



ALWAYS
FLY TOGETHER

2020 CSR REPORT

Jamco
ALWAYS FLY TOGETHER

JAMCO 2020 CSR Report

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Editorial Policy

This report is produced and made available with the aim of introducing the Jamco Group's* approach and initiatives for Corporate Social Responsibility (CSR) and for the purpose of further improvement of our CSR promotion through communication with our customers, shareholders, investors, suppliers, employees and other stakeholders.

* JAMCO Group: Domestic and foreign subsidiaries and affiliates

Scope of this Report

Organizations

JAMCO Corporation, its domestic and overseas subsidiaries and affiliates

Period Reported

April 1, 2019 ~ March 31, 2020, (some information is included for dates outside of this period as)

Issue Date

September, 2020.

Other

Referenced Guidelines

ISO26000 : 2010 Guidance on social responsibility

ISO14001 : 2015 Environmental management systems

Contact

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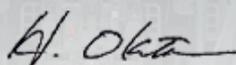
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Management's Commitment to CSR

Treasuring the precious bonds with stakeholders, while setting our sights on further excelling as a sustainable and successful business

Harutoshi Okita,
President and CEO



JAMCO, a Technology Oriented Company with Samurai Values:

- **Rising to the eternal challenge of realizing our aspirations.**
- **Bringing joy and satisfaction to our customers and employees.**
- **Striving for coexistence with nature, contributing to a prosperous and progressive society.**

These commitments, championed by JAMCO as the core of our management philosophy, can also be said to manifest the spirit of CSR.

Rising to the Eternal Challenge of Realizing our Aspirations

Since our establishment, JAMCO has nurtured our business focusing on the aviation industry. This stance is firmly rooted in the conviction that our own aspirations can only be realized hand-in-hand with the ongoing evolution of aviation technology. In keeping with this, JAMCO has steadily expanded the borders of our business along the road to realizing our dreams, with the stage for such activities now showing signs of broadening to an even greater extent. There has been no change or pause, however, in the rock-solid commitment to realizing all aspects of our vision as it pertains to the aviation field.

Bringing Joy and Satisfaction to our Customers and Employees

At JAMCO, the goal is always to supply products and services of genuine and enduring satisfaction to our customers. Through this avenue, we look forward to our employees likewise sensing joy and fulfillment in their work, continuing to develop and grow both as participating members of the business community and as individual human beings.

To this end, we arrange for necessary education, training and work opportunities, while conveying the "unwritten rules" of what may be referred to as "JAMCO-ism." On the strength of this platform, we believe that JAMCO will continue to grow alongside our employees, while fostering an environment empowering employees to move forward with teamwork and a rich sense of achievement. In this way, JAMCO remains boldly fixed on perennially evolving and shining as a "sincere corporate entity where people come first."

Striving for Coexistence with Nature, Contributing to a Prosperous and Progressive Society

JAMCO is proactively engaged in dealing with global environmental issues. This stance encompasses energy-saving measures, “green procurement” programs, extensive waste reduction and recycling efforts, as well as analysis of the chemical substances in the materials and other items we use, and the active promotion of conversion to alternatives for components containing hazardous substances and other enlightened efforts. Going forward, JAMCO pledges to further intensify the push to lower our environmental footprint, in a no-nonsense response to the increasing need to take meaningful countermeasures in the face of environmental challenges.

Approach to CSR

Basic CSR Policy

Basic CSR Policy

JAMCO’s CSR policies are rooted in its management philosophy and are defined in the following terms:

- Our commitment to compliance is marked by our “samurai values” in which pride and faithfulness are the cornerstone of our actions as a responsible corporate citizen.
- We pursue growth and happiness for employees as well as provide services and products to meet customer expectations.
- We work to ensure harmony between society and the environment, thereby contributing to a better society.

Human Rights Policy

The JAMCO Group, to achieve its management philosophy and maintain sustainable growth, will fulfill its responsibility to respect fundamental human rights by the following.

1. Promote initiatives that respect fundamental human rights based on international standards*, and contribute to the creation of a sustainable society.
2. Comply with the laws of the countries and regions that we do business in based on international standards.
3. To refrain from acting in ways that have a negative effect on human rights.
4. To take immediate steps to begin the remediation process in cases where our actions have a negative effect on human rights, or where we have had a hand in such an effect.
5. Operate internal and external hotlines for reporting the discovery of negative effects on human rights.
6. Reduce and avoid risks that could result in negative effects on human rights.
7. Promote human rights awareness activities that target all JAMCO Group officers and employees.
8. Require our business partners to respect human rights and to work to avoid doing anything that may have a negative effect on those rights.
9. Disclose information about human rights issues related to our business activities and discuss them with stakeholders as appropriate.

*"International standards" refers to 'international standards regarding business and human rights' that are represented by the following:

- Universal Declaration of Human Rights & International Covenants on Human Rights (United Nations)
- ILO Declaration on Fundamental Principles & Rights at Work (International Labour Organization/ILO)
- Guiding Principles on Business and Human Rights (United Nations)

CSR Promotion System

To meet higher social demands and expectations with respect to promoting CSR, JAMCO established a system to promote CSR activities by forming a CSR Committee in April, 2017.

The CSR Committee manages across the organization and leads company-wide CSR activities. The CSR Committee is comprised of a Chairperson (Executive Officer in charge of Human Resources General Affairs Department) and members from each Department. CSR Committee meetings are regularly held to plan, review CSR promotion activities and disseminate CSR information.



Summary of CSR Activities For FY2019

In FY 2019, JAMCO carried out activities across our group affiliates related to each ISO 26000 core subject:

- Training was implemented and carried out emphasizing human rights and compliance.
- CSR fundamentals training was executed for JAMCO executive officers as well as Sustainable Development Goals (SDGs) global awareness and the company's CSR commitments.
- Performed analysis review of the increased number of outsourced processing contractors to ascertain the state of CSR in the supply chain.

CSR Activities for FY2019

ISO 26000 Core Subjects	Target	Results
Organizational governance/ Recognition of social responsibility and integration into the whole organization	JAMCO, sub-tier & suppliers will carry out the following activities:	
	• Continue CSR comprehension and awareness activities	Executed CSR education for all company officers that included basic content regarding the SDGs.
	• Continue to perform CSR reviews	Evaluated the state of CSR at three major Group companies involved in our manufacturing businesses. (Refer to next section for results).
	• Promote and expand reviews regarding CSR procurement policy in the supply chain	<ul style="list-style-type: none"> • Accomplished education to strengthen information security that includes Jamco Group companies. While achieving our target of a 100% attendance rate at the company, failed to reach this target at our Group companies (only 94% attendance) and attendance improvement measures are scheduled. • Strengthened security measures at the company, for example restricting the sending (forwarding) of e-mail from internal addresses to free e-mail addresses.
Human rights	Continue training related to human rights (includes domestic Group companies)	Implemented compliance training that included additional content regarding human rights. (Refer to "CSR/Approach to CSR/Promoting CSR/Human Rights Policies")
Labor practices	Further promote a healthy work-life balance:	
	• Encourage use of annual paid leave	The enactment of the Revised Labor Standards Act, which stipulates that employees use five or more days of paid leave annually, In FY 2019 the Corporate Administration and Human Resource Department performed monthly checks regarding the amount of leave employees utilized , and encouraged those who had not yet used their leave to do so, resulting in target achievement.
	• Encourage use of telecommuting for those raising children	Three (3) employees took advantage of the telecommuting system we implemented in FY 2019 for employees raising children. Additional training / information will continue to offer to encourage its utilization by a greater number of employees.

