

2018
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 provide that 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 recycling-oriented society using advanced waste treatment technologies that meet the needs of local communities.

- Energy from Waste plant
- Pyrolysis gasification and melting plant
- Resource recycling and collection plant
- Bulky garbage crushing plant
- Incineration ash and fly ash melting plant
- Waste to solid fuel conversion plant
- Transition and intermediate processing plant
- Raw fuel (biogas) recovery plant
- Various types of pollution prevention equipment



Energy from Waste plant



Bulky garbage crushing plant

Energy plants

Takuma's core technologies are utilized in various types of boilers, starting with biomass boilers, as well as total systems.

- Biomass boiler
- Fossil fuel boiler
- Waste heat boiler
- Power plant



Biomass power generation boiler



Waste heat boiler

Industrial waste treatment plants

Using advanced incineration technologies, we can even treat toxic substances suitably and we are supporting the environmental protection efforts of industry.

- Industrial waste treatment plant



Industrial waste treatment plant



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

Water treatment plants

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

- Sewage and wastewater treatment plant
- Various types of advanced sewage treatment plant
- Sludge treatment plant
- Sewage sludge-fueled power plant
- Plant to process water that infiltrates final disposal sites



Upflow moving-bed filtration system



Sewage sludge-fueled power plant

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.

- Once-through boiler (EQOS, Super EQOS)
- Vacuum-type water heater (Vacotin Heater)
- Package water-tube boiler
- Smoke tube boiler (RE Boiler)
- Heat-transfer oil boiler (Thermoheater)
- Radiation heating equipment (Strip Heater)
- Various equipment for ships



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

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 room
- Clean devices
- Chemical filters



Chemical filters

Clean oven

Clean booths

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Financial Highlights

► Trend in Principal Management Indicators and Other Financial Data

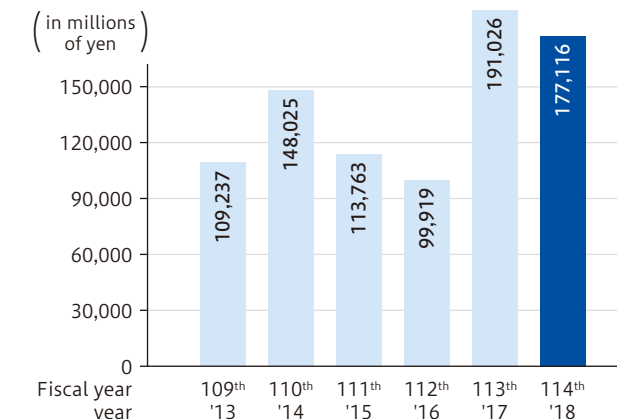
Fiscal year	109 th (Millions of yen)	110 th (Millions of yen)	111 th (Millions of yen)	112 th (Millions of yen)	113 th (Millions of yen)	114 th (Millions of yen)	114 th (Thousands of U.S. dollars)
End of fiscal year	March 2013	March 2014	March 2015	March 2016	March 2017	March 2018	March 2018
Net sales	¥ 96,384	¥ 96,334	¥ 103,875	¥ 113,088	¥ 116,309	¥ 118,199	\$ 1,112,562
Operating income	¥ 6,241	¥ 8,424	¥ 8,223	¥ 9,189	¥ 10,974	¥ 10,030	\$ 94,408
Ordinary profit	¥ 7,168	¥ 9,449	¥ 9,116	¥ 9,646	¥ 11,606	¥ 10,670	\$ 100,433
Profit attributable to owners of parent	¥ 6,145	¥ 8,835	¥ 8,030	¥ 7,817	¥ 8,551	¥ 7,847	\$ 73,865
Comprehensive income	¥ 6,712	¥ 9,935	¥ 9,398	¥ 7,149	¥ 9,937	¥ 10,177	\$ 95,797
Net assets	¥ 34,653	¥ 43,889	¥ 52,516	¥ 58,809	¥ 67,727	¥ 76,726	\$ 722,193
Total assets	¥ 106,754	¥ 108,520	¥ 123,127	¥ 132,614	¥ 140,201	¥ 151,862	\$ 1,429,420
Net assets per share (JPY or USD)	¥ 415.92	¥ 527.50	¥ 631.53	¥ 708.18	¥ 815.77	¥ 924.25	\$ 8.70
Net income per share (JPY or USD)	¥ 74.32	¥ 106.86	¥ 97.12	¥ 94.55	¥ 103.43	¥ 94.93	\$ 0.89
Diluted net income per share (JPY or USD)	-	-	-	-	-	-	-
Capital adequacy ratio (%)	32.2	40.2	42.4	44.1	48.1	50.3	50.3
Return on equity (%)	19.7	22.7	16.8	14.1	13.6	10.9	10.9
Price-to-earnings ratio	7.4	6.9	9.7	10.7	10.5	12.3	12.3
Cash flows from operating activities	¥ 17,465	¥ 8,270	¥ 21,727	¥ 6,728	¥ 9,590	¥ 5,141	\$ 48,388
Cash flows from investing activities	¥ (59)	¥ (1,430)	¥ (160)	¥ (445)	¥ 143	¥ (328)	\$ (3,088)
Cash flows from financing activities	¥ (8,887)	¥ (5,867)	¥ (3,707)	¥ (2,900)	¥ (1,787)	¥ (1,670)	\$ (15,720)
End-of-year balance of cash and cash equivalents	¥ 26,005	¥ 27,030	¥ 45,008	¥ 48,335	¥ 57,132	¥ 60,283	\$ 567,425
Number of employees	3,288	3,315	3,266	3,366	3,447	3,609	3,609

Note:

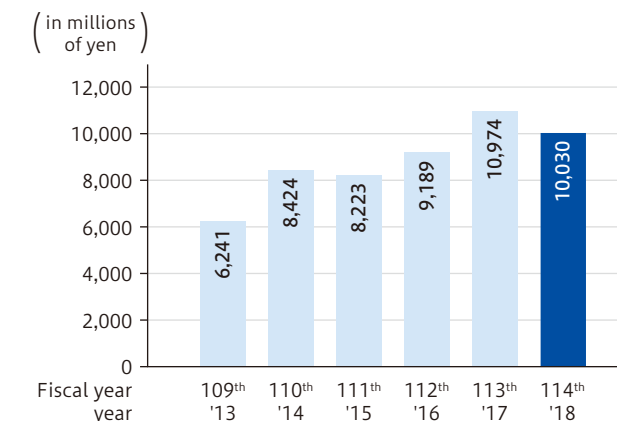
1. U.S. dollar amounts are shown solely for the convenience of readers and are translated at the rate of ¥106.24 to U.S.\$1.00, the exchange rate prevailing at March 31, 2018.
2. Ordinary profit is a measure of accounting profit that equals operating income plus other income minus other expenses, except for extraordinary items under Japanese GAAP.

► Trend in Principal Management Indicators

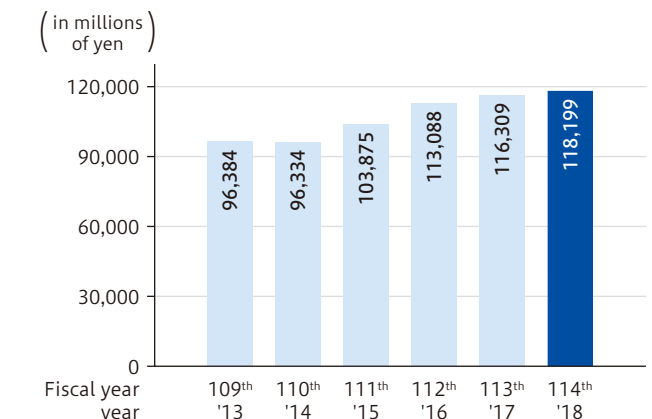
● Value of orders received



● Operating income

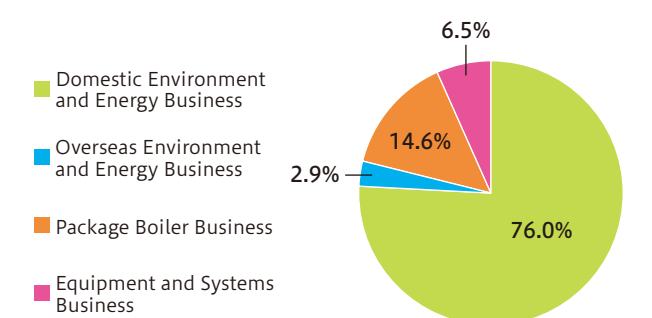


● Net sales



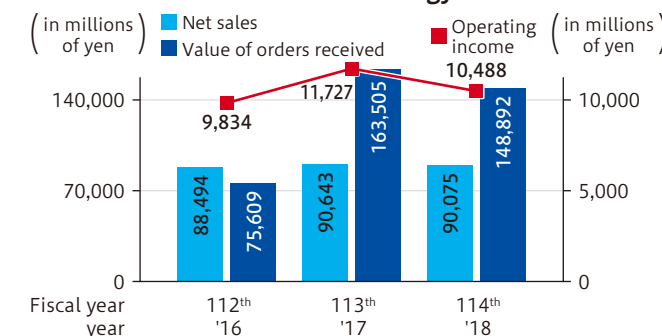
● Net sales composition ratios

(FY2017)

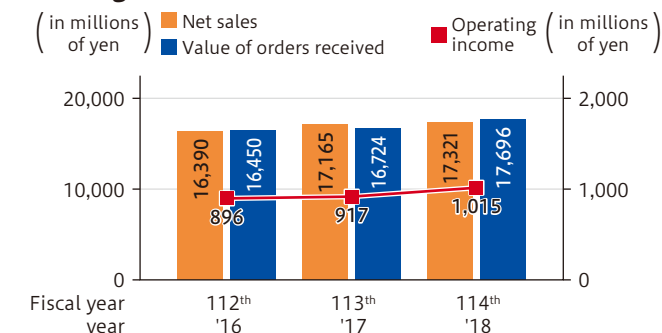


► Trend by Segment

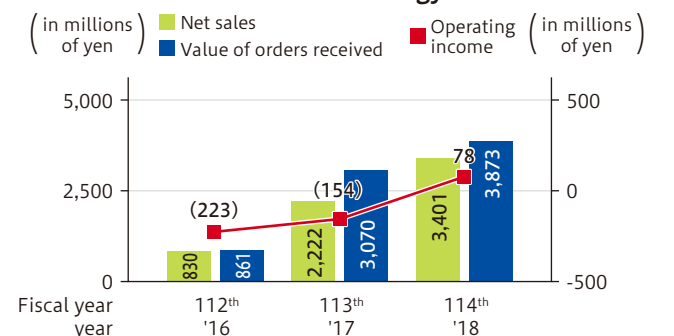
● Domestic Environment and Energy Business



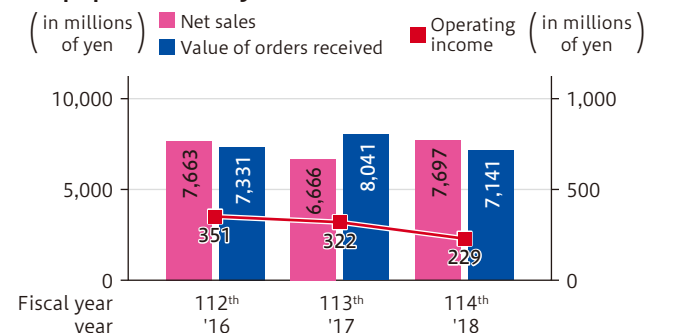
● Package Boiler Business



● Overseas Environment and Energy Business



● Equipment and Systems Business



Message from Top Management

We are working to achieve sustained growth together with society through the policies outlined by our new Medium-Term Management Plan.



In the corporate vision adopted in 2012, the Takuma Group embraced the goal of continuing to play an essential role for society as a leading company in the utilization of renewable energy and in the field of environmental protection and of achieving ordinary profit of JPY 10.0 billion in FY2020. Under our 11th Medium-Term Management Plan (FY2015 to FY2017), which identified the realization of sustained growth as a top priority, we worked to expand our businesses in terms of both quality and quantity in order to achieve that corporate vision through the six policies set forth in the plan, including maintaining and expanding our market position in the EPC* business and expanding businesses that generate base profits.

In our EPC business, we firmly harnessed robust demand to drive orders, allowing us to secure a certain position in the various markets we serve while building a foothold to expand that position by capturing orders for multiple large biomass power plants and sludge-fueled power plants. In businesses that generate base profits, we pursued initiatives to expand those profits in an effort to maintain and increase profitability, for example by developing a business foundation and strengthening our maintenance capabilities. As the result of these initiatives, we were able to steadily expand our business in terms of both quality and quantity, and to achieve our targets for consolidated order value and consolidated ordinary profit under our quantitative plan.

*EPC business: A business in which Takuma offers turnkey service extending from plant design to procurement and construction.

About the new Medium-Term Management Plan

This April, the Group embarked on the 12th Medium-Term Management Plan (FY2018 to FY2020), which embodies the final stage of its current medium- and long-term vision (corporate vision). Although we expect demand to remain robust during the years covered by the plan, we also anticipate that the business environment will undergo major changes as Japanese policy and social structure continue to evolve over the medium and long term. The plan identifies five policies to boost the Group's strength so that we can achieve our corporate vision and subsequently realize steady growth in light of the future changes we expect to see in the business environment.

The first policy is to strengthen and expand our revenue foundation. The Group's products—that is, waste treatment plants, water treatment plants, and boiler plants—serve as social infrastructure and as a base for companies' business activities. Most products remain in use for a long time following their delivery to customers, often 20 or 30 years, and our ability to provide sustained, high-quality after-sales service to ensure that those products function longer and more effectively contributes to our customers' profits as well as our own, providing a basis for stable, long-term profits. By supplying high-quality solutions throughout the plant and product life cycle in order to precisely meet customers' diversifying needs, we will work to further strengthen and enhance our revenue base.

The second policy is to achieve sustained growth. Over the approximately 80 years since its founding, the Group has supplied products built around a core of technology that have earned recognition for their high value, giving it an essential role in society. Drawing on strengths including the technology, track record, experience, and expertise accumulated through our business activities to date, we will achieve sustained growth by continuing to develop unique technologies, services, and business models; creating value for customers; and securing and creating competitive advantages by rapidly accommodating changes in the business environment, for example in the form of evolving needs and the emergence of new social issues.

The third policy is to increase productivity, for example by reforming business processes. The Group's businesses are changing dramatically in response to changes in the business environment, including structural changes such as the aging and shrinking of Japan's population and a tendency for customers' needs and social issues to become more sophisticated and diverse. To address these changes, we will seek to more effectively utilize human resources and to provide higher value to customers by boosting productivity by radically reviewing and rebuilding business processes that have become more complex and focusing on higher-added-value operations.

The fourth policy is to use human resources more effectively. In addition to hiring and training the more diverse workforce that will be essential for the future development of our businesses, we will work to put in place an environment that allows each and every employee to do their jobs in an energetic and engaged manner so that they can take full advantage of their skills and abilities.

The fifth policy is to continue to pursue compliance management. The Group has consistently considered compliance to be a key basis for corporate activities, and the last several Medium-Term Business Plans have included policies that address this area in an effort to ensure the penetration and implementation of associated measures. A sustained program of awareness-raising and educational activities has helped compliance awareness to take root throughout our organization, and we will continue to pursue improvements so the trust that our quality and other accomplishments inspires will remain unshaken. In addition, we will work to ensure that enhanced awareness of the importance of compliance permeates the company even more deeply by effectively implementing and utilizing mechanisms such as our in-house reporting system and CSR awareness questionnaire survey.

Responsible corporate management

Through the current Medium-Term Management Plan the Group is working to build business and management platforms that will be resistant to future changes in the business environment. In order for us to achieve those priorities, I believe that it will be important for us to live up to the trust placed in us by all stakeholders, including customers, shareholders and investors, business partners, employees, and local communities, in a spirit of good faith. To that end, we will work aggressively to implement corporate governance, compliance, and risk management in a way that serves as a basis for our corporate activities going forward.



Message from Top Management

Achieving sustained growth together with society

Takuma has been a signatory to the United Nations Global Compact since 2006, and we support its 10 fundamental principles in the 4 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 the greenhouse gas carbon dioxide through high-efficiency generation of electricity using waste and biomass.



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. Reference: UN Global Compact <http://www.unglobalcompact.org/>



July 2018

Takaaki Kato
President and CEO
Takuma Co., Ltd.

Takaaki Kato

Sustainable Development Goals (SDGs)

The Sustainable Development Goals (SDGs) are a series of international goals covering the time period of 2016 to 2030 as described in “Transforming Our World: The 2030 Agenda for Sustainable Development,” which was adopted at a UN summit in September 2015. The SDGs were intended to pick up where the Millennium Development Goals (MDGs), which were formulated in 2001, left off. They consist of 169 targets organized around 17 goals for achieving a sustainable world, built around the pledge of leaving no one behind. Intended to be implemented not only by developing nations, but also by advanced nations, they are universal in scope, and Japan is working actively to implement them.

Takuma, too, is working to further progress toward the SDGs through its business activities. (The “Introduction to Takuma’s Businesses” section on pages 23 to 34 of this report includes icons representing the SDGs that are related to each business.)

Sustainable Development Goals
17 GOALS TO TRANSFORM OUR WORLD



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 “Service to the nation through boiler manufacturing,”* which in present-day language means “contribution to society by supplying goods and services that we yield.” 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.

* Service to the nation 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).

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 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 organizations, which may pose a threat to the social order and security of civil society.
- 4. We shall respect fundamental human rights and never practice discrimination.
- 5. We shall strive to provide high quality products and services, based on our advanced technologies, to attain high acclaim and confidence from our customers.
- 6. We shall strive to disclose corporate information to shareholders and investors through investor relations (IR) and other activities on a timely and equitable basis.
- 7. We shall strive to protect corporate properties as well as information, while never using either for improprieties or any unjustifiable purpose other than normal business operations.

