TAKUMA

2020
Annual Report

Bringing new value to society with +TAKUMA

Founder Tsunekichi Takuma invented the first boiler to be produced entirely in Japan by bringing expertise and technology to a product that had to be imported until that time.

By passing down this philosophy over time and augmenting it with Takuma's technology, we continue to create products with new value today.

Going forward, we will continue to provide new value to customers through plants that take advantage of the proprietary technologies we have developed since our founding in areas such as combustion, waste treatment, and water treatment.

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

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

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.

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

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

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

Contents

Financial Highlights

Trend in Principal Management Indicators and Other Financial Data

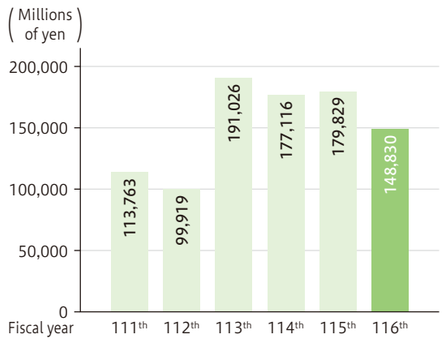
Fiscal year	111th (Millions of yen)	112th (Millions of yen)	113th (Millions of yen)	114th (Millions of yen)	115th (Millions of yen)	116th (Millions of yen)	116th (Thousands of U.S. dollars)
End of fiscal year	March 2015	March 2016	March 2017	March 2018	March 2019	March 2020	March 2020
Net sales	¥ 103,875	¥ 113,088	¥ 116,309	¥ 118,199	¥ 121,951	¥ 134,454	$ 1,235,453
Operating income	¥ 8,223	¥ 9,189	¥ 10,974	¥ 10,030	¥ 11,604	¥ 9,600	$ 88,215
Ordinary profit	¥ 9,116	¥ 9,646	¥ 11,606	¥ 10,670	¥ 12,334	¥ 10,301	$ 94,649
Profit attributable to owners of parent	¥ 8,030	¥ 7,817	¥ 8,551	¥ 7,847	¥ 8,854	¥ 7,445	$ 68,413
Comprehensive income	¥ 9,398	¥ 7,149	¥ 9,937	¥ 10,177	¥ 7,325	¥ 5,881	$ 54,041
Net assets	¥ 52,516	¥ 58,809	¥ 67,727	¥ 76,726	¥ 83,088	¥ 85,040	$ 781,403
Total assets	¥ 123,127	¥ 132,614	¥ 140,201	¥ 151,489	¥ 155,989	¥ 163,498	$ 1,502,329
Net assets per share (JPY or USD)	¥ 631.53	¥ 708.18	¥ 815.77	¥ 924.25	¥ 1,000.34	¥ 1,043.15	$ 9.59
Net income per share (JPY or USD)	¥ 97.12	¥ 94.55	¥ 103.43	¥ 94.93	¥ 107.10	¥ 90.36	$ 0.83
Diluted net income per share (JPY or USD)	-	-	-	-	-	-	-
Capital adequacy ratio (%)	42.4	44.1	48.1	50.4	53.0	51.8	51.8
Return on equity (%)	16.8	14.1	13.6	10.9	11.1	8.9	8.9
Price-to-earnings ratio	9.7	10.7	10.5	12.3	12.3	13.3	13.3
Cash flows from operating activities	¥ 21,727	¥ 6,728	¥ 9,590	¥ 5,141	¥ 10,817	¥ (11,733)	$ (107,806)
Cash flows from investing activities	¥ (160)	¥ (445)	¥ 143	¥ (328)	¥ (1,382)	¥ (202)	$ (1,858)
Cash flows from financing activities	¥ (3,707)	¥ (2,900)	¥ (1,787)	¥ (1,670)	¥ (9,120)	¥ (4,350)	$ (39,971)
End-of-year balance of cash and cash equivalents	¥ 45,008	¥ 48,335	¥ 57,132	¥ 60,283	¥ 61,027	¥ 44,753	$ 411,224
Number of employees	3,266	3,366	3,447	3,609	3,619	3,816	3,816

Note:

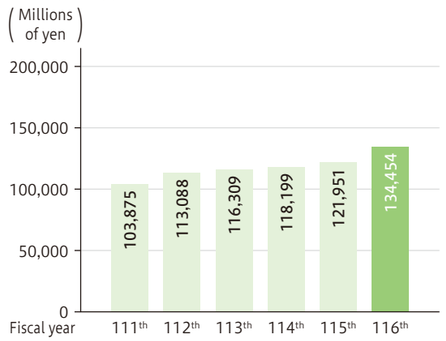
1. U.S. dollar amounts are shown solely for the convenience of readers and are translated at the rate of ¥108.83 to U.S.$1.00, the exchange rate prevailing at March 31, 2020.
2. Ordinary income is a measure of accounting profit that equals operating income plus other income minus other expenses, except for extraordinary items under Japanese GAAP.

Trend in Principal Management Indicators

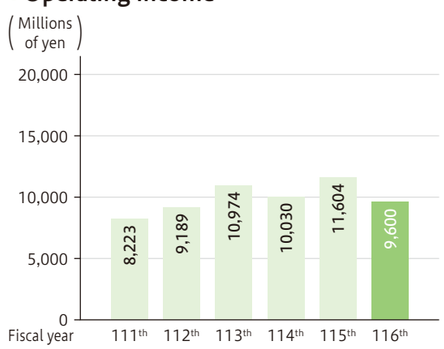
Value of orders received



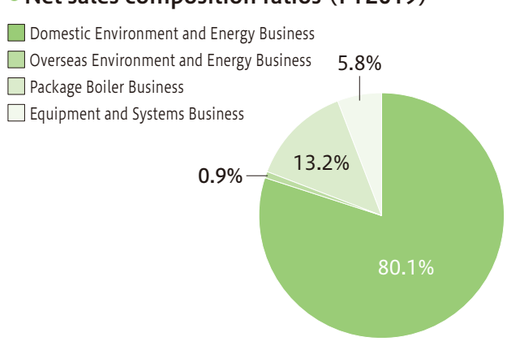
Net sales



Operating income

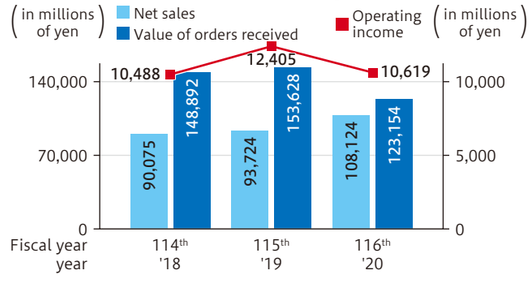


Net sales composition ratios (FY2019)

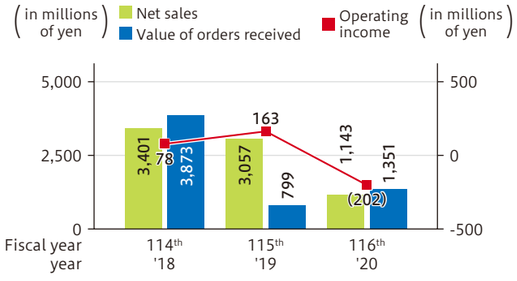


Trend by Segment

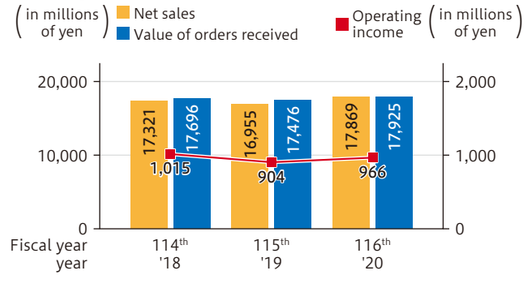
Domestic Environment and Energy Business



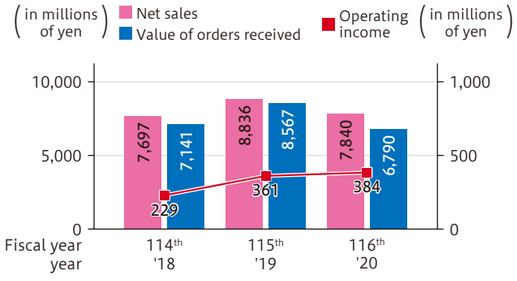
Overseas Environment and Energy Business

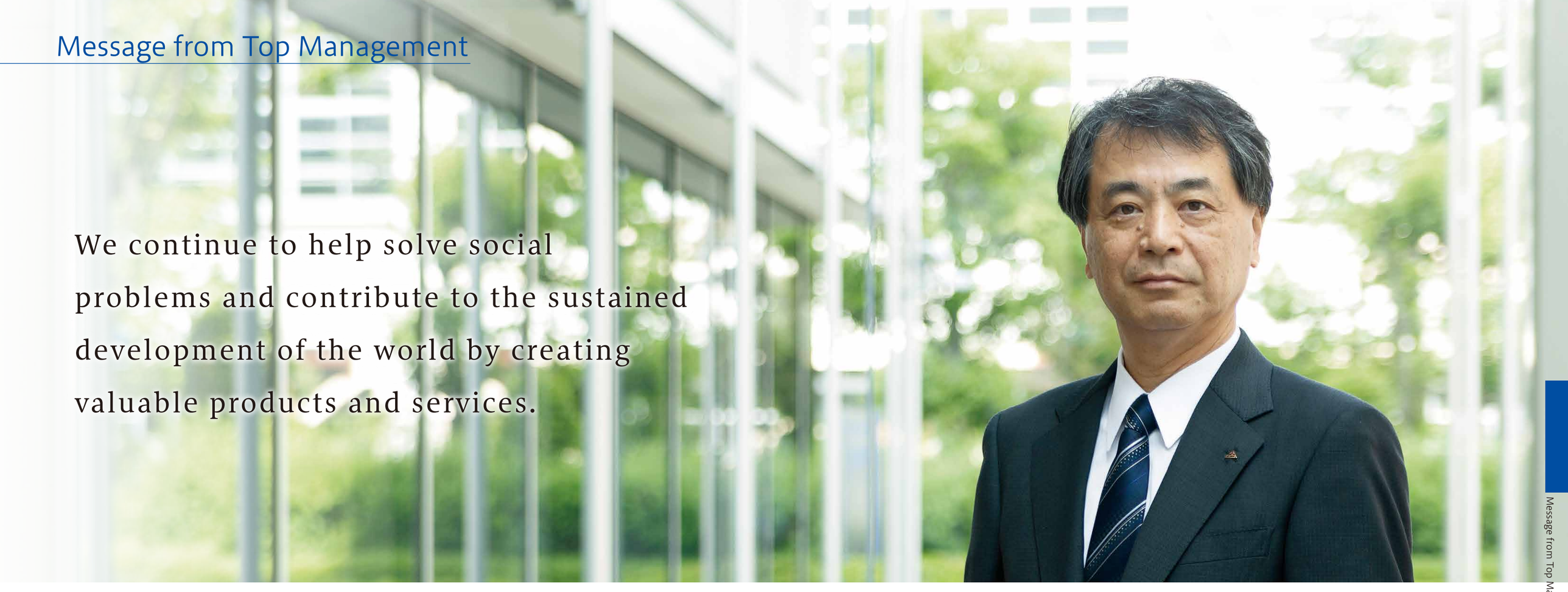


Package Boiler Business



Equipment and Systems Business





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 12th 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.

Message from Top Management

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.

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 12th 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.

Previous medium-and long-term vision | **Current medium- and long-term vision (corporate vision)** | **Next medium- and long-term vision**

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.

Ordinary profit of JPY 10 billion in FY2020 (**Build structures capable of consistently earning ordinary profit of at least JPY 10 billion even as the business environment undergoes major changes.**)

Consistently secure annual ordinary profit of at least JPY 10 billion.

9th Medium-Term Management Plan (FY2009 to FY2011)
Profitability through selection and concentration of resources

10th Medium-Term Management Plan (FY2012 to FY2014)
Reinforcement of business foundation for stability and profitability
Cumulative ordinary profit results
JPY 25.7 billion

11th Medium-Term Management Plan (FY2015 to FY2017)
Steady expansion in terms of both quantity and quality
Cumulative ordinary profit results
JPY 31.9 billion

12th Medium-Term Management Plan (FY2018 to FY2020)
Strengthening of corporate capability to facilitate steady growth
Cumulative ordinary profit target
JPY 33.0 billion

2.Policies of the 12th 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

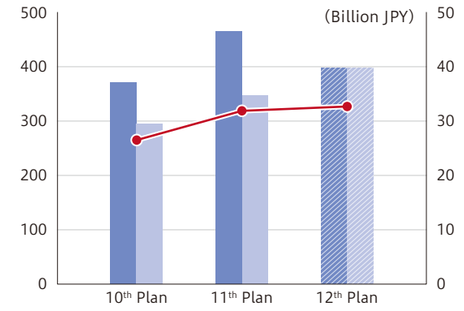
The Group considers compliance to be a key foundation of its corporate activities, and we've worked to spread awareness and foster adoption of good practices by including compliance as a policy in the last several Medium-Term Management Plans.

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 12th 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.



(Billion JPY)

	10th Medium-Term Management Plan results	11th Medium-Term Management Plan results				12th 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	
Ordinary profit	25.7	9.6	11.6	10.6	31.9	12.3	10.3	**Target: JPY 33 billion (3-year cumulative total)**

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.

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 (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.

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.

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.

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 12th Medium-Term Management Plan

In this section, members of Takuma's management team present progress in implementing the goals of the 12th 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_2 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 m² (including associated facilities) Supply Chain Lab: About 3,500 m²
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)

Permits and registrations

● Head Office, branch offices and other business offices

Construction license (Minister of Land, Infrastructure, Transport and Tourism license, Special 27-6129, Special 29-6129)
Construction consultant registration (Minister of Land, Infrastructure, Transport and Tourism registration, Construction 01-10202)
First-class architect office registration (01A02903)
ISO 9001 quality management system certification

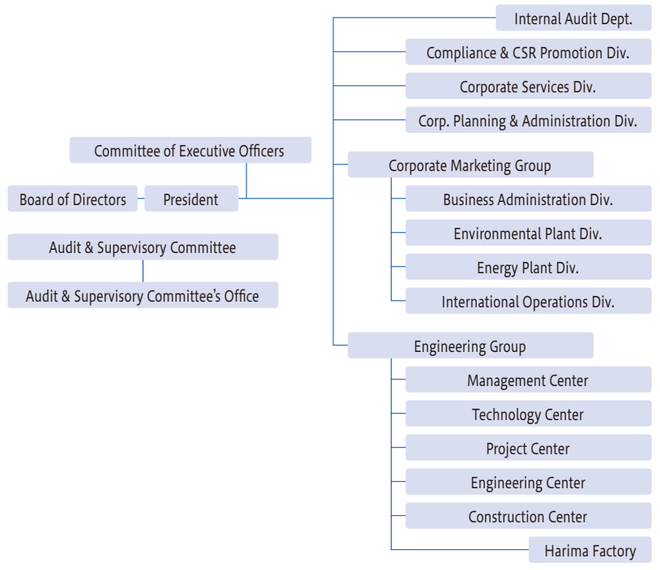
JQA-1952
ISO 9001 certification
Head Office, Osaka Office, Tokyo Branch, Chubu Branch, Kyushu Branch, Hokkaido Branch and Harima Factory

● Harima Factory

ISO 9001 quality management system certification
ISO 14001 environmental management systems certification
Manufacture of thermal equipment for power generation (Ministry of Economy, Trade and Industry)
Permission to manufacture boilers and pressure vessels, permission to manufacture cranes (Ministry of Health, Labour and Welfare)
Manufacture of specific high-pressure gas facilities (Ministry of Economy, Trade and Industry)

JQA-EM0313
ISO 14001 certification
Harima Factory

Corporate structure



Head Office

Harima Factory

The Takuma Group Network

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

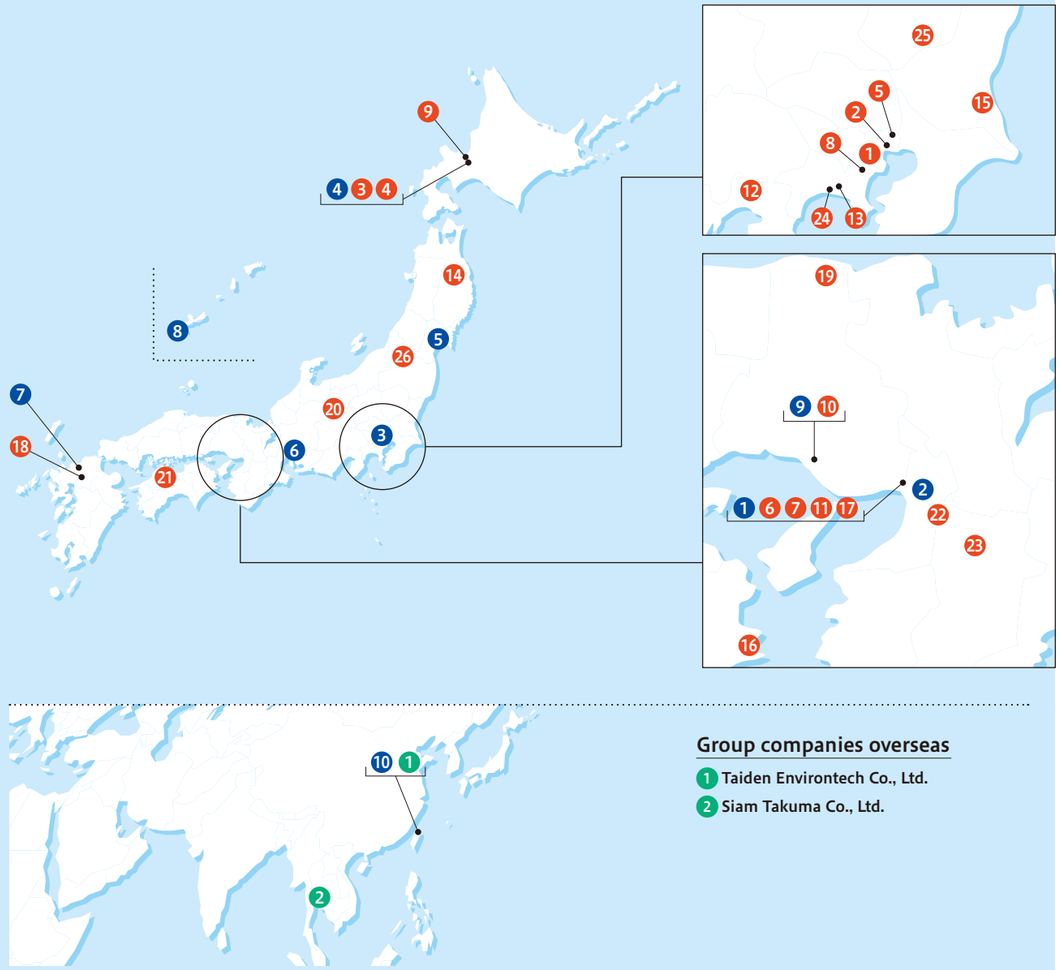
● Takuma's business offices ● Group companies in Japan ● Group companies overseas

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)

Group companies in Japan

1. Nippon Thermoener Co., Ltd.
2. Takuma Technos Co., Ltd.
3. Hokkaido Sanitary Maintenance Co., Ltd.
4. Takuma Technos Hokkaido Co., Ltd.
5. Sunplant Co., Ltd.
6. Takuma Engineering Co., Ltd.
7. Takuma System Control Co., Ltd.
8. Dan-Takuma Technologies Inc.
9. Kyoritsu Setsubi Co., Ltd.
10. Kankyo Sol-Tech Co., Ltd.
11. Takuma Plant Service Co., Ltd.
12. Nagaizumi High Trust Co., Ltd.
13. Fujisawa High Trust Co., Ltd.
14. Iwate-Kenpoku Clean Co., Ltd.
15. Hitachinaka-Tokai High Trust Co., Ltd.
16. Anan High Trust Co., Ltd.
17. Takuma Energy Co., Ltd.
18. Kurume High Trust Co., Ltd.
19. Hokutan High Trust Co., Ltd.
20. Suwako High Trust Co., Ltd.
21. Imabari High Trust Co., Ltd.
22. Energy Mate Co., Ltd.
23. Kashihara High Trust Co., Ltd.
24. Techno Links Inc.
25. Tochigi High Trust Co., Ltd.
26. Ecos Yonezawa Co., Ltd.



