.

This new facility will help us meet a broad range of customer needs while contributing to society in the areas of renewable energy and environmental protection.



Harima Factory

Plan overview	
Planned site	At the Harima Factory site
Total floor space	New factory: About 19,000 m <sup>2</sup> (including associated facilities) Supply Chain Lab: About 3,500 m <sup>2</sup>
Planned start of operations	December 2022

## Company Outline

Name: TAKUMA CO., LTD.  
Head office location: 2-2-33 Kinrakuji-cho, Amagasaki, Hyogo 660-0806, Japan  
TEL +81-6-6483-2609 FAX +81-6-6483-2751 (operator)

Representative Director: Hiroaki Nanjo, President and CEO  
Established: June 10, 1938  
Capital: JPY 13,367,457,968 (as of March 31, 2020)  
Main business areas: The design, construction and superintendence of a wide variety of boilers, plant machinery, pollution prevention plants, environmental equipment plants, and heating and cooling equipment and feed-water / drainage sanitation equipment and facilities  
The design, construction and superintendence of civil, architecture and other works

Number of employees (non-consolidated): 875 (as of March 31, 2020)  
Number of employees (consolidated): 3,816 (as of March 31, 2020)

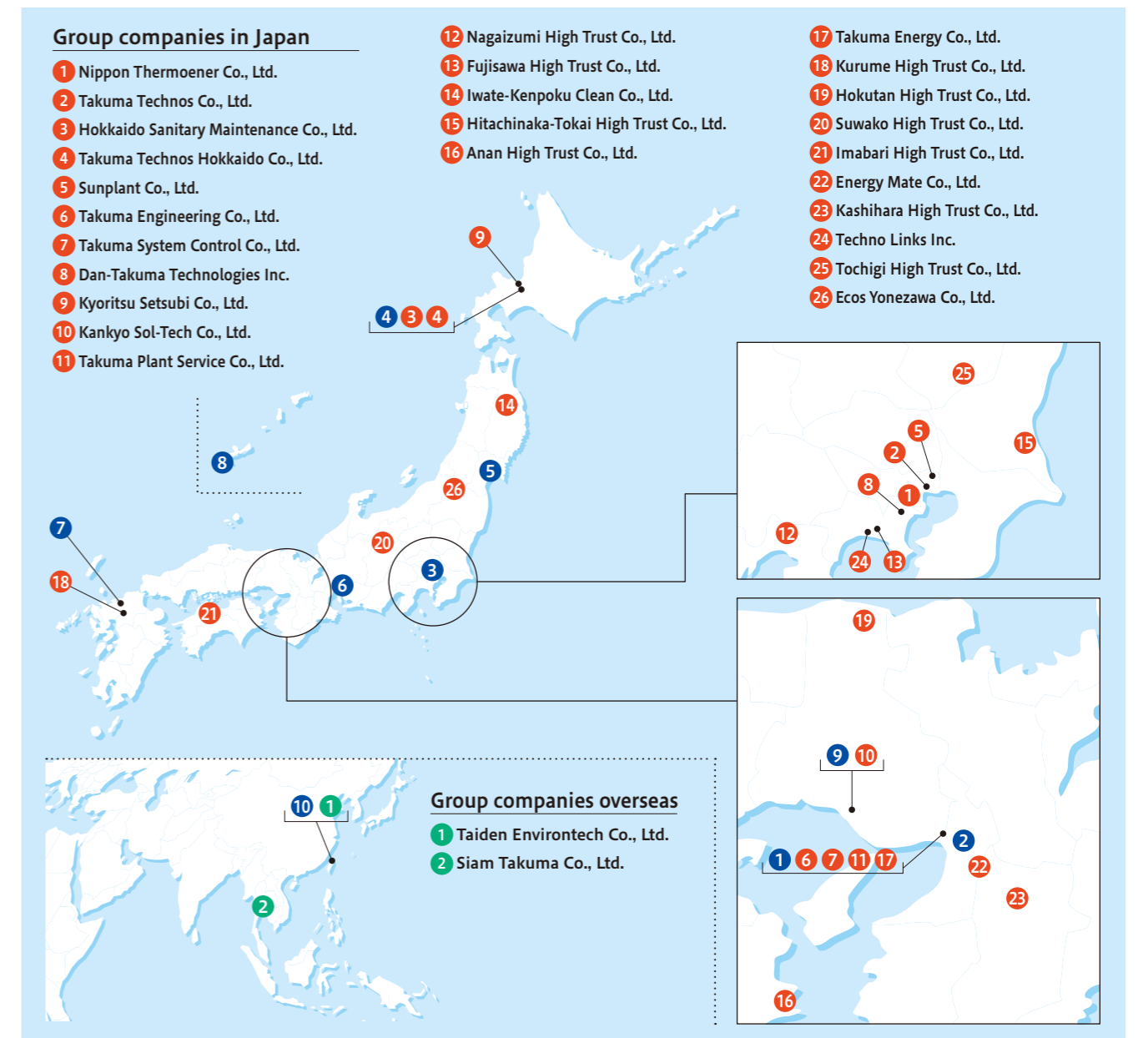
### Takuma's business offices

- 1 Head Office (Amagasaki, Hyogo)
- 2 Osaka Office (Osaka)
- 3 Tokyo Branch (Minato-ku, Tokyo)
- 4 Hokkaido Branch (Sapporo, Hokkaido)
- 5 Tohoku Branch (Sendai, Miyagi)
- 6 Chubu Branch (Nagoya, Aichi)
- 7 Kyushu Branch (Fukuoka)
- 8 Okinawa Branch (Ginowan, Okinawa)
- 9 Harima Factory (Takasago, Hyogo)
- 10 Taipei Branch (Taipei, Taiwan)

### The Takuma Group Network

(As of June 25, 2020; see Takuma's website for details.)

● Takuma's business offices ● Group companies in Japan ● Group companies overseas



# Business Summary

## Environment and Energy Business

### 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.

- Waste incineration plants
- Pyrolysis gasification and melting plants
- Resource recycling and recovery plants
- Bulky waste crushing plants
- Bottom ash and fly ash melting plants
- Refuse derived solid fuel conversion plants
- Transition and intermediate processing plants