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, personal quality, and privacy
- 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. Transmission of corporate information
- 15. Ensuring reliability of financial reporting
- 16. Prohibition of insider trading

Protection of corporate properties and information

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

1. Reflections on the 11th Medium-Term Management Plan

1 Initiatives to implement policies

► Initiatives of the 11th Medium-Term Management Plan (2015 to 2017)

- Theme

Build upon our previous results to further improve our business in terms of both quantity and quality in order to achieve sustained growth.
- Policies

Maintenance and expansion of market position in the EPC business

Expansion of businesses that generate base profits

Initiatives that target growth markets

Further enhancement of the company's financial strength

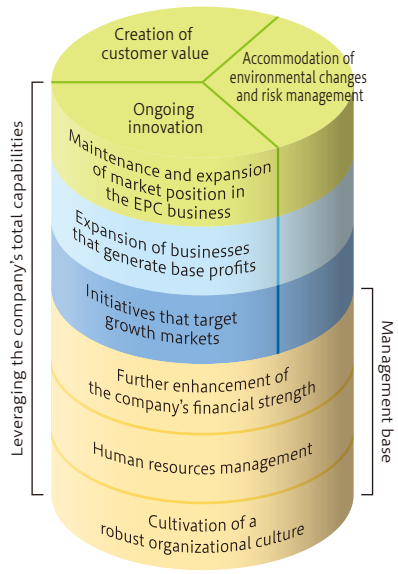
Human resources management

Cultivation of a robust organizational culture
- Perspectives

Creation of customer value

Ongoing innovation

Accommodation of environmental changes and risk management



► Results and issues

- In our EPC business, we established a certain position in the markets we serve by steadily harnessing robust demand to drive orders.
- We built a foothold to expand our presence by capturing orders for multiple large biomass power plants and sludge-fueled power plants.
- Businesses that generate base profits allowed us to generally achieve the profit targets outlined in the plan, contributing to stable consolidated earnings.
- Preparing a stage for overseas expansion and developing human resources continue to be important issues.
- We maintained a certain level of equity ratio thanks to continued profitability.
- Efforts to secure adequate manpower, for example through midcareer hires, as a way to accommodate growth in orders faced difficulty due to a shortage of workers. Tight labor conditions persisted.
- Compliance and CSR awareness spread throughout the Group thanks to ongoing initiatives.



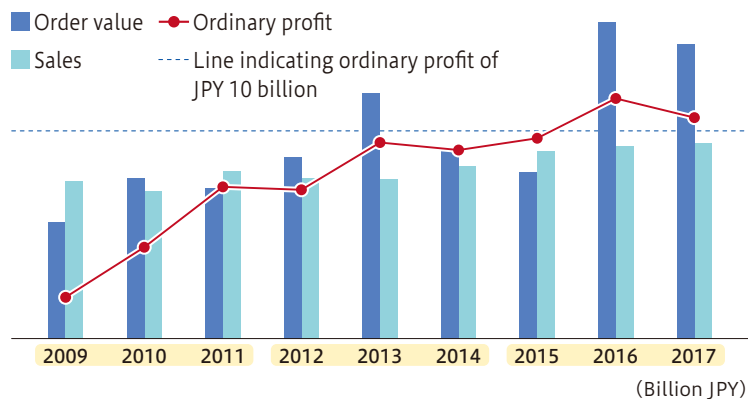
Biomass Power Plant



Sewage Sludge-Fueled Power Plant

2 Quantitative results

- Business volume expanded steadily against a backdrop of robust demand. Order value significantly exceeded the plan, while the order backlog grew to the JPY 200 billion level.
- In terms of quality, we achieved the level of profit outlined in the plan and made smooth progress toward our goal of reaching ordinary profit of JPY 10 billion in FY2020.



	9 th Medium-Term Management Plan results (2009 to 2011)	10 th Medium-Term Management Plan results (2012 to 2014)	11 th Medium-Term Management Plan results				11 th Medium-Term Management Plan targets
			2015	2016	2017	Total	
Order value	257.8	371.0	99.9	191.0	177.1	468.0	400.0
Sales	285.2	296.5	113.0	116.3	118.1	347.5	360.0
Ordinary profit	13.7	25.7	9.6	11.6	10.6	31.9	27.0
Order backlog	78.1	152.5	139.4	214.1	273.0	—	—

*Order backlog figures are provided for the last year of each Medium-Term Management Plan and for the end of each fiscal year.

2. Business Environment

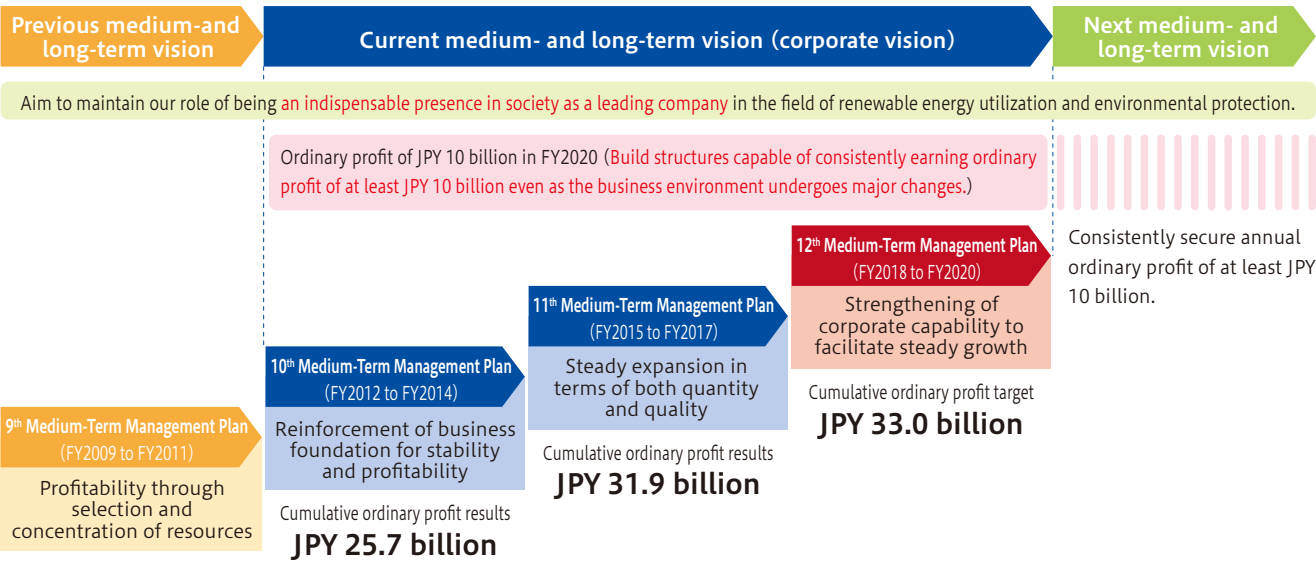
- We expect to see continued robust demand in the Group's principal business domains.
- At the same time, the business environment is expected to undergo major changes over the medium and long term, including changes in demand in response to evolving national policies and the structure of society, increased reliance on comprehensive contracts due to a trend to outsource government services, and increasing sophistication and diversity in customer needs.

	Current 3-year period (12 th Medium-Term Management Plan)	Future (medium and long term)
Waste treatment plants (Japan)	<ul style="list-style-type: none">•Renewal and service life elongation demand will continue as facilities age.•There will continue to be demand for more efficient energy use and additional functionality (development of disaster prevention and peripheral facilities, etc.).•Comprehensive contracts for plant operation, for example in the form of DBO and O&M arrangements, will become more common.	<ul style="list-style-type: none">•Renewal and service life elongation demand will eventually fall off.•The market will contract due to the aging and shrinking of Japan's population.•The trend to outsource government services (by making use of the private sector) will gain momentum.
Water treatment plants (Japan)	<ul style="list-style-type: none">•Renewal demand will increase as sewage treatment plants age.•Demand for converting sewage sludge into energy will grow.•PPP arrangement (that make use of the private sector) will be embraced by the sewer industry.	<ul style="list-style-type: none">•Comprehensive contracts for plant construction and operation, such as PPP/PFI arrangements, will become more common.•There will continue to be demand for energy conservation, energy creation, and resource use.
Boiler plants (Japan)	<ul style="list-style-type: none">•There will continue to be demand from FIT projects.•The number of plants targeted for maintenance will continue to grow as more plants come online.•Demand for plant operational management and O&M will grow.	<ul style="list-style-type: none">•Demand for renewable energy will continue as society works to achieve a new energy mix by 2030.•Use of regional distributed biomass will continue.•There will continue to be a certain level of demand for renewal and fuel conversion of existing plants.
Boiler plants (overseas)	<ul style="list-style-type: none">•Demand for biomass power plants in Southeast Asia will remain robust.•Our flagship bagasse-fired boiler plants will continue to face intense competition, especially from manufacturers in countries such as India and China.	<ul style="list-style-type: none">•There will continue to be a certain level of demand against the backdrop of rich biomass resources.•Demand for using a variety of fuels such as EFB will grow.
Waste treatment plants (overseas)	<ul style="list-style-type: none">•Demand for Waste to Energy will grow in Southeast Asia due to growing urbanization, and an increase in, and diversification of, waste.•Market development will be gradual due to institutional and financial issues, amongst others.	<ul style="list-style-type: none">•The market will expand as economies grow.
Package boilers (general-purpose boilers)	<ul style="list-style-type: none">•A certain level of demand will continue due to factors such as renewal demand even as the Japanese market matures.•Demand for energy-conserving boilers will grow overseas particularly in emerging nations.	<ul style="list-style-type: none">•The Japanese market will contract due to the aging and shrinking of the country's population.•The market will expand further as emerging nations' economies grow.
Equipment and systems	<ul style="list-style-type: none">•A certain level of demand will continue for both building equipment and semiconductor manufacturing equipment as construction demand rises and investment in the semiconductor industry expands.	<ul style="list-style-type: none">•A certain level of demand will continue for both building equipment and semiconductor manufacturing equipment.

*DBO : Design Build Operate / O&M : Operation & Maintenance / PPP : Public Private Partnership / PFI : Private Finance Initiative / FIT : Feed-in Tariff / EFB : Empty Fruit Bunch

3. 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.



4. Policies of the 12th Medium-Term Management Plan

•By undertaking five new policies in line with the three perspectives continued from the 11th Medium-Term Management Plan, we will strengthen profitability and competitiveness while working to strengthen our management foundation, with a focus on effective use of human resources. In this way, we will strive to achieve our medium- and long-term vision while building a robust business and management foundation in response to future changes in the business environment.

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.

Policies

- 1 Strengthening and expanding our revenue foundation
- 2 Achieving sustained growth
- 3 Increasing productivity, for example by reforming business processes
- 4 Using human resources effectively
- 5 Continuing to pursue compliance management

<<<

Perspectives for achieving our policies

1 Creation of customer value

Strive to create new value from the customers' perspective and avoid price competition by working closely with, and developing a deep understanding of, customers.

2 Ongoing innovation

Achieve sustained differentiation by pursuing innovation in terms of both technologies and business models, and leverage that differentiation to create the value demanded by customers.

3 Accommodation of environmental changes and risk management

Adapt to changes of the business environment in which the company operates (e.g., changes in the economic climate, revisions to applicable laws, and changes in customer needs) and strengthen initiatives to treat such changes as business opportunities.

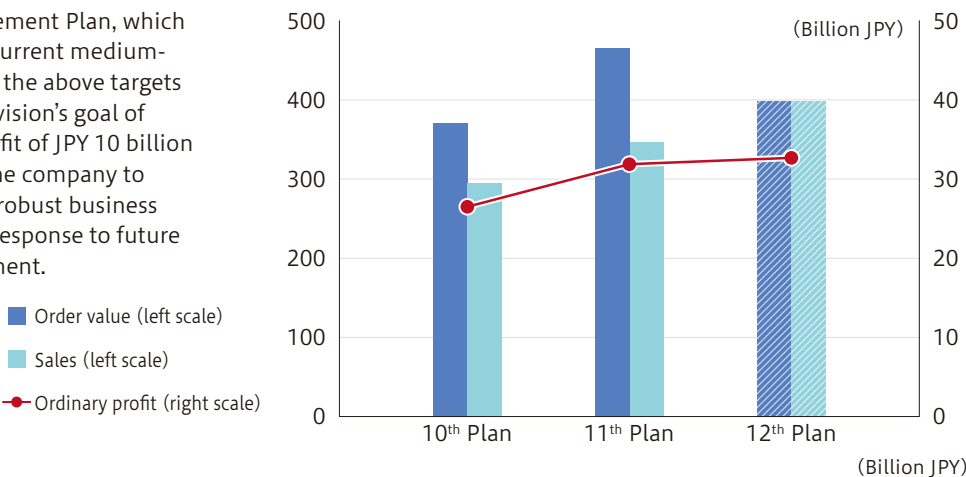
Achieving our vision

Building a business and management foundation that is resilient during change

5. 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.



	10 th Medium-Term Management Plan results				11 th Medium-Term Management Plan results				12 th Medium-Term Management Plan
	2012	2013	2014	Total	2015	2016	2017	Total	FY2018 to FY2020
Order value	109.2	148.0	113.7	371.0	99.9	191.0	177.1	468.0	JPY 400 billion (approx.) (3-year cumulative total; reference value)
Sales	96.3	96.3	103.8	296.5	113.0	116.3	118.1	347.5	
Ordinary profit	7.1	9.4	9.1	25.7	9.6	11.6	10.6	31.9	Target: JPY 33 billion (3-year cumulative total)

6. 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.



Waste-to-Energy Plant
(Primary equipment improvement project)
Treatment capacity: 810 tons per day
Generating capacity: 17,200 kW



Waste-to-Energy Plant
(DBO Project)
Treatment capacity: 174 tons per day
Generating capacity: 3,800 kW

► 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.



Moving Bed Upflow Continuous
Sand Filtration System (high-speed)
Treatment capacity: 29,500 m³ per day



Sludge-Fueled Power System
Demonstration Plant
Treatment capacity: 35 wet tons per day
(with moisture content of about 70%)
Generating output: About 100 kWh/h

► 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.



Wood Chip Biomass Power Plant
Generating capacity: 1,990 kW



Wood Chip Biomass Power Plant
Generating capacity: 22,100 kW

► 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.



Bagasse-Fired Boiler Plant (Thailand)



Bagasse-Fired Boiler Plant
(Thailand)

► 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.



Waste-to-Energy Plant (China)
Treatment capacity: 1,600 tons per day
Generating capacity: 30,000 kW



Waste-to-Energy Plant (UK)
Treatment capacity: 1,370 tons per day
Generating capacity: 36,650 kW

► 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.



Super EQOS EQI Series



Super Vacotin Heater
GTL Series

Perspectives on 12th Medium-Term Management Plan

This section introduces how Takuma's management and the management of major Group companies view their social responsibilities and how they are working to fulfill them as they strive to pursue their respective missions under the 12th Medium-Term Management Plan, which began in FY2018.

Corporate Services Division

Koji Tanaka Executive Manager, Corporate Services Division



The Corporate Services Division's mission is to help boost profits throughout the Group by providing services to its various departments, for example so they can more effectively utilize information and other management resources and practice legal risk management. To that end, it is called upon to provide higher-quality services to help achieve steady growth and to enhance the Group's capabilities.

Due to the extensive scope of these operations, the Division's activities encompass a variety of CSR issues, including with regard to strengthening relationships with shareholders, BCP, information security, and reducing risk. Particularly important priorities under the current Medium-Term Management Plan address human resources, an area that plays an essential role as the basis of all business activities, including hiring practices and training programs as well as the development of an environment that will allow each and every employee to do his or her job in an energetic and engaged manner and to take advantage of his or her skills and abilities, while simultaneously facilitating improvements in productivity.

Corporate Planning & Administration Division

Tsuyohito Nishiyama Executive Manager, Corporate Planning & Administration Division



The current Medium-Term Management Plan sets forth five policies to address the theme of strengthening corporate capability to facilitate steady growth.

Strengthening the Group's corporate capabilities encompasses the meaning of transforming Takuma so that it will be universally recognized as a good company, and the only way to do that is not only to pursue performance metrics, for example by increasing sales and profits, but also to participate actively in the process of addressing social needs.

We are seeing a shift in how the world determines corporate value in the form of a move from tangible assets to intangible assets, and one key area of risk that the world recognizes now is the environment.

The Group is keenly attuned to these social trends, and as we pursue a range of initiatives to make Takuma a better company, we will be fulfilling our responsibilities by working to resolve social issues in the areas of renewable energy utilization and environmental protection.

Perspectives on 12th Medium-Term Management Plan

► Corporate Marketing Group

Business Administration Division

Kengo Numata Executive Manager, Corporate Marketing Group & Business Administration Division & Environmental Plant Division



We are seeking to increase Takuma's corporate value and to achieve sustained growth by formulating and executing a business strategy that will earn us the trust of a broad range of customers and other stakeholders.

For example, our ability to consistently supply high-quality solutions throughout the plant life cycle while responding precisely to changes in the market environment and evolving customer needs yields mutual profits for both customers and the Group over the long term.

At the same time, maintaining and expanding our market position in such EPC markets as waste treatment plants and biomass power plants will allow us to make a significant contribution to the resolution of a variety of current social issues.

By formulating and executing these business strategies, I believe we will be able to build a business platform that is resistant to change so that we can continue to develop as a company that plays an essential role in society.

Environmental Plant Division

Hidetoshi Tomita Deputy Executive Manager, Environmental Plant Division



The Paris Agreement, which seeks to eliminate the world's dependence on fossil fuels, entered into force in 2016, and Takuma, too, has an obligation to pursue corporate activities to help achieve its goals. The Environmental Plant Division will help bring about a recycling-based society through the current Medium-Term Management Plan. We will reduce environmental impacts by working to eliminate and reduce greenhouse gases, specifically through advanced thermal recovery with high-efficiency power generation in waste treatment plant construction, through the reduction of CO₂ emissions in core facility improvement projects at existing plants, and through power generation using incineration heat at sewage sludge incineration plants. In addition, we will coexist alongside local residents through our DBO business by utilizing waste treatment facilities as places of environmental awareness-raising and as disaster prevention facilities in times of large-scale disasters, and by performing daily maintenance in an appropriate manner. Finally, we in the Environmental Plant Division look forward to fulfilling our social responsibility to help realize a recycling-based society by providing high-quality products and services.

Energy Plant Division

Mitsuaki Adachi Executive Manager, Energy Plant Division



Takuma's energy business has utilized the FIT scheme to deliver numerous biomass power plants, and we continue to do so today. Under the current Medium-Term Management Plan, we will prioritize a permanent approach to plant operation, including by continuing to accept orders and by enhancing maintenance business structures for operational plants, so that these facilities can serve as the foundation for clean energy.

We see our role with regard to a sustainable society as contributing to society by resolving issues through our businesses, for example by contributing to environmental protection by reducing CO₂ emissions through the use of renewable energy in response to specific measures by governmental agencies to achieve the Sustainable Development Goals (SDGs), including by promoting use of renewable energy, addressing climate change, and building a recycling-based society.

International Operations Division

Takashi Manabe Executive Manager, International Operations Division



The International Operations Division has identified a number of priorities as it works to implement the current Medium-Term Management Plan.

First, reflecting our belief that addressing compliance, safety, and environmental issues is a given, we are working to develop our overseas businesses in a way that accords with local practices while understanding and respecting the commercial customs, religion, culture, and values in the countries where we do business.

Next, we will help address environmental and energy issues and realize a recycling-based society by working to create renewable energy and to improve the local waste treatment environment through the supply of biomass boilers such as bagasse-fired boilers and waste incineration plants that incorporate exceptional technologies.

Finally, we will strengthen our solutions-based sales initiatives, which are conceived to offer high added value based on customer needs.

We will fulfill our social responsibility by contributing to the sustained development of other countries through these initiatives.