Group companies overseas

1. Taiden Environtech Co., Ltd.
2. Siam Takuma Co., Ltd.

The History of Takuma

1912

1912 The first "Takuma boiler" introduced by our founder, Tsunekichi Takuma

Tsunekichi Takuma

1920

1930

1930 The venerable Tsunekichi Takuma commended as one of the ten great inventors of Japan during the Meiji and Taisho periods (1868–1926)

1938 Takuma Boiler Manufacturing Co., Ltd. founded
Company Motto instituted: "Service to the nation through boiler manufacturing"

Amagasaki Factory

1940

1942 Operation begins at Harima Factory

1949 Company listed on the Osaka and Tokyo stock exchanges

Harima Factory under construction

1950

1949 Bagasse fired boiler, the first product of its kind in the industry, exported

1953 Head Office moved to Osaka's Kita-ku District

1958 Business expanded into the environmental facility sectors, including waste incineration and water treatment plants

1960

1962 Operation begins at Kyoto Factory (Current: Nippon Thermoener Co., Ltd. Kyoto Factory)

1963 Japan's first waste incineration plant delivered
Sewerage treatment facility delivered

Japan's first waste incineration plant

1970

1972 Company renamed Takuma Co., Ltd.

Vacotin Heater

1975 Bulk production begins on "Vacotin Heater", the world's first vacuum-type hot water heater

1980

1986 The first overseas delivery of a waste treatment plant completed (U.S.A)

1990

1992 New Company Motto instituted: "Value Technology, Value People, Value the Earth"

1992 Taiwan's first waste incineration plant delivered

1995 Amagasaki Head Office Building completed

1997 ISO9001 certification obtained

1999 ISO14001 certification obtained for Harima Factory

1998 Japan's largest waste incineration plant delivered (Tokyo Shin-Koto Incineration Plant Capacity:600t/d x 3)

Waste Incineration Plant

2000

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.

2009 Takuma's highest capacity (per unit) waste treatment plant delivered in China (Beijing Gaoantun Waste to Energy Plant Capacity:800t/d x 2)

2010

2010 Waste treatment plant delivered in Europe (U.K.)

Lakeside EfW Plant

2012 2013 Installation and operation of temporary incinerators to process disaster waste from the Great East Japan Earthquake

2013 Operation of the Takuma Solar Power Plant began (Harima Factory)

Takuma Solar Power Plant

2019 Order received for a 74,950 kW biomass power plant (FIT-approved facility)

Biomass Power Plant

1. Environmental Plant Business

Municipal Solid Waste Treatment Plant Business

Since developing waste incineration technologies using proprietary technology and delivering Japan's first fully continuous mechanical waste incineration plant in 1963, Takuma has built more than 360 municipal solid waste treatment plants in Japan. Subsequently, we have introduced numerous new technologies and achieved the No. 1 share of plant deliveries in Japan. Today, we continue to refine our technologies and embrace the challenge of operating to the highest possible standards.

Takuma will continue to contribute to stable regional waste treatment by pursuing integrated initiatives ranging from the construction of municipal solid waste treatment plants to after-sales service for those facilities through a broad product line and service based on an extensive track record as the industry's leading company.

Plant construction

● Stoker-type incinerators

Stoker-type incinerators are the most common type of waste treatment plant in Japan, and they are a flagship Takuma product. Today, most incinerators operated by local governments throughout Japan use this treatment method, and Takuma delivers secure, safe, stable, and highly efficient waste treatment in response to customers' needs through advanced technology and expertise based on its extensive track record.

Realizing stable combustion

1 Stoker-type incinerators

Stoker-type incinerators realize stable combustion of a variety of waste thanks to proprietary stoker technology, state-of-the-art instrumentation, and advanced automatic combustion control.

Reducing environmental impacts

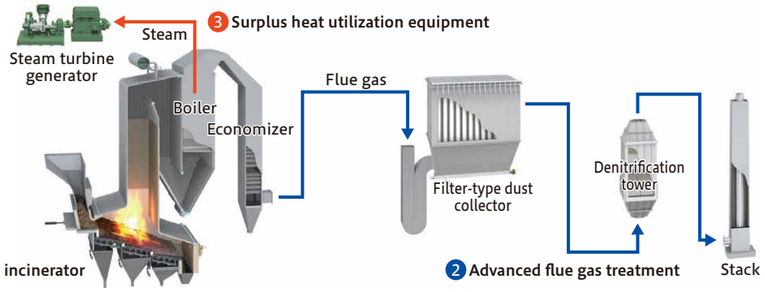
2 Advanced flue gas treatment

We help reduce environmental impacts with advanced flue gas treatment technology that reliably removes toxic substances from flue gas and technology to reduce the amount of fly ash going to landfill.

Realizing high efficiency power generation

3 Surplus heat utilization equipment

High-temperature, high-pressure boilers and other equipment maximize recovery of the energy stored in waste to realize high-efficiency power generation.



Incineration of solid waste | Stable combustion

Solid waste introduced into the incinerator burns consistently at a temperature of 850°C or higher as it moves on the stoker (a step grate combustion equipment).

Flue gas treatment | Reliable removal

Flue gas, flowing out of the boiler and economizer, contains toxic substances which are then reliably removed by a filter-type dust collector and denitrification tower, before being released from the stack.

Utilization of surplus heat | Effective utilization of energy from waste

Heat generated by the waste incineration process is recovered as steam by the boiler and economizer and used to generate electricity at a steam turbine generator. The recovered steam is also used as a heat source in the plant and nearby facilities, for example for hot water, heating, and cooling.

● Methane gasification facilities

Recently the Ministry of the Environment has been encouraging the introduction of Methane gasification facilities for use with municipal solid waste. Takuma is helping reduce incinerated waste volume and environmental impacts with its combined system of methane fermentation and incineration for municipal solid waste, which recovers the maximum amount of energy possible from waste to realize highly efficient power generation. (The system received the New Energy Foundation's Chairman Award at the FY2014 New Energy Awards.)

Maintenance

Annual maintenance is essential in order to ensure stable operation of municipal solid waste treatment plants. Maintenance demands sophisticated technological capabilities as well as experience, because in addition to a range of expertise drawn on waste treatment plants, the manner in which their equipment deteriorates over time varies with the properties of the waste they process. Takuma takes maximum advantage of its accumulated expertise to contribute to stable waste treatment and long-term facility operation by developing long-term repair plans, carrying out elaborate site investigations, and then performing maintenance that has been optimized in terms of both timing and content.


Replacing boiler tubes

(Related SDGs)

Primary equipment improvements

70%* of all Japanese municipal solid waste treatment plants, which comprise a key type of infrastructure, have been operating for at least 15 years, and demand for updating plants and extending their service life is growing due to their aging. Using the advanced heat utilization and energy-saving technologies we have developed as a boiler and environmental plant manufacturer, Takuma helps extend plant service lives and reduce CO_2 emissions through high-added-value primary equipment improvement projects. *According to research conducted by the Ministry of the Environment in 2018 and reported in "Municipal Solid Waste Emissions and Disposal."

Example of a Primary Equipment Improvement Project

Energy Recovery Measures

Improving heat recovery

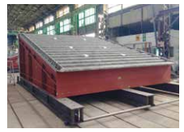
・Adding boilers to water injection furnaces
・Expanding boilers' heat transfer area

Increasing steam turbine capacity

Increasing generating capacity by increasing intake steam volume and optimizing system design

Increasing combustion equipment efficiency

Increasing combustion stability and stabilizing evaporation amount and power generation output through changes in furnace shape



Energy-saving Measures

Changing control systems

Implementing inverter-based speed and airflow control

Increasing efficiency

Increasing the efficiency of motors and other equipment

Long-term comprehensive operation business

The Long-term comprehensive operation business, in which customers enter into contracts covering both operation and maintenance management for a term of 10 to 20 years, has become the most common approach in the industry in recent years, for example in the form of DBO projects.

We have currently collected plant operating and maintenance management data for more than 10 municipal solid waste treatment plants with **POCSYS®**, which we use to provide real-time integrated management of plant and equipment operating status.

Additionally, we operate Solution Lab to further enhance our remote monitoring and operational support functions for existing plants. Our Solution Lab provides remote monitoring and operational support by monitoring plant status and operating conditions 24 hours a day. It utilizes the latest Information and Communications Technologies (ICT), including the IoT, big data, and AI, to provide optimized solutions for customers and support to help ensure safer, more secure plant operation.

Takuma's Solution Lab remote monitoring and operational support facility

Optimal solutions that meet customers' needs

We provide high-quality solutions that have been optimized for customers based on data obtained from remote monitoring and operational support by identifying and analyzing issues related to plant operations using the latest Information and Communications Technologies (ICT).

We also create new value in the form of distinctive technologies and services so that we can respond to the social challenges that will face society in the future.

Safe, secure operation and efficient management

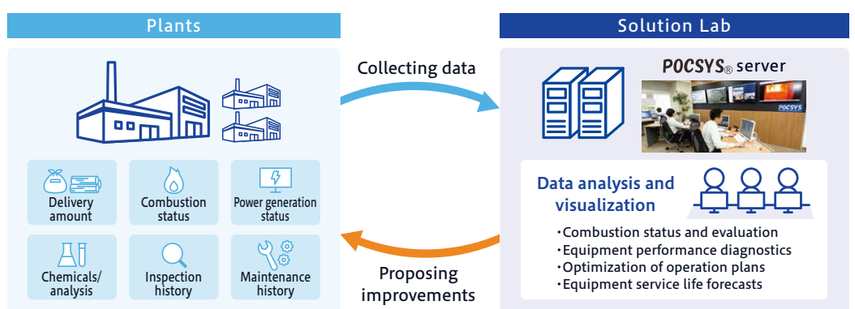
We provide even safer, more secure operation and more efficient management for customers through remote monitoring and operational support functions that utilize the latest ICT.

In the event of the unforeseen circumstances, our highly experienced engineering staff can provide precisely targeted guidance to customer sites 24 hours a day.

Human resources and technological development

In addition to ICT, facilitating the growth of the people involved in operations is essential in order to ensure plants to be operated in a stable manner over the long term.

Solution Lab improves workers' technical skills through highly effective education and training using operational training simulators.



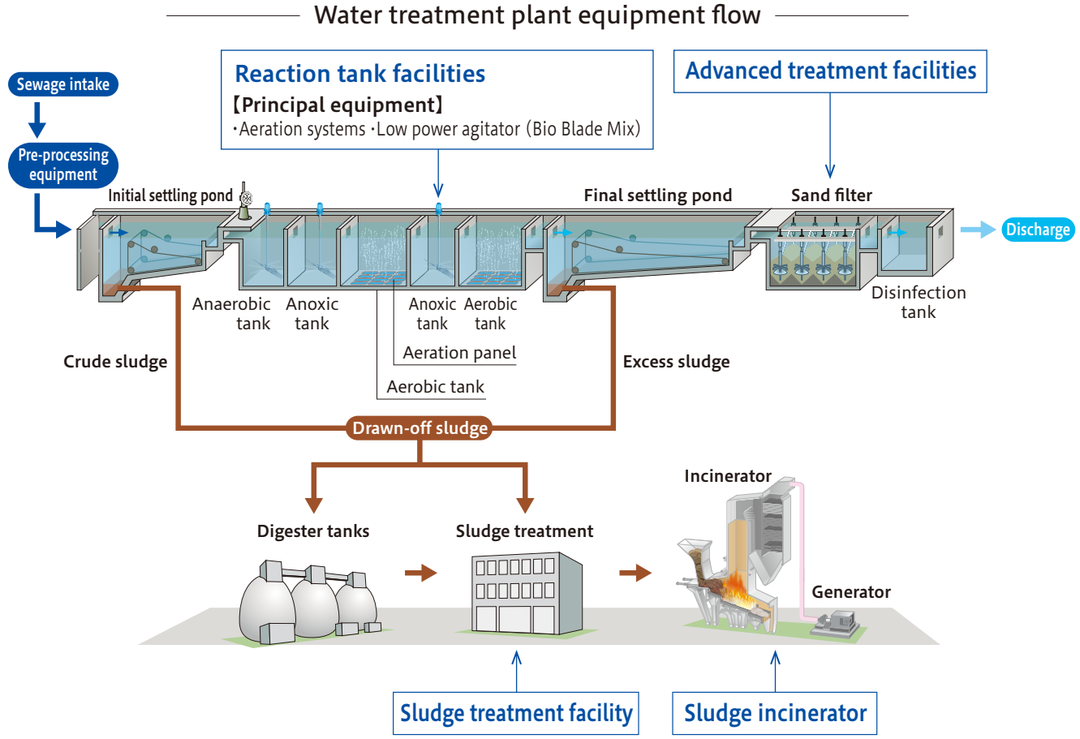
Water Treatment Plant Business

Takuma has delivered numerous systems, particularly in relation to technologies for advanced treatment of wastewater, in an effort to help conserve the aquatic environment.

The recent trend is for plants to be called upon not only to purify water, but also to reduce power use by treatment equipment and create energy from sewage sludge. In an effort to meet these requirements, Takuma has been focused on developing a step grate stoker type sewage sludge incineration and power generation system and implemented technologies using waste heat from the incineration process to generate electricity.

Going forward, we will continue to help conserve the aquatic environment by supplying products that meet the needs of our times.

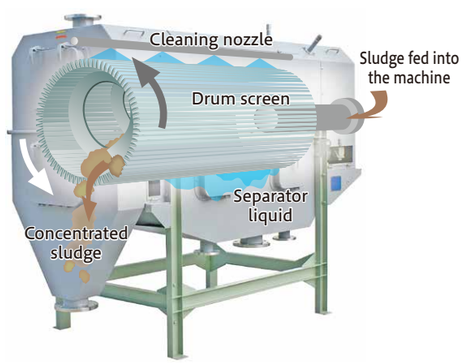
Water Treatment Plants



● Sludge treatment facility【Principal equipment】

・Rotating drum-type concentrator

A rotating drum-type concentrator consists of a drum-shaped screen consisting of metal wedge wire that separates and concentrates solid and liquid components from coagulated sludge as the drum rotates. Following solid-liquid separation, sludge is transported to the exit side of the system as it is concentrated and pushed by spiral-shaped vanes on the inside of the rotating drum. Thanks to a simple design whose operation hinges on a slowly rotating drum screen, the system uses less power than its conventional counterparts, yielding high energy savings.

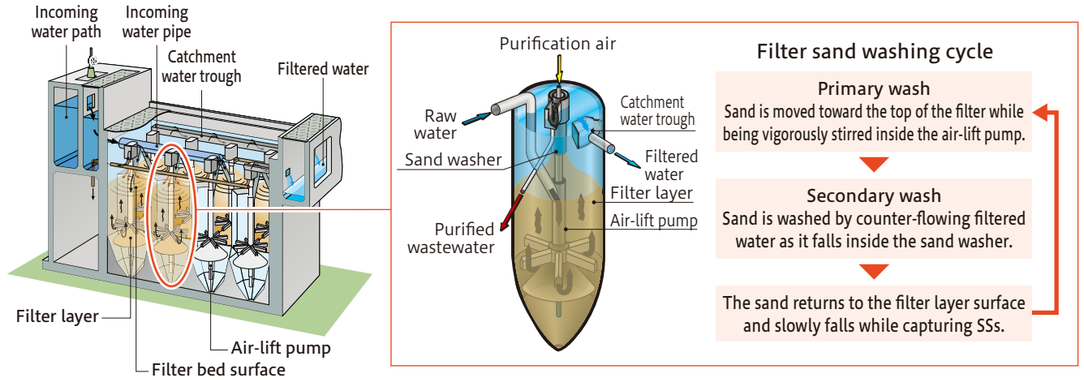


(Related SDGs)

● Advanced treatment facility【Principal equipment】 ・Upflow moving-bed sand filtration systems (Uniflow Sand Filter)

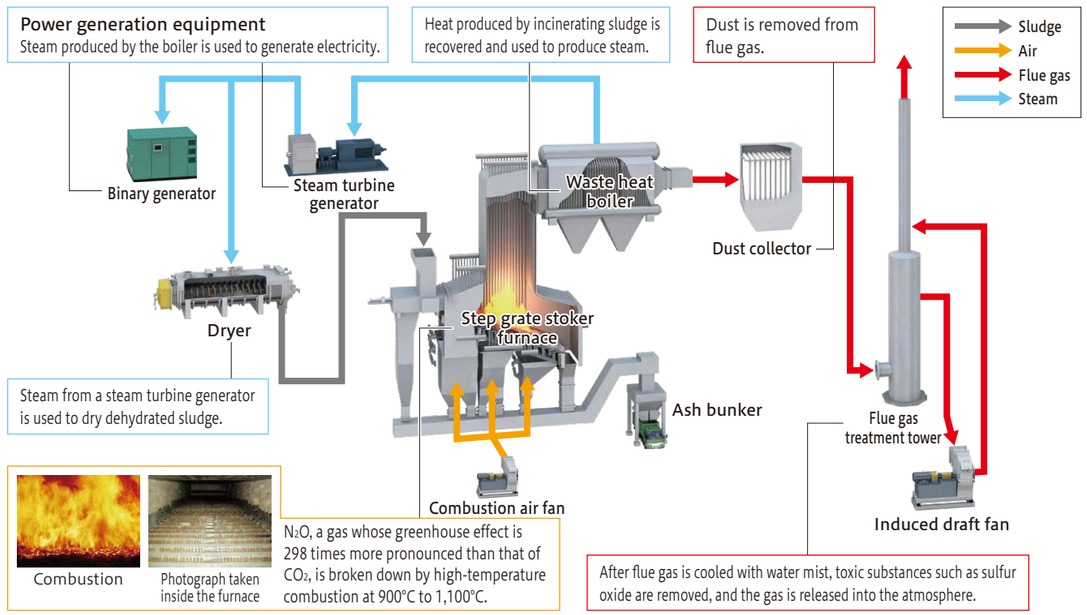
Measures undertaken to improve the quality of public water sources and the need to reuse treated sewage are spurring demand for more advanced water treatment. Upflow moving-bed sand filtration systems (Uniflow Sand Filter), which eliminate suspended solids (SSs) from water, are used in a variety of fields, including in final processing at sewage treatment plants and in pre-processing to remove solids at water plants. This particular model is a long-selling product featuring proven water purification technology of which we have delivered more than 2,700 units in Japan. A design that combines filtration treatment with continuous backwashing of the filtration sand ensures stable operation and exceptional maintainability.