ISO 26000 Core Subjects	Target	Results
	<ul style="list-style-type: none"> Encourage strict adherence to the monthly 80-hour overtime limit 	<p>Implemented “Overtime Reduction Committee” initiative for each department to encourage idea generation regarding reducing working hours with the participation of the Corporate Administration & Human Resources Department, resulting with zero employees exceeding 80 hours of monthly overtime in FY 2019.</p>
	<ul style="list-style-type: none"> Encourage hiring of female employees (increase the number of women in assistant managerial positions at 10% or more) 	<ul style="list-style-type: none"> In April of 2019, JAMCO hired 32 new employees of which only 4 of those were female. To impel increased female employment, JAMCO dispatched female employees to visit schools and actively recruit new female college graduates. The activity resulted in 14 of the 48 new employees that joined the company in April 2020 were female. Jamco employed 6 female managers in FY 2019 equating to about 2.2% from the total manager population and decreased by one person from the previous year. As of April 2020, 7 female managers are employed, equating to about 2.3% from total manager population. Jamco employed 16 female assistant managers in FY 2019 equating to about 7.5% of total assistant manager population and increased by 3 female assistant managers from the previous year. As of April 2020, 21 female employees held assistant manager positions thus the 10% target from all assistant managers was achieved with the percentage rate increasing steadily.
	<ul style="list-style-type: none"> Ascertain and analyze the number of and circumstances surrounding work-related accidents 	<p>The year 2020 experienced 6 work-related accidents, below the recent 5-year average of 8.6. (Refer to “Occupational Safety and Health” for information regarding related activities that were carried out.)</p>
Environment	<p>Reduce energy consumption by 1% or greater compared with FY 2018:</p>	<p>For the results of our environmental activities (detailed information regarding each item below) refer to “Results of FY 2019 Activities” for our environmental conservation activities.</p>
	<ul style="list-style-type: none"> Reduce greenhouse gas (GHG) emissions 	<p>Analyzed carbon dioxide (CO₂) emissions at each business division, and the greenhouse gas reduction plan was formulated resulting in the total CO₂ emissions for all divisions in FY 2019 of 4,618 t, or 2.9% less than last year’s amount of 4,754 t.</p>
	<ul style="list-style-type: none"> Encourage switching lighting to LED 	<p>Replaced 1,417 lighting units to LED lamps in FY 2019, and 3,676 units that use mercury vapor and fluorescent lamps remain as of the end of March 2020. Will continue to encourage each business divisions to transition to LED lighting.</p>
	<ul style="list-style-type: none"> Ascertain water consumption amounts for each business division and formulate a plan to reduce these amounts 	<p>As a result of ascertaining water use amounts at each business division, formulating a reduction plan and working to reduce water usage, the total amount of water used by all divisions in FY 2019 was 37,503 m³, or 8.4% less than last year’s amount of 40,964 m³.</p>
	<ul style="list-style-type: none"> Reduce total waste discharge 	<p>Ascertained the total amount of waste materials output by each business division, formulated a reduction plan and worked to separate and recycle these materials. The total amount of waste output by all divisions in FY 2019 was 546 t, 10.7% more than last year’s amount of 493.4 t.</p>

ISO 26000 Core Subjects	Target	Results
Fair business practices	Compliance code comprehension and adherence	Executed special compliance training related to the Subcontract Act for 110 employees in charge of procurement, including those at Group companies, ensuring familiarization with compliance code dealing with fair business practices.
	Enhancement of Group-wide compliance	Support affiliates to enact their own compliance committee meetings.
Consumer challenge	Improve quality management system/Offer even safer products and services	Continuously promote quality-related meetings and information sharing with participation by all members of the JAMCO Group, including domestic and overseas subsidiaries. The purpose of these activities is to further improve the safety and quality of our products, ensure the safe flight of aircraft, mutually confirm safety and quality information and detect risks at an early stage. Furthermore, as part of our efforts to prevent the recurrence of the inappropriate quality issues that occurred last year, we invited external experts as instructors to reemphasize safety awareness and review compliance education. We are also reviewing the company's work environment, safety management system and business structure, and making related improvements.
	Ascertain number of and analyze safety-related defects	Investigating methods to appropriately deal with defects discovered post-delivery to prevent their recurrence in the areas of manufacturing (interiors, seats, components) and maintenance. Simultaneously improving product safety and quality determining areas that require strengthening through trend analysis.
Participation in and development of communities	Promote activities by our offices, affiliates and subsidiaries that contribute to local communities	Carried out cleaning activities at a local park in the Chofu District. (Refer to "Social Contribution Activities by JAMCO" for details)

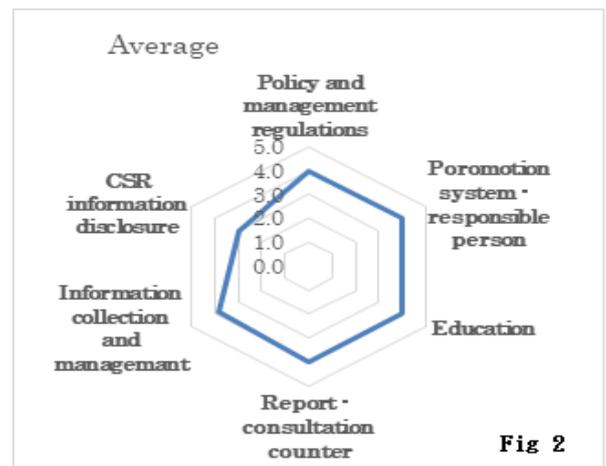
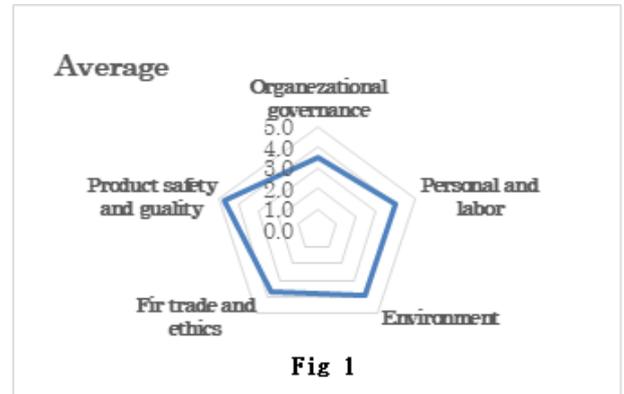
Summary of Results from Review of Status of CSR at Core Business Division Contractors

In order to ascertain the state of CSR at our contractors, an expanded review of thirty-one key outsourced processing contractors (including the eleven reviewed last year) that produce components used in the manufacture of our aircraft interiors and seats was followed through. The review covered six of the Seven Core Subjects of ISO 26000 (as Human Rights and Labor Practices were combined, five subjects were covered), excluding Community Involvement and Development (see Fig. 1). Despite recognizing irregularities in how the core subjects were assessed and expanding the number of

contractors reviewed, most were found to be carrying out solid initiatives related to product safety and quality. They also generally tended to handle compliance and other fundamental standards that companies are expected to meet even more appropriately than last year.

Simultaneously, discovered areas of improvements are required with regard to organizational governance.

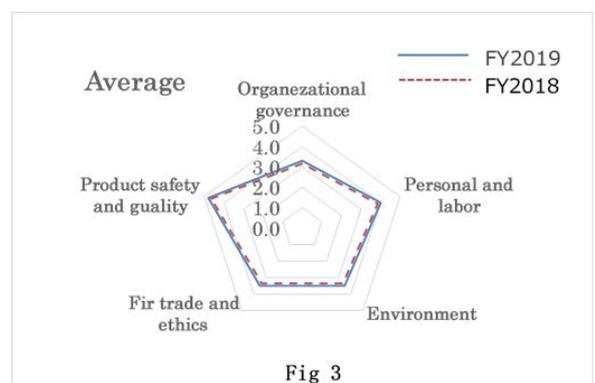
As with last year, we rated and analyzed individual company's policies, systems, training, points of contact, results and disclosure to determine the amount of effort that they put into each of the above six subjects (see Fig. 2) while excluding disclosure, each contractor showed improved awareness of CSR activities and performance of them. However, similar to the previous year, disclosure remains an issue, with around half of the reviewed companies not disclosing relevant CSR information.



Comparison with Previous Years' Results for 11 Core Business Division Contractors

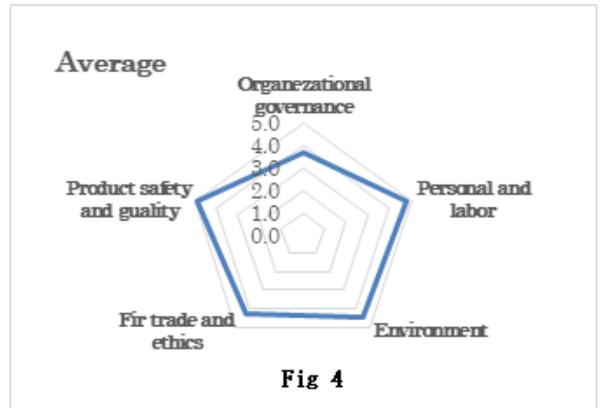
By extracting the results for the eleven companies that we reviewed in FY 2018 from those of thirty-one mentioned above, and comparing their FY 2018 results with those from this year, it was determined that the average score had slightly improved. (see Fig. 3)

In conclusion, determined some companies scores were worse than last year and will continue to encourage these contractors to improve promotion of CSR.