► Engineering Group

Management Center

Hiroaki Nanjo Executive Manager, Engineering Group & Management Center



The Management Center is responsible for cost management and overall process management. Even as we continue to see robust demand for products such as biomass boilers and municipal solid waste treatment plants, the business environment is changing along with the structure of society. We will work to achieve a competitive cost structure by optimizing costs to facilitate sustained growth. To that end, we will monitor pricing trends as they relate to supplies, equipment, construction, and other costs and apply that information precisely to the processes we use to establish quotation costs and manage working budgets. We will also work to limit risk by focusing on process management and cost progress management, including for civil engineering construction work.

In our overseas businesses, we will work to differentiate our offerings from those of our competitors by increasing the competitiveness of our boiler plants. With regard to waste treatment plants, we will study structures for facilitating cooperation with partner companies and work to develop schemes for entering new markets.

Technology Center

Akira Taguchi Executive Manager, Technology Center



The Technology Center is responsible for a swath of operations ranging from the development of Takuma's core technology products to design while surveying and monitoring the latest social needs.

In recent years, we have seen a trend toward proper processing of waste and hazardous materials in the environmental sector, along with a growing focus on reducing waste generation, reusing waste, and reducing waste volume. In the energy sector, the trend is toward making use of fuels and energy sources that have gone unutilized in the past, and on creating new types of energy. Against this backdrop, Takuma will continue to consistently ship environmentally friendly products while making use of, and further developing, its stable of core technologies in areas such as combustion, incineration, boilers, and exhaust gas treatment.

Project Center

Hideki Takeguchi Executive Manager, Project Center



The equipment and plants that Takuma provides effectively utilize waste products and byproducts from human life and production activities, including municipal waste, industrial waste, sewage sludge, and biomass, to create the utilities—electricity and heat—that people need to live and that economies need to grow. In this way, we are able to give something back to society.

Today, as we find ourselves faced with the need to further increase use of renewable energy as one way to protect the Earth's environment, the Project Center is working to help build a society where future generations can enjoy rich and fulfilling lifestyles, including by supplying plants designed to further the realization of a recycling-based society and to reduce CO₂ emissions, for example by generating power from municipal solid waste, sewage sludge, and biomass, and by creating and developing the technologies and processes that will help expand the markets for such plants.

Engineering Center

Norito Uchiyama Executive Manager, Engineering Center



The Engineering Center will promote the streamlining of specifications and design work in a way that takes life cycle cost into account and provides technologies with value in terms of equipment and control by analyzing plant data and utilizing information and communications technology (ICT). We will also realize stable operation and management over the long term by promoting energy savings at all types of facilities and providing solutions that deliver exceptional economic performance at a high level of efficiency.

We will also pursue open innovation in an effort to fulfill our social responsibility as a corporation by adopting a global perspective and working in partnership with Group companies, affiliates, and other organizations to accommodate changes in the business environment.

To help realize a low-carbon society, we will strive to bring innovation to processes and products and to develop products that satisfy all stakeholders.

Construction Center

Ryoji Tani Executive Manager, Construction Center



The current Medium-Term Management Plan calls on us to reliably fulfill a large order backlog and to accommodate a robust flow of new projects, signaling an environment in which we are fortunate to be able to do business. At the same time, that environment raises concerns about waning job enthusiasm due to a heavy workload, the unfortunate occurrence of occupational accidents, and a tendency for human resources training measures to take a back seat to other priorities since most projects involve long lead times. Based on these facts, I see our most significant issue as the need to ensure employee health and safety, to facilitate enthusiasm, and to build solid operational structures that will position us to take the next step once the current plan is complete. As we work to overcome these challenges, veterans and newcomers alike will do well to remember and draw encouragement from one of the motivations that drove them to join Takuma in the first place: love for a job involving protecting the environment and utilizing energy effectively.

Perspectives on 12th Medium-Term Management Plan

► Group Companies

■ NIPPON THERMOENER CO., LTD.

Masahiko Izumi, President and Representative Director



Reflecting our philosophy of “Service to the nation through boiler manufacturing,” we strive to contribute to society through corporate activities in the package boiler segment of the market, and we consider our corporate activities themselves to be CSR activities.

The current Medium-Term Management Plan sets forth two basic goals in order to increase corporate value: increasing the size of the company and developing a more advanced level of quality. To achieve these goals, we will develop and supply safe, high-quality products and services; increase customer and business partner satisfaction; and improve employee satisfaction in the process while boosting organizational trust. If our products and services enter into even more widespread use in society, our contribution in the environmental and energy sectors will grow, helping to increase our corporate value.

Going forward, we will fulfill our CSR by striving to serve as a high-value company for all stakeholders through corporate activities such as these.

■ Takuma Technos Co., Ltd.

Kazunori Tsuji, President



With 68 offices, worksites, and other facilities around Japan, we operate and manage facilities under contract. In recent years, the number of DBO and O&M facilities that we serve in partnership with Takuma Co., Ltd., is increasing, and the manner in which we operate those facilities is changing from the past.

However, our mission of providing safety and stability to customers at each facility we manage and of supervising the operations with which we are entrusted in a way that inspires customers' peace of mind has not changed. To fulfill that mission, all of our employees must come together to harness the full potential of each facility without accident or disaster so that waste products can be treated properly and ever-more-demanding requirements satisfied. We will do everything we can going forward under the current Medium-Term Management Plan to fulfill our company's social responsibility.

■ SUNPLANT Co., Ltd.

Syusuke Suzuki, President



Our philosophy revolves around helping protect the regional environment by utilizing air-conditioning and sanitary equipment design and installation technologies.

It is widely recognized that overwork is an issue in the construction industry, of which we are a part. We recognize this issue as a life-or-death challenge for our company, and we are working to create an environment in which employees can balance their jobs with their private lives, for example by actively participating in the Work-Life Balance campaign led by the Tokyo Metropolitan Government. We also continue to run the company in a fair and just manner, with an absolute focus on compliance. Going forward, we will strive to increase CSR awareness, for example by offering internal classes designed to foster employees' understanding of Japan's legal system.

■ Dan-Takuma Technologies Inc.

Yoshiki Kita, PRESIDENT



For half a century, we have created highly clean environments for production processes in the semiconductor and electronic precision fabrication industries, and we have made broad contributions to society by making possible improvements in rational production that have helped maintain rich and safe lifestyles while solving environmental and energy issues by supplying clean equipment and systems. At the same time, we believe that efforts to maintain and promote compliance provide a crucial basis for the operation of our businesses, and going forward, we will strive on an ongoing basis to enhance compliance by assessing our operations from an ESG standpoint.

In addition, we will work to help achieve the SDGs through cooperation, contribution, and partnership involving customers and other stakeholders, both in Japan and overseas.

This page introduces the views of members of our Audit & Supervisory Committee on the policies, priority measures, and other provisions of the current Medium-Term Management Plan, including with regard to initiatives to increase the Group's corporate value and their expectations and wishes for the future.

► Audit & Supervisory Committee Members

Yasushi Enomoto Audit & Supervisory Committee Member (Director)



Having identified maintaining its role of being indispensable presence in society as a leading company in the field of renewable energy utilization and environmental protection as its corporate vision, Takuma has contributed to environmental protection by realizing a diverse range of customer needs and by improving technology through research and development. We also work to protect the environment via a range of activities that includes limiting energy consumption and waste emissions and community service programs.

In addition, we are achieving steady results through ongoing initiatives to promote compliance management.

Going forward, we believe that cultivating increased awareness of global needs as our overseas businesses develop, for example in the form of ESG investment and the UN's Sustainable Development Goals (SDGs), and bringing those priorities to bear in our businesses will help us contribute to society while increasing our corporate value.

Hiromichi Satake Audit & Supervisory Committee Member (Outside Director)



The Takuma Group built structures to deliver results on a stable basis through the previous 11th Medium-Term Management Plan. Under the 12th Medium-Term Management Plan, I expect to see the company strengthen risk management and develop into an organization that is even more resistant to changes in the business environment.

We are seeing results from our efforts to contribute to society, and it is desirable that we work to ensure those efforts penetrate every aspect of the Group's operations so that they do not lose their viability. Encouraging all employees to continuously think about what they should do and how they should act will allow us to increase our corporate value. As an outside director, I will work from an independent, fair perspective to strengthen the Group's management and supervisory functions and to establish CSR management with the goal of precisely understanding stakeholder expectations and increasing stakeholder satisfaction.

Osamu Iwahashi Audit & Supervisory Committee Member (Outside Director)



I have served as an auditor and director (as a member of the Audit & Supervisory Committee) at Takuma for six years, during which time I have drawn on experience I gained during my involvement with law enforcement policy for many years. I have pursued auditing and other operations primarily from a corporate governance and compliance perspective, and I believe that an emphasis on CSR is an essential part of corporate management.

Takuma's Energy from Waste plants and biomass-fueled power plants make up its core businesses, and the company is fortunate in that these businesses themselves help it fulfill its corporate social responsibility. In addition, the company has actively pursued a broad array of CSR activities, including through solar power installations, research into how waste gas and heat can be used in crop cultivation, and participation in, and contribution to, regional activities.

Going forward, I'm confident that Takuma will be able to effectively pursue activities that achieve the aims of CSR in its primary businesses and associated operations.

Minoru Murata Audit & Supervisory Committee Member (Outside Director)



We contribute to society by creating value through maintenance of social infrastructure that underpins human lifestyles and of industrial equipment. The products and services that are the ultimate result of our corporate activities live up to the standards set by society's expectations, and we have built a track record of success through our efforts to increase social satisfaction.

At the same time, an increasingly diverse society demands a more sophisticated type of value, and attention now encompasses not only deliverables, but also the processes that create them (i.e., production processes). To take CSR to the next level, it will be necessary to increase the satisfaction of the people that participate in the processes that give rise to deliverables. It will be important to reduce environmental impacts in manufacturing and construction processes, and to improve worker safety and the work environment. Going forward, I believe that taking into consideration stakeholders such as employees and local residents will help us pursue an even higher level of CSR.

Company Outline

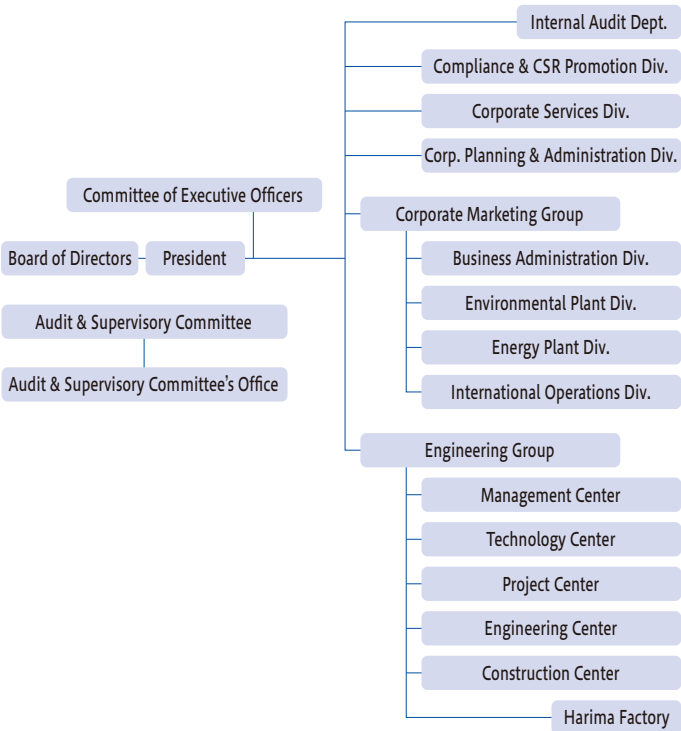
Name: TAKUMA CO., LTD.
Head office location: 2-2-33 Kinrakuji-cho, Amagasaki, Hyogo 660-0806, Japan
TEL +81-6-6483-2609 FAX +81-6-6483-2751 (operator)
Representative Director: Takaaki Kato, President and CEO
Established: June 10, 1938
Capital: JPY 13,367,457,968 (as of March 31, 2018)
Main business areas: 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): 837 (as of March 31, 2018)
Number of employees (consolidated): 3,609 (as of March 31, 2018)

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 26-10202)
 - First-class architect office registration (01A02903)
 - ISO 9001 quality management system certification
- 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)
 - Manufacture of refrigerators (Governor of Hyogo Prefecture)



Corporate structure (as of June 27, 2018)













Head Office



Harima Factory

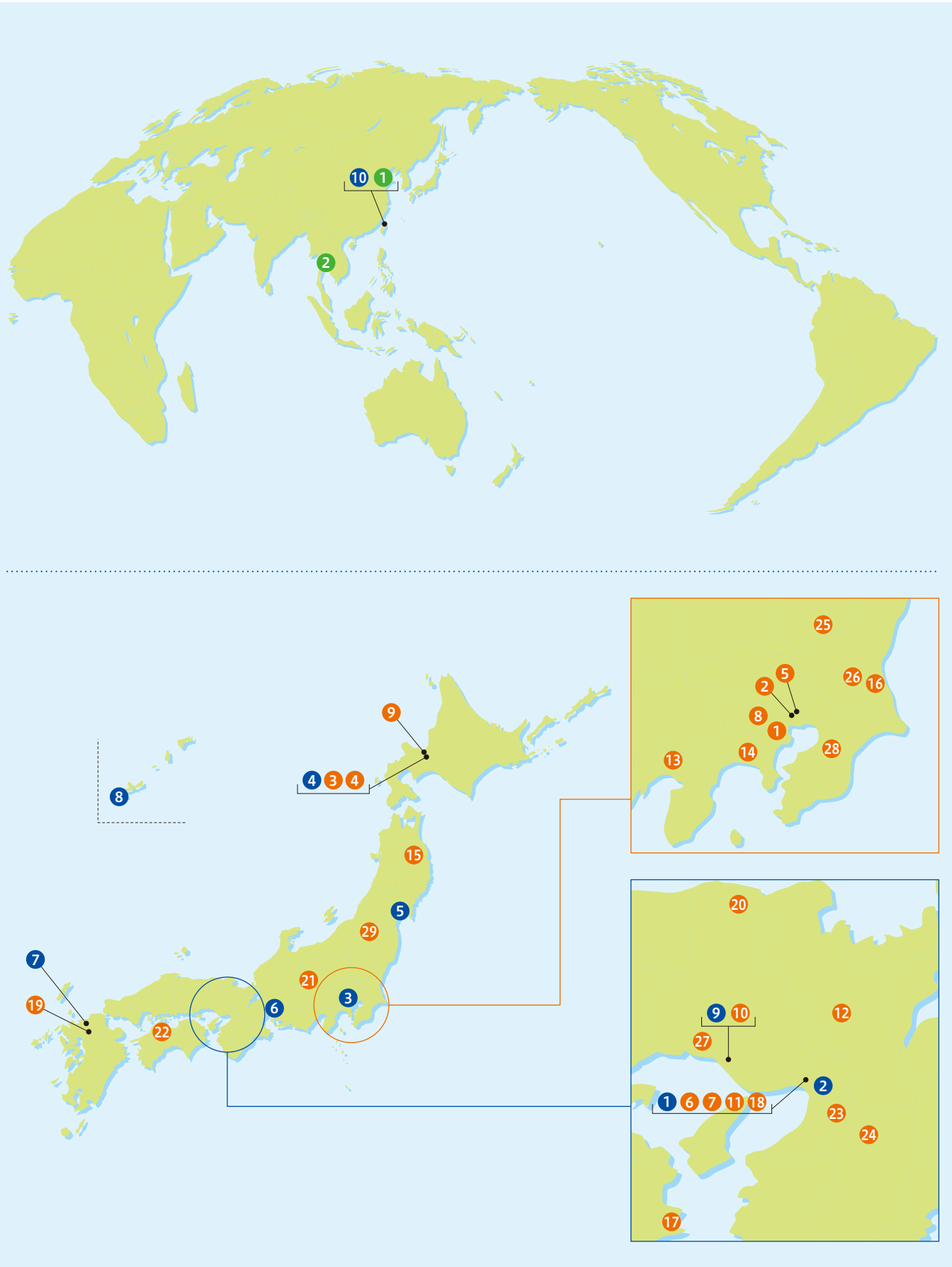
The History of Takuma

	1912	The first "Takuma boiler" introduced by our founder, the venerable Tsunekichi Takuma	
	1920		
	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"	
1942		Operation begins at Harima Factory	
1949		Company listed on the Osaka and Tokyo stock exchanges	
1953		Head Office moved to Osaka's Kita-ku District	
1962		Operation begins at Kyoto Factory (Current: Nippon Thermoener Co., Ltd. Kyoto Factory)	
1972		Company renamed Takuma Co., Ltd.	
1975		Bulk production begins on "Vacotin Heater", the world's first vacuum-type hot water heater	
1986		The first overseas delivery of a waste treatment facility completed (U.S.A.)	
1992		The first delivery of a waste energy treatment facility completed in Taiwan (Nei-Hu, Taipei City)	
1998		Japan's largest Energy from Waste plant delivered (Tokyo Shinkoto Waste Treatment Plant capacity: 1,800 tons per day)	
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.	
2013		Operation of the Takuma Solar Power Plant began (Harima Factory)	
2010		Energy from Waste plant delivered in Europe (U.K.)	
2012		Installation and operation of temporary incinerators to process disaster waste from the Great East Japan Earthquake	
2017		Order received for a 50,000 kW biomass power plant (FIT-approved facility)	

The Takuma Group Network

(as of June 27, 2018)

● Takuma's business offices ● Overseas group companies ● Group companies in Japan



Takuma's business offices

- 1 Head Office**
Daitokai Bldg., 3-22-8, Meieki, Nakamura-ku, Nagoya, Aichi 450-0002, Japan
TEL +81-6-6483-2609 FAX +81-6-6483-2751
- 2 Osaka Office**
Hanahara 6th Bldg., 6-8-31 Nishinakajima, Yodogawa-ku, Osaka 532-0011, Japan
TEL +81-6-4805-7600 FAX +81-6-4805-7601
- 3 Tokyo Branch**
Nomura Higashi-nihonbashi Bldg., 1-1-7 Higashinihonbashi, Chuo-ku, Tokyo 103-0004, Japan
TEL +81-3-5822-7800 FAX +81-3-5822-7888
- 4 Hokkaido Branch**
Daigo Bldg., 5-11, Ohdori Nishi, Chuo-ku, Sapporo, Hokkaido 060-0042, Japan
TEL +81-11-221-4106 FAX +81-11-241-0523
- 5 Tohoku Branch**
NMF Sendai Aoba-dori Bldg., 2-1-2 Ichibancho, Aoba-ku, Sendai, Miyagi 980-0811, Japan
TEL +81-22-222-3042 FAX +81-22-225-6759
- 6 Chubu Branch**
Maintenance of waste treatment and other facilities 7F., No. 16, Lane 35, Jihu Rd., Neihsu District, Taipei 114-92, Taiwan
TEL +886-2-2659-7137 FAX +886-2-2656-0584
- 7 Kyushu Branch**
Yakuin Business Garden, 1-1-1 Yakuin, Chuo-ku, Fukuoka 810-0022, Japan
TEL +81-92-717-2828 FAX +81-92-717-2830
- 8 Okinawa Branch**
Commons Bldg., 1-11-12 Mashiki, Ginowan, Okinawa 901-2224, Japan
TEL +81-98-898-6650 FAX +81-98-898-6657
- 9 Harima Factory**
1-2-1 Shinjima, Arai-cho, Takasago, Hyogo 676-8540, Japan
TEL +81-79-443-6511 FAX +81-79-443-6599
- 10 Taipei Branch**
7F., No.16, Lane 35, Jihu Rd., Neihsu District, Taipei 114-92, Taiwan
TEL +886-2-8752-3838 FAX +886-2-2656-0584