- Raw fuel (biogas) recovery plants
- Various types of pollution prevention equipment



Waste incineration plants



Bulky waste crushing plants

### Energy plants

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

- Biomass boilers
- Fossil fuel boilers
- Waste heat boilers
- Power plants



Biomass power generation boiler



Waste heat boiler

## Package Boiler Business

### General-purpose boilers

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

- Steam Boilers (EQOS, Super EQOS)
- Vacuum-type Water Heaters (Vacotin Heater)
- Heat Medium Oil Boilers (Thermoheater)
- Flue and Smoke Tube Boilers (RE Boiler)
- Package Water-tube Boilers



Super EQOS



Vacotin Heater



Thermoheater



RE Boiler

Note: These products are handled by Nippon Thermoener Co., Ltd., which is one of our group companies.

### Industrial waste treatment plants

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

- Industrial waste treatment plants



Industrial waste treatment plant



Plant that generates power from industrial waste and provides heat to a plantation

### Water treatment plants

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

- Sewage and wastewater treatment plants
- Various types of advanced sewage treatment plants
- Sludge treatment plants
- Sewage sludge-fueled power plants
- Landfill leachate treatment plants



Upflow moving-bed sand filtration system



Sewage sludge-fueled power plant

## Equipment and Systems Business

### 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.

- Building equipment
- Air-conditioning equipment
- Cleaning and drying devices
- Clean rooms
- Clean devices
- Chemical air filters



Clean oven



Clean booths



Chemical air filters

# Introduction to Group Company Businesses

(Related SDGs)



Established	September 15, 1941
Representative	Syusuke Suzuki, President
Employees	111 (as of March 31, 2020)

## Business Profile: Sunplant

Tokyo Steam Power Construction Co., Ltd., was established as a boiler installation company when Takuma Steam Power Construction Co., Ltd., spun off its Tokyo Office. We changed our name to Sunplant in July 1976, and we have developed into a more generally focused facilities company as society has changed over time.