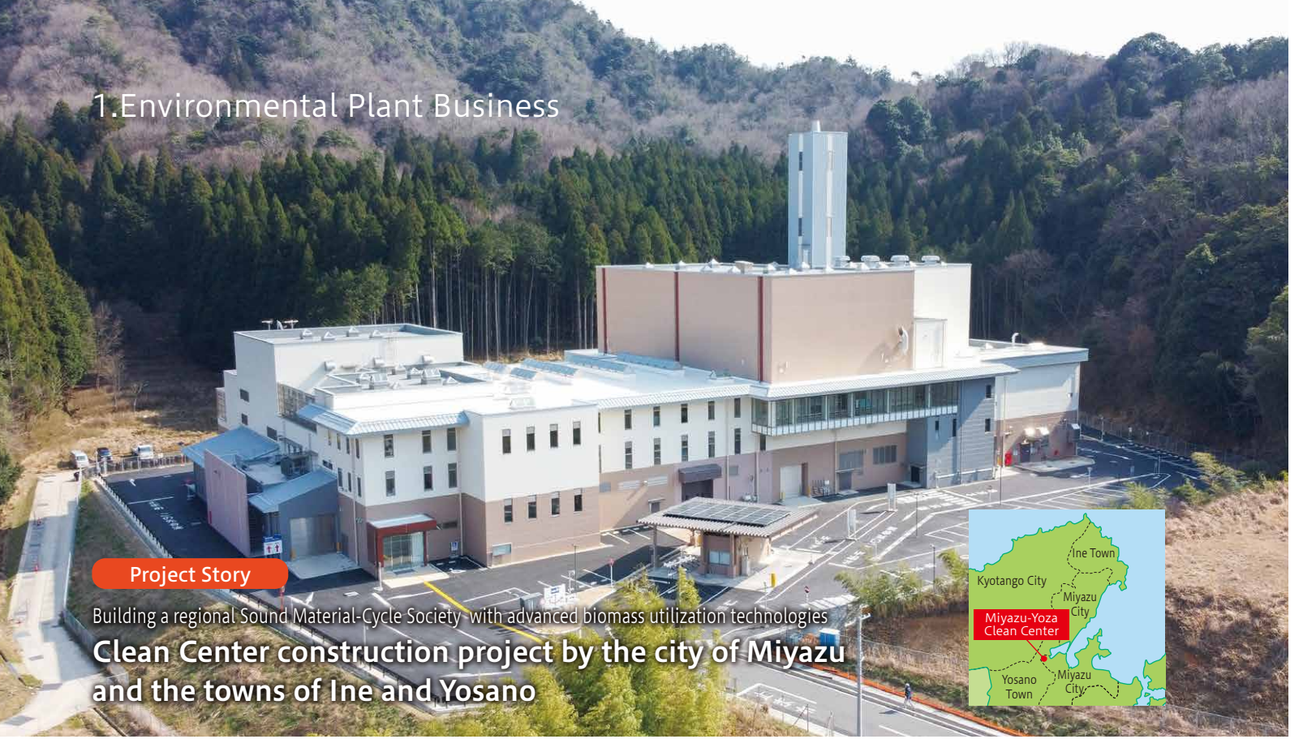
The product line includes high-speed models with double or triple the filtration speed of the standard model as well as denitrifying and dephosphorizing variants that add functionality for eliminating nitrogen and phosphorus to standard SS elimination functionality.



● Sludge incinerator【Principal equipment】 ・Step grate stoker type sewage sludge incineration and power generation system (step grate stoker furnace and innovative step grate stoker furnace)

Because it contains a large amount of energy, sludge generated during the sewage treatment process has been attracting attention in recent years as a biomass resource. We are taking advantage of our core incineration and boiler technologies to make effective use of the energy contained in sludge by using it as a fuel to generate electricity. Following the system's selection for inclusion in the Breakthrough by Dynamic Approach in Sewage High Technology Project (B-DASH) by the Ministry of Land, Infrastructure, Transport and Tourism (Japan) in FY2013, we have received orders for the system from the cities of Tokyo and Sapporo.





Project Story

Building a regional Sound Material-Cycle Society with advanced biomass utilization technologies

Clean Center construction project by the city of Miyazu and the towns of Ine and Yosano

Facility overview

Operator	Miyazu Yoza Union Environment	Project type	DBO (Design, Build, Operate)
Facility name	Miyazu-Yoza Clean Center	Project period	Construction phase: April 2016 to June 2020　Operational phase: July 2020 to February 2040

Miyazu-Yoza Clean Center is a wide-area waste treatment facility operated by a city (Miyazu) and two towns (Ine and Yosano) in northern Kyoto Prefecture. The complex, which consists of an energy recovery-type waste treatment facility (waste incineration + methane gasification) and a material recycling facility, incorporates the latest biomass technologies and will contribute to the realization of a Sound Material-Cycle Society.

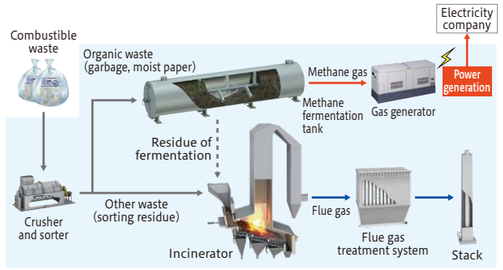
Energy recovery-type waste treatment facility

(Waste incineration facility)
The waste incineration facility uses high-temperature heat from the waste incineration process to make hot water.

(Methane gasification facility)
The methane gasification facility recovers methane gas released by waste and uses it to generate electricity. The heat from that process can be reused.

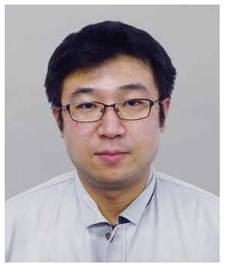
Material recycling facility

The material recycling facility sorts and recycles waste such as noncombustible refuse, plastic containers and packaging, and cans. Sorting helps extend the service life of final disposal site by reducing the volume of waste to be landfilled.



Methane gasification facilities

Message from the engineering coordinator



Hiroshi Kogita
Section 2, Environmental Design Dept. 3
Engineering Center
Takuma Co., Ltd.

The complex consists of an energy recovery-type waste treatment facility (waste incineration + methane gasification) and a material recycling facility. The methane gasification facility ferments waste, paper, and other material that makes up the combustible waste stream to produce methane, which is then used to run a gas generator, allowing it to be recovered as electrical energy. Electricity that remains after certain local load requirements are met can be sold back to the grid.

In designing the methane gasification facility, we worked hard to precisely apply the expertise we have gained through past experience and to incorporate the latest information about other state-of-the-art facilities into the plant after a careful vetting process.

It is our hope that in addition to its basic role of treating waste in a hygienic manner, the plant will contribute to material recycling and to the effective use of biomass energy.

Construction

This project, through which the city of Miyazu and the towns of Ine and Yosano are seeking to realize a safe and hygienic living environment, was about more than just fulfilling the basic role of a waste treatment facility. Reflecting its belief that the project is one in which a new future can be pioneered through advanced biomass utilization technologies, the Takuma Group sought to create a model case demonstrating how a project could help create a Sound Material-Cycle Society. In undertaking the project, we identified three core concepts: providing peace of mind and vitality to the region, protecting the environment and coexisting with nature, and supporting a sound material cycle into the future.

Similarly, in planning the facility, we identified three design concepts: nature, history, and people. In addition to adopting a design that blends into the area's rich natural environment, we incorporated the distinguishing shapes of the region's traditional arts and crafts into the design, along with features that express gentle hospitality toward visitors, for example through the natural warmth of wood.

As it turned out, the construction phase posed many unexpected challenges, including the discovery of underground obstructions and flooding in a waste pit due to heavy rainfall. Nonetheless, we were able to overcome these obstacles to complete a facility whose advanced equipment is unique in Japan.

Construction site


July 2018 (heavy rainfall)


September 2018


April 2019


October 2019

Message from the construction coordinator

Takahiro Kimura
Section 2, Civil & Architectural Engineering Dept.
Construction Center
Takuma Co., Ltd.

The facility's location next to Yoza-Amanohashidate IC about 10 minutes by car from Amanohashidate, one of the three most famous scenic spots in Japan, makes it a picturesque destination in its own right.

Although the greatest concern when construction began in January 2017 was delays caused by accumulated snowfall during the winter, the project was blessed with a comparatively mild winter. However, in addition to boulders and other underground obstructions, a variety of problems, including inflows of muddy water caused by heavy rainfall in nearby mountainous valleys, impacted the construction schedule and led to a delay of about 11 months after discussions with the customer.

We were able to overcome the challenges with the customer in cooperation with a local general contractor with whom we shared the construction work, sharing information about problems arising in each scope of the plant construction and the civil work, and revamping the schedule.

Our hope is that the facility, which was completed thanks to the understanding and cooperation of the customer and local residents, will continue to operate and develop as a site that can contribute to the region as part of Takuma's comprehensive operation business.

2.Energy Plant Business

For more than 100 years, Takuma has delivered numerous boilers and plants of various types and specifications, including for use in power, shipping, and air-conditioning applications, while accumulating extensive experience and expertise as a pioneer of the boiler industry. We will continue to help realize a sustainable society while working to resolve customers' issues as well as social problems through our business activities.

Contributing to society through business activities

Promoting renewable energy

We are helping promote renewable energy by supplying biomass power plants.

Preserving the environment: water, air, and mountain forests

We are helping preserve the global environment by supplying plants that utilize appropriate technologies and systems to protect the environment.

Making effective use of unutilized resources

We are helping realize a Sound Material-Cycle Society by supplying plants that can efficiently burn fuels and waste products that have gone underutilized in the past.

Reducing CO_2 emissions

We are helping realize a low-carbon society by supplying high-efficiency power plants.

Value provided by Takuma's Energy Plant Business

1. Plant engineering

We supply plants that combust a variety of fuels and waste in a stable manner over extended periods of time based on our extensive track record of deliveries.

Biomass power plants

We supply power plants that can utilize a variety of biomass fuels to operate in a stable manner over extended periods of time, including unused lumber, lumber waste, construction waste, PKS (Palm kernel shells), pellets, livestock manure, bagasse, and paper sludge.

Industrial waste incineration and power generation facilities

We supply facilities that can recover heat in a highly efficient manner, including by using it to generate electricity, after burning even difficult-to-treat waste in an appropriate manner.

2. After-sales service

We offer service designed to ensure that plants can operate in a stable manner over the long term based on our advanced technologies and extensive experience.

Maintenance

We offer proposals for, and carry out, plans for periodic inspections and maintenance, functional improvements, and preventive maintenance in order to maintain high plant performance and prevent unplanned stoppages.

O&M*

We accept orders for operation, maintenance, and management on 20-year terms to reduce workload and life cycle costs so that customers can maximize the profitability of their businesses.

* O&M: Operation & Maintenance

(Related SDGs)

Products and services

Biomass Power Plants

These plants produce heat and power from a variety of biomass fuels, including wood fuels such as wood chips and bark, PKS, and bagasse.

Four Advantages

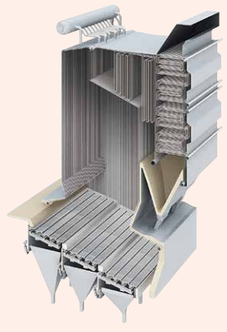
Advantage 1 Ability to burn a wide range of fuels

These plants can effectively use a variety of substances that have been difficult to use in the past as fuel.

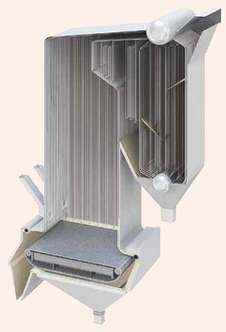
Wood chips / Bark / Wood pellets / PKS / Bagasse / Livestock (poultry) manure / Rice husks / Corn residue etc.

Advantage 2 Custom designs

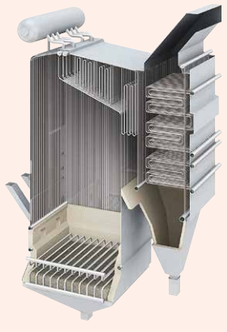
From our four combustion furnace types, we select the model that best suits each customer's plan and design a plant accordingly.



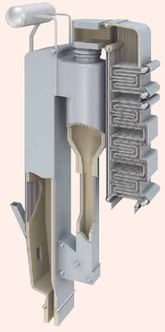
Step grate stoker



Traveling stoker



Bubbling fluidized bed



Circulating fluidized bed

Advantage 3 Stable operation over the long term

We supply plants that can operate in a stable manner for decades with the least number of breakdowns or sudden stoppages by designing them based on our extensive experience and expertise and by maintaining them in an optimal manner, even when biomass with inconsistent properties is used.

Advantage 4 High-efficiency, energy-saving performance

We supply plants characterized by high transmission end efficiency and boiler efficiency by selecting the optimal combustion method and boiler for each installation and by reducing auxiliary power and the unburnt portion.

Project Story

Supporting continuity of the renewable energy industry with a biomass power plant

Biomass power plant construction project in Toyohashi, Aichi Prefecture

Customer	SALA e POWER Co., Ltd.
Project name	SALA e POWER Biomass Power Plant Construction Project
Power output capacity	22,100 kW 150 million kWh per year (Equivalent to the power used by about 40,000 households)
Principal fuel	PKS, wood fuel, wood pellets
Completion date	June 2019

The customer, a wholly owned subsidiary of SALA Energy Co., Ltd., which is a central company in the SALA Group and its array of energy-oriented businesses, was established to operate a wood biomass power plant business. The biomass power plant that we delivered in this project uses PKS imported from Southeast Asia as its primary fuel, and it uses the heat generated by burning a mixture of chips produced from unused lumber and other wood from Okumikawa in Aichi Prefecture and the Enshu region of Shizuoka Prefecture to generate electricity.

In addition to providing a clean, stable source of power that also helps reduce greenhouse gases regardless of the weather, the facility contributes to the appropriate protection of the region's woodland resources by working closely with local communities.

Message from the engineering coordinator

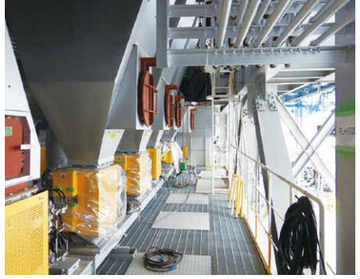
Ryoji Higuchi

Section 2, Energy Engineering Dept. 1
Project Center
Takuma Co., Ltd.

I currently work in Takuma's engineering oversight department, where I am involved with boiler plant planning and design.

Since the project represents SALA e POWER's first purchase of a Takuma boiler plant, we conducted a series of highly detailed meetings, starting during the design phase. I believe that we were able to construct a plant that would satisfy the customer as a result of the unity and effort by each and every person who was involved with the project.

Going forward, I look forward to contributing to plant planning and design so that we can leverage Takuma's experience and technology to better meet customers' needs.



Construction

This plant, which was constructed on a site of about 30,000 square meters on Mikawa Harbor in the Shinnishihama-cho district of the city of Toyohashi, is one of the few wood biomass power plants in Japan with a generating capacity of 150 million kWh a year, equivalent to the power used by 40,000 households. It uses PKS and lumber from forest thinning in Japan as fuel. Reflecting our belief that the project will play a key role in the adoption of renewable energy in Japan, we emphasized an early start of operations and thorough safety management in its construction.

Construction began in April 2018, and commissioning began in April 2019. Work was completed in June 2019, 15 months after it began. The schedule was extremely tight for a plant of this scale, but we were able to transfer the facility to the customer after completing it without incident (while setting a record of about 160,000 accident-free hours). The project's successful completion is entirely due to the customer's cooperation and the hard work of the cumulative total of 20,900 employees of Takuma and of partner companies who were involved with the plant's construction.

We look forward to taking advantage of the experience gained from this project to build the kind of plants that are required by our changing times.

Construction site

Stakeholder message

Mr. Naohiro Fujita

President
SALA e POWER Co., Ltd.

The energy industry has embarked in an era of consolidation and borderless operations as a result of an across-the-board liberalization of the power and gas retail sector. The SALA Group has responded to these changes by augmenting its natural gas and propane supply operations with power retail and generation businesses. We believe that by putting in place structures that allow us to carry out integrated operations extending from power generation to power sales, we will be able to earn the trust, and meet the expectations, of regional society as well as of our customers.

We look forward to supplying clean, stable renewable energy to the region in a way that also helps reduce greenhouse gases by operating this biomass power plant built by Takuma and to deepen our partnership with local communities while bringing innovation to the infrastructure that underpins society by making effective use of unused lumber from nearby regions.

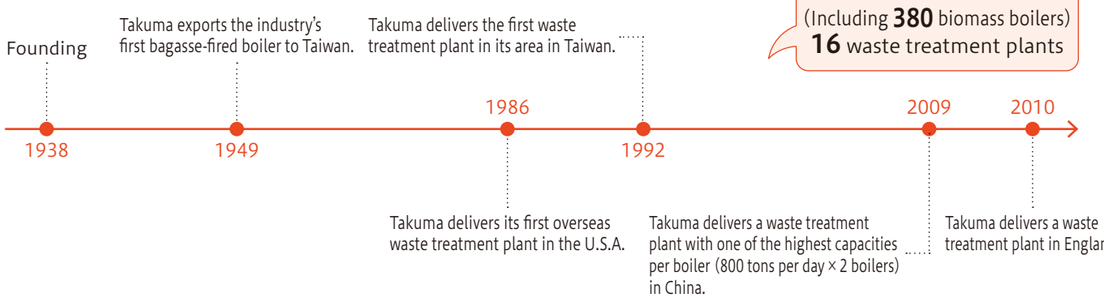
3.Overseas Business

Our overseas business began in 1949, when we exported the industry's first bagasse-fired boiler to Taiwan. During the subsequent 70 years, we have delivered more than 850 boilers to overseas customers. The combustion technologies we have developed since our founding can accommodate not only fossil fuels, but also special fuels such as bagasse, palm, and wood, and we have both supported local industry by providing a source of power for manufacturing facilities in various countries and promoted effective use of renewable resources.

We have also delivered 16 waste treatment plants to customers in the U.S.A., Taiwan, China, South Korea, and England. Takuma technology allows these facilities to incinerate a variety of waste products. We help these customers achieve stable operation over the long term by providing optimal solutions for waste streams whose properties vary by country and region.

In recent years, biomass boilers have received new attention from the dual standpoints of global warming prevention and energy policy based on international frameworks such as the Paris Agreement, and there is now a major trend toward using biomass as a source of power at scale. At the same time, the appropriate treatment of waste is becoming a particularly pressing issue in developing nations. The path to solutions is by no means a simple one as a result of the complexities of environmental awareness, legal structures, budgets, and other considerations, but there is no doubt that plants provided by Takuma make a valuable contribution to achieve the Sustainable Development Goals (SDGs) in a number of areas, including by providing "affordable and clean energy", aiding in the development of "sustainable cities and communities," and so on. We will continue to harness such products, which are the embodiment of Takuma's technologies, to support customers' businesses while contributing to international society.