Group companies in Japan

- 1 Nippon Thermoener Co., Ltd.**
Manufacture and sale of a wide range of boilers and related equipment
Shirokanedai Bldg., 3-2-10 Shirokanedai, Minato-ku, Tokyo 108-0071, Japan
TEL +81-3-6408-8251 FAX +81-3-6408-8278
<http://www.n-thermo.co.jp>
- 2 Takuma Technos Co., Ltd.**
Maintenance, management and operation of waste treatment facilities, water treatment facilities and other facilities, as well as the design, installation and management of various types of boilers, environmental equipment and other equipment
10th Chuo Bldg., 1-5-6 Nihonbashi-honcho, Chuo-ku, Tokyo 103-0023, Japan
TEL +81-3-3231-2911 FAX +81-3-3231-2917
<http://www.takumatechnos.co.jp>
- 3 Hokkaido Sanitary Maintenance Co., Ltd.**
Operation and maintenance of sewage treatment facilities
Daigo Bldg., 5-11, Ohdori Nishi, Chuo-ku, Sapporo, Hokkaido 060-0042, Japan
TEL +81-11-221-8398 FAX +81-11-221-8542
- 4 Takuma Technos Hokkaido Co., Ltd.**
Operation and maintenance of waste treatment facilities
Daigo Bldg., 5-11, Ohdori Nishi, Chuo-ku, Sapporo, Hokkaido 060-0042, Japan
TEL +81-11-221-4128 FAX +81-11-221-1030
- 5 Sun Plant Co., Ltd.**
Design, construction and superintendence of air-conditioning equipment, feed-water/drainage sanitation equipment, and electrical equipment
Nomura Higashi-nihonbashi Bldg., 1-1-7 Higashinihonbashi, Chuo-ku, Tokyo 103-0004, Japan
TEL +81-3-5825-0921 FAX +81-3-5825-1631
<http://www.sunplant.co.jp>
- 6 Takuma Engineering Co., Ltd.**
Design of environmental equipment plants and energy plants
Takuma Bldg., 2-2-33 Kinrakuji-cho, Amagasaki, Hyogo 660-0806, Japan
TEL +81-6-6487-4820 FAX +81-6-6487-4829
<http://www.takuma-eng.co.jp>
- 7 Takuma System Control Co., Ltd.**
Design of electrical instrumentation equipment, including environmental equipment plants and energy plants
Takuma Bldg., 2-2-33 Kinrakuji-cho, Amagasaki, Hyogo 660-0806, Japan
TEL +81-6-6487-4830 FAX +81-6-6487-4839
<http://www.takuma-sc.co.jp>
- 8 Dan-Takuma Technologies Inc.**
Manufacture and sale of clean equipment, cleaning equipment, chemical filters, clean rooms, drying equipment and thermal chambers
3-12-16 Iwadokita, Komae, Tokyo 201-0004, Japan
TEL +81-3-3488-1111 FAX +81-3-3488-1118
<http://www.dan-net.com>
- 9 Kyoritsu Setsubi Co., Ltd.**
Design, construction and superintendence of waste treatment facilities, mechanical equipment of sewage treatment facilities, and boiler plants for general industries
5-1-38 Yurigahara, Kita-ku, Sapporo, Hokkaido 002-8081, Japan
TEL +81-11-770-2811 FAX +81-11-770-2822
- 10 Kankyo Sol-Tech Co., Ltd.**
Analyzing and measurement for environment-related issues, including water quality, exhaust gas and soil pollution
1-2-1 Shinjima, Arai-cho, Takasago, Hyogo 676-0008, Japan
TEL +81-79-443-6508 FAX +81-79-443-6510
<http://www.k-soltech.co.jp>
- 11 Takuma Plant Service Co., Ltd.**
Maintenance of a wide variety of boilers and environmental facilities
2-2-27 Kinrakuji-cho, Amagasaki, Hyogo 660-0806, Japan
TEL +81-6-6488-8434 FAX +81-6-6488-0300
<http://www.takuma-ps.com>
- 12 Campo Recycle Plaza Co., Ltd.**
Municipal solid waste and industrial waste treatment services
1 Takayanishitani, Sonobe-cho, Nantan, Kyoto 622-0032, Japan
TEL +81-771-68-3636 FAX +81-771-68-3639
<http://www.c-rp.co.jp>
- 13 Nagaizumi High Trust Co., Ltd.**
Facility upgrading, operation and maintenance of municipal solid waste final disposal sites
374-12 Higashino, Nagaizumi-cho, Suntou-gun, Shizuoka 411-0931, Japan
TEL +81-55-989-2268 FAX +81-55-987-9935
<http://www.nagaizumi-ht.jp>
- 14 Fujisawa High Trust Co., Ltd.**
Operation and maintenance management of municipal solid waste treatment facilities
2168 Ishikawa, Fujisawa, Kanagawa 252-0815, Japan
TEL +81-466-45-5411 FAX +81-466-45-5454
- 15 Iwate-Kenpoku Clean Co., Ltd.**
Municipal solid and industrial waste treatment services
48-34, Dai 20 Chiwari, Esashika, Kunohe-mura, Kunohe-gun, Iwate 028-6505, Japan
TEL +81-195-42-4085 FAX +81-195-42-4550
<http://www.iwate2cln.co.jp>
- 16 Hitachinaka-Tokai High Trust Co., Ltd.**
Operation and maintenance management of municipal solid waste treatment facilities
103-2 Shinkocho, Hitachinaka, Ibaraki 312-0005, Japan
TEL +81-29-265-5371 FAX +81-29-265-5372
<http://hitachinaka-tokai-ht.com>
- 17 Anan High Trust Co., Ltd.**
Operation and maintenance management of municipal solid waste treatment facilities
1-5 Kokatsu, Tachibana-cho, Anan, Tokushima 779-1631, Japan
TEL +81-884-49-5823 FAX +81-884-49-5824
<http://www.ecopark-anan.com>
- 18 Takuma Energy Co., Ltd.**
Power retail business
Takuma Bldg., 2-2-33 Kinrakuji-cho, Amagasaki, Hyogo 660-0806, Japan
TEL +81-6-6487-4870 FAX +81-6-6483-2794
- 19 Kurume High Trust Co., Ltd.**
Operation and maintenance management of a municipal solid waste treatment facilities
2225 Hachojima, Miyanojin-machi, Kurume, Fukuoka 839-0805, Japan
TEL +81-942-27-7515 FAX +81-942-27-7491
<http://www.kurume-ht.com>
- 20 Hokutan High Trust Co., Ltd.**
Operation and maintenance management of a municipal solid waste treatment facilities
943 Booka, Takeno-machi, Toyooka, Hyogo 669-6331, Japan
TEL +81-796-21-9111 FAX +81-796-21-9112
<http://hokutan-ht.com>
- 21 Suwako High Trust Co., Ltd.**
Operation and maintenance management of a municipal solid waste treatment facilities
4769-14 Uchiyama, Okaya, Nagano 394-0055, Japan
TEL +81-266-78-1590 FAX +81-266-78-1591
<http://www.suwako-ht.jp>
- 22 Imabari High Trust Co., Ltd.**
Operation and maintenance management of a municipal solid waste treatment facilities
394 Machiyakou, Imabari, Ehime 799-1514, Japan
TEL +81-898-35-5181 FAX +81-898-35-5182
<http://bariclean.jp>
- 23 Energy Mate Co., Ltd.**
Sale of cogeneration systems and systems for the generation equipment of the same and total service for onsite energy systems for consumer use
Midosuji Daiwa Bldg., 3-6-8 Kyutaromachi, Chuo-ku, Osaka 541-0056, Japan
TEL +81-6-6241-6200 FAX +81-6-6241-6210
<http://www.energy-mate.co.jp>
- 24 Kashiwara High Trust Co., Ltd.**
Operation and maintenance management of municipal solid waste treatment facilities
1038-2 Kawanishi-cho, Kashiwara, Nara 634-0826, Japan
TEL +81-744-26-6227 FAX +81-744-26-6228
- 25 Tochigi High Trust Co., Ltd.**
Industrial waste treatment services
18-3 Kinugaoka, Moka, Tochigi 321-4367, Japan
TEL +81-285-83-3966 FAX +81-285-83-6500
<http://www.t-hitrust.co.jp>
- 26 Katsuta Co., Ltd.**
Industrial waste and municipal solid waste treatment services
1968-2 Koya, Hitachinaka, Ibaraki 312-0002, Japan
TEL +81-29-270-3711 FAX +81-29-270-3712
<http://www.eco-katsuta.com>
- 27 R.B.N. Co., Ltd.**
Municipal solid waste, including waste home appliances and office automation equipment, and industrial waste treatment services
3059-20 Nakajima, Shikama-ku, Himeji, Hyogo 672-8035, Japan
TEL +81-79-243-1200 FAX +81-79-243-1202
<http://rbn.jp>
- 28 Ichihara New Energy Co., Ltd.**
Industrial and municipal solid waste treatment services
733 Mandano, Ichihara, Chiba 290-0549, Japan
TEL +81-436-50-8300 FAX +81-436-50-8400
<http://www.ichihara-new.com>
- 29 Ecos Yonezawa Co., Ltd.**
Final disposal of industrial waste
7028-1 Yanazawa, Yonezawa, Yamagata 992-0077, Japan
TEL +81-238-39-4050 FAX +81-238-39-4051
<http://www.ecos-y.co.jp>

1. Municipal Solid Waste Treatment Plant Business

(Related SDGs)



► Seeing municipal solid waste treatment plants through to completion

Takuma is helping protect the global environment through business activities consisting of an integrated approach that extends from the design, manufacture, and procurement of equipment and systems to plant construction. This section introduces the process that goes into bringing a municipal solid waste treatment plant online in one of Takuma's core businesses.



As a salesperson, I visited the site numerous times to ensure that the customer would choose to entrust the project to Takuma. The process leading up to our receipt of the order was a truly challenging one.

This effort had numerous components, including precisely assessing the customer's needs; proposing a project that would satisfy those needs; building relationships of trust with the customer, local residents, and others; coordinating and negotiating with in-house teams and outside entities; negotiating with other companies; and dealing with various problems as they arose. Our hard work was rewarded and turned into immeasurable pleasure when the customer made the following response on a customer satisfaction questionnaire after the project was completed and handed over: "I believe that we've just seen one of the best facilities of its kind in Japan completed."

My involvement with this project began as we sought to work out the system that Takuma was going to propose after we received the order for the project while listening carefully to the customer's requests. As an example, we ended up changing equipment that uses waste heat from incinerating waste at the facility from a hot water supply system to an electricity supply system after a series of discussions with involved agencies and other stakeholders so that the plant could supply the electricity it generates to nearby facilities.

After the basic design was finalized, we were able to design a facility that earned the customer's approval by explaining information including the capacity, operating methods, and maintenance methods for all machinery and participating in numerous meetings.

The process leading up to the transfer of the facility to the customer brought one challenge after another, and I'll strive to take advantage of those experiences so that we can continue to deliver facilities that make customers happy in the future.

Expert staff members manage operations at each construction site on a daily basis to ensure that the facility will be completed as outlined in design drawings and in a way that satisfies the customer.

As many as more than 500 workers worked on this plant's site every day. Daily construction management included safety patrols to ensure that workers were doing their jobs safely and a variety of inspections to verify that the plant was being built in accordance with drawings.

We also actively promoted exchanges with local residents to ensure they understood the construction process and to give them peace of mind, for example by inviting them to tour the site, by cleaning up the area around the site, and by participating in community events.

I realized that all the hard work was worth it when the customers' representatives expressed their gratitude at the completion ceremony after construction was finished.

1. Municipal Solid Waste Treatment Plant Business

► Main Recent Projects

The following are the main plants supplied by Takuma during FY2017.

●New construction

■Uwajima Public Association Environment Center



- | | | |
|--|--|------------------|
| ● Project name | ● Capacity | ● Location |
| Regional New Waste Treatment Facility Construction Project (tentative) | Incineration facility: 120 tons per day (60 tons per day × 2 units)
Recycling facility: 20 tons per 5 hours
Power output: 2,500 kW | Ehime Prefecture |

■Hanno City Clean Center



- | | | |
|---|---|--------------------|
| ● Project name | ● Capacity | ● Location |
| Hanno Waste Treatment Facility Construction Project | Incineration facility: 80 tons per day (40 tons per day × 2 units)
Recycling facility: 11.8 tons per 5 hours
Power output: 830 kW | Saitama Prefecture |

■Imabari City Waste Management Center



- | | | |
|--|--|------------------|
| ● Project name | ● Capacity | ● Location |
| Imabari New Waste Treatment Facility Maintenance and Operation Project | Incineration facility: 174 tons per day (87 tons per day × 2 units)
Recycling facility: 41 tons per 5 hours
Power output: 3,800 kW | Ehime Prefecture |

●Primary equipment improvements

■Chiyoda Clean Center



- | | | |
|---|---|---------------------|
| ● Project name | ● Capacity | ● Location |
| Okitama Administrative Association Chiyoda Clean Center Incineration Facility Primary Equipment Improvement Project | Incineration facility: 255 tons per day (85 tons per day × 3 units)
Power output: 2,150 kW | Yamagata Prefecture |

2. Energy Plant Business

(Related SDGs)

7

AFFORDABLE AND CLEAN ENERGY

13

CLIMATE ACTION

8

DECENT WORK AND ECONOMIC GROWTH

9

INDUSTRY INNOVATION AND INFRASTRUCTURE

11

SUSTAINABLE CITIES AND COMMUNITIES

12

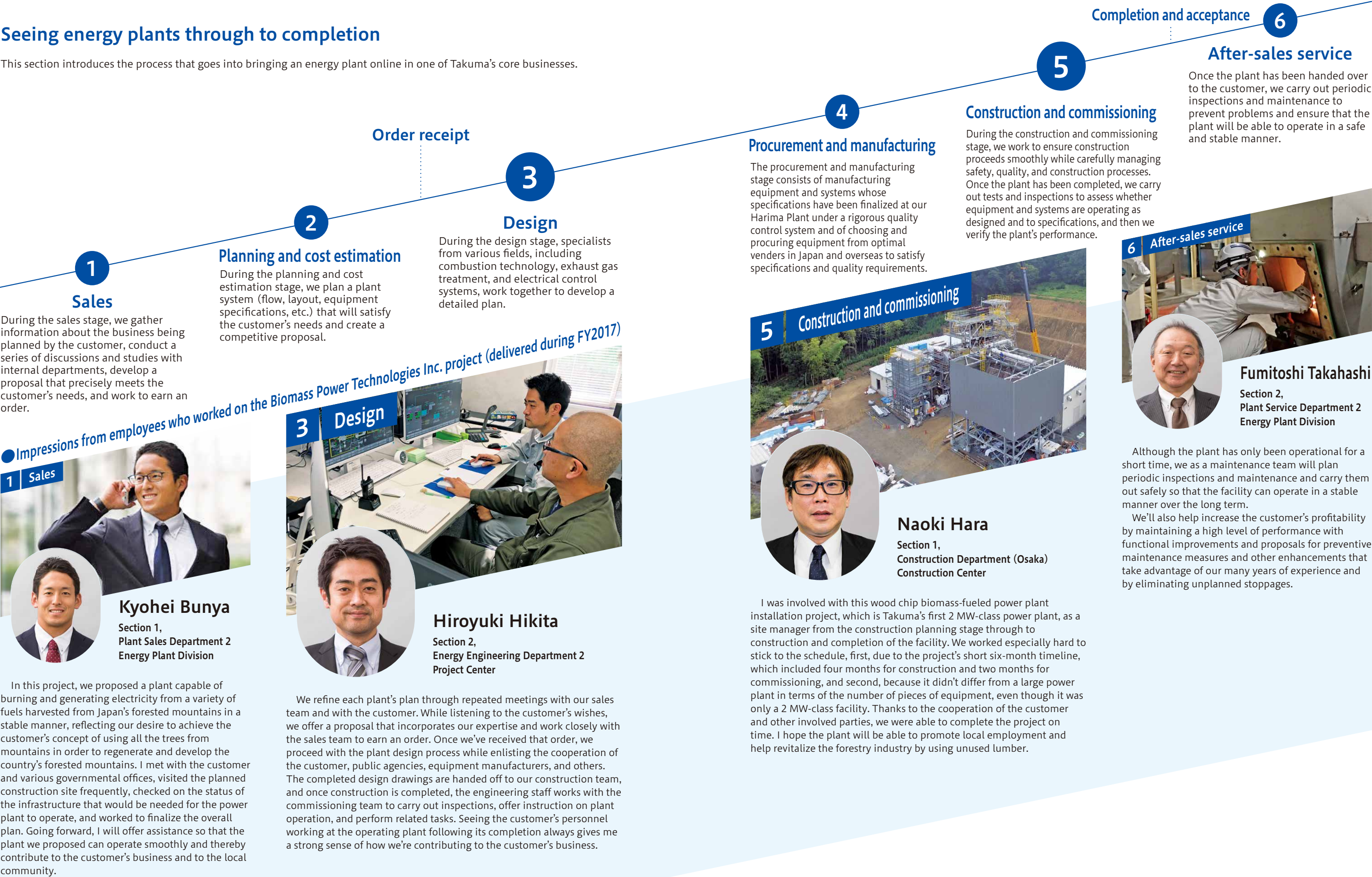
RESPONSIBLE CONSUMPTION AND PRODUCTION

15

LIFE ON LAND

▶ Seeing energy plants through to completion

This section introduces the process that goes into bringing an energy plant online in one of Takuma's core businesses.



2. Energy Plant Business

► Main Recent Projects

The following are the main plants supplied by Takuma during FY2017.

●Energy plants



Chugoku Mokuzai Co., Ltd. Head Office Plant

- **Project name**
Chugoku Mokuzai Biomass-fueled Power Plant (Head Office) Construction Project
- **Capacity**
Fuel: Wood fuel
Steam conditions (normal operation):
42 tons per hour × 6.0 MPaG × 460°C
Power output: 9,850 kW
- **Location**
Hiroshima Prefecture



SGET Green Power Sanjo Godo Kaisha

- **Project name**
Biomass Power Plant Construction Project
- **Capacity**
Fuel: Wood fuel
Steam conditions (normal operation):
28 tons per hour × 6.0 MPaG × 425°C
Power output: 6,250 kW
- **Location**
Niigata Prefecture



Biomass Power Technologies Inc.