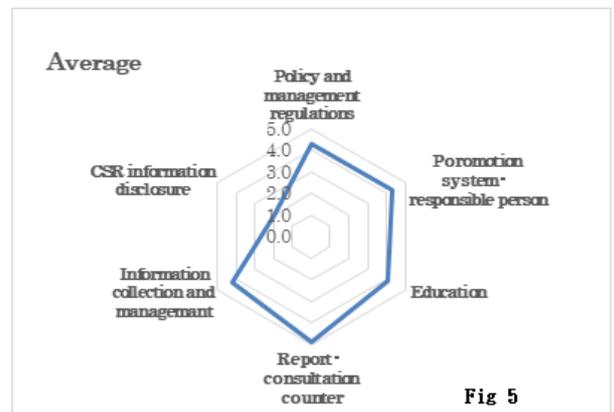
Summary of Results from Review of Status of CSR at Group Companies

A CSR review at core Group companies involved in the company's manufacturing businesses was executed at the following three companies: Niigata JAMCO Corporation, which primarily manufactures (assembles) aircraft interior products; Miyazaki JAMCO Corporation, which manufactures components used in our seats and interior products; and JAMCO AEROMANUFACTURING Co., Ltd., which primarily manufactures aircraft structural components (structural parts for vertical stabilizers and other portions of aircraft fuselages) for Airbus S.A.S., as well as aircraft engine components. The review was carried out in the same manner as with contractors above. As a result, while all three companies had high ratings for product safety and quality and human rights and labor, organizational governance issues will require some improvement. (see Fig. 4).



Companies were rated and analyzed by policies, systems, training, points of contact, results and disclosure to determine the amount of effort that they put into each of the above six subjects. (see Fig. 5)

The results were relatively good, except for disclosure. Two of the three companies possess their own websites, yet only one has a page related to CSR. The disclosure of CSR information on Group company websites is primarily for recruiting purposes. With students also showing increasing interest in CSR initiatives when choosing employment at a company, CSR policy information disclosure is an issue that each Group company will need to deal with going forward.



CSR Activity Targets for FY2020

In order to further enhance the CSR promotion structure, the following primary targets for FY2020 CSR activities to be carried out by JAMCO for ISO 26000's Core Subjects were fixed.

ISO26000 Core Subjects	Activity Targets for FY2019
Organizational governance/Recognition of social responsibility and integration into the whole organization	JAMCO, sub tier & contractors will carry out the following activities: <ul style="list-style-type: none"> • Continue CSR comprehension and awareness activities • Continue to perform CSR reviews • Continue CSR comprehension and awareness activities at contractors • Continue information security training • Enhance information security
Human rights	Continue training related to human rights (includes domestic Group companies)
Labor practices	Further promote a healthy work-life balance <ul style="list-style-type: none"> • Encourage use of annual paid leave • Encourage use of telecommuting • Reduce amount of overtime worked • Encourage hiring of female employees (increase the number of women in assistant managerial positions to 10% or more) • Obtain next-generation child raising "Kurumin" certification mark • Eliminate work-related accidents
Environment	<ul style="list-style-type: none"> • Reduce energy consumption by 1% or greater compared with FY 2019 • Encourage the transition of all lighting to LED • Reduce water consumption • Reduce total waste discharge
Fair business practices	<ul style="list-style-type: none"> • Compliance code comprehension • Enhance compliance Group-wide
Consumer challenge	<ul style="list-style-type: none"> • Improve quality management system/offer even safer products and services • Ascertain number of and analyze safety-related defects according to voluntary code
Participation in and development of communities	<ul style="list-style-type: none"> • Promote activities by our affiliates that contribute to local communities

Corporate Governance

Basic Policy

Based on our management philosophy reflected in our commitment “JAMCO, a Technology Oriented Company with Samurai Values,” we place great value on contributing to society and continuing to operate by offering products and services to customers. To put this value into practice, we recognize that our efforts to encourage shareholders, executives and employees to form an efficient coalition, to improve corporate value while compensating stakeholders, and to ensure transparency in management and enhance accountability are fundamental to good corporate governance.

Our Articles of Incorporation provide that there be no more than 15 Directors. They also provide that resolutions to elect or dismiss Directors at a General Meeting of Shareholders shall be passed by a majority of the votes held by shareholders present who hold no less than one-third of the votes of shareholders entitled to exercise their voting rights, and that cumulative voting shall not be used to elect Directors.

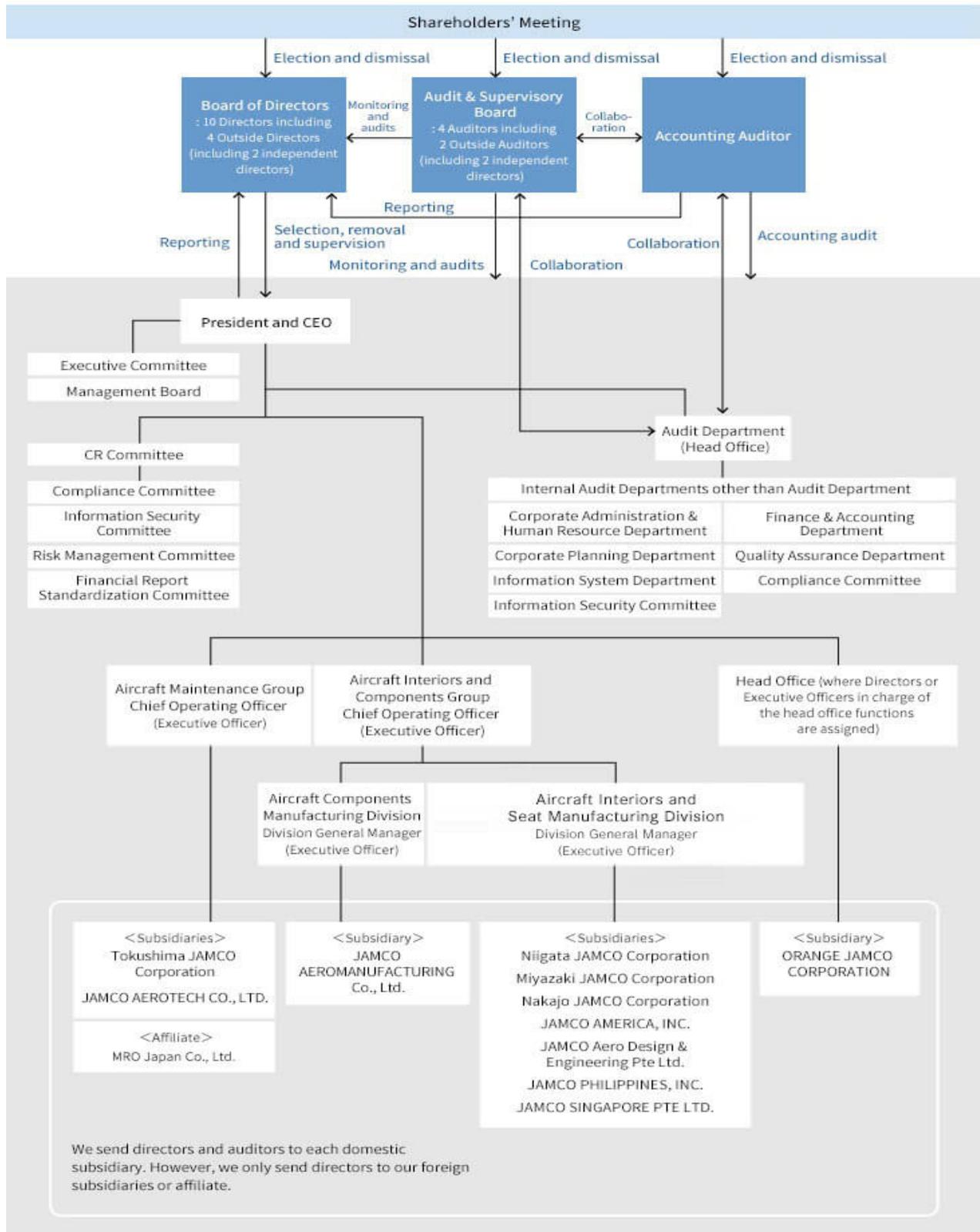
Regarding the election of Directors, while believing that those familiar with our operations can make more appropriate decisions and supervise the execution of operations better, we also believe it important to elect Outside Directors familiar with management and the aviation industry to achieve a balanced composition of the Board.