Deliveries to overseas markets
856 boilers
(Including **380** biomass boilers)
16 waste treatment plants



Our Achievements

LuTsao Incineration Plant, ChaiYi County (Taiwan)

嘉義縣鹿草垃圾焚化廠

Facility
Waste incineration power plant

Completed
December 2001

Treatment type
Step grate stoker

Treatment capacity
900 tons per day
(450 tons per 24 hours × 2 units)

Power output
28,000 kW (rated)

TSM Group (Thailand)

TSM Power Co., Ltd.
Thai Udonthani Power Co., Ltd.

Facility
Biomass boiler plant (4 units)

Completed
2 units in November 2012,
2 units in January 2019

Combustion furnace type
Traveling stoker

Steam conditions (normal operation)
150 tons per hour × 4.2 MPaG × 450°C × 2 units
170 tons per hour × 4.2 MPaG × 450°C × 2 units

Fuel
Bagasse

(Related SDGs)

Kenana Sugar Co., Ltd. (Sudan)

Facility	Biomass boiler plant (8 units)
Completed	6 units in 1981, 1 unit in March 1999, 1 unit in January 2004
Combustion furnace type	Traveling stoker
Steam conditions (normal operation)	113.4 tons per hour × 3.2 MPaG × 360°C × 6 units 136 tons per hour × 3.1 MPaG × 370°C × 2 units
Fuel	Bagasse

This bagasse-fired boiler plant was delivered to a customer in Sudan. Kenana Sugar, which was established in 1976, is a large company that manages integrated operations extending from sugarcane cultivation to sugar refining. The project was part of a national effort to take advantage of water from the Nile River and the area's extensive insolation to greenify the region and transform it into a grain-growing area.

Takuma contributed to regional development by delivering six boilers in 1981, followed by one boiler each in 1999 and 2004, while contending with challenges including the project's scale, demanding requirements, a completely different culture, and a harsh work environment in distant Africa during a time when communications were limited. A number of national presidents and other distinguished guests from various countries attended an elaborate dedication ceremony following the project's completion in 1981.

A 10-Sudan-pound note featuring a depiction of Kenana Sugar to commemorate the facility's completion

Lakeside Energy from Waste Ltd. (UK)

Facility	Waste incineration power plant
Completed	January 2010
Treatment type	Step grate stoker
Treatment capacity	1,370 tons per day (685 tons per 24 hours × 2 units)
Power output	36,650 kW (rated)

We delivered this waste incineration power plant in 2010 to a customer in Slough, a suburb of London, England. The company's website introduces the facility as a plant that is large enough to supply electricity to power all 86,267 households in the area by processing 450,000 tons of waste to generate 306 GWh of power every year.

Overseas, private-sector companies are often responsible for waste treatment, including municipal solid waste, at facilities such as this one. Durable plants that can operate at high efficiency in a stable manner over the long term are essential in order to improve the profitability of revenue such as processing fees and power sales when such plants are operated as a business, and this facility has earned high praise in this regard.

Message

Yasuo Takamatsu
Deputy Executive Manager
International Division
Takuma Co., Ltd.

The eight boilers we have delivered to Kenana Sugar continue to operate today, close to 40 years after the first units were delivered. Ten years has passed since we delivered the facility we completed in 2010 for Lakeside EfW, and that plant, too, continues to operate smoothly and earn high praise from the customer as Europe's No. 1 EfW plant. Our products contribute to our customers' businesses and to society by operating in a stable manner over the long term, and their performance is our greatest pride. Although the overseas business poses unique challenges that must be met before a plant can be delivered, I look forward to continuing our initiatives in this area as a bridge to the future, based on the willingness to embrace difficult challenges that we inherit from those who came before us and the experience we have accumulated to date.

Main Recent Projects

The following are the main plants supplied by Takuma during FY2019.

Municipal Solid Waste Treatment Plant Business

Primary equipment improvements

Yamaguchi City Incineration Plant

Project name
Yamaguchi City Incineration Plant
Primary Equipment Improvement Project

Capacity
Incineration facility: 220 tons per day (110 tons per 24 hours × 2 units)
Power output: 3,600 kW

Location
Yamaguchi Prefecture

Uji City Higashiuji Sewage Treatment Plant

Project name
Uji City Higashiuji Sewage Treatment Plant
Water Treatment Equipment Project No. 17

Equipment capacity and specifications
Project overview: Modification to early sedimentation, reaction tank, final sedimentation, disinfection, and water equipment
Capacity treatment volume: 3,650 m^3 per day
Treatment method:
Biological nitrogen removal with agglomerating agent
Specifications: Aeration system, sludge scraper, etc.

Location
Kyoto Prefecture

Osaka City Hokko Landfill site

Project name
Hokko Landfill site
Wastewater Treatment Facility
Restoration Work (Phase 2)

Equipment capacity and specifications
Project overview: Work to restore operation to a wastewater treatment facility that was damaged by Typhoon 21 in September 2018
Capacity treatment volume: 3,000 m^3 per hour
Treatment method:
Coagulating sedimentation
Specifications: Turbid water treatment system

Location
Osaka Prefecture

Water Treatment Plant Business

Tokyo Kasai Water Reclamation Center

Project name
Tokyo Kasai Water Reclamation Center Sludge Concentration Tank No. 4
Machinery and Equipment Improvement Project

Equipment capacity and specifications
Project overview: Update work on a sludge scraper
Type: Center-drive post type
Capacity: ϕ28,000 mm × 1 unit

Location
Tokyo

Kochi Prefecture Urado Bay Eastern Basin Takasu Sewage Treatment Plant

Project name
Urado Bay Eastern Basin Takasu Sewage Treatment Plant
Sludge Treatment System Construction Part 15

Equipment capacity and specifications
Project overview: Dehydrator expansion work
Type: Pressurized screw press dehydrator
Treatment capacity: 225 kg-DS per hour

Location
Kochi Prefecture

Energy Plant Business

CEPO Handa Biomass Power Co., Ltd.

Project name
CEPO Handa Biomass Power Plant
Construction Project

Equipment capacity and specifications
Fuel: PKS, wood fuel
Steam conditions (normal operation):
190 tons per hour × 6.2 MPaG × 480°C
Power output: 50,000 kW

Location
Aichi Prefecture

SALA e POWER Co., Ltd.

Project name
SALA e POWER
Biomass Power Plant Construction Project

Equipment capacity and specifications
Fuel: PKS, wood fuel, wood pellets
Steam conditions (normal operation):
85 tons per hour × 6.0 MPaG × 480°C
Power output: 22,100 kW

Location
Aichi Prefecture

Aoki Environmental Enterprise Co., Ltd.

Project name
Waste Incineration Power Plant
Construction Project

Equipment capacity and specifications
Treated waste type: Industrial waste
Treatment capacity: 93.6 tons per day
Power output: 1,050 kW

Location
Niigata Prefecture

SARA Inc.

Project name
Waste Gas Purification System
Installation Project

Equipment capacity and specifications
Equipment overview: Equipment to supply CO_2
Waste gas source: Incineration waste gas from biomass power plant
CO_2 supply volume: 2,750 kg of CO_2 per hour

Location
Okayama Prefecture

Hayashi Plywood Industrial Co., Ltd.

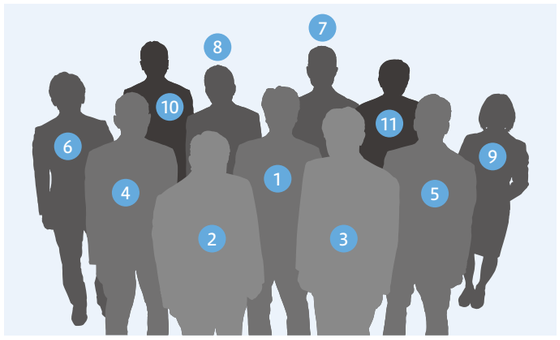
Project name
Biomass Power Plant Construction Project

Equipment capacity and specifications
Fuel: Wood fuel
Steam conditions (normal operation):
31 tons per hour × 5.98 MPaG × 415°C
Power output: 6,800 kW

Location
Kyoto Prefecture

Corporate Governance

Executive Profiles: Directors



1 **Hiroaki Nanjo**
Representative Director
President and Chief Executive Officer

2 **Takaaki Kato**
Director
Chairman Executive Officer

3 **Kengo Numata**
Director
Executive Vice President

4 **Tsuyohito Nishiyama**
Director
Senior Managing Executive Officer

5 **Hideki Takeguchi**
Director
Senior Managing Executive Officer

6 **Koji Tanaka**
Director
Executive Officer

7 **Yasushi Enomoto**
Director
(Audit & Supervisory Committee Member)

8 **Osamu Iwahashi**
Outside Director
(Audit & Supervisory Committee Member)

9 **Tomomi Fujita**
Outside Director
(Audit & Supervisory Committee Member)

10 **Yoshiaki Ito**
Outside Director
(Audit & Supervisory Committee Member)

11 **Tetsuya Kaneko**
Outside Director
(Audit & Supervisory Committee Member)

Managing Executive Officer

Takashi Manabe
Ryoji Tani
Norito Uchiyama
Mitsuaki Adachi
Akira Taguchi

Executive Officer

Hidetoshi Tomita
Norio Maeda
Kunio Hamada
Keiji Nakamura
Hiroshi Oishi

Corporate Governance

Basic policy on corporate governance

In order to safeguard and steadily increase Takuma's corporate value over the long term, it is essential not only to ensure the development of the company's businesses, but also to clearly define governance in corporate operations-that is, to ensure that shareholders' oversight of operations is carried out appropriately and that officers carry out their operational responsibilities by means of a process that is clear, rational, efficient, and legally compliant. For that reason, we believe that understanding the Corporate Governance Code and putting it into practice in an autonomous and systematic manner are top-priority management issues.

Board of Directors

As of June 25, 2020, the Board of Directors was comprised of six directors (excluding directors who are members of the Audit & Supervisory Committee) and five directors (of whom four were outside directors). The Board of Directors meets regularly once a month as a rule and whenever else it is necessary to make decisions about important issues related to business management and issues established by law and ordinances, as well as to oversee the execution of the directors' duties.

Directors	Including the following outside directors:
11 (10 men and 1 woman)	4 (3 men and 1 woman)

Executive Officers

In order to accelerate management decision-making and clarify where management responsibilities are placed, we have adopted an executive officer system in which we appoint executive officers who are entrusted with the responsibility of executing our business activities. As of June 25, 2020, there were 16 executive officers (including those who also serve as directors). Moreover, we have also established a Committee of Executive Officers, which is chaired by the president/chief executive officer, as an organization that deliberates matters that are brought up at meetings of the Board of Directors and other important issues related to the execution of our business activities. This committee communicates and provides direction about items decided by the Board of Directors and other important items related to the execution of our business activities appropriately to the divisions that are to execute them.

Audit & Supervisory Committee

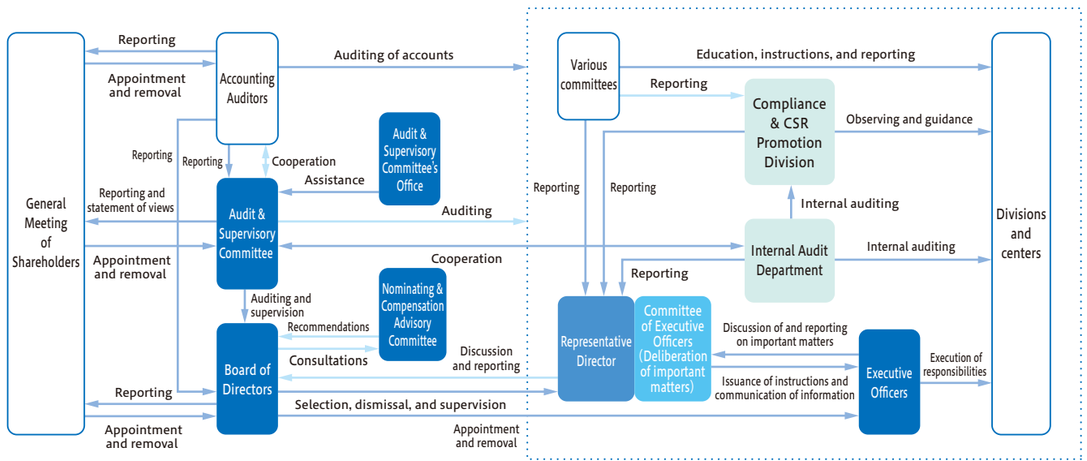
An Audit & Supervisory Committee that consists of five members, of whom four are outside directors, is responsible for accounting and operational audits. Members of the committee attend important meetings, including those of the Board of Directors and the Committee of Executive Officers, and they strive to understand and observe the status of business execution in a timely and appropriate manner. Drawing on their professional background and experience, they express their opinions as necessary from an objective perspective, and they conduct strict auditing of the business execution performed by the directors. To facilitate the effectiveness of audits carried out by the Audit & Supervisory Committee, the representative director holds regular meetings with committee members to ensure good communication.

Audit & Supervisory Committee's Office

Takuma has established an Audit & Supervisory Committee's Office to help carry out the committee's work.

Nominating & Compensation Advisory Committee

To augment the above structures, we have established a Nominating & Compensation Advisory Committee comprised of independent officers, representative directors, and the officer in charge of human resources. The purpose of the committee, a majority of whose membership consists of independent outside directors, is to increase transparency and objectivity in the selection of candidates for director and executive officer positions and in the determination of the compensation and other terms so as to enhance the oversight function of the Board of Directors.



Corporate governance structure (As of June 25, 2020)

Internal Control

Takuma has adopted a Basic Policy for Establishment of an Internal Control System (the full text is available on our website) in accordance with the Companies Act. We continue to review and improve this policy in response to changing circumstances.

Working towards thorough compliance, Takuma built a compliance promotion organization in FY2006 in order to continuously implement enlightenment and educational activities that make corporate ethics, related laws and ordinances, and internal rules fully understood. To control the danger of loss, we have also prepared a "Risk Management Code" that determines the person in charge of each risk, and we set up our risk management organization according to that Code. When the unexpected occurs, emergency headquarters are established with the company president as the director in charge of risk management, and an organization is put in place in order to minimize and prevent further damage through prompt action.

Internal control, constructed and evaluated in order to report on and prevent misstatements in our financial reporting, is based on the Financial Instruments and Exchange Act. This internal control on financial reporting for the Group has resulted in reports that indicate this system has been effective.

In this way, we will continue to work in the future to ensure thorough compliance while carrying out business properly and efficiently while also deepening risk management.

Compliance & CSR Promotion Structure

Basic approach

Led by the department in charge of compliance and CSR promotion (CSR Department), Takuma aims at encouraging proper activities through the Compliance & CSR Promotion Organization which was installed for the purpose of enabling compliance and CSR to concretely permeate company-wide through an in-house organization.

This organization is composed of a chairman (the Executive Manager of the Compliance & CSR Promotion Division), a secretariat (positioned in the CSR Department), and an executing organization in each division, center, and department. As the person in charge of promoting compliance and CSR in his or her division, each division or center manager is appointed as a Compliance and CSR Promotion Administrator. As persons who implement awareness and education in compliance and CSR in their respective departments, department managers are appointed as Compliance and CSR Promoters. The meetings conducted within this mechanism include regular meetings and departmental meetings.

Regular meetings

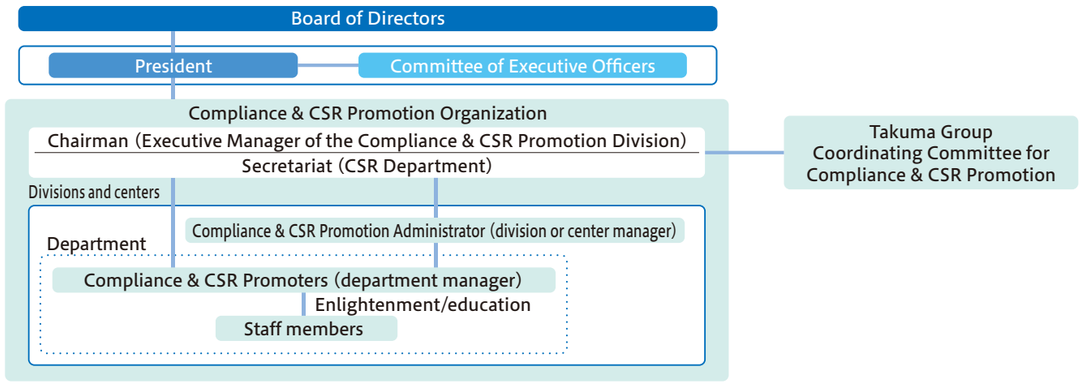
Regular meetings are held once a year. The person in charge of promotion receives reports on the status of compliance and CSR promotion company-wide, as well as on the status of the implementation of compliance and CSR promotion education for the past year, etc., and participants deliberate on a promotion plan for the current fiscal year.

Departmental meetings

Promotion members convene departmental meetings once a quarter, with educational training aiming at the permeation of compliance and CSR in each department. After departmental meetings, promotion members implement compliance and CSR promotion education in their respective departments using training materials or in-house educational materials and report the results to the Secretariat.

Takuma Group Coordinating Committee for Compliance & CSR Promotion

We are pursuing awareness-raising and educational activities targeting group companies through our Takuma Group Coordinating Committee for Compliance & CSR Promotion to ensure thorough compliance and risk management throughout the Group. During FY2019, we invited representatives of group companies to participate in two meetings of the committee.



Compliance & CSR promotion structure

Risk Management Structure

Takuma follows a "Risk Management Policy" that connects company-wide risks and separately classifies them into project risks related to our core business, i.e., plant construction; DBO project risks and DBO project operation, maintenance and management risks related to our DBO business; and potential risks, actualized risks, and financial reporting risks related to other corporate business activities.

Group companies also work to develop and strengthen approaches to risk management through the Takuma Group Coordinating Committee for Compliance and CSR Promotion.

Risk Management Policy

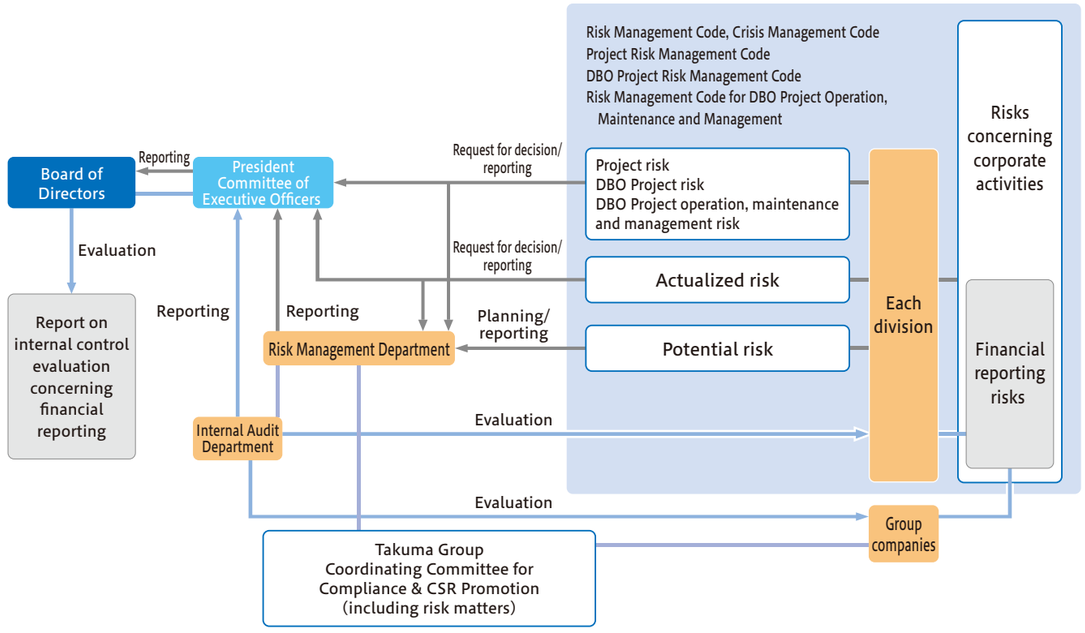
[Basic purpose of risk management]

Risk refers to all phenomena that interfere with the Group's ability to achieve its business objectives or cause losses or harm to the interests of stakeholders.