- **Project name**
Biomass Power Technologies Inc. Matsusaka Woody Biomass Power Plant Installation Project
- **Capacity**
Fuel: Wood fuel
Steam conditions (normal operation):
11.4 tons per hour × 4.2 MPaG × 405°C
Power output: 1,990 kW
- **Location**
Mie Prefecture

●Industrial waste treatment plants



Shin nihon kaihatsu Co., Ltd.

- **Project name**
No. 5 Incinerator Construction Project
- **Capacity**
Treated waste type: Industrial waste
Incineration capacity: 93.6 tons per day
- **Location**
Hyogo Prefecture



Pultec Energy Co., Ltd.

- **Project name**
No. 5 Biomass Power Generator Installation Project
- **Capacity**
Fuel: Wood fuel, PKS
Steam conditions (normal operation):
85 tons per hour × 6.0 MPaG × 480°C
Power output: 22,100 kW
- **Location**
Hyogo Prefecture



DS Green Power Generation Yonezawa LLC.

- **Project name**
Biomass Power Plant Construction Project
- **Capacity**
Fuel: Wood fuel
Steam conditions (normal operation):
28 tons per hour × 6.0 MPaG × 425°C
Power output: 6,250 kW
- **Location**
Yamagata Prefecture



Ehime Forest Generation, LLC

- **Project name**
Matsuyama Biomass Power Plant Construction Project
- **Capacity**
Fuel: Wood fuel, PKS
Steam conditions (normal operation):
48.5 tons per hour × 6.0 MPaG × 480°C
Power output: 12,500 kW
- **Location**
Ehime Prefecture



Kurihalant Co., Ltd.

- **Project name**
Daigo Biomass Power Plant Construction Project
- **Capacity**
Fuel: Wood fuel
Steam conditions (normal operation):
11.4 tons per hour × 4.2 MPaG × 405°C
Power output: 1,990 kW
- **Location**
Ibaraki Prefecture

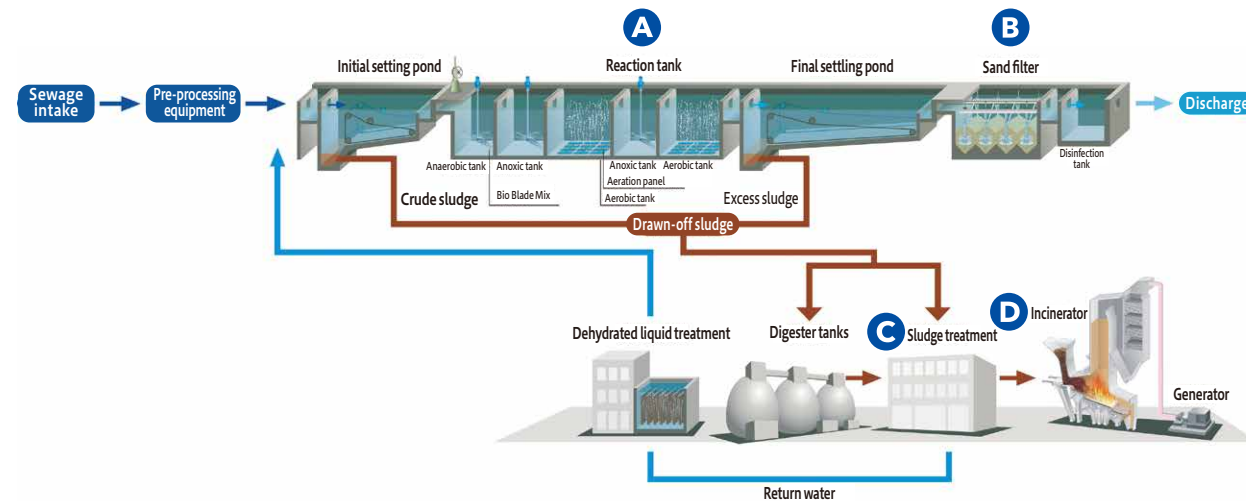
3. Water Treatment Plant Business

(Related SDGs)



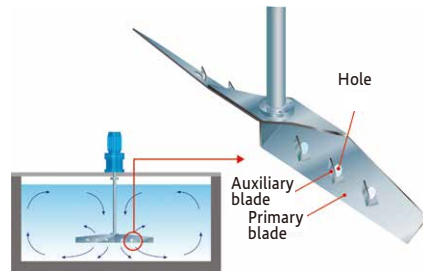
More than 50 years have passed since Takuma entered the water treatment business. To date, we have helped improve the water environment by building water treatment facilities. Recently, the industry has been called upon not only to improve the water environment, but to reduce the amount of power that treatment equipment consumes and to create energy from sludge.

Energy-saving and energy-creating products play key roles in the industry, particularly at sewage treatment plants, and we remain committed to helping realize sustainable sewage systems.



A Reaction tank facility Saving energy

[Principal equipment]
Aeration systems
Low power agitator
(Bio Blade Mix)



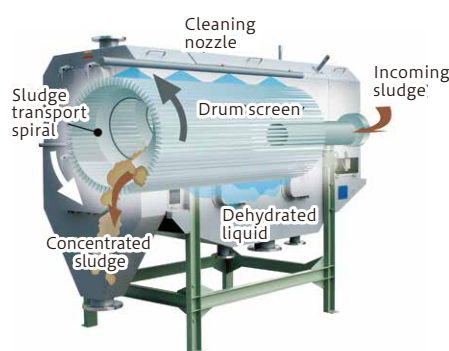
B Rapid filtration facility Saving energy

[Principal equipment]
Upflow moving-bed filtration
(Uniflow Sand Filter)



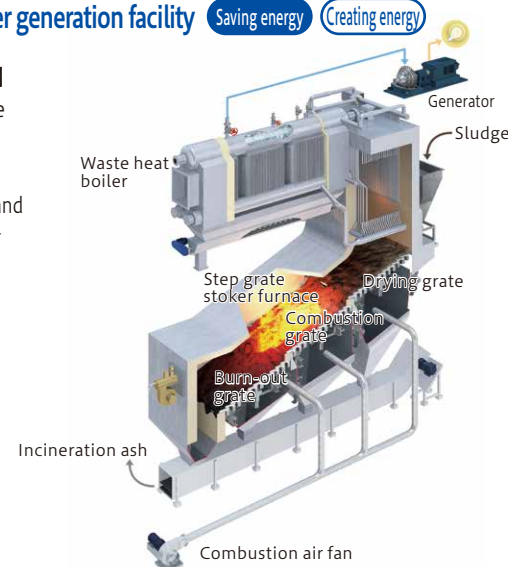
C Sludge treatment facility Saving energy

[Principal equipment]
Rotating drum-type concentrator



D Sludge-fueled power generation facility Saving energy Creating energy

[Principal equipment]
Step grate stoker furnace
sewage sludge power
generation system
(Step grate stoker furnace and
innovative step grate stoker
furnace)



► Main Recent Projects The following are the main facilities supplied by Takuma during FY2017.



Tarumi Sewage Treatment Plant

- **Project name**
Tarumi Sewage Treatment Plant Sand Filter Machinery and Equipment Renovation Project (Sand Filter Machinery and Equipment Renovation Project)
- **Capacity**
Treatment volume: 7,992 m³ per day
Treatment method: Upflow moving-bed filtration (high-speed type)
Specifications: M40 × 1 unit × 3 basins
- **Location**
Hyogo Prefecture

Homare Sewage Relay Pumping Station

- **Project name**
Homare Sewage Relay Pump Station Screening Equipment Renovation Project (Automatic Screen Renovation Project)
- **Capacity**
Type: Back-raked continuous automatic screen
Specifications: 800 (W) × 1,300 (D) mm
- **Location**
Hyogo Prefecture



Kita-Tama No.2 Water Reclamation Center

- **Project name**
Kita-Tama No.2 Water Reclamation Center Sludge Concentration Equipment Reconstruction Project (Sludge Concentrator Delivery)
- **Capacity**
Type: Rotating drum
Specifications: 50 m³ per hour
- **Location**
Tokyo Prefecture

4. Activities of Our Overseas Business



► Biomass-fueled power plant business in the Southeast Asian market

The biomass-fueled power generation boiler business in Southeast Asia is an essential part of any discussion of Takuma's history. We have delivered more than 370 biomass boilers to customers overseas, and we have an especially extensive track record since 1959 of delivering boilers fueled by bagasse (fiber remaining after sugarcane is crushed) in Thailand, where we have a local subsidiary. Takuma takes pride in having supported the Thai sugar industry for many years.

As the feed-in tariff program for renewable energy becomes increasingly well established in various industries, a growing number of customers in Thailand are looking beyond simply gaining a source of power for plant operation and instead opting to construct boilers with the goal of using 10 MPa·520°C class boilers that operate at comparatively high temperature and high pressure levels to actively generate electricity for resale to boost their income. In this way, demand for this type of boiler facility is expected to continue to grow.

Under these conditions, we look forward to helping supply environmentally friendly power from biomass, particularly in Southeast Asia, by accommodating demand not only in Thailand, but also in neighboring countries such as Indonesia and Vietnam with reliable technology and fine-grained customer service based on our extensive experience in the field.



Sugarcane deliveries

► Main Recent Project



- Bagasse boiler delivered in FY2017
 - Steam capacity: 170 tons per hour
 - Steam pressure: 4.2 MPa
 - Steam temperature: 485°C
 - Number of boilers: 2

► Message



Yasuyuki Kawabe

Section 3, Energy Engineering Department 2
Project Center

I oversaw my first overseas project in FY2017. Overseas projects pose unique challenges because they tend to have larger boilers than domestic Japanese projects and because all interactions with the customer during the design process must be carried out in English. I was relieved that we were able to deliver this boiler plant to the customer without any issues. I'm looking forward to taking advantage of the experience I've gained from this project so that I can embrace the challenges of similar projects in the future.

► Overseas Energy from Waste plant business

Waste processing problems have been manifesting themselves in countries around the world recently due to the effects of trends such as rapid urbanization, and there have been reports of various adverse effects of burying waste as-is on living conditions, including soil pollution and fires, especially in developing nations. Such countries are pursuing initiatives to resolve waste treatment issues, and demand for Energy from Waste plants has been growing with each passing year, seemingly in proportion to the volume of waste being disposed of. Growth in construction of large-scale plants nonetheless remains gradual. One cause of this mismatch between demand and construction is likely to be inadequacies in terms of programs, financing, and technologies as expectations concerning renewable energy combine with robust requirements with regard to safety and environmental friendliness.

Takuma has deep experience and an extensive track record that together make it a market share leader in waste incineration and processing equipment in Japan. The photograph below depicts a plant that we delivered to Lakeside Energy from Waste Limited in the UK, one of a series of nine facilities we have delivered in various countries and regions, including China and the UK. Our Lakeside Plant in the UK and our Gaoantun Plant in Beijing have earned a high level of praise and trust from their respective customers, for example due to the facilities having achieved continuous operation for more than 8,000 hours a year.

We are confident that taking advantage of our extensive experience in the field, working closely with stakeholders as we share detailed information, and actively cooperating in order to solve waste treatment-related issues will allow us to better deliver plants that operate in a safe and stable manner to bring peace of mind to the residents of those countries and regions.

We look forward to contributing to initiatives designed to encourage the adoption of waste power plants in the future by drawing on the technological expertise that is our strength and partnerships with local companies and other entities to propose solutions to local needs.

► Main Recent Project



- Lakeside Energy from Waste Plant
 - Processing capacity: 1,370 tons per day (685 tons per day × 2 units)
 - Steam capacity: 95 tons per hour per unit
 - Steam pressure: 4.5 MPa
 - Steam temperature: 400°C
 - Power output: 36,650 kW

► Message



Marc Nyhan

Sales Section, Environmental Plant Sales Department
International Operations Division

Recently, I've noticed a big increase in awareness around waste issues, be it in developed or developing countries. But already for over half-a-century, Takuma has been providing environmental technology solutions by designing and building hundreds of household waste treatment facilities. As one of the few foreigners in Takuma, I'm working to bring our technology and expertise overseas and while these projects are very difficult and complicated, the resulting facilities undoubtedly help towards creating a cleaner environment for ordinary people and their communities.

Corporate Governance

► Directors and Executive Officers

(as of June 27, 2018)

■ Directors



(Back row, from the left)

- Minoru Murata**
Outside Director
(Audit & Supervisory
Committee Member)
- Hiromichi Satake**
Outside Director
(Audit & Supervisory
Committee Member)
- Koji Tanaka**
Director
Executive Officer
- Osamu Iwahashi**
Outside Director
(Audit & Supervisory
Committee Member)
- Yasushi Enomoto**
Director
(Audit & Supervisory
Committee Member)

(Front row, from the left)

- Tsuyohito Nishiyama**
Director
Managing Executive Officer
- Kengo Numata**
Director
Executive Vice President
- Takaaki Kato**
Representative Director
President and
Chief Executive Officer
- Hiroaki Nanjo**
Director
Senior Managing
Executive Officer
- Hideki Takeguchi**
Director
Managing Executive Officer

■ Managing Executive Officers

- Takashi Manabe
Ryoji Tani
Norito Uchiyama

■ Executive Officers

- Mitsuaki Adachi
Akira Taguchi
Hidetoshi Tomita
Norio Maeda
Kunio Hamada

► Corporate Governance

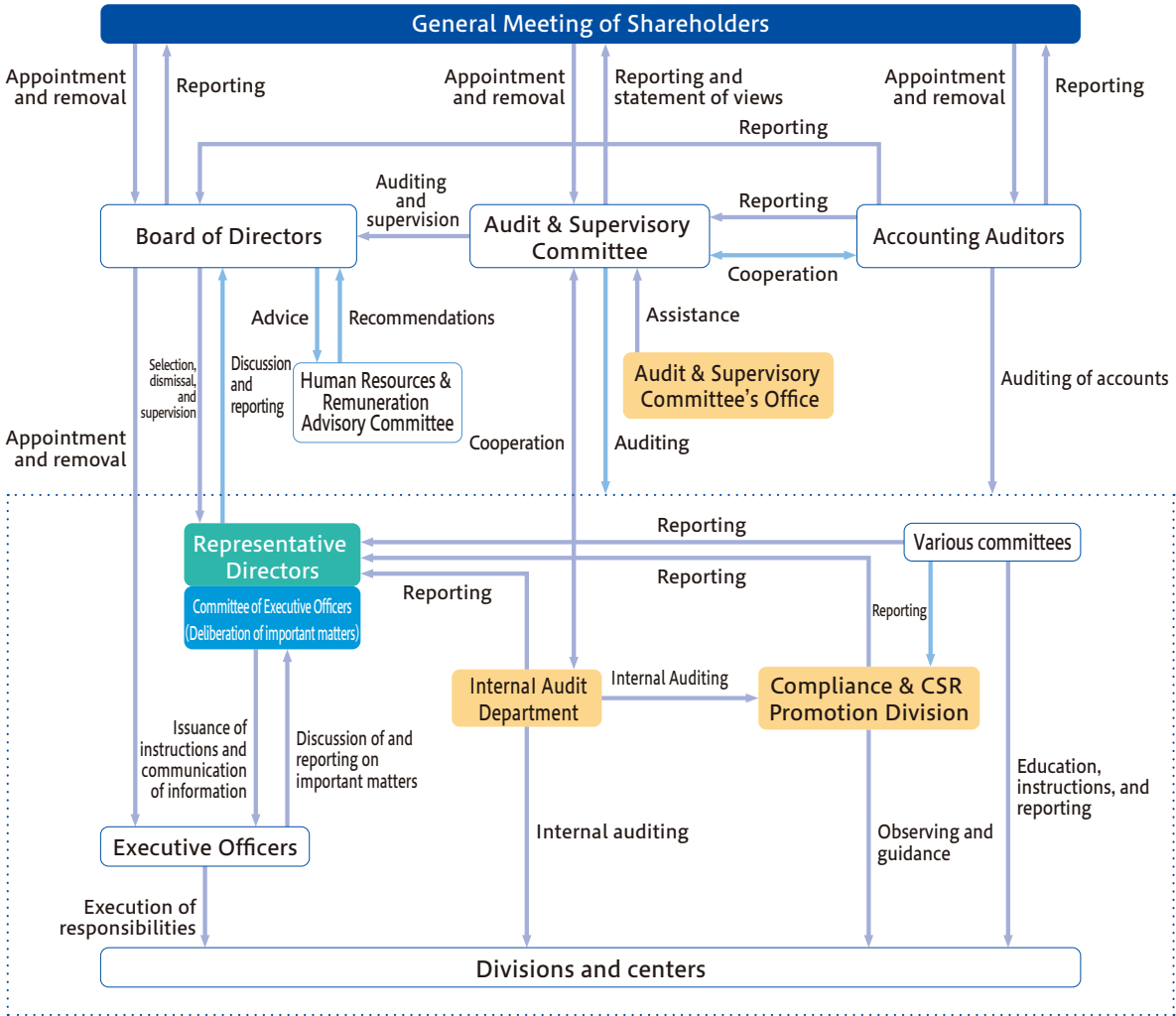
As of June 27, 2018, the Board of Directors was comprised of six directors (excluding directors who are members of the Audit & Supervisory Committee) and four directors (of whom three were outside directors). The Board of Directors meets regularly once a month as a rule and whenever else it is necessary 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.

In order to accelerate management decision-making and clarify where management responsibilities are placed, we have adopted an operating officer system in which we appoint operating officers who are entrusted with the responsibility of executing our business activities. As of June 27, 2018, there were 14 operating 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 operating 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.

An Audit & Supervisory Committee that consists of four members, of whom three 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 president holds regular meetings with committee members to ensure good communication, and we have established an Audit & Supervisory Committee's Office to provide staff to help carry out the committee's work.

In addition to the above, we have established a Human Resources & Remuneration Advisory Committee comprised of independent officers, representative directors, and the officer in charge of human resources. The committee works to increase transparency and objectivity in the selection of candidates for director and operating officer positions and in the determination of compensation as well as to enhance the supervisory function of the Board of Directors.



Corporate governance structure

(As of June 27, 2018)

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

Led by the department in charge of compliance and CSR promotion (CSR Department), Takuma aims at encouraging that activity through the Compliance & CSR Promotion Organization that 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.