As for compliance, we recognize that it is important not only to comply with applicable laws, regulations, international rules and internal rules and regulations but also to develop a corporate culture that fosters a strong sense of ethics in day-to-day business activities. We have established a “Code of Compliance” and are committed to sharing understanding of the importance of compliance among officers and employees. We have also applied our compliance system to group companies to put compliance management into full practice, thereby fulfilling our corporate social responsibilities.

For more information regarding corporate governance at JAMCO, please also refer to the following pages on our corporate website.

•Corporate governance page on JAMCO’s corporate website: <https://www.jamco.co.jp/en/ir/governance.html>

Our Corporate Governance Structure



* The Quality Assurance Department changed its name to the Quality Planning Department from July 2020.

CSR in Business Activities

Compliance

The JAMCO Group is committed to responding to stakeholders' expectations and trust through the promotion of compliance management as well as the establishment of sound management control functions and performance of operations. We also have a "Compliance Code" to ensure that each of our officers and employees can comply with laws and regulations, respond to social demands including ethical demands to conduct themselves in a socially acceptable manner.

Promotion of Compliance

We have designated a Chief Compliance Officer (CCO) as the person responsible for managing compliance throughout the whole company, and established a Compliance Committee as a compliance management body. Compliance Committee meetings are held regularly, or from time to time as appropriate, and the results of the compliance efforts are reported to the Compliance Risk (CR) Committee and the Board of Directors.

We also seek to instill compliance by regularly providing compliance education to ensure that each of our employees has a better knowledge and understanding of compliance.

In FY2018, we provided face-to-face training for all officers at JAMCO, its affiliates and subsidiaries that included content to improve quality awareness. For entry training aimed at new employees and those recently promoted to the position of chief, assistant manager or manager, we carried out compliance training tailored to the unique characteristics of each.

Compliance Promotion System



* CR Committee: (Compliance Risk) body which manages internal controls

Compliance hotline

The JAMCO Group has established and operates a compliance hotline (contact point for whistleblowing and consultation queries) with the aim of purifying and rectifying compliance issues promptly. We have established contacts for consultation both internally and externally, and strive to deal with whistleblowing and consultation queries as sincerely and promptly as possible in cooperation with relevant internal departments and external consultants and lawyers. In addition, they are also equipped to handle consultations regarding harassment, human rights and a wide range of other issues. Furthermore, we have formulated rules for the protection of whistleblowers to prevent unfavorable treatment toward them.

Promotion of Sound Business Transactions

JAMCO Group clearly defines our initiatives to promote sound business transactions in our Compliance Code. In addition, the “Compliance Handbook” distributed to all officers and employees provides specific policies such as compliance with applicable laws and regulations, prohibition of giving illicit benefits to public officials and prohibition of excessive business entertainment and gift-giving to customers. While striving to ensure that transactions are conducted in an honest, open and fair manner by providing regular compliance education, we are fully committed to maintaining a sound and healthy relationship with the politics and government administration.



Compliance Handbook

Compliance Code

We at JAMCO Corporation aim to form an enterprise that fulfills its corporate social responsibilities and lives up to the trust of society.

The officers and employees of JAMCO Corporation follow the principles enumerated below at every level and in every function. Together we observe applicable laws, international rules, office routines, and other regulations, and behave properly in accordance with firm ethical standards and a sincere social conscience.

1. To develop and supply products and services with due consideration to safety and quality, and to build a relationship of higher trust with every customer.
2. To actively address environmental issues on our own initiative in accordance with the goals of an independently established basic environmental policy and corporate action plan.
3. To respect the individuality and personality of every employee and to secure a safe and comfortable work environment free from any discrimination, harassment, or other undesirable behaviors.
4. To never commit insider trading (unfair trading of a corporation's stock or other securities) by taking advantage of our access to inside information that we learn with respect to matters handled in the course of assigned work.
5. To aim at bona fide and fair trading and to maintain a sensible and sound relationship with politicians and governmental agencies.
6. To respond to anti-social forces with a resolute stance and to abstain from forming any connections with such forces.
7. To respect the established practices and cultures of individual nations and to maintain cooperative relations with these nations as members of a global corporation.

Information Security Initiatives

JAMCO Group believes that the implementation and continuous improvement of information security management is vital to perform our corporate social responsibilities. We are committed to operating, monitoring, reviewing, maintaining and continuously improving information security based on the ISMS (Information Security Management System) compliant with ISO/IEC27001:2013 (requirements for information security management).

We also ensure that the handing of personal information is managed thoroughly in accordance with our "Privacy Policy."

Basic Information Security Policy

Based on the JAMCO Group view that ensuring information security is an essential requirement for fulfilling our social responsibilities, we have established, as described below, an information security management system based on ISO27001 to secure the management of information, and we work on initiatives related to operations, monitoring and continuous improvements.

1. By appointing a person with overall responsibility and establishing a group-wide organization, we have put in place an information security management structure.
2. We ensure that we fulfill operational and legal requirements, as well as discharging our contractual security obligations, and the basic handling of information assets and specific procedures are prescribed in internal rules, allowing us to implement rational management of information according to its level of importance.
3. We are establishing standards and methods for evaluating risk. We are drawing up appropriate measures to avoid or mitigate risks that emerge as a result of these evaluations, and to alleviate any serious impact on to our business from major obstacles or natural disasters that are difficult to avoid or mitigate.
4. Education and training is provided out on a regular basis to ensure that officers and employees act with an appropriate awareness of the importance and the requirements of information security, allowing us to achieve well-balanced and high quality security management.
5. We have established a framework for monitoring and evaluation to continuously ensure the effectiveness of the information security structure, seeking to review and improve appropriate mechanisms with the aim of preventing and forestalling the recurrence of malfunctions and incidents.

Privacy Policy

We at JAMCO Corporation have established the Privacy Policy summarized below in the belief that it is our social responsibility to properly treat every piece of personal information about you, the customer, in order to fully protect your personal information. We achieve this policy by protecting all pieces of private information throughout the organization.

1. To respect the privacy of our individual customers, to comply with applicable laws and regulations, norms, and internal rules relating to your personal information, and to protect any of your personal information we have in our possession.
2. To use your personal information only within a prescribed scope for business, and to act fairly, appropriately, and within the prescribed scope for business when acquiring or using your personal information or when disclosing your personal information to others.
3. To properly handle your personal information in our possession at all times, and to keep it up to date and maintain its accuracy to the extent required for achieving the purpose of use.
4. To handle your personal information appropriately whenever you submit a claim for disclosure, correction, or suspension of use, or make other requests or otherwise express complaints or make inquiries.
5. To take proper precautions and other safeguards against possible unauthorized access, leakage, misuse, loss, or destruction when we handle your personal information, and to respond appropriately and promptly if and when any problem arise.
6. To regularly audit our approaches for the protection of private information and to continually improve these approaches in response to changing social conditions and environments.

Business Continuity Plan (BCP) in Case of a Disaster

As a company with CSR values, it is our responsibility to build systems that minimize the impact of any large-scale natural disaster or accident on our management resources, and enable us to continue our business.

JAMCO has formulated a Business Continuity Plan (BCP) and made various commitments such as the establishment of a disaster response system, and the implementation of safety inspections, drills and exercises.

In FY 2019 a revised BCP was formulated based on new anticipated damages that includes our regional production locations.

Basic Business Continuity Policy

JAMCO has formulated a Business Continuity Plan (BCP) based on the following basic principles and is committed to establishing Business Continuity Management (BCM) to ensure, in case of a large-scale disaster or accident, that we can provide products and services as promptly as possible while placing top priority on the safety of our customers and employees and their family members.