In recent years, we have carried out numerous installations that are backed by our technological capabilities and reliability at sites ranging from commercial facilities such as nursing homes and hotels to research facilities and facilities at U.S. military bases.

Next year, we will mark the 80th anniversary of our founding, and all of our employees are committed to working together to create comfortable spaces in buildings through the design and installation of air-conditioning, water and wastewater, and hygienic equipment in keeping with our philosophy of “gratitude and service” so that all people can lead healthy lives.

## Business Activities

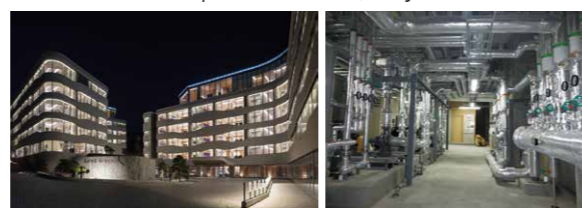
- Design and installation of air-conditioning, water and wastewater, and hygienic equipment



Research institution (Tsukuba, Ibaraki)



Hospital (Adachi-ku, Tokyo)



Resort hotel (Niseko, Abuta-gun, Hokkaido)



## Future business policy

Cleanliness is becoming even more necessary in the environments inside and outside buildings, and companies performing installation work are under pressure to do so in a way that helps eliminate pollutants and viruses. We have the technology necessary to do this kind of work as well as a proven track record (including equipment installation work at university hospitals and clean room construction), and we will continue to work to enhance our capabilities and provide safer, cleaner spaces in line with our philosophy of “continual refinement.”

(Related SDGs)



Established	August 21, 1969
Representative	Yoshiki Kita, President
Employees	77 (as of March 31, 2020)



Head Office (LIVMO Rising. Bldg., 2F, Shin-Yokohama)

## Business Profile: Dan-Takuma

Our products have been used broadly in a variety of industries and social systems over half a century, and we have contributed to society by creating advanced clean environments that are an essential part of the manufacturing processes for semiconductors and electronic devices, which have a major impact on our lives.

We have world-class technological capabilities and a market share for chemical air filters for use in clean rooms and semiconductor manufacturing equipment and for magnetic shield rooms for use with high-precision electron beam equipment.

## Business Activities

- Manufacture of products used in semiconductor manufacturing processes



Chemical air filter



Magnetic shield room



Polyimide curing oven



Wet station

## New business domains

We are working with national universities to commercialize products by pursuing applied research and development of precision cleaning using micro- and nano-bubbles for the electronic industry and for the use of nano-bubble ozone water in the hygiene and healthcare fields.

The pictured system is a washing system featuring next-generation environmental technology that uses ozone and pure water to wash semiconductors instead of the heated mixed cleaning liquid used by conventional semiconductor washing equipment.

By using cleaning liquid made from ozone (oxygen) and water while maintaining washing performance that is as good as or better than conventional systems, the product simplifies waste liquid treatment while enhancing safety.



Founder Tsunekichi Takuma established our philosophy of “Serve society through boiler manufacturing.”

The goal of becoming a technologically driven company based on that belief has been the basis of Takuma's operations throughout our 80-years history.

## 1912 ▶

Founder Tsunekichi Takuma, who invented the first water tube-type boiler entirely produced in Japan, is one of the 10 great inventors of the Meiji and Taisho periods. He formulated the philosophy of “Serve society through boiler manufacturing” in 1938. That philosophy, which calls on the company to contribute (render service to) society and the environment through the manufacture of boilers, remains the foundation of Takuma's Management Principles today.