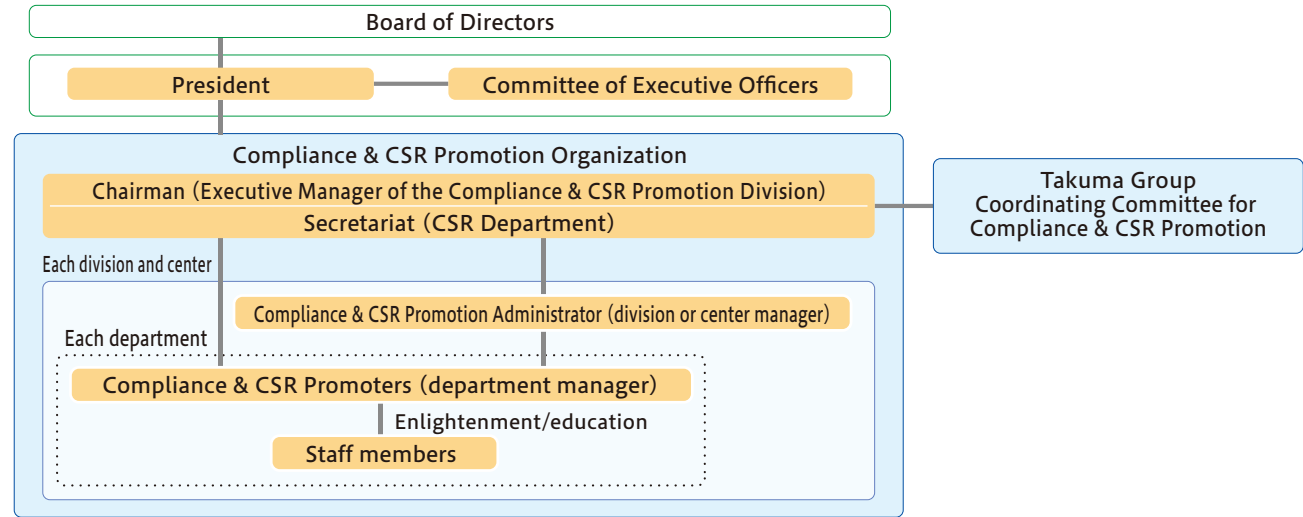
As the person in charge of promoting compliance and CSR in his or her division, each division or center manager is appointed as a Compliance and CSR Promotion Administrator. As persons who implement awareness and education in compliance and CSR in their respective departments, department managers are appointed as Compliance and CSR Promoters.

The meetings conducted within this mechanism include regular meetings and departmental meetings.

Regular meetings 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.

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 result to the Secretariat.

We are also 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.



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.

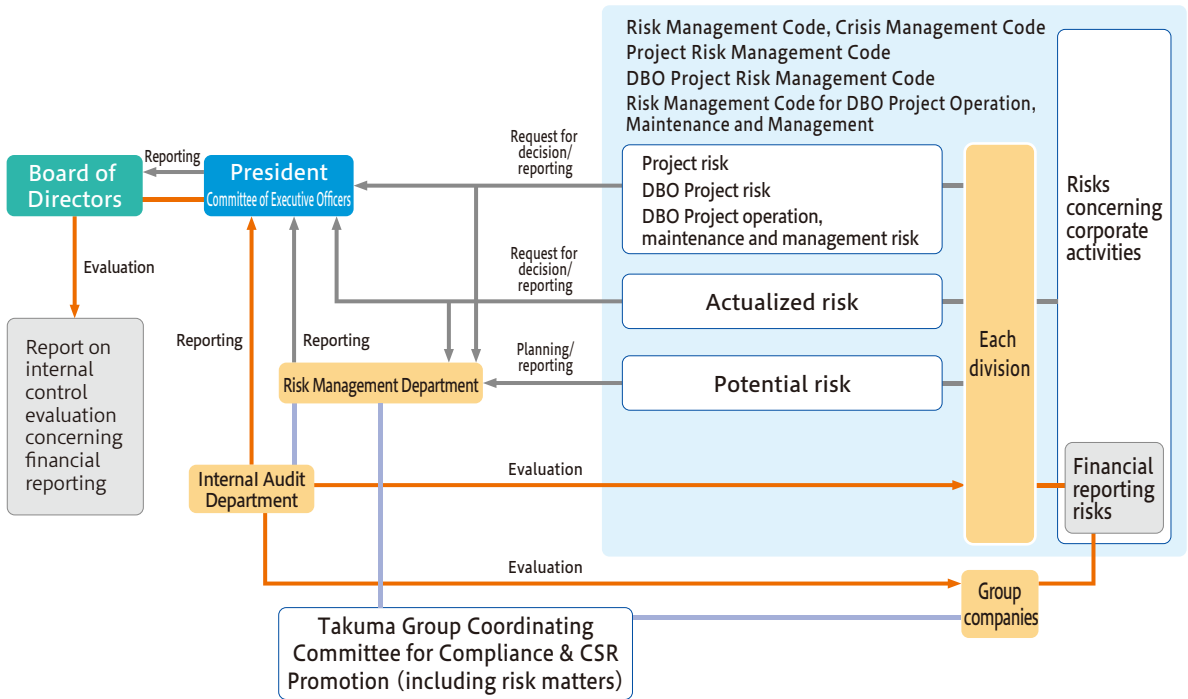
We are also building a risk management organization and constructing a system of risk management and promoting the strengthening of management for group companies as well through our Takuma Group Coordinating Committee for Compliance and CSR Promotion.

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)

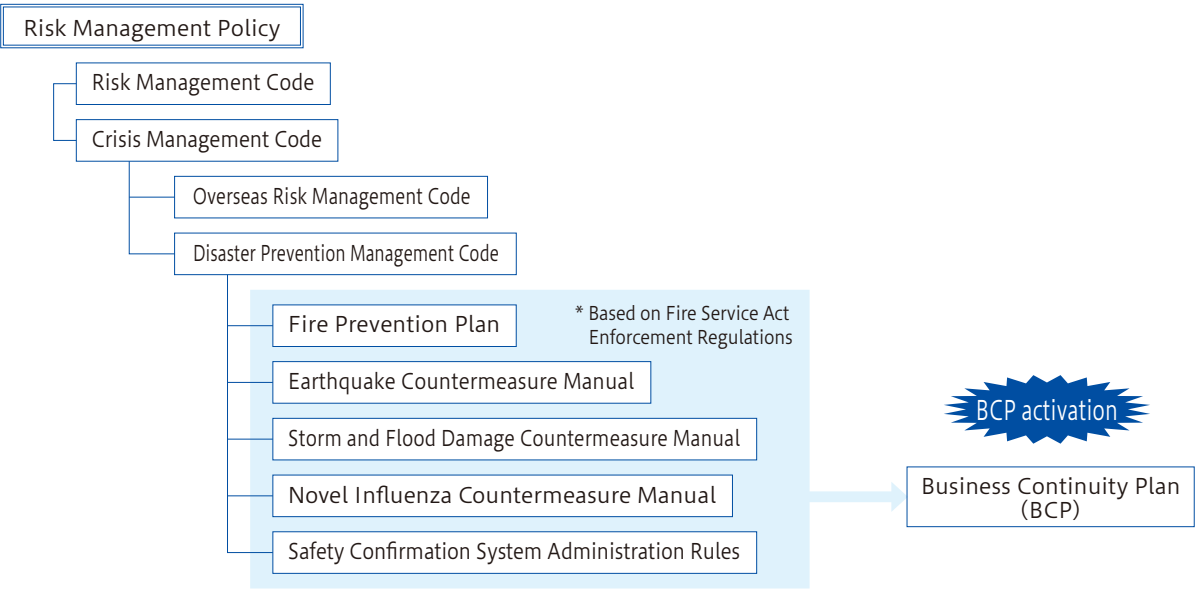
Takuma has formulated a “Business Continuity Plan” based on the following policies to ensure proper and appropriate continuity of business operations in the event of a large-scale disaster, pandemic, or other emergency:

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】



► CSR Activities

Please refer to our "CSR Report 2018" for more details on our CSR activities.

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



- CSR-related Contents:
- Takuma and Group Company CSR Activity Reports and Future Issues
 - Human Rights and Labor Practices
 - The Environment
 - Fair Business Practices
 - Activities Involving Product Quality
 - Participation in the Community
 - Contribution to Society

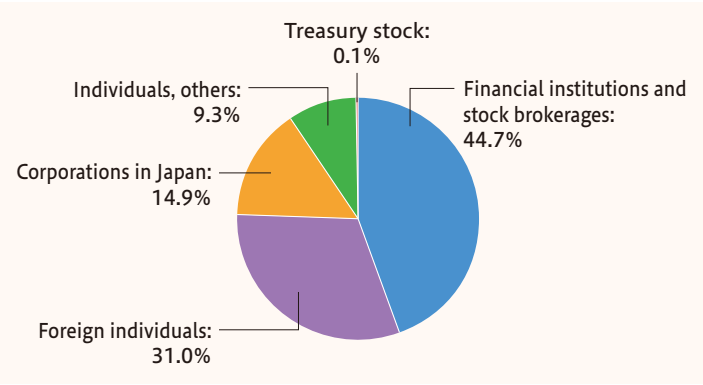
► IR Activities

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, 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>



Shareholders Report



Composition of shareholders (as of March 31, 2018)

► 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: 4,162 (as of March 31, 2018)
4. Major shareholders (top 10)

(as of March 31, 2018)

Shareholder	Number of shares	Stake
The Master Trust Bank of Japan, Ltd. (Trust Account)	7,760,000	9.4%
Japan Trustee Services Bank, Ltd. (Trust Account)	5,611,000	6.8%
Mizuho Trust & Banking Co., Ltd. (Retirement Benefits Trust, Mizuho Bank, Ltd. Acoount)	4,022,000	4.8%
Trust & Custody Services Bank, Ltd. (Re-entrustment)		
Nippon Life Insurance Company	3,593,282	4.3%
Japan Trustee Services Bank, Ltd. (Trust Account 9)	2,710,800	3.3%
J.P. MORGAN BANK LUXEMBOURG S.A. 380578	2,383,400	2.9%
THREADNEEDLE INVESTMENT FUNDS ICVC-JAPAN FUND	2,103,600	2.5%
TAKUMA CO., LTD. Kyoueikai	1,739,143	2.1%
Sumitomo Mitsui Banking Corporation	1,621,875	2.0%
JP MORGAN CHASE BANK 380055	1,312,745	1.6%

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 9 yen per share, which, combined with the interim dividend, brought the annual dividend to 16 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.

Status of Business Activities

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

(1) Overview of Business Performance and Related Information

This section provides an overview of the Group's financial position, business performance, and cash flows during the consolidated fiscal year under review.

① Business Performance

The Japanese economy continued a gradual recovery during the consolidated fiscal year under review as corporate earnings grew along with employment and incomes. Despite gradual economic expansion overseas, uncertainty remained in the form of the UK's exit from the EU and actions by the administration in the U.S., clouding the outlook for the future.

Against this economic backdrop, the Takuma Group expects to see continued demand for its principal businesses thanks to increased environmental awareness; progress in initiatives to prevent global warming and conserve resources and energy; planned replacement of, and updates to, outdated waste treatment facilities; and energy policies that are favorable for biomass power facilities, for example in the form of feed-in tariff programs for power.

During the consolidated fiscal year under review, we received orders for projects including construction of biomass power facilities and sewage sludge-fueled power generation facilities in addition to construction of waste treatment facilities, primary improvement work, and facility operation, maintenance, and management. As a result, order volume totaled 177,116 million yen. Although volume fell 13,910 million yen (7.3%) from the previous consolidated fiscal year, performance remained strong.

Sales rose 1,890 million yen (1.6%) from the previous consolidated fiscal year to 118,199 million yen on steady progress in construction projects such as waste treatment facilities and biomass power facilities. As a result, the backlog totaled 273,060 million yen.

Operating income was 10,030 million yen, ordinary profit was 10,670 million yen, and profit attributable to owners of parent was 7,847 million yen, down 944 million (8.6%), 936 million yen (8.1%), and 704 million yen (8.2%), respectively, from the previous consolidated fiscal year, when performance benefited from cost reductions.

Results by Business Segment

■ Domestic Environment and Energy Plant Business

In addition to construction, primary equipment upgrades, operation, maintenance, and management of waste treatment facilities, we received orders for projects including construction of biomass power plants as well as sewage sludge incineration and power plants, resulting in order volume of 148,892 million yen. Although that number represents a decline of 14,613 million yen (8.9%) from the previous consolidated fiscal year, order volume remained strong. Net sales fell 568 million yen (0.6%) from the previous consolidated fiscal year to 90,075 million yen despite steady progress in the construction of waste treatment facilities, biomass power plants, and other facilities.

Operating income fell 1,239 million yen (10.6%) from the previous consolidated fiscal year to 10,488 million yen.

■ Overseas Environment and Energy Plant Business

Order volume grew 802 million yen (26.1%) from the previous consolidated fiscal year to 3,873 million yen thanks to orders for biomass power boilers and maintenance of overseas plants. Net sales rose 1,179 million yen (53.1%) from the previous consolidated fiscal year to 3,401 million yen.

Performance recovered as the previous consolidated fiscal year's operating loss of 154 million yen turned into an operating profit of 78 million yen.

■ Package Boiler Business

Efforts to secure demand for upgrades to higher-efficiency once-through boilers and vacuum-type water heaters and maintenance demand for parts sales and repairs pushed order volume up 971 million yen (5.8%) from the previous consolidated fiscal year to 17,696 million yen. Net sales rose 156 million yen (0.9%) to 17,321 million yen.

Operating income rose 98 million yen (10.8%) from the previous consolidated fiscal year to 1,015 million yen.

■ Equipment and Systems Business

Order volume fell 900 million yen (11.2%) from the previous consolidated fiscal year to 7,141 million yen on orders for products including building equipment and semiconductor-related equipment. Net sales rose 1,031 million yen (15.5%) from the previous consolidated fiscal year to 7,697 million yen.

Operating income fell 93 million yen (29.0%) from the previous consolidated fiscal year to 229 million yen.

Status of Business Activities

② Financial Position

Total assets at the end of the consolidated fiscal year under review increased 11,661 million yen from the end of the previous consolidated fiscal year to 151,862 million yen thanks primarily to an increase of 5,333 million yen in notes and accounts receivable and of 3,724 million yen in equity securities.

Liabilities rose 2,662 million yen from the end of the previous consolidated fiscal year to 75,136 million yen as an increase of 5,657 in advances received offset a decrease of 3,205 in allowance for losses on sales contracts.

Net assets rose 8,999 million yen from the end of the previous consolidated fiscal year to 76,726 million yen as increases of 7,847 million yen in retained earnings due to the posting of profit attributable to owners of the parent and of 2,275 million yen in valuation difference on available-for-sale securities offset a decrease of 1,156 million yen in retained earnings due to the payments of dividends.

As a result, the equity capital ratio rose 2.2 points from the end of the previous consolidated fiscal year to 50.3%, and net assets per share rose 108.48 yen from the end of the previous consolidated fiscal year to 924.25 yen.

③ Status of Cash Flow

Cash and cash equivalents at the end of the consolidated fiscal year under review rose 3,151 million yen from the previous consolidated fiscal year to 60,283 million yen.

■ Cash Flows from Operating Activities

Net cash provided by operating activities totaled 5,141 million yen (compared to net cash provided by operating activities of 9,590 million yen during the previous consolidated fiscal year). Principal factors included net income before taxes of 10,811 million yen and an increase of 1,959 million yen in accounts payable, which offset decreases of 3,753 million from corporate tax and other payments and 3,205 million from allowances for losses on sales contracts.

■ Cash Flows from Investing Activities

Net cash used in investing activities totaled 328 million yen (compared to net cash provided by investing activities of 143 million yen during the previous consolidated fiscal year). Expenditures of 561 million yen on the purchase of investment securities and of 343 million yen on the purchase of property, plant and equipment offset income of 550 million yen from collection of loans receivable.

■ Cash Flows from Financing Activities

Net cash used in financing activities totaled 1,670 million yen (compared to net cash used in financing activities of 1,787 million yen during the previous consolidated fiscal year). Principal factors included payment of 1,156 million yen on dividends and expenditures of 468 million yen on repayment of long-term debt.

(2) 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 Plant Business	62,578	0.6
Overseas Environment and Energy Plant Business	2,761	30.7
Package Boiler Business	11,334	0.7
Equipment and Systems Business	6,382	18.9
Subtotal	83,057	2.6
Inter-segment transactions	(252)	(27.2)
Total	82,804	2.7

Notes:

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 Plant Business	148,892	(8.9)	262,388	28.9
Overseas Environment and Energy Plant Business	3,873	26.1	2,783	20.4
Package Boiler Business	17,696	5.8	3,350	12.6
Equipment and Systems Business	7,141	(11.2)	4,770	(10.4)
Subtotal	177,603	(7.2)	273,292	27.6
Inter-segment transactions	(486)	54.0	(231)	464.0
Total	177,116	(7.3)	273,060	27.5

Notes:

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 Plant Business	90,075	(0.6)
Overseas Environment and Energy Plant Business	3,401	53.1
Package Boiler Business	17,321	0.9
Equipment and Systems Business	7,697	15.5
Subtotal	118,494	1.5
Inter-segment transactions	(295)	(23.7)
Total	118,199	1.6

Note:

Amounts do not include consumption tax or other taxes.

Status of Business Activities

(3) Management Analysis of Operating Results and Issues for Future Study

This section sets forth awareness and analysis of the Group's operating results from the perspective of management as well as issues for future study. The information included represents the Group's best judgment as of the end of the consolidated fiscal year under review.

① Operating Results

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 76% of total net sales before excluding inter-segment sales and 88% of total operating income before excluding adjustments.)

Domestic Environment and Energy Plant Business

The Domestic Environment and Energy Plant segment's principal business consists of construction of waste treatment plants for local government, sewage treatment plants, biomass power plants for private-sector companies, and other facilities (as part of the EPC business) as well as after-sales service for those facilities, including maintenance, operational management, and operation.

Demand in the EPC business tends to fluctuate significantly over the medium and long term because it is susceptible to factors such as government policy, for example in the form of environmental regulations and other laws and subsidies for local government and private-sector businesses, as well as trends in public and private-sector investment. By contrast, demand for after-sales businesses such as maintenance is forecast to remain stable over the 20 to 30 year life cycle following the start of plant operation.

Current robust demand in the EPC business is expected to continue in the near future, with waste treatment plants generating update and service life extension demand due to superannuation, with sewage treatment driving demand for transition to energy-saving and -creating equipment during updates to sludge incineration plants, and with private industry fueling demand for construction of new biomass power plants utilizing feed-in tariff programs for power. Demand is expected to grow in the future in the after-sales service business due to factors such as increased turnkey outsourcing of waste treatment plant management, a trend toward turnkey outsourcing of sewage projects, and an increase in the number of plants covered by after-sales service agreements due to growth in the number of plants delivered by the company to private industry.

During the consolidated fiscal year under review, order volume remained strong at 148,892 million yen as we secured a strong position in the markets in which we're active thanks to initiatives to maintain and expand our market position in the EPC business and to expand businesses that generate base revenue in after-sales service along with other businesses under the 11th Medium-Term Management Plan in the face of strong demand. Net sales generally tracked the previous consolidated fiscal year (falling 0.6%) thanks to progress in construction of previously ordered plants, although operating profit fell 10.6% from the previous consolidated fiscal year due to changes in project mix.

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 work to strengthen and expand our revenue base by enhancing the after-sales service business, for example by strengthening the profitability of our waste treatment plant operation business, applying operational expertise horizontally to water treatment and biomass facilities, and strengthening maintenance structures.

Overseas Environment and Energy Plant Business

The Overseas Environment and Energy Plant segment's principal business consists of building and maintaining biomass power plants and energy-from-waste plants overseas. Overseas bases are located in Thailand and Taiwan, where it has local subsidiaries and from which it is expanding its business with a focus on Southeast Asia.