1. Place priority on the lives and safety of our customers and employees and their family members
2. Establish a system to prioritize the provision of products and services contributing to the manufacture and safe flight of aircraft
3. Coordinate disaster response efforts with local communities
4. Aim to resume our business activities as soon as possible

Risk Management

In the event of a crisis, we believe it is important to manage relevant information in an appropriate manner and as outlined by corporate organizational structures. The internal rules for crisis management identify potential risks to the company and, in the event that these risks materialize, they prescribe in-house responses such as the setting up of an emergency headquarters and the management of information, including reporting systems. In addition, with regard to the disclosure of related information outside the company, after analyzing the impact on the business of the emergency, the president or the executive officer in charge of PR & IR shall decide a media response, while timely disclosure to investors concerning the event will be dealt with under the timely disclosure procedures for corporate information.

Moreover, crises at subsidiaries shall be handled in the same way as if they had occurred at the Company itself.

Special Feature: “CONTRAIL Project”

CONTRAIL project

Paper Published of Analysis
of a Decade of Observation
Data!



An analysis of ten years’ worth of data obtained from observations by CONTRAIL, an atmospheric observation project using commercial airliners, reveals changes in CO₂ concentrations above 34 cities around the world.

Researchers from the CONTRAIL Project, which surveys the distribution of concentrations of CO₂, a major cause of global warming, analyzed a decade’s worth of observation data obtained by the project to reveal the state of CO₂ concentrations above 34 cities around the world. The results of their findings were compiled in a research paper published in a leading scientific journal. The paper, entitled “Statistical characterization of urban CO₂ emission signals observed by commercial airliner measurements” and written by lead author Taku Umezawa, a senior researcher at the National Institute for Environmental Studies (NIES) in Japan, was published in the natural science journal *Scientific Reports*. The report contains extremely interesting findings that have emerged from the high precision analysis of CO₂ observations taken at regular intervals in areas around commercial flight destination airports, and vertical observations that only aircraft can make.

An interview with Mr. Umezawa, was arranged by CONTRAIL Project Leader, and Head of the Office for Atmospheric and Oceanic Monitoring at NIES, Toshinobu Machida. The interviewer met him at NIES’ offices in Tsukuba, Japan with Mr. Machida present, and following the interview, a tour was provided of the laboratory where the data analysis was conducted. The interview was frank and casual, enabling questions to be asked about the content of the paper, as well revealing insight about potential JAMCO involvement and cooperation with the project in the future.



Taku Umezawa
Senior Researcher at NIES

CSR Promotion Section Reporting!

-National Institute for Environmental Studies Edition-

Interviewer:

First, congratulations on publishing your research paper related to atmospheric observations. (Looking at the NIES press release) Since I am covering the CONTRAIL Project as one of JAMCO's CSR activity initiatives, I wanted to speak with you more about the paper. Thank you for taking the time to meet with me today.

In the paper, you investigated data for 34 cities and 36 airports that JAL flies to. If you were free to do so, what other regions you would like to observe in the future?

Mr.Umezawa :

We would like to get observations of Africa, Siberia and South America. This is because we do not have observation networks in those areas, and atmospheric observations are impossible in areas where social infrastructure is fragile. In such places, observations by commercial aircraft are especially effective. Though there are airports everywhere, unfortunately we are unable to carry out observations at all of them.

Despite this, one of CONTRAIL's major strengths is its Asian focus. Organizations in the West typically only have data for Western cities, and they have yet

to extend the scope of their observations to include Asia. With the recent increase in CO₂ emissions from India, China and Southeast Asian nations, CONTRAIL's coverage of such areas is extremely valuable.



Mr. Umezawa with interviewer from JAMCO

Interviewer:

Looking at this graph showing the relationship between the amount of CO₂ enhancements and anthropogenic CO₂ emissions, Shanghai, Beijing, Haneda, Narita, Incheon... emissions from the Asian region are high. In comparison, emissions from major Western cities appear to be very low, but I would think that comes from them being much larger in size.

Mr.Umezawa :

Even when comparing the cities in the study by population they still end up in the same order. So, I think it is that emissions are strongly correlated to population size more so than it being a regional thing. The supplementary materials for the paper include maps of the areas surrounding the airports where the data was collected, with pink indicating urban areas. Even when comparing these maps, it is clear that Tokyo is much larger than the Western cities. There 36 cities' worth of maps, and it is very interesting to examine them and compare their sizes.

Interviewer:

There are also charts showing wind speed, direction and CO₂ concentration distribution.

Mr.Umezawa :

Reading those charts is not easy, but at Narita, for example, we can see that high concentrations of CO₂ often appear when there is a weak wind from the west. The reason why the concentrations are higher during this condition is because the air above the city is moving slowly, so emitted CO₂ builds up in large amounts over the area. There is some variance in wind direction because there is also a variance in observation points due to flight paths. As these observations are taken while the aircraft are in motion and not from fixed locations, the key point of this study is how we looked at this data.

Interviewer:

Are the wind speeds and directions used in this research from among the data recorded by the atmospheric monitoring equipment that JAMCO was involved in developing and installing on commercial aircraft?

Mr.Umezawa :

Yes, it is. There is a lot of research that only used CO₂ levels and location information recorded by the equipment, but ours is the first to use the wind speed and direction data.

Interviewer:

While it is clear that wind speed and direction data is important, is there any other data that is vital to your research?

Mr.Umezawa :

For meteorological information, our focus is on outside temperature data. The atmosphere's characteristics change dramatically at a point around two to three kilometers above the ground, and we use outside temperature to determine the altitude of that boundary. To put it simply, air in the area beneath the atmospheric boundary layer mixes easily, making it easily influenced by CO₂ emissions. So, outside temperature is also vital in determining which data is for the atmospheric boundary layer. It is also extremely meaningful to obtain temperature and wind data simultaneously. In our field of study, we use a type of simulation called an atmospheric chemistry model, and real-world wind and temperature observations are very important in determining how accurate a model is.

Interviewer:

To be honest, when looking at the monitoring data, wind speed, wind direction and outside temperature were always towards the end, so I never really paid them much attention. I get the feeling that other members of the CONTRAIL project team are of the same opinion. While we often hear from researchers that they need such and such a parameter monitored, knowing that they are directly appearing in research results enables one to see just how important they are.

By the way, is the data collected by the CONTRAIL Project publicly available?

Mr.Umezawa :

Yes, it is available to everyone. There are many other papers published that are based on the project's data. Up until now we had only been able to release a limited portion of it, but we are planning to also make outside temperature, wind speed and direction available.

Interviewer:

What are your feelings about the CONTRAIL Project being jointly promoted by research institutes and private companies?

Mr. Machida:

Though the Japanese government is promoting public-private partnerships, there really does not seem to be much progress in that area. Even now, you only tend to see partnerships in fields where private companies stand to benefit, and very few in fields where they will not make a profit. However, I get the feeling that the recent trend of focusing on CSR is accelerating government-industry partnerships. This is because participating in projects that leverage a company's strengths leads to "social contributions" and "environmental contributions." With projects like CONTRAIL, which universities and research institutions cannot carry out by themselves, we really are grateful for the participation of private companies like JAL and JAMCO who, even though it will not make them money, do it because it is related to CSR. I think that ESG investing will eventually serve as an index for measuring companies' values.

Interviewer:

JAMCO recognizes the significance of CSR activities and is aggressively working to expand on them. This interview itself is an activity meant to introduce what the company is doing in that area.

I want to thank you for taking time out of your busy schedules to speak with me today. As we are planning to make a series of interviews like this one, we may talk again in the future.

Mr. Umezawa :

I cannot promise that we will be able to publish a new paper by the next interview, but we look forward to talking with you again.



Mr. Umezawa and Mr. Machida stand next to the



Reference gas bottles lined up in the

NIES News Release (Japanese): <http://www.nies.go.jp/whatsnew/20200515-2/20200515-2.html>

NIES News Release (English): <http://www.nies.go.jp/whatsnew/20200515-2/20200515-2-e.html>

EurekAlert! (English article by NIES): https://www.eurekalert.org/pub_releases/2020-05/nife-cam051220.php

The paper's co-authors working at the U.S. Universities Space Research Association (USRA) also announced the paper's publication:

<https://newsroom.usra.edu/commercial-airliners-monitoring-carbon-dioxide-emissions-from-cities-worldwide/>

About the CONTRAIL Project

CONTRAIL* is a collaborative atmospheric observation project between industry, academia and government that aims to shed light on the mechanism of atmospheric changes that bring about global warming.