The Takuma Group practices risk management with the goal of increasing its corporate value by working to maximize returns while minimizing the negative impacts of risk.

[Risk management action guidelines]

1. The president and CEO is responsible for risk management at Takuma.
2. All officers and employees participate in risk management activities.
3. Risk management activities are carried out in accordance with applicable guidelines such as the Risk Management Rules.
4. Risk management activities are carried out in line with the Medium-Term Management Plan and annual plan, and we work to make improvements on an ongoing basis.
5. When risk manifests itself, we respond by taking responsible action quickly to minimize any damage and creating provisional organizational entities as necessary.
6. Group companies carry out risk management activities in accordance with their own policies and plans, with support from Takuma.



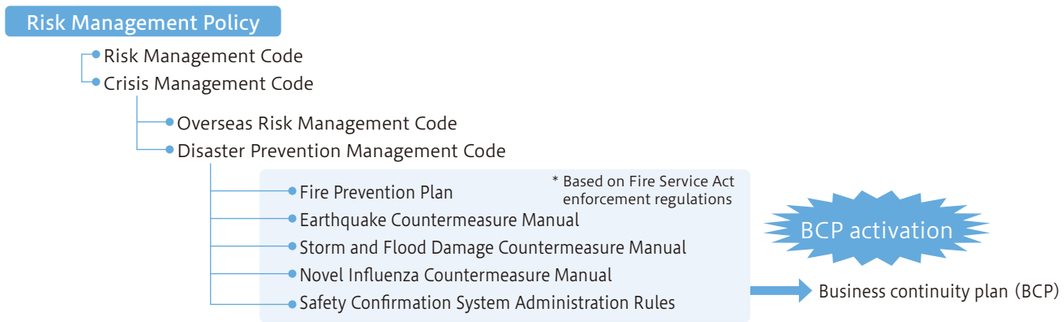
Risk management structure

Business Continuity Plan（BCP）

Takuma has formulated a “Business Continuity Plan” based on the following policies to ensure proper and appropriate continuity of business operations in the event of a large-scale disaster, pandemic, or other emergency:

1. In addition to implementing disaster-related measures to secure the safety of corporate officers and employees, maintain structures so as to enable continuity of business operations while minimizing damage in an emergency.
2. Strive to respond to customer needs and recover from damage quickly by working closely with suppliers and partner companies to continue business operations.
3. Earn the trust of numerous stakeholders, including employees, their families, shareholders, and nearby residents, and fulfill social needs by continuing business operations.

【Disaster rule system diagram】



Disaster prevention exercises

On November 19, group and partner companies joined head office personnel in participating in disaster prevention exercises, which included drills to test readiness for a Nankai Trough earthquake and tsunami, firefighting practice, and an evacuation. The head office is equipped to serve as a temporary shelter in the event of a tsunami or other emergency, and the exercises included practice for providing evacuation guidance to residents. On October 9, Takuma’s company fire brigade competed in the indoor fire hydrant category of a firefighting technique competition organized by the Amagasaki City Bouka Kyokai（Fire Protection Association）to maintain and improve firefighting skills. The event offered the brigade an opportunity to improve its ability to respond in the event of a fire. We also held two safety confirmation exercises using a system developed specifically for that purpose.

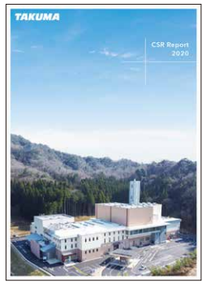
With regard to the maintenance and restoration of information systems, which is the top priority of the Company’s business continuity plan（BCP）, we carried out exercises envisioning an earthquake and subsequent power outage.

These exercises and related activities served to verify that participants understand the applicable rules and procedures and that they have the necessary knowledge and skills. We will apply the results to future educational exercises and countermeasures as we work to improve our ability to respond in the event of a crisis.

A disaster prevention exercise

A response exercise

CSR Activities



Please refer to our "CSR Report 2020" for more details on our CSR activities.

[Takuma Website > CSR]
https://www.takuma.co.jp/english/csr/index.html

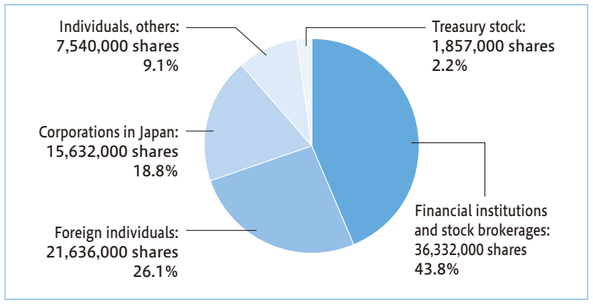
CSR-related Contents:

- CSR Activities for the Future
- The Environment
- Human Rights and Labor Practices
- Consumer Issues
- Participation in the Community
- Contribution to Society
- Corporate Governance
- Fair Business Practices

IR Activities

In keeping with the “Takuma Group Code of Conduct,” we provide our shareholders and investors with accurate corporate information in a timely and fair manner. As a part of this, we provide notifications on the convening of General Meetings of Shareholders, balance sheet information, timely disclosure information, marketable securities reports, shareholders reports, annual reports in English and other business information, all on our website.

【Takuma website > IR information】
https://www.takuma.co.jp/english/investor/index.html



Distribution by shareholder type (as of March 31, 2020)

Stock Information

1. Total number of authorized shares: 321,840,000
2. Total number of outstanding shares: 83,000,000
3. Total number of shareholders: 4,628 (as of March 31, 2020)

4. Major shareholders（top 10）

(as of March 31, 2020)

Shareholder	Number of shares	Stake
The Master Trust Bank of Japan, Ltd.（Trust Account）	8,414,000	10.4%
Japan Trustee Services Bank, Ltd.（Trust Account）	6,789,000	8.4%
Mizuho Trust & Banking Co., Ltd.（Retirement Benefits Trust, Mizuho Bank, Ltd. Acoount） Trust & Custody Services Bank, Ltd.（Re-entrustment）	4,022,000	5.0%
Nippon Life Insurance Company	3,593,000	4.4%
HIKARI TSUSHIN, INC.	3,251,000	4.0%
THREADNEEDLE INVESTMENT FUNDS ICVC-JAPAN FUND	2,293,000	2.8%
JP MORGAN CHASE BANK 380055	1,868,000	2.3%
TAKUMA CO., LTD. Kyoueikai	1,816,000	2.2%
Sumitomo Mitsui Banking Corporation	1,621,000	2.0%
SSBTC CLIENT OMNIBUS ACCOUNT	1,606,000	2.0%

5. Dividend Policy

Takuma returns profits to investors in line with a comprehensive assessment of business performance and other factors based on a policy of maintaining stable dividends while working to enhance the quality of its business. Our overriding goal is to remain competitive in an increasingly challenging marketplace.

Two dividends are paid each fiscal year: an interim dividend offered by resolution of the Board of Directors and a year-end dividend offered by resolution of the annual meeting of shareholders.

In keeping with this policy, the year-end dividend for the consolidated fiscal year under review was 18 yen per share, which, combined with the interim dividend, brought the annual dividend to 31 yen per share.

We plan to continue to build internal reserves to strengthen our financial foundation and to use funds to increase corporate value through capital investment, R&D investment, and other avenues in order to lay the groundwork for the future growth and expansion of our businesses.

Financial Information

Status of Business Activities

1. Management Analysis of Financial Position, Business Performance, and Cash Flows

This section provides an overview of the Group's financial position, business performance, and cash flows during the consolidated fiscal year under review, along with explanations of the significance of that information and the Group's analysis and study of it from the perspective of management.

Forward-looking statements in the text reflect the judgment of management as of the end of the consolidated fiscal year under review.

(1) Business Performance

Orders received during the consolidated fiscal year under review totaled 148,830 million yen, exceeding our target at the beginning of the year (140,000 million yen), thanks to reliable conversion of continued robust demand centering on waste treatment plants and biomass power plants into orders.

Sales rose 12,503 million yen from the previous year to 134,454 million yen on steady progress in the construction of ordered plants. As a result, the backlog rose 14,376 million yen to 345,315 million yen.

Operating income fell 2,003 million yen from the previous year to 9,600 million yen, while ordinary profit fell 2,033 million yen to 10,301 million yen as construction expenses incurred in addressing defects at a delivered plant offset increased sales in the Domestic Environment and Energy business. Profit attributable to owners of parent fell 1,409 million yen to 7,445 million yen.

The COVID-19 pandemic did not have a substantial impact on performance during the consolidated fiscal year under review.

Performance by segment during the consolidated fiscal year under review was as follows.

(Unit: Millions of yen)

Segment	Consolidated fiscal year under review				Change from previous consolidated fiscal year		
	Orders received	Sales amount	Operating income	Backlog	Orders received	Sales amount	Operating income
Domestic Environment and Energy Business	123,154	108,123	10,619	337,322	(30,473)	14,399	(1,785)
Overseas Environment and Energy Business	1,351	1,143	(202)	733	551	(1,913)	(366)
Package Boiler Business	17,925	17,868	966	3,928	448	913	61
Equipment and Systems Business	6,790	7,840	384	3,453	(1,777)	(995)	22
Subtotal	149,221	134,975	11,767	345,437	(31,250)	12,403	(2,068)
Adjustments	(390)	(521)	(2,167)	(122)	252	100	64
Total	148,830	134,454	9,600	345,315	(30,998)	12,503	(2,003)

The Group's operating segments consist of the following four businesses, of which the flagship Domestic Environment and Energy Plant segment accounts for most net sales: Domestic Environment and Energy Plant, Overseas Environment and Energy Plant, Package Boiler, and Equipment and Systems business. (During the consolidated fiscal year under review, Domestic Environment and Energy Plant segment accounted for 80% of total net sales before excluding inter-segment sales and 90% of total operating income before excluding adjustments.)

Domestic Environment and Energy Business

During the consolidated fiscal year under review, efforts to take advantage of continued robust demand yielded one order for a waste treatment plant DBO project, one equipment improvement project, seven new plants (including biomass power plants and other facilities for private-sector customers), and one O&M project. Nonetheless, order volume fell 30,473 million yen to 123,154 million yen compared to the previous year, when we received orders for multiple large biomass power plants (with generating capacity ranging from 50 to 75 MW).

At the same time, sales rose 14,399 million yen from the previous year to 108,123 million yen on steady progress in the construction of ordered plants. As a result, the order backlog stood at 337,322 million yen as of the end of the year, and DBO, O&M, and other long-term projects accounted for about 40% of that figure.

Operating income fell 1,785 million yen to 10,619 million yen due to construction expenses incurred in addressing defects at an industrial waste treatment plant we delivered to a private-sector customer.

In addition to pursuing initiatives to secure sustained growth, for example by earning new orders for biomass power plants and strengthening the competitiveness of our sewage sludge incineration and power generation systems, we will continue to work to strengthen and expand our revenue base by enhancing the after-sales service business, for example by strengthening the profitability of our waste incineration plant operation business, applying operational expertise horizontally to water treatment and biomass facilities, and strengthening maintenance structures.

Overseas Environment and Energy Business

Orders received during the consolidated fiscal year under review rose 551 million yen compared to the previous year to 1,351 million yen as we received an order for a bagasse-fired plant in Myanmar following initiatives to secure orders for new plants.

At the same time, sales fell 1,913 million yen to 1,143 million yen compared to the previous year, during which we made significant progress in the construction of ordered bagasse-fired plants, and operating income fell from 163 million yen to 202 million yen on lower sales.

In addition to pursuing initiatives to strengthen our competitiveness and create competitive advantages so that we can capture biomass power plant orders on an ongoing basis, we will continue to work to build structures for capturing orders for Energy from Waste plants.

Package Boiler Business

Orders received during the consolidated fiscal year under review rose 448 million yen from the previous year to 17,925 million yen thanks to continued initiatives to tap new demand and secure maintenance orders. Sales rose 913 million yen to 17,868 million yen, while operating income rose 61 million yen to 966 million yen.

We will continue to maintain and expand the domestic business with a focus on replacement demand and maintenance while striving to expand the overseas business through efforts centered on our local subsidiary in Thailand.

Equipment and Systems Business

Orders received during the consolidated fiscal year under review fell 1,777 million yen to 6,790 million yen compared to the previous year, when the segment booked an order for a large project, despite continued efforts to tap strong demand centering on equipment construction. Sales fell 995 million yen to 7,840 million yen.

At the same time, operating income rose 22 million yen to 384 million yen as improved profit margins offset lower sales.

Going forward, we will continue to work to secure stable profits by working steadily to capture robust demand.

The Group is currently implementing its 12th Medium-Term Management Plan, which covers FY2018 to FY2020 and which has set forth a cumulative (three-year) consolidated ordinary profit target of 330 million yen. We have made smooth progress toward this goal, as is evidenced by the achievement of cumulative ordinary profit totaling 22.6 billion yen and an order backlog of 345.3 billion yen as of the end of the consolidated fiscal year under review.

The COVID-19 pandemic has not yet had a substantial impact on the Group's performance, and we will continue to do our utmost to achieve the targets set forth in the Medium-Term Management Plan.

That said, potential effects in the event of a worsening of the pandemic include fewer new orders as demand slows and new orders are delayed, as well as lower sales as delivery of existing orders is delayed.

(2) Financial Position

Total assets as of the end of the consolidated fiscal year under review rose 7,509 million yen from the end of the previous consolidated fiscal year to 163,498 million yen. Principal factors included an increase in notes and accounts receivable trade of 23,988 million yen, which offset a decrease in cash and time deposits of 15,624 million yen.

Liabilities rose 5,557 million yen from the end of the previous consolidated fiscal year to 78,458 million yen. Principal factors included an increase in notes and accounts payable trade of 6,122 million yen.

Net assets rose 1,952 million yen from the end of the previous consolidated fiscal year to 85,040 million yen. Principal factors included a decrease in treasury stock of 1,943 million yen due to acquisitions of treasury stock and other factors, which was offset by an increase in retained earnings of 5,378 million yen due to factors including posting of profit attributable to owners of parent for the consolidated fiscal year under review.

As a result, the capital adequacy ratio at the end of the consolidated fiscal year under review fell 1.2 points from the end of the previous year to 51.8%, while net assets per share rose 42.81 yen from the end of the previous year to 1,043.15 yen.

The COVID-19 pandemic did not have a substantial impact on the Company's financial position during the consolidated fiscal year under review.

(3) Status of Cash Flow

Cash and cash equivalents at the end of the consolidated fiscal year under review fell 16,274 million yen from the end of the previous consolidated fiscal year to 44,753 million yen.

Cash Flows from Operating Activities

Net cash used in operating activities totaled 11,733 million yen (compared to net cash provided by operating activities of 10,817 million yen during the previous consolidated fiscal year). Principal factors included income before income taxes of 10,139 million yen, which was offset by a decrease in accounts receivable and advances received of 23,614 million yen.

Cash Flows from Investing Activities

Net cash used in investing activities totaled 202 million yen (compared to net cash used in investing activities of 1,382 million yen during the previous consolidated fiscal year). Principal factors included income from the sale of investment securities of 2,621 million yen, which was offset by expenditures on purchases of property, plant and equipment of 1,520 million yen and expenditures on purchases of investment securities of 1,253 million yen.

Cash Flows from Financing Activities

Net cash used in financing activities totaled 4,350 million yen (compared to net cash used in financing activities of 9,120 million yen during the previous consolidated fiscal year). Principal factors included cash dividends of 2,068 million yen and expenditures on purchases of treasure stock of 2,000 million yen.

The Takuma Group obtains working capital as well as funds for use in capital investment and research and development to expand its businesses in the future from group funds, advances from customers, and lending from financial institutions. Going forward, we do not expect to encounter difficulty in procuring the funds necessary to pursue our business activities. We have established commitment line agreements with multiple financial institutions to complement liquidity in preparation for unexpected contingencies such as the COVID-19 pandemic.

(4) Production Output, Orders Received and Sales

① Production Results

The following table summarizes the Group's production results during the consolidated fiscal year under review by business segment:

Segment	Production output (millions of yen)	Year-on-year (%)
Domestic Environment and Energy Business	79,204	25.7
Overseas Environment and Energy Business	932	(53.5)
Package Boiler Business	11,927	6.8
Equipment and Systems Business	6,291	(15.1)
Subtotal	98,355	17.7
Inter-segment transactions	(433)	(26.8)
Total	97,922	18,0

Note:
1. Amounts are expressed as total manufacturing expenses.
2. Amounts do not include consumption tax or other taxes.

② Orders Received

The following table summarizes orders received by the Group during the consolidated fiscal year under review by business segment:

Segment	Orders received (millions of yen)	Year-on-year (%)	Backlog (millions of yen)	Year-on-year (%)
Domestic Environment and Energy Business	123,154	(19.8)	337,322	4.7
Overseas Environment and Energy Business	1,351	69.0	733	39.6
Package Boiler Business	17,925	2.6	3,928	1.5
Equipment and Systems Business	6,790	(20.7)	3,453	(23.3)
Subtotal	149,221	(17.3)	345,437	4.3
Inter-segment transactions	(390)	(39.2)	(122)	(51.7)
Total	148,830	(17.2)	345,315	4.3

Note:
1. Amounts do not include consumption tax or other taxes.
2. Package Boiler Business figures include some speculative production. In addition to order-driven production, the orders received and the backlog figures in the above table include that portion of speculative production for which delivery to a specific customer has been finalized.

③ Sales

The following table summarizes the Group's sales results during the consolidated fiscal year under review by business segment:

Segment	Sales amount(millions of yen)	Year-on-year (%)
Domestic Environment and Energy Business	108,123	15.4
Overseas Environment and Energy Business	1,143	(62.6)
Package Boiler Business	17,868	5.4
Equipment and Systems Business	7,840	(11.3)
Subtotal	134,975	10.1
Inter-segment transactions	(521)	(16.2)
Total	134,454	10.3

Note:
Amounts do not include consumption tax or other taxes.

(5) Important accounting estimates and underlying assumptions

The Group's consolidated financial statements are prepared in accordance with accounting standards that are generally recognized as fair and appropriate in Japan. More information is available in "2. Summary of significant accounting policies" under "Notes to Consolidated Financial Statements." When estimates are necessary, managers make reasonable judgments that take into account past performance and other factors. However, actual performance may differ from these estimates due to the uncertainty inherent in the estimation process. The factors and phenomena described below could have a material impact on the Group's consolidated financial statements.

More information about the Group's approach to the impact of the COVID-19 pandemic as it applies to accounting estimates can be found in "4. Additional information" under "Notes to Consolidated Financial Statements."

① Deferred tax assets

In determining deferred tax assets, the Group uses reasonable estimates of future taxable income and considers the likelihood of collection in order to post the amount that it anticipates being able to recover. However, in the event of a change in the recoverable portion of deferred tax assets, for example due to changes in the business environment following a decline in demand, performance could be adversely affected by the need to draw down deferred tax assets.