Demand for biomass power plants is expected to continue to grow against the backdrop of the region's rich endowment of biomass resources, and the market exhibits a high level of potential over the medium and long term; however, the environment will remain highly competitive due to intense rivalry with Indian and Chinese manufacturers for orders for the bagasse-fired plants that are Takuma's flagship product in the region. In addition, although demand for energy-from-waste facilities is growing due to urbanization, a stable market has not yet developed in Southeast Asia due to the lack of programs and standards as well as fund shortages being experienced by governments.

Order volume during the consolidated fiscal year under review rose 26.1% from the previous consolidated fiscal year as we built on last year's legacy by adding new orders for bagasse-fired plants in Thailand thanks to initiatives to secure orders for biomass power plants as well as new orders for maintenance for energy-from-waste plants in Taiwan. Net sales rose 53.1% from the previous consolidated fiscal year as that year's operating loss turned into an operating profit of 78 million yen thanks to an increase in orders as well as progress in the construction of previously ordered bagasse-fired plants.

Going forward, we will continue to build structures to secure orders for energy-from-waste plants while simultaneously pursuing orders for biomass power plants on an ongoing basis.

Package Boiler Business

The Package Boiler segment's principal business consists of the manufacture, sale, and maintenance of general-purpose boilers such as small once-through boilers, which are used as heat sources in commercial and manufacturing facilities, and vacuum-type water heaters.

Although the domestic general-purpose boiler market has already matured, it is expected to yield a certain level of primarily replacement demand going forward, and demand is expected to grow overseas, primarily in Southeast Asia.

Order volume during the consolidated fiscal year under review rose 5.8% from the previous year thanks to initiatives designed to secure replacement demand and growth in maintenance orders. Although net sales remained on par with the previous consolidated fiscal year (up 0.9%) for reasons related to the timing of project deliveries, cost-cutting initiatives improved the cost rate to yield a 10.8% rise in operating profit from the previous consolidated fiscal year.

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

Equipment and Systems Business

The Equipment and Systems segment's principal business consists of the design and installation of building equipment such as air-conditioning equipment and water and sewage equipment as well as the manufacture, sale, and maintenance of equipment like clean devices and cleaning systems for the semiconductor industry.

Demand is trending up thanks to growth in building demand and increased capital investment in the semiconductor industry, and we expect strong demand to continue for the time being based on the outlook for building demand and the electronic device market.

Order volume during the consolidated fiscal year under review fell 11.2% from the previous consolidated fiscal year due to delays in the timing at which orders for major projects were received in the building equipment industry. Although net sales rose 15.5% from the previous consolidated fiscal year on steady progress in construction of building equipment that had already been ordered, operating profit fell 29.0% from the previous consolidated fiscal year due to changes in project mix.

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

The Takuma Group has worked diligently to implement its 11th Medium-Term Management Plan, which ended with the consolidated fiscal year under review. Thanks to those efforts, we achieved cumulative order volume of 468.0 billion yen, net sales of 347.5 billion yen, and ordinary profit of 31.9 billion yen during the three-year period covered by the plan, versus targets of 400.0 billion yen, 360.0 billion yen, and 27.0 billion yen, respectively. In this way, we were able to meet our goals in terms of the key indicators of order volume and ordinary profit.

During the 12th Medium-Term Management Plan, which began this April, we will work diligently to achieve a target of 33.0 billion yen in cumulative consolidated ordinary profit during the three-year period covered by the plan.

Status of Business Activities

② Sources of Capital and Capital Liquidity

During the consolidated fiscal year under review, net cash provided by operating activities totaled 5,141 million yen (compared to net cash provided by operating activities of 9,590 million yen during the previous consolidated fiscal year) due to factors including a reduction in allowance for losses on sales contracts. Due to the low balance for this account during the consolidated fiscal year under review, we expect the impact of this change to be temporary in nature.

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.

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 2018
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 exhaust gas treatment systems using impulse waves	November 2005	Nihon Spindle Manufacturing Co., Ltd. (Japan)	For 10 years, then automatically renewed every year
Takuma Co., Ltd.	Coal firing boiler	June 2007	P.T. Panca Mandiri Essencia (Indonesia)	Until May 2017 (See Note 2.)

Notes:
1. 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.
2. Contract ended during the consolidated fiscal year under review.

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, recycling-oriented 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 and universities.

Expenditures on research and development during the consolidated fiscal year under review totaled 929 million yen. Principal research and development activities by business segment were as follows:

(1) Environment and Energy Plant Business

- ① In the area of waste treatment, we are constructing a demonstration incinerator with a next-generation stoker at one of our plants with the principal goal of developing proprietary technology to aid in reducing life cycle cost and boosting energy recovery. We are utilizing this demonstration incinerator in a program of ongoing development of such aspects of equipment operation as the reduction of harmful substances (e.g., nitrogen oxides, dioxins, and mercury) through combustion improvements and increases in power generation efficiency. In addition, we’re pursuing a project known as “Development of a Next-generation Low-carbon High-efficiency Biogas Power System and Combined System Using CO₂ 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 in FY2017. We’re working to stabilize combustion and to develop technologies for remote monitoring using AI and 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.
- ② In the area of energy, we continue to develop constituent technologies for burning a variety of 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. For sewage sludge incineration and power generation, we continue to develop combustion technology to allow stable incineration of sludge with varying water content. 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 804 million yen.

(2) Package Boiler Business

In the once-through boiler category, we launched the EQOS Links EQRH-1001KM/AM, an oil-fueled high-efficiency simple boiler that delivers dramatically improved operating efficiency. The product features a newly developed oil burner with reduced minimum output, realizing wider-range load control, or operation among four stages of output instead of the previous three. This innovation reduces the number of times combustion has to be started and stopped, improving efficiency when operating under conditions of low load. The model also delivers improved efficiency during rated operation, for example thanks to the improved thermal efficiency provided by its multi-pass flow body.

In the vacuum-type water heater category, we worked together with the East Japan Railway Company to develop a Vacotin Heater designed to deliver excellent energy-saving performance in conjunction with a new control system for water-sprinkling systems used on Shinkansen train lines to melt snow, and the new model was chosen for use at the company’s Joetsu Shinkansen Nakajima Snow-melting Station. The product utilizes a larger-capacity heat exchanger and a more compact boiler body to deliver higher output in the same footprint as previous units. It also features a burner with reduced minimum output to allow greater control over output. These changes make possible more efficient operation by implementing load-based combustion control.

The research and development budget for this segment of our business was 41 million yen.

(3) Equipment and Systems Business

In washing systems for semiconductor plants, we are working to develop products that utilize micro-bubble washing technology that boosts washing effectiveness with fine bubbles while reducing cleaning agent use. We’re developing and evaluating the technology with the goal of using it not only for wafers, but also a variety of electronic components such as hard disks.

In the area of chemical filters for clean rooms at semiconductor plants, we’re 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 82 million yen.

Financial Statement

Consolidated Balance Sheets

TAKUMA CO., LTD. and Consolidated Subsidiaries
As of March 31, 2018 and 2017

	Millions of yen		Thousands of U.S. dollars (Note 1)		Millions of yen		Thousands of U.S. dollars (Note 1)
	2018	2017	2018		2018	2017	2018
ASSETS				LIABILITIES AND NET ASSETS			
Current assets:				Current liabilities:			
Cash and time deposits (Notes 4, 6 and 8)	¥ 60,864	¥ 57,719	\$ 572,888	Short-term loans payable (Notes 6 and 9)	¥ 7,675	¥ 7,675	\$ 72,242
Notes and accounts receivable (Note 6):				Current portion of long-term debt (Notes 6 and 9)	470	468	4,422
Trade	50,049	44,716	471,092	Notes and accounts payable (Note 6):			
Unconsolidated subsidiaries and affiliated companies	380	391	3,578	Trade	34,913	32,569	328,625
Other	381	242	3,590	Unconsolidated subsidiaries and affiliated companies	234	344	2,204
Less allowance for doubtful accounts	(38)	(27)	(358)	Other	979	931	9,214
Total	50,772	45,322	477,902	Total	36,126	33,844	340,043
Inventories (Note 5)	4,307	3,897	40,538	Accrued income taxes	281	2,532	2,644
Deferred tax assets (Note 15)	1,669	2,471	15,708	Advances received	13,592	7,935	127,936
Other	1,372	766	12,917	Allowance for guarantees on completed work	86	177	808
Total current assets	118,984	110,175	1,119,953	Allowance for losses on sales contracts	373	3,578	3,508
				Other	5,709	5,734	53,741
Property, plant and equipment:				Total current liabilities	64,312	61,943	605,344
Land (Note 8)	3,011	3,018	28,344				
Buildings and structures (Note 8)	12,287	12,225	115,647	Long-term liabilities:			
Machinery, equipment, lease assets and construction in progress (Note 8)	10,653	11,119	100,275	Long-term debt (Notes 6 and 9)	459	929	4,319
Less accumulated depreciation	(17,450)	(17,434)	(164,245)	Allowance for directors' and executive officers' retirement benefits	183	152	1,728
Total property, plant and equipment	8,501	8,928	80,021	Net defined benefit liability (Note 10)	9,406	9,011	88,535
				Other	776	439	7,301
Investments and other assets:				Total long-term liabilities	10,824	10,531	101,883
Investment securities (Notes 6, 7 and 8)	16,885	13,161	158,932	Total liabilities	75,136	72,474	707,227
Investments in:				Contingent liabilities (Note 11)			
Unconsolidated subsidiaries and affiliated companies	5,015	4,950	47,204				
Other	1,823	938	17,155	Net assets (Note 12):			
Less allowance for doubtful accounts	(471)	(461)	(4,433)	Common stock	13,367	13,367	125,823
Total	6,367	5,427	59,926	Authorized: 321,840,000 shares			
Deferred tax assets (Note 15)	785	2,210	7,388	Issued: 83,000,000 shares			
Other	340	300	3,200	Capital surplus	3,768	3,768	35,469
Total investments and other assets	24,377	21,098	229,446	Retained earnings	52,949	46,258	498,386
				Treasury stock, at cost	(235)	(234)	(2,214)
Total assets	¥ 151,862	¥ 140,201	\$ 1,429,420	331,385 shares in 2018 and 331,201 shares in 2017			
				Total shareholders' equity	69,849	63,159	657,464
				Unrealized gains on securities	7,161	4,886	67,407
				Deferred gains and losses on hedges	(46)	(21)	(438)
				Foreign currency translation adjustments	2	6	22
				Remeasurements of defined benefit plans	(559)	(591)	(5,265)
				Total accumulated other comprehensive income	6,558	4,280	61,726
				Non-controlling interests in consolidated subsidiaries	319	288	3,003
				Total net assets	76,726	67,727	722,193
				Total liabilities and net assets	¥ 151,862	¥ 140,201	\$ 1,429,420

See accompanying notes.

Financial Statement

Consolidated Statements of Operations

TAKUMA CO., LTD. and Consolidated Subsidiaries
For the years ended March 31, 2018 and 2017

	Millions of yen		Thousands of U.S. dollars (Note 1)
	2018	2017	2018
Net sales (Note 17)	¥ 118,199	¥ 116,309	\$ 1,112,562
Cost of sales (Notes 10, 13, 14 and 17)	93,372	90,693	878,877
Gross profit	24,827	25,616	233,685
Selling, general and administrative expenses (Notes 10, 14 and 17)	14,797	14,642	139,277
Operating income (Note 17)	10,030	10,974	94,408
Other income (expenses):			
Interest and dividend income	367	337	3,455
Interest expense	(66)	(76)	(621)
Foreign currency exchange loss	(157)	-	(1,478)
Gain on sales of investment securities (Note 7)	111	-	1,041
Gain on liquidation of subsidiaries and associates	90	-	850
Loss on valuation of investment securities	(60)	-	(565)
Loss on disposal of property, plant and equipment	(44)	(51)	(419)
Equity in earnings of affiliated companies	461	280	4,344
Other, net	79	142	744
Other income (expenses), net	781	632	7,351
Income before income taxes	10,811	11,606	101,759
Income taxes (Note 15):			
Current	1,352	2,859	12,731
Deferred	1,581	172	14,879
Total income taxes	2,933	3,031	27,610
Profit	7,878	8,575	74,149
Profit attributable to non-controlling interests in consolidated subsidiaries	31	24	284
Profit attributable to owners of parent	¥ 7,847	¥ 8,551	\$ 73,865
Per share:	Yen		U.S. dollars (Note 1)
Net income	¥ 94.93	¥ 103.43	\$ 0.89
Diluted net income	-	-	-
Cash dividends applicable to the year	16.00	13.00	0.15

See accompanying notes.

Consolidated Statements of Comprehensive Income

TAKUMA CO., LTD. and Consolidated Subsidiaries
For the years ended March 31, 2018 and 2017

	Millions of yen		Thousands of U.S. dollars (Note 1)
	2018	2017	2018
Profit	¥ 7,878	¥ 8,575	\$ 74,149
Other comprehensive income:			
Unrealized gains on securities	2,275	1,299	21,420
Deferred gains and losses on hedges	(3)	(29)	(30)
Foreign currency translation adjustments	(4)	23	(36)
Remeasurements of defined benefit plans	31	69	294
Total other comprehensive income	2,299	1,362	21,648
Comprehensive income (Note 16)	¥ 10,177	¥ 9,937	\$ 95,797
Comprehensive income attributed to:			
Owners of the parent	¥ 10,125	¥ 9,942	\$ 95,306
Non-controlling interests	52	(5)	491

Consolidated Statements of Changes in Net Assets

TAKUMA CO., LTD. and Consolidated Subsidiaries
For the years ended March 31, 2018 and 2017

	Millions of yen												
	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, 2018													
Balance at the beginning of current period	¥ 13,367	¥ 3,768	¥ 46,258	¥ (234)	¥ 63,159	¥ 4,886	¥ (21)	¥ 6	¥ (591)	¥ 4,280	¥ 288	¥ 67,727	
Cash dividends (¥14.00 per share)	-	-	(1,156)	-	(1,156)	-	-	-	-	-	-	(1,156)	
Profit attributable to owners of parent	-	-	7,847	-	7,847	-	-	-	-	-	-	7,847	
Purchase of treasury stock	-	-	-	(1)	(1)	-	-	-	-	-	-	(1)	
Other changes during the year, net	-	-	-	-	-	2,275	(25)	(4)	32	2,278	31	2,309	
Balance at the end of current period	¥ 13,367	¥ 3,768	¥ 52,949	¥ (235)	¥ 69,849	¥ 7,161	¥ (46)	¥ 2	¥ (559)	¥ 6,558	¥ 319	¥ 76,726	
For the years ended March 31, 2017													
	Millions of yen												
Balance at the beginning of current period	¥ 13,367	¥ 3,768	¥ 38,754	¥ (232)	¥ 55,657	¥ 3,586	¥ (27)	¥ (11)	¥ (660)	¥ 2,888	¥ 264	¥ 58,809	
Cash dividends (¥12.00 per share)	-	-	(992)	-	(992)	-	-	-	-	-	-	(992)	
Profit attributable to owners of parent	-	-	8,551	-	8,551	-	-	-	-	-	-	8,551	
Change in scope of consolidation	-	-	(55)	-	(55)	-	-	-	-	-	-	(55)	
Purchase of treasury stock	-	-	-	(2)	(2)	-	-	-	-	-	-	(2)	
Other changes during the year, net	-	-	-	-	-	1,300	6	17	69	1392	24	1,416	
Balance at the end of current period	¥ 13,367	¥ 3,768	¥ 46,258	¥ (234)	¥ 63,159	¥ 4,886	¥ (21)	¥ 6	¥ (591)	¥ 4,280	¥ 288	¥ 67,727	
For the years ended March 31, 2018													
	Thousands of U.S. dollars (Note 1)												
Balance at the beginning of current period	\$ 125,823	\$ 35,469	\$ 435,415	\$ (2,212)	\$ 594,495	\$ 45,987	\$ (196)	\$ 53	\$ (5,559)	\$ 40,285	\$ 2,711	\$ 637,491	
Cash dividends (\$0.13 per share)	-	-	(10,894)	-	(10,894)	-	-	-	-	-	-	(10,894)	
Profit attributable to owners of parent	-	-	73,865	-	73,865	-	-	-	-	-	-	73,865	
Purchase of treasury stock	-	-	-	(2)	(2)	-	-	-	-	-	-	(2)	
Other changes during the year, net	-	-	-	-	-	21,420	(242)	(31)	294	21,441	292	21,733	
Balance at the end of current period	\$ 125,823	\$ 35,469	\$ 498,386	\$ (2,214)	\$ 657,464	\$ 67,407	\$ (438)	\$ 22	\$ (5,265)	\$ 61,726	\$ 3,003	\$ 722,193	

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Consolidated Statements of Cash Flows

TAKUMA CO., LTD. and Consolidated Subsidiaries
For the years ended March 31, 2018 and 2017

	Millions of yen		Thousands of U.S. dollars (Note 1)
	2018	2017	2018
Cash flows from operating activities:			
Income before income taxes	¥ 10,811	¥ 11,606	\$ 101,759
Adjustments to reconcile income before income taxes to net cash provided by operating activities:			
Depreciation	790	851	7,433
Loss (gain) on sales of investment securities	(111)	0	(1,041)
Loss (gain) on liquidation of subsidiaries and associates	(90)	1	(850)
Loss (gain) on valuation of investment securities	60	-	565
Increase (decrease) in allowance for doubtful accounts	20	(18)	191
Increase (decrease) in allowance for bonuses	307	182	2,892
Increase (decrease) in allowance for losses on sales contracts	(3,205)	(1,586)	(30,168)
Increase (decrease) in net defined benefit liability	441	445	4,152
Interest and dividend income	(367)	(337)	(3,455)
Interest expense	66	76	621
Equity in losses (earnings) of affiliated companies	(461)	(280)	(4,344)
Net decrease (increase) in notes and accounts receivable and advances received	200	463	1,884
Decrease (increase) in inventories	(387)	148	(3,640)
Decrease (increase) in other current assets	(305)	(25)	(2,875)
Net increase (decrease) in notes and accounts payable and advance money	1,959	(2,143)	18,438
Increase (decrease) in other current liabilities	(426)	1,489	(4,007)
Other	(798)	148	(7,506)
Subtotal	8,504	11,020	80,049
Interest and dividend received	456	405	4,293
Interest paid	(66)	(76)	(625)
Income taxes received (paid)	(3,753)	(1,759)	(35,329)
Net cash provided by operating activities	5,141	9,590	48,388
Cash flows from investing activities:			
Net decrease (increase) in time deposits	4	3	40
Purchase of property, plant and equipment	(343)	(575)	(3,231)
Purchase of intangible fixed assets	(125)	(65)	(1,174)
Purchase of investment securities	(561)	(473)	(5,277)
Sale of investment securities	230	13	2,161
Disbursement for loans receivable	(151)	(171)	(1,423)
Collection of loans receivable	550	1,328	5,175
Other	68	83	641
Net cash provided by (used in) investing activities	(328)	143	(3,088)
Cash flows from financing activities:			
Net increase (decrease) in short-term bank loans	-	(75)	-
Payment of long-term debt	(468)	(673)	(4,403)
Purchase of treasury stock	(1)	(2)	(2)
Payment of cash dividends	(1,157)	(992)	(10,894)
Dividends paid to non-controlling interests	(21)	(17)	(199)
Other	(23)	(28)	(222)
Net cash used in financing activities	(1,670)	(1,787)	(15,720)
Effect of exchange rate changes on cash and cash equivalents	8	15	78
Net increase in cash and cash equivalents	3,151	7,961	29,658
Cash and cash equivalents at beginning of year	57,132	48,335	537,767
Increase in cash and cash equivalents from newly consolidated subsidiary	-	836	-
Cash and cash equivalents at end of year (Note 4)	¥ 60,283	¥ 57,132	\$ 567,425

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, 2018, which was ¥106.24 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 22 significant subsidiaries (the "Companies"). 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.