JAMCO joined the project in 2003, and was responsible for the development of two devices: The Automatic Atmospheric Sampling Device (ASE) and the Continuous Carbon Dioxide Measuring Device (CME). We obtained the Supplemental Type Certificates (STC) required to install them on aircraft from the Japan Civil Aviation Bureau of Ministry of Land, Infrastructure, Transport and Tourism as well as the U.S. Federal Aviation Administration (FAA). Having acquired the STCs, we fitted the devices to a Boeing 777-200ER and 777-300ER that are used by Japan Airlines for regular passenger flights, and they are currently sampling observational atmospheric data on a global scale. The results from the analysis of these observations are distributed worldwide by the National Institute for Environmental Studies as valuable data for use in research related to global warming.

*CONTRAIL is the acronym for Comprehensive Observation Network For TRace gases by AIrLiner, and has been in use since 2007.

Three-Dimensional Observation of Greenhouse Gases in the Atmosphere

The objective of the "CONTRAIL Project" is extensive observation of the greenhouse gases which cause global warming. In order to observe precisely where concentrations of greenhouse gases such as carbon dioxide are distributed in the atmosphere, it is very important that we observe not only from the ground but also three-dimensionally using aircraft.

Prior to this project, observation using chartered aircraft was performed in areas such as over Siberia, but if we can observe the atmosphere using a commercial aircraft flying around the world every day, we can collect more frequent and precise data.

Moreover, there are groundbreaking merits to be had such as being able to observe each area of the world on a global scale, and being able to investigate the detailed distribution of greenhouse gases at various altitudes from the surface of the earth to the sky.

Supporting the Continuation of the Project as an Aviation Industry Professional

Atmospheric observation for research on global warming was started in 1993 by the Meteorological Research Institute, Japan Airlines, JAL Foundation (current JAL Foundation), and was conducting observations with a JAL Boeing 747-200 aircraft on the route between Australia and Narita using a timer and equipment that collects atmospheric samples at regular intervals (flask sampling).

However, around 2002, due to the retirement of the aircraft equipped with the equipment, installation of a new atmospheric observation device was being considered.

In 2003, a new collaborative atmospheric observation research project was launched with industry-academia members from the National Institute for Environmental Studies, Meteorological Research Institute, Tohoku University, Japan Aerospace Exploration Agency, Japan Airlines International (present Japan Airlines), JAL Foundation and JAMCO.

JAMCO was in charge of developing two kinds of new atmospheric observation devices such as ASE (Automatic Atmospheric Sampling Device) and CME (Continuous Carbon Dioxide Measuring Device), and obtaining approval for installing the devices on aircraft. Since 2005 observation activities with these new devices are continuing to be conducted as the "CONTRAIL Project" (the use of the project name began in 2007).

JAMCO's mission in this project is to support continuation of atmospheric observation as a professional in the airline industry.

Since the observation began, JAMCO has been in charge of refurbishments for implementing installations on new aircraft due to aircraft retirement and the changing of routes, as well as making renovations to improve the functions of observation equipment.



CME (Continuous Carbon Dioxide Measuring Device)



ASE (Automatic Atmospheric Sampling Device)



Maintenance of ASE

Ten years have passed since the start of observation, and obtaining internal parts is becoming difficult. JAMCO is making efforts that will enable the project to continue and develop further. These include improvements that allow alternate parts to be used in place of those difficult to obtain, the development of new observation devices, and research regarding installing these devices on new aircraft, so that observations can be continued in the coming decade.

Observation Results are Valuable Data used throughout the World

ASE can collect 12 pre-programmed areas of the atmosphere automatically and bring them back to the ground. Then, from the areas collected, the concentrations of carbon dioxide, methane, nitrous oxide, sulfur hexafluoride, carbon monoxide, and hydrogen can be analyzed by the National Institute for Environmental Studies.

This observation data, including the former ASE observations that began in 1993, is the longest, continuous long-term observation recorded for the latitudinal distribution of greenhouse gases in both the northern and southern hemispheres in the world.

In addition, CME can continuously measure and record carbon dioxide concentration with high precision during aircraft ascent, cruise, and descent.

This is the first project in the world to attempt to measure such concentrations of greenhouse gases at a high frequency on a global scale, and to compile the data.

Valuable data from this long-term observation is currently being offered to researchers around the world through the National Institute for Environmental Studies.

Research results utilizing that data are disseminated throughout the world in the form of numerous academic papers and academic presentations.

JAMCO will continue to contribute to research on global warming by backing up stable observations.



Related News (Findings & awards)

- May 2020: Research paper using CONTRAIL Project data by Taku Umezawa, Senior Researcher at National Institute for Environmental Studies, published
- March 2019: Project receives the 1st Japan Open Innovation Environment Minister's Award
- December 2017: CONTRAIL Project Receives the Environment Minister's Award for Global Warming Prevention Activity in the International Contribution Category
- December 2016: Announcement of Findings From the CONTRAIL
- May 2015: CONTRAIL Receives the Special Award of The Grand Prize for the Global Environment Award
- November 2014: Atmospheric Observation Project Participates in Flight of Boeing's eco Demonstrator 787
- October 2013: Atmospheric Observation Project CONTRAIL receives Asian Environmental Award
- June 2013: Atmospheric Observation Project CONTRAIL receives Environment Minister's Award as well as Award for Excellence of Environmental Award
- July 2012: Aircraft Begins Flights With Special Atmospheric Observation Project Livery
- June 2007: JAMCO's Keita Goto, Responsible for Development of New Atmospheric Observation Devices, Receives the Japan Aeronautical Engineer Association's Chairman Award.

Related Websites

- >National Institute for Environmental Studies (NIES) CONTRAIL Project Website (English)
- >Japan Airlines webpage introducing the CONTRAIL Project

With our Customers

JAMCO contributes to society by providing products and services which meet customer satisfaction while taking into account that safety and quality comes first.

Approach to Product Quality

We strive to "Uphold flight safety and enhance quality" in our management policy, and recognize that providing safe and high-quality products to society is the most important foundation of management. Based on this idea, JAMCO will always ensure adequate quality control and product safety in accordance with laws, regulations, standards, specifications, etc. in all life cycles of our products, such as research and development, design, production, maintenance, repair, etc.

Quality Management System Construction

"The JAMCO Group will provide customers with products and services that assuredly satisfy the quality requirements by giving top priority to quality for pursuing social trust and customer satisfaction." has been decided as the group quality policy. Based on this, we are proactively promoting high-quality products and services that will satisfy our customers by flowing them down into the quality policy of each department.

Certifications

Japan Civil Aviation Bureau (JCAB), Organization Approval

Organization Name	Capability	Approval Reference	Remarks
Aircraft Maintenance Group	Capability of aircraft maintenance and final inspection Capability of aircraft maintenance or modification Capability of aircraft part repair or modification	No. 004	
Aircraft Interiors and Component Group	Capability of manufacturing aircraft parts and conducting the final inspection	No. 094	

EASA, Organization Approval

Organization Name	Scope of Approval	Approval Reference	Remarks
Aircraft Maintenance Group	Repair, modification, overhaul and inspection for aircraft components (other than complete engines or APUs)	EASA.145.0560	
Aircraft Interiors and Component Group	Approval of minor change and repair design for aircraft interiors	EASA.21J.170	
	Manufacture and inspection for aircraft interiors Manufacture and inspection for aircraft passenger seats	EASA.21G.004	
	Repair, modification, overhaul and inspection for aircraft components (other than complete engines or APUs)	EASA.145.0087	

CAAS, Organization Approval

Organization Name	Scope of Approval	Approval Reference	Remarks
Aircraft Interiors and Component Group	Repair, modification and overhaul for aircraft components (other than complete engines or APUs)	AWI/225	
	Manufacture of aircraft interiors	AWI/POA/019	
Niigata JAMCO Corporation	Manufacture of galleys and lavatories	AWI/POA/019	Satellite

Quality Management System

Aircraft Maintenance Group JIS Q 9100:2016 (Certification Structure: Campus)