② Allowance for losses on sales contracts

In order to account for the possibility of losses on contracted work, the Group posts an allowance for losses on sales contracts it expects to sustain during or after the next consolidated fiscal year in the event it determines that estimated construction costs for contracts included in the order backlog at the end of the current consolidated fiscal year will significantly exceed the value of underlying orders. However, in the event that costs exceed these estimates, for example due to a significant increase in material, equipment, or construction prices, performance could be adversely affected by the need to post additional allowance for losses on sales contracts.

2. Contracts of Major Importance in the Group's Business

(1) Technology In-licensing Contracts

Contractee	Contract target	Contract date	Name of other party	Contract term
Takuma Co., Ltd.	Continuous bed filtration of liquids	April 1979	Nordic Water Products AB (Sweden)	Until December 2038
Takuma Co., Ltd.	Process for the organic and anaerobic treatment of waste	December 2011	Hitachi Zosen Inova AG (Switzerland)	For 10 years, then automatically renewed every year

Note:
Most of the above contracts entail payment of a fixed percentage of sales in addition to a one-time payment at the time the contract was entered into.

(2) Technology Out-licensing Contracts

Contractee	Contract target	Contract date	Name of other party	Contract term
Takuma Co., Ltd.	N-type palm wastes fired water-tube boiler	September 1982	P.T. Super Andalas Steel (Indonesia)	For 15 years, then automatically renewed every year
Takuma Co., Ltd.	Auxiliary agent for filter-type dust collector	July 1993	MITSUI MINING & SMELTING CO., LTD. (Japan)	For 10 years, then automatically renewed every year
Takuma Co., Ltd.	Dust elimination technology in flue gas treatment systems using impulse waves	November 2005	Nihon Spindle Manufacturing Co., Ltd. (Japan)	For 10 years, then automatically renewed every year

Note:
Most of the above contracts entail receipt of payment of a fixed percentage of sales in addition to a one-time payment at the time the contract was entered into.

3. Research and Development Activities

Having identified the fields of environmental protection and renewable energy utilization as its principal business domains in an effort to achieve a sustainable, low- or no-carbon society that is not excessively dependent on nuclear power or fossil fuels, the Takuma Group is focusing its management resources on business in these domains as it pursues research and development in keeping with the corporate vision it has set forth of being an indispensable presence in society as a leading company.

The Takuma Group has consolidated its technology-related departments into the Engineering Group, through which it is actively working to strengthen and pass on its technological capabilities and develop new technologies, products, and services through collaboration between the Takuma Group companies and joint research with outside research institutions, universities, and private-sector companies.

Expenditures on research and development during the consolidated fiscal year under review totaled 1,154 million yen. Principal research and development activities by business segment were as follows:

(1) Environment and Energy Business

① In the area of waste treatment, we continue to utilize a multipurpose demonstration incinerator with a stoker at one of our plants to develop such aspects of equipment operation as the reduction of harmful substances (e.g., nitrogen oxides, acidic gases, dioxins, and mercury) through combustion improvements and increases in power generation efficiency with the principal goal of developing proprietary technology to aid in reducing life cycle cost and boosting energy recovery. In addition, we continue to pursue a project known as "Development of a Next-generation Low-carbon High-efficiency Biogas Power System and Combined System Using CO_2 Separation Membranes," which was adopted as an Evaluation and Demonstration Project for Advanced Waste Treatment Systems at Small and Medium-size Waste Treatment Facilities by the Ministry of the Environment. We are working to stabilize combustion and to develop technologies for remote monitoring using AI and the IoT, for example by utilizing ***POCSYS***®, a comprehensive support system for operation, maintenance, and management that enables integrated use of a range of data that facilities previously managed and evaluated independently. We're working to enhance the functionality and services offered by ***POCSYS***® at the newly established Solution Lab, and we will strive to utilize AI and the IoT to help accomplish efficient facility operation that is safer and more secure in the future.

② In the area of energy, we continue to develop constituent technologies for burning a variety of biomass fuels including unutilized wood biomass to generate power, an area in which we are receiving many inquiries in connection with Japan's feed-in tariff program for power generated from renewable sources.

③ In the area of water treatment, we continue to develop a sewage sludge incineration and power generation system as well as technologies related to a new system for eliminating nitrogen by means of the anammox process. With our sewage sludge incineration and power generation system, we've worked to develop technologies for reducing nitrogen oxides in exhaust gases. We also continue to develop technologies for expanding the range of wastewater with which the anammox process can be used.

The research and development budget for this segment of our business was 999 million yen.

(2) Package Boiler Business

We developed and launched the EQiH-3000NM/LM gas-fired steam boilers, both high-pressure models in the SUPER EQOS line of high-efficiency, multifunctional boilers. With models offering a maximum operating pressure of 1.57 MPa or 1.96 MPa, the line provides coverage for a broad range of applications requiring high-pressure steam. In addition to super-high-efficiency operation that rivals the industry's best designs, gas burners that can control output in multiple stages to reduce minimum output help these models deliver significantly improved energy savings.

We also developed and introduced the EQOS EQSH-502KM/AM/NM/LM gas- and oil-fired steam boilers. Designed as new, high-efficiency replacements for the previous EQOS EQS-502, the products incorporate an economizer to deliver even higher efficiency.

The research and development budget for this segment of our business was 60 million yen.

(3) Equipment and Systems Business

In washing systems for semiconductor plants, we continued to participate in a joint research project with a university to develop products that utilize micro-bubble washing technology that boosts washing effectiveness with fine bubbles while reducing cleaning agent use. This development program includes assessing basic properties and using the university's facilities to conduct detailed analysis and evaluation. We also launched a joint research project with a university to develop ozone nano-bubble water sterilization technology in an effort to bring micro-bubble generation technology to applications in fields other than the semiconductor and electronics industries.

In the area of chemical filters for clean rooms at semiconductor plants, we are developing filters that will deliver advanced functionality and longer service life.

Going forward, we will continue to improve our washing systems and chemical filters as we work to develop products that meet customer needs.

The research and development budget for this segment of our business was 94 million yen.

Financial Statement

Consolidated Balance Sheets

TAKUMA CO., LTD. and Consolidated Subsidiaries
As of March 31, 2020 and 2019

ASSETS	Millions of yen 2020	Millions of yen 2019	Thousands of U.S. dollars (Note 1) 2020
Current assets:			
Cash and time deposits (Notes 5, 7 and 9)	**¥ 46,145**	¥ 61,769	**$ 424,015**
Notes and accounts receivable (Note 7):			
Trade	**73,034**	49,046	**671,083**
Unconsolidated subsidiaries and affiliated companies	**556**	764	**5,104**
Other	**785**	281	**7,216**
Less allowance for doubtful accounts	**(20)**	(28)	**(183)**
Total	**74,355**	50,063	**683,220**
Inventories (Note 6)	**4,681**	4,356	**43,014**
Other	**1,787**	1,732	**16,414**
Total current assets	**126,968**	117,920	**1,166,663**
Property, plant and equipment:			
Land (Note 9)	**2,497**	3,013	**22,945**
Buildings and structures (Note 9)	**11,955**	11,905	**109,856**
Machinery, equipment, lease assets and construction in progress (Note 9)	**10,114**	8,969	**92,932**
	24,566	23,887	**225,733**
Less accumulated depreciation	**(16,146)**	(15,593)	**(148,360)**
Total property, plant and equipment	**8,420**	8,294	**77,373**
Investments and other assets:			
Investment securities (Notes 7, 8 and 9)	**13,815**	15,138	**126,945**
Investments in:			
Unconsolidated subsidiaries and affiliated companies	**2,112**	4,163	**19,403**
Other	**5,433**	5,460	**49,923**
Less allowance for doubtful accounts	**(109)**	(109)	**(998)**
Total	**7,436**	9,514	**68,328**
Deferred tax assets (Note 16)	**6,529**	4,810	**59,993**
Net defined benefit asset	**54**	-	**494**
Other	**276**	313	**2,533**
Total investments and other assets	**28,110**	29,775	**258,293**
Total assets	**¥ 163,498**	¥ 155,989	**$ 1,502,329**

LIABILITIES AND NET ASSETS	Millions of yen 2020	Millions of yen 2019	Thousands of U.S. dollars (Note 1) 2020
Current liabilities:			
Short-term loans payable (Notes 7 and 10)	**¥ 470**	¥ 645	**$ 4,319**
Current portion of long-term debt (Notes 7 and 10)	**80**	117	**735**
Notes and accounts payable (Note 7):			
Trade	**43,708**	37,587	**401,622**
Unconsolidated subsidiaries and affiliated companies	**301**	334	**2,761**
Other	**1,493**	1,227	**13,721**
Total	**45,502**	39,148	**418,104**
Accrued income taxes	**1,673**	3,628	**15,374**
Advances received	**10,029**	9,798	**92,155**
Allowance for guarantees on completed work	**165**	149	**1,516**
Allowance for losses on sales contracts	**3,401**	1,739	**31,251**
Provision for loss on liquidation of subsidiaries and associates	**833**	999	**7,656**
Other	**5,429**	6,023	**49,881**
Total current liabilities	**67,582**	62,246	**620,991**
Long-term liabilities:			
Long-term debt (Notes 7 and 10)	**262**	342	**2,409**
Allowance for directors' and executive officers' retirement benefits	**220**	185	**2,022**
Net defined benefit liability (Note 11)	**10,111**	9,746	**92,906**
Other	**283**	382	**2,598**
Total long-term liabilities	**10,876**	10,655	**99,935**
Total liabilities	**78,458**	72,901	**720,926**
Contingent liabilities (Note 12)			
Net assets (Note 13):			
Common stock	**13,367**	13,367	**122,829**
Authorized: 321,840,000 shares			
Issued: 83,000,000 shares			
Capital surplus	**3,818**	3,768	**35,084**
Retained earnings	**66,244**	60,866	**608,688**
Treasury stock, at cost	**(2,178)**	(235)	**(20,017)**
1,857,894 shares in 2020 and 331,644 shares in 2019			
Total shareholders' equity	**81,251**	77,766	**746,584**
Unrealized gains on securities	**3,764**	5,390	**34,590**
Deferred gains and losses on hedges	**4**	8	**35**
Foreign currency translation adjustments	**(3)**	(4)	**(24)**
Remeasurements of defined benefit plans	**(373)**	(463)	**(3,431)**
Total accumulated other comprehensive income	**3,392**	4,931	**31,170**
Non-controlling interests in consolidated subsidiaries	**397**	391	**3,649**
Total net assets	**85,040**	83,088	**781,403**
Total liabilities and net assets	**¥ 163,498**	¥ 155,989	**$ 1,502,329**

See accompanying notes.

Consolidated Statements of Operations

TAKUMA CO., LTD. and Consolidated Subsidiaries
For the years ended March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 1)
	2020	2019	**2020**
Net sales (Note 18)	**¥ 134,454**	¥ 121,951	**$ 1,235,453**
Cost of sales (Notes 11, 14, 15 and 18)	**108,592**	94,491	**997,817**
Gross profit	**25,862**	27,460	**237,636**
Selling, general and administrative expenses (Notes 11, 15 and 18)	**16,262**	15,856	**149,421**
Operating income (Note 18)	**9,600**	11,604	**88,215**
Other income (expenses):			
Interest and dividend income	**485**	419	**4,459**
Interest expense	**(17)**	(59)	**(155)**
Gain on sales of investment securities (Note 8)	**710**	-	**6,521**
Settlement package	**(565)**	-	**(5,196)**
Provision for loss on liquidation of subsidiaries and associates	**-**	(999)	**-**
Loss on sales of investment securities	**(214)**	-	**(1,965)**
Loss on valuation of investment securities	**(92)**	(155)	**(842)**
Commitment fee	**(29)**	(17)	**(263)**
Loss on disposal of property, plant and equipment	**(53)**	(58)	**(490)**
Provision for doubtful accounts	**-**	(49)	**-**
Equity in earnings of affiliated companies	**222**	473	**2,044**
Other, net	**92**	(19)	**840**
Other income (expenses), net	**539**	(464)	**4,953**
Income before income taxes	**10,139**	11,140	**93,168**
Income taxes (Note 16):			
Current	**3,891**	4,179	**35,756**
Deferred	**(1,169)**	(1,991)	**(10,740)**
Total income taxes	**2,722**	2,188	**25,016**
Profit	**7,417**	8,952	**68,152**
Profit (loss) attributable to non-controlling interests in consolidated subsidiaries	**(28)**	98	**(261)**
Profit attributable to owners of parent	**¥ 7,445**	¥ 8,854	**$ 68,413**

	Yen		U.S. dollars (Note 1)
Per share:			
Net income	**¥ 90.36**	¥ 107.10	**$ 0.83**
Diluted net income	**-**	-	**-**
Cash dividends applicable to the year	**31.00**	22.00	**0.28**

See accompanying notes.

Consolidated Statements of Comprehensive Income

TAKUMA CO., LTD. and Consolidated Subsidiaries
For the years ended March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 1)
	2020	2019	**2020**
Profit	**¥ 7,417**	¥ 8,952	**$ 68,152**
Other comprehensive income:			
Unrealized losses on securities	**(1,625)**	(1,772)	**(14,934)**
Deferred gains and losses on hedges	**(5)**	58	**(41)**
Foreign currency translation adjustments	**5**	(9)	**42**
Remeasurements of defined benefit plans	**89**	96	**822**
Total other comprehensive income	**(1,536)**	(1,627)	**(14,111)**
Comprehensive income (Note 17)	**¥ 5,881**	¥ 7,325	**$ 54,041**
Comprehensive income attributed to:			
Owners of the parent	**¥ 5,907**	¥ 7,227	**$ 54,275**
Non-controlling interests	**(26)**	98	**(234)**

Consolidated Statements of Changes in Net Assets

TAKUMA CO., LTD. and Consolidated Subsidiaries
For the years ended March 31, 2020 and 2019

	Common stock	Capital surplus	Retained earnings	Treasury stock, at cost	Total shareholders' equity	Unrealized gains on securities	Deferred gains and losses on hedges	Foreign currency translation adjustments	Remeasurements of defined benefit plans	Total accumulated other comprehensive income	Non-controlling interests in consolidated subsidiaries	Total net assets
For the years ended March 31, 2020	Millions of yen											
Balance at the beginning of current period	¥ 13,367	¥ 3,768	¥ 60,866	¥ (235)	¥ 77,766	¥ 5,390	¥ 8	¥ (4)	¥ (463)	¥ 4,931	¥ 391	¥ 83,088
Cash dividends (¥25.00 per share)	-	-	(2,068)	-	(2,068)	-	-	-	-	-	-	(2,068)
Profit attributable to owners of parent	-	-	7,446	-	7,446	-	-	-	-	-	-	7,446
Purchase of treasury stock	-	-	-	(2,000)	(2,000)	-	-	-	-	-	-	(2,000)
Disposal of treasury shares	-	50	-	57	107	-	-	-	-	-	-	107
Other changes during the year, net	-	-	-	-	-	(1,626)	(4)	1	90	(1,539)	6	(1,533)
Balance at the end of current period	¥ 13,367	¥ 3,818	¥ 66,244	¥ (2,178)	¥ 81,251	¥ 3,764	¥ 4	¥ (3)	¥ (373)	¥ 3,392	¥ 397	¥ 85,040
For the years ended March 31, 2019	Millions of yen											
Balance at the beginning of current period	¥ 13,367	¥ 3,768	¥ 52,949	¥ (235)	¥ 69,849	¥ 7,161	¥ (46)	¥ 2	¥ (559)	¥ 6,558	¥ 319	¥ 76,726
Cash dividends (¥19.00 per share)	-	-	(1,571)	-	(1,571)	-	-	-	-	-	-	(1,571)
Profit attributable to owners of parent	-	-	8,854	-	8,854	-	-	-	-	-	-	8,854
Change in scope of consolidation	-	-	657	-	657	-	-	-	-	-	-	657
Change in scope of equity method	-	-	(23)	-	(23)	-	-	-	-	-	-	(23)
Purchase of treasury stock	-	-	-	(0)	(0)	-	-	-	-	-	-	(0)
Other changes during the year, net	-	-	-	-	-	(1,771)	54	(6)	96	(1,627)	72	(1,555)
Balance at the end of current period	¥ 13,367	¥ 3,768	¥ 60,866	¥ (235)	¥ 77,766	¥ 5,390	¥ 8	¥ (4)	¥ (463)	¥ 4,931	¥ 391	¥ 83,088
For the years ended March 31, 2020	Thousands of U.S. dollars (Note 1)											
Balance at the beginning of current period	$ 122,829	$ 34,625	$ 559,274	$ (2,165)	$ 714,563	$ 49,522	$ 76	$ (38)	$ (4,252)	$ 45,308	$ 3,590	$ 763,461
Cash dividends ($0.23 per share)	-	-	(19,000)	-	(19,000)	-	-	-	-	-	-	(19,000)
Profit attributable to owners of parent	-	-	68,414	-	68,414	-	-	-	-	-	-	68,414
Purchase of treasury stock	-	-	-	(18,377)	(18,377)	-	-	-	-	-	-	(18,377)
Disposal of treasury shares	-	459	-	525	984	-	-	-	-	-	-	984
Other changes during the year, net	-	-	-	-	-	(14,932)	(41)	14	821	(14,138)	59	(14,079)
Balance at the end of current period	$ 122,829	$ 35,084	$ 608,688	$ (20,017)	$ 746,584	$ 34,590	$ 35	$ (24)	$ (3,431)	$ 31,170	$ 3,649	$ 781,403

Consolidated Statements of Cash Flows

TAKUMA CO., LTD. and Consolidated Subsidiaries
For the years ended March 31, 2020 and 2019

	Millions of yen		Thousands of U.S. dollars (Note 1)
	2020	2019	**2020**
Cash flows from operating activities:			
Income before income taxes	**¥ 10,139**	¥ 11,140	**$ 93,168**
Adjustments to reconcile income before income taxes to net cash provided by operating activities:			
Depreciation	**917**	798	**8,426**
Impairment loss	**-**	40	**-**
Loss (gain) on sales of investment securities	**(496)**	7	**(4,557)**
Loss (gain) on valuation of investment securities	**92**	155	**842**
Increase (decrease) in allowance for bonuses	**183**	4	**1,683**
Increase (decrease) in allowance for losses on sales contracts	**1,662**	1,367	**15,267**
Increase (decrease) in provision for loss on liquidation of subsidiaries and associates	**(166)**	999	**(1,523)**
Increase (decrease) in net defined benefit liability	**494**	470	**4,539**
Interest and dividend income	**(485)**	(419)	**(4,458)**
Interest expense	**17**	59	**155**
Equity in losses (earnings) of affiliated companies	**(222)**	(473)	**(2,044)**
Net decrease (increase) in notes and accounts receivable and advances received	**(23,614)**	(2,229)	**(216,984)**
Decrease (increase) in inventories	**(312)**	3	**(2,864)**
Decrease (increase) in other current assets	**(529)**	(27)	**(4,858)**
Net increase (decrease) in notes and accounts payable and advance money	**6,146**	1,865	**56,474**
Increase (decrease) in other current liabilities	**(551)**	431	**(5,059)**
Other	**211**	(3,197)	**1,935**
Subtotal	**(6,514)**	10,993	**(59,858)**
Interest and dividend received	**563**	647	**5,175**
Interest paid	**(19)**	(60)	**(170)**
Income taxes received (paid)	**(5,763)**	(763)	**(52,953)**
Net cash provided by operating activities	**(11,733)**	10,817	**(107,806)**
Cash flows from investing activities:			
Net decrease (increase) in time deposits	**(650)**	(14)	**(5,973)**
Purchase of property, plant and equipment	**(1,520)**	(482)	**(13,967)**
Sale of property, plant and equipment	**508**	2	**4,666**
Purchase of intangible fixed assets	**(36)**	(51)	**(334)**
Purchase of investment securities	**(1,253)**	(802)	**(11,513)**
Sale of investment securities	**2,621**	105	**24,087**
Disbursement for loans receivable	**(50)**	-	**(459)**
Collection of loans receivable	**140**	112	**1,284**
Other	**38**	(252)	**351**
Net cash used in investing activities	**(202)**	(1,382)	**(1,858)**
Cash flows from financing activities:	**(175)**	(7,030)	**(1,608)**
Net increase (decrease) in short-term bank loans	**(117)**	(470)	**(1,072)**
Payment of long-term debt	**(2,000)**	(0)	**(18,377)**
Purchase of treasury stock	**(2,068)**	(1,571)	**(19,000)**
Payment of cash dividends	**(24)**	(28)	**(219)**
Dividends paid to non-controlling interests	**34**	(21)	**305**
Other	**(4,350)**	(9,120)	**(39,971)**
Net cash used in financing activities			
Effect of exchange rate changes on cash and cash equivalents	**11**	(11)	**102**
Net increase in cash and cash equivalents	**(16,274)**	304	**(149,533)**
Cash and cash equivalents at beginning of year	**61,027**	60,283	**560,757**
Increase (decrease) in cash and cash equivalents resulting from change in scope of consolidation	**-**	440	**-**
Cash and cash equivalents at end of year (Note 5)	**¥ 44,753**	¥ 61,027	**$ 411,224**

See accompanying notes.