Financial Statement

- (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) Allowance for directors’ and executive officers’ retirement benefits

Directors and executive officers are generally entitled to receive retirement benefits based on the Companies’ internal rules. The Companies provide an allowance for directors’ and executive officers’ retirement benefits based on the amount that would be required if all directors and executive officers retired at the balance sheet date.
- (11) 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.
- (12) 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.
- (13) 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.
- (14) 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 in each year and year-end dividends approved by the shareholders at the annual meeting held subsequent to the end of the fiscal year.
- (15) 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.
- (16) Reclassifications

Certain prior year amounts have been reclassified to conform to the 2018 presentation.

3. Accounting standards issued but not yet adopted

- “Accounting Standard for Revenue Recognition” (Accounting Standards Board of Japan Statement No. 29, March 30, 2018)
 - “Implementation Guidance on Accounting Standard for Revenue Recognition” (Accounting Standards Board of Japan Guidance No. 30, March 30, 2018)
- (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. Cash and cash equivalents

Amounts of cash and cash equivalents as of March 31, 2018 and 2017 were reconciled with cash and time deposits as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Cash and time deposits	¥ 60,864	¥ 57,719	\$ 572,888
Time deposits with maturities exceeding three months from the date of acquisition	(581)	(587)	(5,463)
Total cash and cash equivalents	¥ 60,283	¥ 57,132	\$ 567,425

5. Inventories

Inventories were summarized as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Merchandise and finished goods	¥ 733	¥ 476	\$ 6,896
Work-in-process	1,887	1,911	17,763
Materials and supplies	1,687	1,510	15,879
Total inventories	¥ 4,307	¥ 3,897	\$ 40,538

6.Financial instruments

- (1) Status of financial instruments

(a) Financial instruments policy

Under Group policy, investment in financial instruments is 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 manages its cash position by preparing monthly cash-flow plans and other means.

(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.

Financial Statement

(2) Fair value of financial instruments

Amounts recognized on the consolidated balance sheets, fair values and differences as of March 31, 2018 and 2017, 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
	2018	2017	2018
Amounts recognized on the consolidated balance sheets	¥ 60,864	¥ 57,719	\$ 572,888
Fair value	60,864	57,719	572,888
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
	2018	2017	2018
Amounts recognized on the consolidated balance sheets	¥ 50,355	¥ 44,954	\$ 473,977
Fair value	50,355	44,954	473,977
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
	2018	2017	2018
Amounts recognized on the consolidated balance sheets	¥ 16,795	¥ 13,071	\$ 158,087
Fair value	16,795	13,071	158,087
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
	2018	2017	2018
Amounts recognized on the consolidated balance sheets	¥ 35,107	¥ 32,871	\$ 330,452
Fair value	35,107	32,871	330,452
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
	2018	2017	2018
Amounts recognized on the consolidated balance sheets	¥ 7,675	¥ 7,675	\$ 72,242
Fair value	7,675	7,675	72,242
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
	2018	2017	2018
Amounts recognized on the consolidated balance sheets	¥ 929	¥ 1,397	\$ 8,741
Fair value	934	1,404	8,786
Difference	¥ 5	¥ 7	\$ 45

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

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Amounts recognized on the consolidated balance sheets			
Equity securities issued by affiliates	¥ 4,333	¥ 4,041	\$ 40,790
Other	90	90	845

(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, 2018	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	¥ 60,864	¥ -	¥ -	¥ -	¥ -	¥ -
Notes and accounts receivable	47,648	2,177	530	-	-	-
Investment securities	-	-	-	-	-	-
Total	¥ 108,512	¥ 2,177	¥ 530	¥ -	¥ -	¥ -

Short-term loans payable	¥ 7,675	¥ -	¥ -	¥ -	¥ -	¥ -
Long-term debt	470	117	80	182	80	-
Total	¥ 8,145	¥ 117	¥ 80	¥ 182	¥ 80	¥ -

	Millions of yen					
As of March 31, 2017	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	¥ 57,719	¥ -	¥ -	¥ -	¥ -	¥ -
Notes and accounts receivable	43,928	1,026	-	-	-	-
Investment securities	-	-	-	-	-	-
Total	¥ 101,647	¥ 1,026	¥ -	¥ -	¥ -	¥ -

Short-term loans payable	¥ 7,675	¥ -	¥ -	¥ -	¥ -	¥ -
Long-term debt	468	470	117	80	182	80
Total	¥ 8,143	¥ 470	¥ 117	¥ 80	¥ 182	¥ 80

	Thousands of U.S. dollars					
As of March 31, 2018	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	\$ 572,888	\$ -	\$ -	\$ -	\$ -	\$ -
Notes and accounts receivable	448,500	20,487	4,990	-	-	-
Investment securities	-	-	-	-	-	-
Total	\$ 1,021,388	\$ 20,487	\$ 4,990	\$ -	\$ -	\$ -

Short-term loans payable	\$ 72,242	\$ -	\$ -	\$ -	\$ -	\$ -
Long-term debt	4,422	1,099	753	1,715	753	-
Total	\$ 76,664	\$ 1,099	\$ 753	\$ 1,715	\$ 753	\$ -

7. Securities

(1) Acquisition costs and book values of available-for-sale securities with available fair values as of March 31, 2018 and 2017 were as follows:

	Acquisition cost	Millions of yen Book value	Difference
As of March 31, 2018			
Securities with book values exceeding acquisition costs:			
Equity securities	¥ 5,923	¥ 16,324	¥ 10,401
Subtotal	5,923	16,324	10,401
Securities with book values not exceeding acquisition costs:			
Equity securities	551	471	(80)
Subtotal	551	471	(80)
Total	¥ 6,474	¥ 16,795	¥ 10,321

	Acquisition cost	Millions of yen Book value	Difference
As of March 31, 2017			
Securities with book values exceeding acquisition costs:			
Equity securities	¥ 5,954	¥ 13,008	¥ 7,054
Subtotal	5,954	13,008	7,054
Securities with book values not exceeding acquisition costs:			
Equity securities	81	63	(18)
Subtotal	81	63	(18)
Total	¥ 6,035	¥ 13,071	¥ 7,036

Financial Statement

As of March 31, 2018	Thousands of U.S. dollars		
	Acquisition cost	Book value	Difference
Securities with book values exceeding acquisition costs:			
Equity securities	\$ 55,752	\$ 153,651	\$ 97,899
Subtotal	55,752	153,651	97,899
Securities with book values not exceeding acquisition costs:			
Equity securities	5,187	4,436	(751)
Subtotal	5,187	4,436	(751)
Total	\$ 60,939	\$ 158,087	\$ 97,148

(2) Available-for-sale securities sold for the years ended March 31, 2018 and 2017 were as follows:
Information on the available-for-sale securities sold for the year ended March 31, 2017 is not provided because there was no significant gain.

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Total sales amount	¥ 230	¥ -	\$ 2,162
Gains	111	-	1,041

8. 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, 2018 and 2017:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Buildings and structures	¥ 193	¥ 270	\$ 1,815
Machinery and equipment	36	48	341
Land	-	94	-
Investment securities	450	450	4,236
Cash and time deposits	256	237	2,410
Time deposits as construction contract guarantees	102	73	956
Total	¥ 1,037	¥ 1,172	\$ 9,758

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

Short-term loans payable as of March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Secured	¥ -	¥ 175	\$ -
Unsecured	7,675	7,500	72,242
	¥ 7,675	¥ 7,675	\$ 72,242

Current portion of long-term debt as of March 31, 2018 and 2017 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Secured	¥ 72	¥ 70	\$ 676
Unsecured	398	398	3,746
	¥ 470	¥ 468	\$ 4,422

Long-term debt as of March 31, 2018 and 2017 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Secured	¥ 37	¥ 109	\$ 345
Unsecured	422	820	3,974
	¥ 459	¥ 929	\$ 4,319

The annual average interest rate applicable to bank loans at March 31, 2018 and 2017 was as follows:

	2018	2017
Short-term loans payable	0.6%	0.6%
Current portion of long-term debt	1.5%	1.2%
Long-term debt	2.4%	2.0%

10. 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 plan applied simplified method) for the years ended March 31, 2018 and 2017 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Balance at April 1, 2017 and 2016	¥ 8,446	¥ 8,093	\$ 79,498
Service cost	576	565	5,425
Interest cost	46	44	429
Actuarial loss (gain)	62	13	589
Benefits paid	(304)	(269)	(2,865)
Balance at March 31, 2018 and 2017	¥ 8,826	¥ 8,446	\$ 83,076

Movement in net defined benefit liability of plan applied simplified method for the years ended March 31, 2018 and 2017 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Balance at April 1, 2017 and 2016	¥ 565	¥ 575	\$ 5,318
Retirement benefit costs	99	78	936
Contributions paid by the employer	(29)	(34)	(278)
Benefits paid	(54)	(58)	(509)
Other	(1)	4	(8)
Balance at March 31, 2018 and 2017	¥ 580	¥ 565	\$ 5,459

Reconciliation from retirement benefit obligations and plan assets to net defined benefit liability as of March 31, 2018 and 2017 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Funded retirement benefit obligations	¥ 571	¥ 602	\$ 5,381
Plan assets	(415)	(434)	(3,910)
	156	168	1,471
Unfunded retirement benefit obligations	9,250	8,843	87,064
Total net defined benefit liability (asset) at March 31, 2018 and 2017	9,406	9,011	88,535
Net defined benefit liability	9,406	9,011	88,535
Total net defined benefit liability (asset) at March 31, 2018 and 2017	¥ 9,406	¥ 9,011	\$ 88,535

Retirement benefit costs for the years ended March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Service cost	¥ 576	¥ 565	\$ 5,425
Interest cost	46	44	429
Amortization of actuarial differences	157	162	1,474
Amortization of prior service cost	(49)	(49)	(461)
Retirement benefit costs based on the simplified method	99	78	936
Total retirement benefit costs for the fiscal years ended March 31, 2018 and 2017	¥ 829	¥ 800	\$ 7,803

Remeasurements of defined benefit plans for the years ended March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Prior service costs	¥ (49)	¥ (49)	\$ (462)
Actuarial gains and losses	94	149	885
Total remeasurements of defined benefit plans for the fiscal years ended March 31, 2018 and 2017	¥ 45	¥ 100	\$ 423

Financial Statement

Accumulated remeasurements of defined benefit plans as of March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Prior service costs yet to be recognized	¥ 10	¥ 59	\$ 91
Actuarial gains and losses yet to be recognized	(816)	(910)	(7,676)
Total balance at March 31, 2018 and 2017	¥ (806)	¥ (851)	\$ (7,585)

The principal actuarial assumptions at March 31, 2018 and 2017 were as follows:

	2018	2017
Discount rate	principally 0.64%	principally 0.64%
Expected rate of salary increase	principally 6.6%	principally 6.4%

(3) Defined contribution plan

The amount of contribution required for the defined contribution plans of the Companies for the years ended March 31, 2018 and 2017 was ¥132 million (\$1,240 thousand) and ¥130 million, respectively.

11. Contingent liabilities

The Companies were contingently liable under guarantees for bank loans of affiliated companies and other companies as of March 31, 2018 and 2017 as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Unsecured	¥ 239	¥ 284	\$ 2,247

12. 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.

13. Provision for losses on sales contracts

Provision for losses on sales contracts included in cost of sales for the years ended March 31, 2018 and 2017 was as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
	¥ 373	¥ 10	\$ 3,507

14. 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, 2018 and 2017 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
	¥ 929	¥ 973	\$ 8,743

15. 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 30.8% for the years ended March 31, 2018 and 2017.

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.

	2018	2017
Statutory tax rate	30.8%	30.8%
Nondeductible expenses	1.1	1.1
Dividend income	(0.2)	(0.2)
Equity in earnings of affiliated companies	(1.3)	(0.7)
Council tax	0.6	0.6
Decrease in deferred tax assets resulting from change in statutory rate	-	0.2
Tax credits	(2.0)	(2.4)
Valuation allowance	(1.3)	0.0
Other	(0.6)	(3.3)
The Companies' effective tax rate	27.1%	26.1%

Components of the Companies' deferred tax assets and liabilities as of March 31, 2018 and 2017 were as follows:

	Millions of yen		Thousands of U.S. dollars
	2018	2017	2018
Deferred tax assets:			
Net defined benefit liability	¥ 2,876	¥ 2,782	\$ 27,068
Accrued cost of sales	1,483	1,348	13,958
Impairment loss	1,262	1,262	11,879
Other	3,721	5,671	35,032
Total deferred tax assets	9,342	11,063	87,937
Valuation allowance	(3,975)	(4,112)	(37,416)
Net deferred tax assets	¥ 5,367	¥ 6,951	\$ 50,521
Deferred tax liabilities:			
Unrealized gains on securities	¥ (3,143)	¥ (2,135)	\$ (29,586)
Valuation difference in land of consolidated subsidiary	(152)	(152)	(1,433)
Other	(168)	(168)	(1,584)
Total deferred tax liabilities	(3,463)	(2,455)	(32,603)
Net deferred tax assets	¥ 1,904	¥ 4,496	\$ 17,918

Financial Statement

16. 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
	2018	2017	2018
Unrealized gains on securities			
Increase (decrease) during the year	¥ 3,395	¥ 1,866	\$ 31,952
Reclassification adjustments	(111)	(0)	(1,041)
Subtotal, before tax	3,284	1,866	30,911
Tax (expense) or benefit	(1,009)	(567)	(9,491)
Subtotal, net of tax	¥ 2,275	¥ 1,299	\$ 21,420
Deferred gains and losses on hedges			
Increase (decrease) during the year	¥ (13)	¥ (29)	\$ (122)
Reclassification adjustments	-	-	-
Subtotal, before tax	(13)	(29)	(122)
Tax (expense) or benefit	10	(0)	92
Subtotal, net of tax	¥ (3)	¥ (29)	\$ (30)
Foreign currency translation adjustments			
Increase (decrease) during the year	¥ (4)	¥ 23	\$ (36)
Reclassification adjustments	-	-	-
Subtotal, before tax	(4)	23	(36)
Tax (expense) or benefit	-	-	-
Subtotal, net of tax	¥ (4)	¥ 23	\$ (36)
Remeasurements of defined benefit plans			
Increase (decrease) during the year	¥ (63)	¥ (13)	\$ (589)
Reclassification adjustments	108	113	1,013
Subtotal, before tax	45	100	424
Tax (expense) or benefit	(14)	(31)	(130)
Subtotal, net of tax	¥ 31	¥ 69	\$ 294
Total other comprehensive income	¥ 2,299	¥ 1,362	\$ 21,648

17. 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

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

Waste combusting power plants and biomass power plants

Package Boiler

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, 2018 and 2017 was as follows:

	Millions of yen						
	Domestic Environment and Energy	Overseas Environment and Energy	Package Boiler	Equipment and System Business	Total	Adjustment	Consolidated
Year ended March 31, 2018							
Sales:							
Outside customers	¥ 89,850	¥ 3,401	¥ 17,267	¥ 7,681	¥ 118,199	¥ -	¥ 118,199
Intersegment	225	-	54	16	295	(295)	-
Total	90,075	3,401	17,321	7,697	118,494	(295)	118,199
Reportable segment income	¥ 10,488	¥ 78	¥ 1,015	¥ 229	¥ 11,810	¥ (1,780)	¥ 10,030
Others:							
Depreciation	¥ 559	¥ 12	¥ 170	¥ 19	¥ 760	¥ 30	¥ 790
Year ended March 31, 2017							
Sales:							
Outside customers	¥ 90,311	¥ 2,222	¥ 17,128	¥ 6,648	¥ 116,309	¥ -	¥ 116,309
Intersegment	332	0	37	18	387	(387)	-
Total	90,643	2,222	17,165	6,666	116,696	(387)	116,309
Reportable segment income (loss)	¥ 11,727	¥ (154)	¥ 917	¥ 322	¥ 12,812	¥ (1,838)	¥ 10,974
Others:							
Depreciation	¥ 605	¥ 13	¥ 179	¥ 23	¥ 820	¥ 31	¥ 851
Year ended March 31, 2018							
Sales:							
Outside customers	\$ 845,721	\$ 32,014	\$ 162,527	\$ 72,300	\$ 1,112,562	\$ -	\$ 1,112,562
Intersegment	2,124	-	510	148	2,782	(2,782)	-
Total	847,845	32,014	163,037	72,448	1,115,344	(2,782)	1,112,562
Reportable segment income	\$ 98,714	\$ 734	\$ 9,558	\$ 2,153	\$ 111,159	\$ (16,751)	\$ 94,408
Others:							
Depreciation	\$ 5,262	\$ 111	\$ 1,598	\$ 184	\$ 7,155	\$ 278	\$ 7,433

Adjustments in reportable segment income 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 relating to segment assets is omitted since assets are not allocated to business segments.

Financial Statement

(Related information)
Reportable segment information for the years ended March 31, 2018 and 2017 was as follows:

- (1) Information about products and services
Disclosure of this information is omitted since similar information is disclosed in Note 17, “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



Independent Auditor’s Report

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

We have audited the accompanying consolidated financial statements of TAKUMA CO., LTD. and its consolidated subsidiaries, which comprise the consolidated balance sheets as at March 31, 2018 and 2017, and 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 a summary of significant accounting policies and other explanatory information.

Management’s Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these 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.

Auditor’s Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in Japan. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the entity’s preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances, while the objective of the financial statement audit is not for the purpose of expressing an opinion on the effectiveness of the entity’s internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of TAKUMA CO., LTD. and its consolidated subsidiaries as at March 31, 2018 and 2017, and their financial performance and cash flows for the years then ended in accordance with accounting principles generally accepted in Japan.

Convenience Translation

The U.S. dollar amounts in the accompanying consolidated financial statements with respect to the year ended March 31, 2018 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.

KPMG AZSA LLC

June 27, 2018
Osaka, Japan

KPMG AZSA LLC, a limited liability audit corporation incorporated under the Japanese Certified Public Accountants Law and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative (“KPMG International”), a Swiss entity.

TAKUMA CO., LTD.

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