Scope of Certification

- Maintenance and Alteration of Aircraft, and Design and Development of Aircraft Alteration
- Repair and Alteration of Aircraft Accessories
- Design and Development, Production and Maintenance of On-Ground Supporting Equipment for Aircraft

Site Name		Location	Remarks
JAMCO Corporation	Aircraft Maintenance Group	Head Office and Aircraft Maintenance Center	70 aza-Shintaku, Shimonogo, Iwanuma-shi, Miyagi-ken, Japan Central Office
		Narita District (Accessories Maintenance Center)	26 Shinizumi, Narita-shi, Chiba-ken, Japan
		Mitaka District (Marketing & Sales Division and Accessories Maintenance Center)	6-11-25 Osawa, Mitaka-shi, Tokyo, Japan

Aircraft Interiors and Components Group (Aircraft Components)

JIS Q 9100:2016 (Certification Structure: Campus)

Scope of Certification

Design and Development, Manufacture and Servicing (Maintenance and Inspection, Repair, etc.) of Aerospace and Aircraft Components, Aerospace and Aircraft Parts, Ground Service Equipment and Composite Material

Site Name		Location	Remarks
JAMCO Corporation	Aircraft Interiors and Components Group (Aircraft Components)	Chofu District	6-11-25 Osawa, Mitaka-shi, Tokyo, Japan Central Office
		Tachikawa District	1-100 Takamatsu-cho, Tachikawa-shi, Tokyo, Japan Marketing & Sales Division of Aircraft Components
JAMCO Aeromanufacturing Co., Ltd.		7-101-36 Medeshimadai, Natori-shi, Miyagi-ken, Japan	Associated Organization

Aircraft Interiors and Components Group (Aircraft Interiors) JIS Q 9100:2016 (Certification Structure: Campus)

Scope of Certification

Design and Development, Production and Service Provision (Repair) of Airplane Interiors

Site Name			Location	Remarks
JAMCO Corporation	Aircraft Interiors and Components Group (Aircraft Interiors)	Aircraft Interiors and Components Group (Aircraft Interiors)	1-100 Takamatsu-cho, Tachikawa-shi, Tokyo, Japan	Central Office
		Chofu Test Facilities (Mitaka)	6-11-25 Osawa, Mitaka-shi, Tokyo, Japan	
		Nakajo Warehouse (Tainai)	9-125 Shimizu, Tainai-shi, Niigata-ken, Japan	
	Marketing & Sales Division (Aircraft Interiors)		1-100 Takamatsu-cho, Tachikawa-shi, Tokyo, Japan	
Niigata JAMCO Corporation			341-1 Kamitsubone, Tsubone-aza, Murakami-shi, Niigata-ken, Japan	Associated Organization (including Honeycomb Core Manufacturing)
Niigata JAMCO Corporation, No. 2 Facility			945-3 Ueno, Sasaki-aza, Murakami-shi, Niigata-ken, Japan	Associated Organization
Niigata JAMCO Corporation, No. 3 Facility			9-113 Shimizu, Tainai-shi, Niigata-ken, Japan	Associated Organization
Miyazaki JAMCO Corporation			7320 Tanocho-ko, Miyazaki-shi, Miyazaki-ken, Japan	Associated Organization
Miyazaki JAMCO Corporation, No. 2 Facility			8136-7 Tanocho-ko, Miyazaki-shi, Miyazaki-ken, Japan	Associated Organization

Performance of Quality Assurance Education

We are performing quality assurance education to enhance knowledge and awareness of quality. The main curriculum consists of "Introductory" and "Basic" education on the quality management system for new employees, including those hired year-round, and we perform Human Factors and qualification education etc. from time to time for employees in the production departments.

Improvement of Customer Satisfaction

At JAMCO, we strive to communicate conscientiously every day in order to reflect customer input into our product quality and service improvements.

Providing Services to Customers and Gaining their Trust in Return

JAMCO Receives Safety Award from Civil Aviation College

JAMCO was awarded the Civil Aviation College's Safety Award.

When performing a through-flight inspection on a Beechcraft G58 trainer at the Civil Aviation College's Sendai branch as part of maintenance operations, JAMCO's Ryota Kanuka discovered a fracture in a component used in operating the nose gear door, which was not a part of the inspection. His actions prevented a possible malfunction of the nose gear to become inoperative. The College presented Kanuka with its Safety Award in recognition of meritorious service related to safety that contributed to the prevention of an aircraft accident.

While it has been sixty years since JAMCO's aircraft maintenance center started servicing the College's trainer aircraft in 1960, this is the first time the company has received such an award.

The Aircraft Maintenance Business will continue to work to ensure aircraft flight safety and prevent aircraft accidents, and based on its motto of "delivering technology, quality and safety" it will devote itself to gaining the trust of its customers by putting quality first and strictly complying with applicable laws and regulations.



A word from the recipient:

I was both extremely happy and humbled to have received this award. I will devote myself further to performing maintenance operations so that I can continue contributing to the flight safety of the College's trainers.



Ryota Kanuka (Fixed Wing Department, Maintenance Management Office, Aircraft Maintenance Center) with the aircraft he discovered the defect on

With our Employees

In order to continue to be "a sincere company that respects employees", JAMCO will support the growth of all employees supporting the JAMCO Group, and will promote a workplace environment where employees can actively work.

Employee Composition of JAMCO

Number of Employees

	Group Total	JAMCO
Regular employees	3,465	1,194
Temporary employees	249	114
Total Employees	3,714	1,308

As of March 31st, 2020

Full-Time Employees

Average Age	43.2 years old
Average Years of Service	17.7 years
Average Annual Salary	7,056 thousand yen/year
New Graduates Hired	48

As of March 31st, 2020

Human Resources Development Initiatives

Each and every JAMCO employee is able to work with pride and high technology in day-to-day business activities, and we are actively promoting the development of human resources in order to provide ever higher quality products and services to our customers.

Our human resources training system provides opportunities for career education and skill improvement through new employee education, band (occupational type) education, and training by age. This is performed by the Corporate Administration & Human Resource Department, and various types of professional education including quality management is performed by each assigned Department.

In addition, we have organized self-development support systems such as an overseas and domestic language training system, a qualification acquisition incentive system, etc., and we support the growth of our employees in many ways.

Respect for Human Rights

The JAMCO Group has established a Compliance Code which states "We will endeavor to secure a safe and comfortable work environment without discrimination or harassment, while respecting individual character and personality", and prescribes a fundamental stance of respect for human rights.

We regularly perform in-house education to promote human rights awareness to both executives and employees.

In order to actively fulfill its responsibilities as a company that develops business globally, in the future we plan to promote initiatives such as group-wide human rights education/self-development programs taking global human rights issues into consideration.

Promotion of Diversity in the Workplace

The JAMCO Group will contribute to the Group's sustainable growth and creation of a better society by promoting diversity of human resources, setting up a workplace environment where employees with various backgrounds can play an active role.

General Employer Action Plan

To create an environment where all employees can manage both work and childcare, and can demonstrate their abilities to the fullest. Also, to support the development of the next generation, and to promote activities by female employees, we have formulated the following action plan:

1) Next Generation Development Support (Planned period: April 1, 2020 - March 31, 2025)

- Plan Goal 1: Improve work-life balance through initiatives to increase the number of employees to participate in raising their children by encouraging the use of annual paid leave
- Goal 2: Build an environment that allows employees to balance work-life with childcare
- Goal 3: Expand the availability of internships and other work experience opportunities

2) Female Activity Promotion (Planned period: April 1st, 2016 ~ March 31st, 2021)

Plan Goals : Increase the percentage of female assistant managers to 10 percent or more.

Female Activity Promotion

As of FY 2019, there are 6 female managers in JAMCO (2.2% of total management positions). In order to promote the appointment of managers, we believe that it is necessary to promote female assistant managers in managerial positions, and "Female Promotion Campaign" has been set as a goal in the General Employer Action Plan.

Transition of female assistant managers based on the Female Activity Promotion Plan

	FY 2017	FY 2018	FY 2019
# of Female Assistant Managers	8	13	16
% of Female Assistant Managers	3.9	6.1	7.5

Employment of Persons with Disabilities

The JAMCO Group is continually working to create employment and promote the success of people with disabilities.