Notes to Consolidated Financial Statements

TAKUMA CO., LTD. and Consolidated Subsidiaries

1. Basis of presenting financial statements

The accompanying consolidated financial statements have been prepared in accordance with the provisions set forth in the Japanese Financial Instruments and Exchange Law and its related accounting regulations and in conformity with accounting principles generally accepted in Japan, which are different in certain respects as to application and disclosure requirements from International Financial Reporting Standards.

The accounts of overseas subsidiaries are based on their accounting records maintained in conformity with generally accepted accounting principles prevailing in the respective countries of domicile. However, necessary adjustments are made upon consolidation. The accompanying consolidated financial statements have been restructured and translated into English from the consolidated financial statements of TAKUMA CO., LTD. (the "Company") prepared in accordance with Japanese GAAP and filed with the appropriate Local Finance Bureau of the Ministry of Finance as required by the Japanese Financial Instruments and Exchange Law. Some supplementary information included in the statutory Japanese language consolidated financial statements, but not required for fair presentation, is not presented in the accompanying consolidated financial statements.

The translations of the Japanese yen amounts into U.S. dollar amounts are included solely for the convenience of readers outside Japan, using the prevailing exchange rate at March 31, 2020, which was ¥108.83 to U.S.$1.00. The translations should not be construed as representations that the Japanese yen amounts have been, could have been or could in the future be converted into U.S. dollars at this or any other rate of exchange.

2. Summary of significant accounting policies

(1) Principles of consolidation
The consolidated financial statements include the accounts of the Company and its 27 significant subsidiaries (the "Companies"). Saitama High Trust Co., Ltd., Komaoka High Trust Co., Ltd., which were newly established subsidiaries, have been included in the consolidation from the consolidated fiscal year ended March 31, 2020. All significant intercompany transactions and unrealized profits among the Companies have been eliminated in consolidation. Investments in certain significant affiliates over which the Company and/or its subsidiaries are able to exert influence to a material degree with regard to financial and operating decision making, other than consolidated subsidiaries, are accounted for by the equity method after the elimination of unrealized intercompany profits.

Investments in the remaining unconsolidated subsidiaries and affiliated companies are not accounted for by the equity method because of the immaterial effect on the consolidated financial statements. Therefore, such investments are carried at cost, adjusted for any substantial and non-recoverable decline in value. Income from those unconsolidated subsidiaries and affiliated companies is recognized only when the Companies receive dividends therefrom.

(2) Foreign currency translation
Revenue and expense are translated at the rates of exchange prevailing on the transaction date. Assets and liabilities denominated in foreign currencies are generally translated at the rate of exchange prevailing at the balance sheet date, and the resulting translation gains and losses are included in earnings.

The financial statements of a consolidated overseas subsidiary are translated into Japanese yen at the year-end rate, except that net asset accounts are translated at historical rates and income statement items resulting from transactions with the Company are translated at rates used by the Company. The resulting translation adjustments are shown as "Foreign currency translation adjustments," a separate component of net assets.

(3) Cash and cash equivalents
In preparing the consolidated statements of cash flows, cash and cash equivalents include cash on hand, readily available deposits and short-term investments with maturities not exceeding three months from the date of acquisition and which have high liquidity and low risk of price fluctuation.

(4) Securities
Equity securities issued by subsidiaries and affiliated companies which are not consolidated or accounted for using the equity method are stated at cost determined by moving average cost. Available-for-sale securities with available fair market value are stated at fair market value, and unrealized gains and losses on these securities are reported net of applicable income taxes as a separate component of net assets. Realized gains and losses on the sale of such securities are computed at cost using moving average cost. Available-for-sale securities with no available fair market value are stated at cost determined by moving average cost.

If the market value of equity securities issued by unconsolidated subsidiaries and affiliated companies or available-for-sale securities declines significantly, such securities are stated at fair market value and the difference between fair market value and the carrying amount is recognized as loss in the period of the decline. If the fair market value of such securities is not readily available, such securities should be written down to net asset value with a corresponding charge in the income statement in the event the net asset value declines significantly. In these cases, the fair market value or the net asset value will be the carrying amount of the securities at the beginning of the next year.

(5) Allowance for doubtful accounts
The Companies provide an allowance for doubtful accounts by estimating the uncollectible amounts of certain individual accounts and by applying a percentage based on collection experience to the remaining receivables.

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(6) Inventories
Merchandise and finished goods are stated at cost using the moving average method. Work-in-process is stated at cost determined by the identified cost method. Materials and supplies are stated at cost using the average method. For these inventories, the carrying amounts on the balance sheet are written down to reflect decreases in profitability.

(7) Property, plant and equipment
Property, plant and equipment are depreciated principally using the declining balance method over the estimated useful life of the asset. However, buildings acquired after March 31, 1998 and facilities attached to buildings and structures acquired after March 31, 2016 are depreciated using the straight-line method. The range of useful lives is principally from 3 to 60 years for buildings and structures and from 2 to 20 years for machinery, equipment and other. Maintenance and repairs, including minor renewals and improvements, are charged to income as incurred.

Lease assets under finance leases in which the ownership of the lease assets is not transferred to the lessee are depreciated using the straight-line method over the lease term with an assumption of no residual value.

(8) Allowance for losses on sales contracts
For sales orders on hand at the balance sheet date for projects in which the estimated cost is expected to exceed the price of the order by a wide margin, an allowance for losses on sales contracts is recognized at the estimated aggregate amount.

(9) Allowance for guarantees on completed work
Allowance for guarantees on completed work is based on estimated amounts of expenditure in the warranty period after products are delivered.

(10) Provision for loss on liquidation of subsidiaries and associates
To prepare for the loss on liquidation of subsidiaries and associates, a provision is made based on the estimated amounts.

(11) Allowance for directors' retirement benefits
Directors are generally entitled to receive retirement benefits based on the Companies' internal rules. The Companies provide an allowance for directors' retirement benefits based on the amount that would be required if all directors retired at the balance sheet date.

(12) Net defined benefit liability
In calculating retirement benefit obligations, the method of attributing expected benefits to periods employs principally a benefit formula basis. Actuarial gains and losses are recognized in expenses using the straight-line method principally over 10 years commencing with the following period. Prior service costs are recognized in expenses using the straight-line method principally over 10 years.

(13) Revenue recognition
When the outcome of an individual contract can be estimated reliably, the domestic companies apply the percentage-of-completion method to work performed during the year, otherwise, the completed contract method is applied. The degree of completion, or the percentage of the contract performed during the period under review, is measured by the proportion of the cost incurred during the period to the estimated total cost.

(14) Income taxes
The Companies are subject to corporation tax, inhabitants tax and enterprise tax based on taxable income. The Companies recognize the tax effects of the temporary differences between the carrying amounts of assets and liabilities for tax and financial reporting. The provision for income taxes is computed based on the pretax income of each of the Companies, with certain required adjustments. The asset-liability approach is used to recognize deferred tax assets and liabilities for the expected future tax consequences of temporary differences.

The Companies have adopted the consolidated tax return system.
Application of tax effect accounting for the transition from the consolidated tax payment system to the group taxation system
Having regard to paragraph 3 of "Practical Solution on the Treatment of Tax Effect Accounting for the Transition from the Consolidated Taxation System to the Group Tax Sharing System" (PITF No.39, March 31, 2020), the Company and its domestic consolidated subsidiaries did not follow paragraph 44 of "Implementation Guidance on Tax Effect Accounting" (ASBJ Guidance No. 28, February 16, 2018) but applied provisions of pre-amended tax laws when calculating the amounts of deferred tax assets and liabilities that relate to transitioning to the group taxation system and related amendments of tax laws for transitioning to the single tax payment system.

(15) Net income and cash dividends per share
Net income per share is computed based on the weighted average number of shares of common stock outstanding during each period. Diluted net income per share is computed with the assumption that all convertible bonds were converted into common stock at the beginning of each period. Cash dividends per share represent interim dividends declared by the Board of Directors during each year and year-end dividends approved by the shareholders at the annual meeting held subsequent to the end of the fiscal year.

(16) Derivatives and hedge accounting
The Companies generally state derivative financial instruments at fair value and recognize changes in the fair value as gains or losses unless the derivative financial instruments are used for hedging purposes. If derivative financial instruments are used as hedges and meet certain hedging criteria, the Companies generally defer recognition of gain or loss resulting from a change in the fair value of the derivative financial instrument until the related loss or gain on the hedged item is recognized.

The Companies use currency forward contracts to hedge accounts receivable and payable denominated in foreign currencies (mainly U.S. dollars) against the risk of fluctuation in exchange rates that comes from foreign currency transactions.
Certain foreign exchange contracts are subject to appropriation if they satisfy the requirements of appropriation treatment. Interest rate swaps that qualify for hedge accounting and meet specific matching criteria are not re-measured at market value.

(17) Reclassifications
Certain prior year amounts have been reclassified to conform to the 2020 presentation.

3. Accounting standards issued but not yet adopted

- "Accounting Standard for Revenue Recognition" (Accounting Standards Board of Japan Statement No. 29, March 30, 2020)
- "Implementation Guidance on Accounting Standard for Revenue Recognition" (Accounting Standards Board of Japan Guidance No. 30, March 30, 2020)

(1) Overview
This is a comprehensive accounting standard for revenue recognition. Revenue is recognized using the following five steps.
Step 1: Identify the contract with a customer.
Step 2: Identify the performance obligations in the contract.
Step 3: Determine the transaction price.
Step 4: Allocate the transaction price to the performance obligations in the contract.
Step 5: Recognize revenue when (or as) the reporting organization satisfies a performance obligation.

(2) Effective date
Effective from the beginning of the fiscal year ending March 31, 2022.

(3) Effects of application of the standard and guidance
The Company and its consolidated domestic subsidiaries are currently in the process of determining the effects of the standard and guidance on the consolidated financial statements.

4. Additional information

As Covid-19 has had no significant effect on the financial statements for the year ended March 31, 2020, it is assumed that there is no significant effect on the accounting estimates such as retrievability of deferred tax assets. If the virus were to have more influence on society and economy than ever, the consolidated financial statements for the next fiscal year would reflect the influence.

5. Cash and cash equivalents

Amounts of cash and cash equivalents as of March 31, 2020 and 2019 were reconciled with cash and time deposits as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Cash and time deposits	¥ 46,145	¥ 61,769	$ 424,015
Time deposits with maturities exceeding three months from the date of acquisition	(1,392)	(742)	(12,791)
Total cash and cash equivalents	¥ 44,753	¥ 61,027	$ 411,224

6. Inventories

Inventories were summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Merchandise and finished goods	¥ 1,003	¥ 816	$ 9,215
Work-in-process	2,048	2,087	18,824
Materials and supplies	1,630	1,453	14,975
Total inventories	¥ 4,681	¥ 4,356	$ 43,014

7. Financial instruments

(1) Status of financial instruments
(a) Financial instruments policy
Under Group policy, investments in financial instruments are limited primarily to short-term deposits and bank loans for raising funds. Derivative transactions are used to hedge risks of fluctuations in foreign exchange and interest rates.

(b) Financial instruments, risks and risk management structure
The Companies are working to reduce customer credit risk associated with notes and accounts receivable and operating receivables through customer based due dates and other balance controls in accordance with the Companies' regulations.
Investment securities consists mainly of stocks and are periodically checked for the fair value of the listed shares.
Notes and accounts payables, or operating payables, are due within one year.
Short-term financing is primarily for operating funds while long-term debt is for capital investment.

With floating rate loans, which are exposed to interest rate fluctuation risk, Group companies use derivative transactions (interest rate swaps) as a part of their long-term loans to hedge the risk of interest rate fluctuation on bank loans and to fix interest payments.

To cope with operating receivables and loans exposed to liquidity risk, each Group company prepares monthly cash-flow plans and enters into loan commitment agreements with several financial institutions for raising working capital flexibly and stably.

(c) Supplementary remarks on fair values of financial instruments
The fair values of financial instruments do not reflect the market risks concerning the derivative trading.

(2) Fair value of financial instruments
Amounts recognized on the consolidated balance sheets, fair values and any differences between them as of March 31, 2020 and 2019, except items for which no fair value was obtainable, were as follows:

(Cash and time deposits)
The fair value of cash and time deposits is based on relevant book value because they are mostly settled within a short period of time and the fair value is nearly equal to the book value.

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Amounts recognized on the consolidated balance sheets	¥ 46,145	¥ 61,769	$ 424,015
Fair value	46,145	61,769	424,015
Difference	¥ -	¥ -	$ -

(Notes and accounts receivable)
The fair value of notes and accounts receivable is based on the relevant book value because they are mostly settled within a short period of time and the fair value is nearly equal to the book value.

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Amounts recognized on the consolidated balance sheets	¥ 73,349	¥ 49,507	$ 673,978
Fair value	73,349	49,507	673,978
Difference	¥ -	¥ -	$ -

(Investment securities)
The fair value of stocks is based on stock exchange prices, and the fair values of bonds are based on stock exchange prices or prices provided by financial institutions.

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Amounts recognized on the consolidated balance sheets	¥ 13,579	¥ 14,943	$ 124,775
Fair value	13,579	14,943	124,775
Difference	¥ -	¥ -	$ -

(Notes and accounts payable)
The fair value of notes and accounts payable is based on the relevant book value because they are mostly settled within a short period of time and the fair value is nearly equal to the book value.

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Amounts recognized on the consolidated balance sheets	¥ 29,276	¥ 37,869	$ 269,008
Fair value	29,276	37,869	269,008
Difference	¥ -	¥ -	$ -

(Electronically recorded obligations)
The fair value of electronically recorded obligations is based on the relevant book value because they are mostly settled within a short period of time and the fair value is nearly equal to the book value.

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Amounts recognized on the consolidated balance sheets	¥ 14,681	¥ 15,942	$ 134,895
Fair value	14,681	15,942	134,895
Difference	¥ -	¥ -	$ -

(Accrued income taxes)
The fair value of accrued income taxes is based on the relevant book value because they are settled within a short period of time and the fair value is nearly equal to the book value.

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Amounts recognized on the consolidated balance sheets	¥ 1,673	¥ 3,628	$ 15,374
Fair value	1,673	3,628	15,374
Difference	¥ -	¥ -	$ -

(Short-term loans payable)
The fair value of short-term loans payable is based on the relevant book value because they are settled within a short period of time and the fair value is nearly equal to the book value.

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Amounts recognized on the consolidated balance sheets	¥ 470	¥ 645	$ 4,319
Fair value	470	645	4,319
Difference	¥ -	¥ -	$ -

(Long-term debt)
The fair value of long-term debt is calculated by a method that discounts total principal plus interest by an assumed interest rate for a similar new loan. Short-term financing is primarily for operating funds, while long-term debt is for capital investment.

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Amounts recognized on the consolidated balance sheets	¥ 342	¥ 459	$ 3,144
Fair value	343	462	3,156
Difference	¥ 1	¥ 3	$ 12

Items for which no fair value was obtainable
(Non-listed equity securities)

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Amounts recognized on the consolidated balance sheets			
Equity securities issued by affiliates	¥ 1,814	¥ 3,811	$ 16,666
Other	236	195	2,169

(3) Redemption schedule of monetary assets with contractual maturities and repayment schedule of short-term loans payable and long-term debt

	Millions of yen					
As of March 31, 2020	Less than 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	More than 5 years
Cash and time deposits	¥ 46,145	¥ -	¥ -	¥ -	¥ -	¥ -
Notes and accounts receivable	53,573	19,639	137	-	-	-
Investment securities	-	-	-	-	-	800
Total	¥ 99,718	¥ 19,639	¥ 137	¥ -	¥ -	¥ 800
Short-term loans payable	¥ 470	¥ -	¥ -	¥ -	¥ -	¥ -
Long-term debt	80	182	80	-	-	-
Total	¥ 550	¥ 182	¥ 80	¥ -	¥ -	¥ -

	Millions of yen					
As of March 31, 2019	Less than 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	More than 5 years
Cash and time deposits	¥ 61,769	¥ -	¥ -	¥ -	¥ -	¥ -
Notes and accounts receivable	40,827	8,670	10	-	-	-
Investment securities	-	-	-	-	-	-
Total	¥ 102,596	¥ 8,670	¥ 10	¥ -	¥ -	¥ -
Short-term loans payable	¥ 645	¥ -	¥ -	¥ -	¥ -	¥ -
Long-term debt	117	80	182	80	-	-
Total	¥ 762	¥ 80	¥ 182	¥ 80	¥ -	¥ -

	Thousands of U.S. dollars					
As of March 31, 2020	Less than 1 year	1 to 2 years	2 to 3 years	3 to 4 years	4 to 5 years	More than 5 years
Cash and time deposits	$ 424,015	$ -	$ -	$ -	$ -	$ -
Notes and accounts receivable	492,264	180,457	1,257	-	-	-
Investment securities	-	-	-	-	-	7,351
Total	$ 916,279	$ 180,457	$ 1,257	$ -	$ -	$ 7,351
Short-term loans payable	$ 4,319	$ -	$ -	$ -	$ -	$ -
Long-term debt	735	1,674	735	-	-	-
Total	$ 5,054	$ 1,674	$ 735	$ -	$ -	$ -

8. Securities

(1) Acquisition costs and book values of available-for-sale securities with available fair values as of March 31, 2020 and 2019 were as follows:

	Millions of yen		
As of March 31, 2020	Acquisition cost	Book value	Difference
Securities with book values exceeding acquisition costs:			
Equity securities	¥ 5,030	¥ 10,888	¥ 5,858
Subtotal	5,030	10,888	5,858
Securities with book values not exceeding acquisition costs:			
Equity securities	2,294	1,899	(395)
Debt securities	828	792	(36)
Subtotal	3,122	2,691	(431)
Total	¥ 8,152	¥ 13,579	¥ 5,427

	Millions of yen		
As of March 31, 2019	Acquisition cost	Book value	Difference
Securities with book values exceeding acquisition costs:			
Equity securities	¥ 6,417	¥ 14,319	¥ 7,902
Subtotal	6,417	14,319	7,902
Securities with book values not exceeding acquisition costs:			
Equity securities	759	624	(135)
Subtotal	759	624	(135)
Total	¥ 7,176	¥ 14,943	¥ 7,767

	Thousands of U.S. dollars		
As of March 31, 2020	Acquisition cost	Book value	Difference
Securities with book values exceeding acquisition costs:			
Equity securities	$ 46,219	$ 100,041	$ 53,822
Subtotal	46,219	100,041	53,822
Securities with book values not exceeding acquisition costs:			
Equity securities	21,080	17,449	(3,631)
Debt securities	7,611	7,285	(326)
Subtotal	28,691	24,734	(3,957)
Total	$ 74,910	$ 124,775	$ 49,865

(2) Available-for-sale securities sold for the years ended March 31, 2020 and 2019 were as follows:
Information on the available-for-sale securities sold for the year ended March 31, 2019 is not provided because there was no significant gain.