Tsunekichi Takuma

- 1938** Takuma Boiler Manufacturing Co., Ltd., founded (1)
- 1942** Operations began at Harima Factory (2)
- 1949** Bagasse-fired boiler, the first product of its kind in the industry, exported  
Company listed on the Osaka and Tokyo stock exchanges
- 1950** Head Office moved to Osaka's Kita-ku District (Sonezaki) (3)



(1) Amagasaki Factory



(2) Harima Factory under construction



(3) Former head office (Sonezaki)

**1938**  
Takuma Boiler Manufacturing Co., Ltd., founded

## 1951 ▶

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 1972, the company changed its name to Takuma Co., Ltd., which remains its name to this day.

- 1953** Head Office moved to Osaka's Kita-ku District (Dojimahama) (4)
- 1958** Business expanded into the environmental facility sectors, including waste incineration and water treatment plants
- 1961** Operations began at Kyoto Factory\* (5)  
\*Currently operates as a factory of Nippon Thermoener Co., Ltd.
- 1963** Japan's first 24 hour operating waste incineration plant delivered (6)  
Sewerage treatment facility delivered
- 1970** Waste Management and Public Cleansing Act and Water Pollution Control Act enacted
- 1972** Company renamed Takuma Co., Ltd. (7)
- 1975** Mass production began on “Vacotin Heater” the world's first vacuum-type hot water heater (8)



(4) Former head office (Dojimahama)



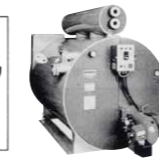
(5) Kyoto Factory at the time



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



(7) Company name change



(8) Vacotin Heater

## 1985 ▶

Takuma formulated its first Medium-Term Management Plan in order to adapt to the challenging economic environment. During this period, Takuma worked to develop technologies to accommodate a variety of customer needs, including demand for energy savings in industry, the growing volume and diversity of municipal solid waste, and the need for improvements in water quality by means of water treatment equipment.

- 1985** Takuma formulated the 1st Medium-Term Management Plan.
- 1986** The first overseas delivery of a waste treatment facility completed (U.S.A.)
- 1992** New Company Motto instituted: “Value Technology, Value People, Value the Earth”
- 1993** Basic Environment Act enacted
- 1995** Amagasaki Head Office Building completed (9)
- 1997** ISO9001 certification obtained
- 1998** Japan's largest waste incineration plant delivered (10) (Tokyo Shin-Koto Incineration Plant Capacity: 1,800 tons per day)
- 1999** ISO14001 certification obtained for Harima Factory
- 1999** Act on Special Measures against Dioxins enacted



(9) Amagasaki Head Office Building



(10) Shin-Koto Incineration Plant

## 2000 ▶

Takuma continues to provide technology for utilizing and rendering harmless a variety of waste products and biomass energy sources through its businesses in the renewable energy and environmental protection fields. We established local subsidiaries overseas and continue to bring our technologies to customers not only in Japan, but also worldwide, particularly in Asia.

- 2004** Takuma's first “Environmental Report” issued  
The “Takuma Group Code of Conduct” instituted
- 2005** Takuma Hanyokikai Co., Ltd., a subsidiary involved in the manufacture and sale of small boilers, and Ebara Boiler Co., Ltd., merged and renamed Nippon Thermoener Co., Ltd.
- 2005** The “Takuma Environmental Policy” instituted  
The “Personal Information Protection Policy” instituted
- 2006** The “Compliance Declaration” instituted  
The “Takuma Group Ethics Charter” instituted  
Takuma participated in the UN Global Compact
- 2007** Takuma's first “CSR Report” issued
- 2010** Energy from Waste plant delivered in Europe (U.K.)
- 2012** Feed-in tariff (FIT) program launched to facilitate fixed-cost purchases of renewable energy
- 2013** Operation of the Takuma Solar Power Plant began (11)
- 2019** Decision made to build a new factory and after-sales service facility (12)



(11) Takuma Solar Power Plant



(12) Conceptual drawing of our new factory