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Total sales amount	¥ 904	¥ -	$ 8,307
Gains	710	-	6,521

9. Pledged assets

The following assets were pledged to secure short-term loans payable, long-term debt, and contingent liabilities under guarantees for bank loans of affiliated companies and fulfillment of contracts as of March 31, 2020 and 2019:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Buildings and structures	¥ -	¥ 129	$ -
Machinery and equipment	-	24	-
Investment securities	150	150	1,378
Cash and time deposits	-	274	-
Time deposits as construction contract guarantees	63	86	584
Total	¥ 213	¥ 663	$ 1,962

10. Short-term loans payable and long-term debt

Short-term loans payable as of March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Secured	¥ -	¥ -	$ -
Unsecured	470	645	4,319
	¥ 470	¥ 645	$ 4,319

The current portion of long-term debt as of March 31, 2020 and 2019 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Secured	¥ -	¥ 37	$ -
Unsecured	80	80	735
	¥ 80	¥ 117	$ 735

Long-term debt as of March 31, 2020 and 2019 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Secured	¥ -	¥ -	$ -
Unsecured	262	342	2,409
	¥ 262	¥ 342	$ 2,409

The annual average interest rate applicable to bank loans at March 31, 2020 and 2019 was as follows:

	2020	2019
Short-term loans payable	0.8%	0.6%
Current portion of long-term debt	1.0%	2.0%
Long-term debt	3.3%	2.6%

11. Employees' retirement benefits

(1) Outline of adopted retirement benefit scheme
The Companies provide three types of post-employment benefit plans, unfunded lump-sum payment plans, funded non-contributory pension plans and defined contribution plans, under which all eligible employees are entitled to benefits based on the level of wages and salary at the time of retirement or termination, length of service and certain other factors.

(2) Defined benefit plans
Movement in retirement benefit obligations (except plans applying the simplified method) for the years ended March 31, 2020 and 2019 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Balance at April 1, 2019 and 2018	¥ 9,110	¥ 8,826	$ 83,708
Service cost	601	600	5,519
Interest cost	49	48	453
Actuarial loss (gain)	6	(4)	53
Benefits paid	(374)	(360)	(3,434)
Balance at March 31, 2020 and 2019	¥ 9,392	¥ 9,110	$ 86,299

Movement in net defined benefit liability of plans applying the simplified method for the years ended March 31, 2020 and 2019 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Balance at April 1, 2019 and 2018	¥ 636	¥ 580	$ 5,843
Retirement benefit costs	88	102	809
Contributions paid by the employer	(24)	(22)	(222)
Benefits paid	(37)	(35)	(340)
Other	2	11	23
Balance at March 31, 2020 and 2019	¥ 665	¥ 636	$ 6,113

Reconciliation from retirement benefit obligations and plan assets to net defined benefit liability as of March 31, 2020 and 2019 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Funded retirement benefit obligations	¥ 597	¥ 589	$ 5,486
Plan assets	(426)	(414)	(3,913)
	171	175	1,573
Unfunded retirement benefit obligations	9,886	9,571	90,839
Total net defined benefit liability (asset) at March 31, 2020 and 2019	10,057	9,746	92,412
Net defined benefit liability	10,111	9,746	92,906
Net defined benefit asset	(54)	-	(494)
Total net defined benefit liability (asset) at March 31, 2020 and 2019	¥ 10,057	¥ 9,746	$ 92,412

Retirement benefit costs for the years ended March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Service cost	¥ 601	¥ 600	$ 5,519
Interest cost	49	48	453
Amortization of actuarial differences	138	139	1,272
Amortization of prior service cost	(4)	(4)	(36)
Retirement benefit costs based on the simplified method	88	102	809
Total retirement benefit costs for the fiscal years ended March 31, 2020 and 2019	¥ 872	¥ 885	$ 8,017

Remeasurements of defined benefit plans for the years ended March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Prior service costs	¥ (4)	¥ (4)	$ (35)
Actuarial gains and losses	133	143	1,219
Total remeasurements of defined benefit plans for the fiscal years ended March 31, 2020 and 2019	¥ 129	¥ 139	$ 1,184

Accumulated remeasurements of defined benefit plans as of March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Prior service costs yet to be recognized	¥ 2	¥ 6	$ 18
Actuarial gains and losses yet to be recognized	(540)	(673)	(4,961)
Total balance at March 31, 2020 and 2019	¥ (538)	¥ (667)	$ (4,943)

The principal actuarial assumptions at March 31, 2020 and 2019 were as follows:

	2020	2019
Discount rate	principally 0.64%	principally 0.64%
Expected rate of salary increase	principally 6.8%	principally 6.7%

(3) Defined contribution plan
The amount of contribution required for the defined contribution plans of the Companies for the years ended March 31, 2020 and 2019 was ¥139 million ($1,277 thousand) and ¥135 million, respectively.

12. Contingent liabilities

The Companies were contingently liable under guarantees for bank loans of affiliated companies and other companies as of March 31, 2020 and 2019 as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Unsecured	¥ 179	¥ 209	$ 1643

13. Net assets

Under Japanese laws and regulations, the entire amount paid for new shares is required to be designated as common stock. However, a company may, by a resolution of the Board of Directors, designate an amount not exceeding one half of the price of the new shares as additional paid-in capital, which is included in capital surplus.

Under the Japanese Corporate Law (the "Law"), in cases in which a dividend distribution of surplus is made, the smaller of an amount equal to 10% of the dividend or the excess, if any, of 25% of common stock over the total of additional paid-in capital and legal earnings reserve must be set aside as additional paid-in capital or legal earnings reserve. Legal earnings reserve is included in retained earnings in the accompanying consolidated balance sheets.

Under the Law, legal earnings reserve and additional paid-in capital can be used to eliminate or reduce a deficit or be capitalized by a resolution of the shareholders' meeting.

Additional paid-in capital and legal earnings reserve may not be distributed as dividends. Under the Law, all additional paid-in capital and all legal earnings reserve may be transferred to other capital surplus and retained earnings, respectively, which are potentially available for dividends.

The maximum amount that the Company can distribute as dividends is calculated based on the nonconsolidated financial statements of the Company in accordance with Japanese laws and regulations.

The appropriation of retained earnings with respect to a given financial year is made by resolution of the shareholders at a general meeting held subsequent to the close of such financial year. The accounts for that year do not, therefore, reflect such appropriations.

14. Provision for losses on sales contracts

Provision for losses on sales contracts included in cost of sales for the years ended March 31, 2020 and 2019 was as follows:

Millions of yen		Thousands of U.S. dollars
2020	2019	2020
¥ 2,199	¥ 1,400	$ 20,204

15. Research and development expenses

Research and development expenses are charged to income as incurred. Such expenses included in cost of sales and selling, general and administrative expenses for the years ended March 31, 2020 and 2019 were as follows:

Millions of yen		Thousands of U.S. dollars
2020	2019	2020
¥ 1,154	¥ 961	$ 10,605

16. Income taxes

The Companies are subject to a number of taxes based on income, which, in the aggregate, indicated a statutory rate in Japan of approximately 30.6% for the years ended March 31, 2020 and 2019.

The significant differences between the statutory tax rate and the Companies' effective tax rate for financial statement purposes were set forth in the table below.

	2020	2019
Statutory tax rate	30.6%	30.6%
Nondeductible expenses	2.0	1.7
Dividend income	(1.4)	(0.5)
Equity in earnings of affiliated companies	(0.7)	(1.3)
Council tax	0.7	0.6
Tax credits	(1.8)	(2.3)
Valuation allowance	(4.7)	(1.7)
Change in scope of consolidation	-	(10.0)
Other	2.1	2.3
The Companies' effective tax rate	26.8%	19.6%

Components of the Companies' deferred tax assets and liabilities as of March 31, 2020 and 2019 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Deferred tax assets:			
Net defined benefit liability	¥ 3,084	¥ 2,985	$ 28,338
Allowance for doubtful accounts	1,891	1,844	17,380
Accrued cost of sales	1,424	1,553	13,082
Other	4,959	4,736	45,564
Total deferred tax assets	11,358	11,118	104,364
Valuation allowance	(3,040)	(3,788)	(27,937)
Net deferred tax assets	¥ 8,318	¥ 7,330	$ 76,427
Deferred tax liabilities:			
Unrealized gains on securities	¥ (1,649)	¥ (2,363)	$ (15,147)
Valuation difference in land of consolidated subsidiary	-	(140)	-
Other	(176)	(180)	(1,618)
Total deferred tax liabilities	(1,825)	(2,683)	(16,765)
Net deferred tax assets	¥ 6,493	¥ 4,647	$ 59,662

The main change in the valuation allowance is the decrease in the valuation allowance related to the less allowance for doubtful accounts.

17. Comprehensive income

Amounts reclassified to net income in the current period that were recognized in other comprehensive income in the current or previous periods and the tax effects for each component of other comprehensive income were as follows:

	Millions of yen		Thousands of U.S. dollars
	2020	2019	2020
Unrealized gains on securities			
Increase (decrease) during the year	¥ (1,672)	¥ (2,552)	$ (15,363)
Reclassification adjustments	(668)	(0)	(6,139)
Subtotal, before tax	(2,340)	(2,552)	(21,502)
Tax (expense) or benefit	715	780	6,568
Subtotal, net of tax	¥ (1,625)	¥ (1,772)	$ (14,934)
Deferred gains and losses on hedges			
Increase (decrease) during the year	¥ (7)	¥ 82	$ (60)
Reclassification adjustments	-	-	-
Subtotal, before tax	(7)	82	(60)
Tax (expense) or benefit	2	(24)	19
Subtotal, net of tax	¥ (5)	¥ 58	$ (41)
Foreign currency translation adjustments			
Increase (decrease) during the year	¥ 5	¥ (9)	$ 42
Reclassification adjustments	-	-	-
Subtotal, before tax	5	(9)	42
Tax (expense) or benefit	-	-	-
Subtotal, net of tax	¥ 5	¥ (9)	$ 42
Remeasurements of defined benefit plans			
Increase (decrease) during the year	¥ (6)	¥ 4	$ (53)
Reclassification adjustments	135	135	1,237
Subtotal, before tax	129	139	1,184
Tax (expense) or benefit	(40)	(43)	(362)
Subtotal, net of tax	¥ 89	¥ 96	$ 822
Total other comprehensive income	¥ (1,536)	¥ (1,627)	$ (14,111)

18. Segment information

(Supplemental information - Accounting Standard for Disclosures about Segments of an Enterprise and Related Information)

(1) General information about reportable segments
In the Group, businesses for which separate financial information is available are grouped into the following four reporting segments in accordance with the similarity of products and services of the respective business. The results of each reporting segment are reviewed periodically by the Board of Directors to assess the segment's business performance.

Domestic Environment and Energy Business
General waste treatment plants, industrial waste treatment plants, waste recycling plants, wastewater treatment plants, sludge combustion plants, biomass power plants and gas-turbine cogeneration systems

Overseas Environment and Energy Business
Waste combusting power plants and biomass power plants

Package Boiler Business
Compact through-flow boilers and vacuum water heating systems

Equipment and System Business
Construction equipment, equipment for semi-conductor industry and cleaning systems

(2) Basis of measurement about reported segment profit or loss and other material items
Accounting methods used for reporting segments are the same those explained in the Note 2, “Summary of significant accounting policies.”

Profits of reporting units are operating income. Internal revenue and transfers between reporting segments are recorded using prevailing market prices.

(3) Information about reported segment profit or loss and other material items
Reportable segment information for the years ended March 31, 2020 and 2019 was as follows:

	Millions of yen						
Year ended March 31, 2020	Domestic Environment and Energy	Overseas Environment and Energy	Package Boiler	Equipment and System Business	Total	Adjustment	Consolidated
Sales:							
Outside customers	¥ 107,898	¥ 1,127	¥ 17,822	¥ 7,607	¥ 134,454	¥ -	¥ 134,454
Intersegment	226	16	47	233	522	(522)	-
Total	108,124	1,143	17,869	7,840	134,976	(522)	134,454
Reportable segment income (loss)	¥ 10,619	¥ (202)	¥ 966	¥ 384	¥ 11,767	¥ (2,167)	¥ 9,600
Others:							
Depreciation	¥ 731	¥ 5	¥ 154	¥ 21	¥ 911	¥ 6	¥ 917

	Millions of yen						
Year ended March 31, 2019	Domestic Environment and Energy	Overseas Environment and Energy	Package Boiler	Equipment and System Business	Total	Adjustment	Consolidated
Sales:							
Outside customers	¥ 93,558	¥ 3,057	¥ 16,868	¥ 8,468	¥ 121,951	¥ -	¥ 121,951
Intersegment	166	-	87	368	621	(621)	-
Total	93,724	3,057	16,955	8,836	122,572	(621)	121,951
Reportable segment income	¥ 12,405	¥ 164	¥ 905	¥ 362	¥ 13,836	¥ (2,232)	¥ 11,604
Others:							
Depreciation	¥ 574	¥ 10	¥ 159	¥ 20	¥ 763	¥ 35	¥ 798

	Thousands of U.S. dollars						
Year ended March 31, 2020	Domestic Environment and Energy	Overseas Environment and Energy	Package Boiler	Equipment and System Business	Total	Adjustment	Consolidated
Sales:							
Outside customers	$ 991,441	$ 10,354	$ 163,757	$ 69,901	$1,235,453	$ -	$1,235,453
Intersegment	2,069	151	433	2,139	4,792	(4,792)	-
Total	993,510	10,505	164,190	72,040	1,240,245	(4,792)	1,235,453
Reportable segment income (loss)	$ 97,579	$ (1,860)	$ 8,877	$ 3,531	$ 108,127	$ (19,912)	$ 88,215
Others:							
Depreciation	$ 6,714	$ 47	$ 1,412	$ 194	$ 8,367	$ 60	$ 8,427

Adjustments in reportable segment income (loss) include eliminations of transactions between segments and corporate expenses not allocated to reportable segment expenses, including selling, general and administrative expenses not attributable to reportable segments.

Total reportable segment income is adjusted with operating income reported on the Consolidated Statements of Operations.

Disclosure of information related to segment assets is omitted since assets are not allocated to business segments.

(Related information)
Reportable segment information for the years ended March 31, 2020 and 2019 was as follows:
(1) Information about products and services
Disclosure of this information is omitted since similar information is disclosed in Note 18, “Segment information.”

(2) Information about geographic areas
Revenues
Since over 90% of net sales reported on the Consolidated Statements of Operations were sales to outside customers within Japan, disclosure of this information is omitted.
Tangible fixed assets
Since 90% of tangible noncurrent assets reported on the consolidated balance sheet (in terms of values) were located within Japan, disclosure of this information is omitted.

(3) Information about major customers
Since no outside customer accounted for 10% or more of net sales reported on the income statement, disclosure of this information is omitted.

(Information related to noncurrent asset impairment loss by reporting segment)
Not applicable

(Information related to amortization and unamortized balance of goodwill)
Not applicable

(Information related to gain on negative goodwill by reporting segment)
Not applicable

KPMG

Independent auditor's report

To the Board of Directors of TAKUMA CO., LTD.:

Opinion

We have audited the accompanying consolidated financial statements of TAKUMA CO., LTD. and its consolidated subsidiaries (collectively referred to as “the Group"), which comprise the consolidated balance sheets as at March 31, 2020 and 2019, the consolidated statements of operations, statements of comprehensive income, statements of changes in net assets and statements of cash flows for the years then ended, and notes, comprising a summary of significant accounting policies, other explanatory information.

In our opinion, the accompanying consolidated financial statements present fairly, in all material respects, the consolidated financial position of the Group as at March 31, 2020 and 2019, and its consolidated financial performance and cash flows for the years then ended in accordance with accounting principles generally accepted in Japan.

Basis for Opinion

We conducted our audit in accordance with auditing standards generally accepted in Japan. Our responsibilities under those standards are further described in the *Auditor's Responsibilities for the Audit of the Consolidated Financial Statements* section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the consolidated financial statements in Japan, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Responsibilities of Management and the Audit and supervisory committee for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of the consolidated financial statements in accordance with accounting principles generally accepted in Japan, and for such internal control as management determines is necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern in accordance with accounting principles generally accepted in Japan and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The audit and supervisory committee is responsible for overseeing the directors' performance of their duties including the design, implementation and maintenance of the Group's financial reporting process.

Auditor's Responsibilities for the Audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with auditing standards generally accepted in Japan will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements.

As part of our audit in accordance with auditing standards generally accepted in Japan, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the consolidated financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, while the objective of the audit is not to express an opinion on the effectiveness of the Group's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.
- Conclude on the appropriateness of management's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the consolidated financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to continue as a going concern.
- Evaluate whether the presentation and disclosures in the consolidated financial statements are in accordance with accounting standards generally accepted in Japan, the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express an opinion on the consolidated financial statements. We are responsible for the direction, supervision and performance of the group audit. We remain solely responsible for our audit opinion.

We communicate with the audit and supervisory committee regarding, among other matters, the planned scope and timing of the audit, significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide the audit and supervisory committee with a statement that we have complied with relevant ethical requirements regarding independence, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

Convenience Translation

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2020 are presented solely for convenience. Our audit also included the translation of yen amounts into U.S. dollar amounts and, in our opinion, such translation has been made on the basis described in Note 1 to the consolidated financial statements.

Interest required to be disclosed by the Certified Public Accountants Act of Japan

We do not have any interest in the Group which is required to be disclosed pursuant to the provisions of the Certified Public Accountants Act of Japan.

黒木 賢一郎

Kenichiro Kuroki

Designated Engagement Partner

Certified Public Accountant

大橋 正嗣

Masatsugu Ohashi

Designated Engagement Partner

Certified Public Accountant

KPMG AZSA LLC

Osaka Office, Japan

June 25, 2020

TAKUMA CO., LTD.

This publication features an environmentally friendly,
universal design that is made possible by the following initiatives and programs:

■Printing

Printed using “waterless printing,” which does not generate hazardous waste.

Printed using environmentally friendly vegetable oil ink.

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■Paper

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■Fonts

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