At Group companies, we are making efforts to develop workplace environments where people with disabilities can easily work together. We also actively promote employment at Orange JAMCO Corporation (wholly-owned by JAMCO, 29 employees as of March 2020), a special subsidiary* established in 1999, which entrusts supplementary work within the JAMCO facilities.

As of March 2020, the JAMCO employment rate for people with disabilities was 2.75%, exceeding the statutory employment rate of 2.2%.



Retiree Re-employment System

At JAMCO, employees who have reached the compulsory retirement age of 60 who wish to be re-employed, and who satisfy the requirements such as employment regulations, may continue to be employed as a re-employed temporary employee up to the age of 65.

In addition, if both the company and the employee so desire, the agreement may be renewed beyond the age of 65.

JAMCO would prepare an environment where the employee can work flexibly, making use of knowledge and experience, and able to choose a shorter working time according to their wishes.

In FY2019 there are 23 re-employed employees, and the re-employment rate is 85%.

Promotion of Work-Life Balance

We have established various systems to promote the work-life balance of our employees in order to create a workplace environment where our diverse human resources can work vigorously and rewardingly, and maximize their abilities.

As part of creating a comfortable working environment that deals with such issues as returning to work after childcare leave and children being put on long waiting lists to enter nursery schools, we are also taking the following steps in addition to promoting workstyle reform.

JAMCO became a tenant company at the Fuji Akatombo Nursery School, a privately-run day care center near our Head Office and Aircraft Interiors and Components Business Groups' buildings opened by Tachihi Holdings, giving JAMCO employees priority when enrolling their children at the school.

While JAMCO has been partnering with privately-run day care centers outside of the Tachikawa area since 2019 to create a comfortable working environment for employees, it also became a tenant company at Tachihi Holdings' Fuji Lemon Nursery School, which newly opened in April 2020.

To further meet the needs of employees JAMCO also introduced a telecommuting system for those raising children in April 2019. Three employees (one male, two female) took advantage of this system in FY 2019.

JAMCO will continue to evaluate and promote the creation of a comfortable work environment together with its employees.

Main Work-Life Balance Support Systems and Usage Results (FY2019)

System	Outline	Male	Female
Maternity Leave	6 weeks prior to and 8 weeks after childbirth for a total of 14 weeks.	-	6
Time of Birth Leave	4 days leave available for use.	30	-
Childcare Leave	Until the child is 1 year and 6 months old (up to a maximum of the first March 31 st when the child is 2 years old) .	6	14
Reduced Working Hours for Childcare	Until the first March 31st when the child is 12 years old working hours can be reduced by two hours per day.	1	16
Childcare Leave	5 days leave available per child per year for the school events, etc. of children up to 12years old.(10 days for 2 children,15 days for 3 children)	114	28
Family care leave	5 days available per year for family care.	2	0
Family care leave	A maximum of 93 days available per year for family care.	0	0

* Other work-life balance support programs such as Childcare Flexible Work Hours, Overtime Duty Exemption, Late-Night Overtime Exemption, Childcare Leave Returnee Support Program (promoted by the government), Family Care Assistance Leave, etc. are also available.

* Available to full-time employees, part-time employees and contract employees.

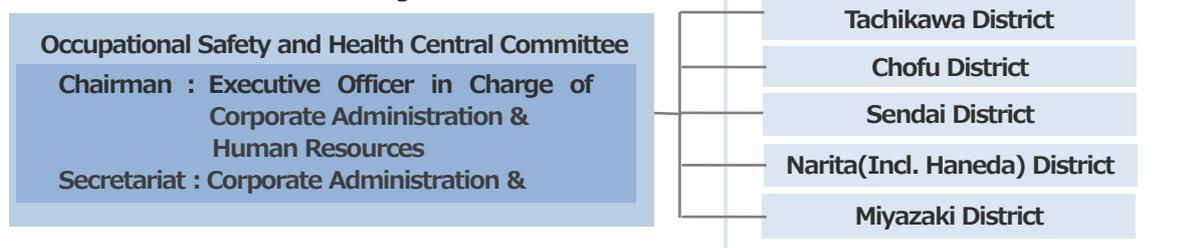
Occupational Safety and Health

Occupational safety is the most important foundation of our business and a duty to society. JAMCO's basic policy is to comply with relevant laws and regulations concerning occupational safety and to realize a safe and comfortable workplace environment by closely cooperating with executives, employees and organizations.

JAMCO has established a district safety and health committee for each district under the Central Safety and Health Committee, which is chaired by the executive officer in charge of Corporate Administration & Human Resources, and is working on an organizational basis. We are also working to raise employee safety awareness every day, such as by implementing safety and health education for employees at work sites.

Occupational Safety and Health

Management Structure



* In JAMCO, the people in charge of safety and health at each district (supervisors of safety and health managers,safety managers, health managers, safety and health promoters and industrial physicians) are all assigned according to the number of employees.

* JAMCO assigns a dedicated operations chief as stipulated in the Occupational Safety and Sanitation Law of each district.

Ascertaining and Analyzing the Number and Circumstances of Work-Related Accidents

In FY 2019, JAMCO carried out activities for achieving its goal of “raising safety awareness among employees and creating a working environment that is safe, comfortable and mentally and physically healthy for all employees.”

Our Central and District Safety and Health Committees continued to work systematically to meet our perpetual goal of “zero accidents.” When accidents do occur, investigation into root causes and actions are discovered, analyzed, and preventative measures are installed to prevent recurrence. Simultaneously executed safety and supervisor training which was instrumental in the reduction or elimination of risks of accidents occurring/reoccurring, group-wide worksite patrols were enacted, and risk assessment reviews during National Safety Week. As a result of these efforts, there were only 6 work-related accidents in FY 2019, falling below the past five-year average of 8.6 accidents.

In the area of managing employee health, all employees are mandated to undergo regular health screenings, including complete physical examinations. Exempt were employees whose appointments were delayed until next year due to the impact of COVID-19, and a small number of employees taking extended leave. We are encouraging them to undergo these screenings next year as soon as possible.

As part of measures to effectively develop solutions to issues made apparent by the results of the stress assessment we performed, our mental healthcare initiatives for this year included training sessions for managers led by outside experts that focused in particular on encouraging divisions with high-stress individuals to make related workplace improvements.

For Employee Health

In addition to performing mental health education for all employees as a measure to protect the health of employees, JAMCO has a mandatory physical health examination, and accepts health consultations by telephone (JAMCO Family Consultation 24).

With our Business Partners

The JAMCO Group is always striving to build fair and sound relationships with our business partners, keeping in mind to deal honestly so that we can expand our partnerships further.

CSR Procurement Policy

CSR Procurement Policy

The JAMCO Group will promote CSR-aware procurement activities. We will also require our business partners to observe this policy.

1. Building Sound Business Relationships
 - Maintain healthy business relations with our partners by placing value on relationships built on mutual understanding and trust.
 - Adhere to fair and appropriate terms in all of our transactions.
 - Encourage transactions that value corporate social responsibility, evaluating the financial condition, technological strengths, corporate stance and other aspects of our business partners.
2. Fair Selection of Business Partners and Appropriate Procurement
 - Select business partners based on objective purchasing standards such as quality, price, and delivery time, using fair judgement to do so.
3. Elimination of Questionable Relationships
 - To carry out transactions that are fair and just, and will not accept personal remunerations or commissions related to work, nor accept hospitality or gifts that exceed socially accepted bounds.
4. Compliance & Ethics
 - Comply with the laws and ordinances of the countries and regions that we perform transactions in.
 - Observe industry standards and trends, and carry out transactions in alignment.
 - Comply with the parental enterprise responsibilities set out in the Act against Delay in Payment of Subcontract Proceeds, Etc. to Subcontractors, and will not carry out unfair business practices that are prohibited as an abuse of a superior bargaining position as established in the Antimonopoly Act.
 - Withhold confidential terms of transactions to outside parties not involved with the transactions.
 - Withhold information and intellectual assets provided to us without the consent of the party providing them.
 - Ensure supply chain transparency and carry out responsible procurement with regard to conflict minerals.
5. Green Procurement
 - Promote green procurement and carry out transactions that give adequate consideration to environmental and resource conservation.
6. Respect for Human Rights and Occupational Safety and Health
 - Respect basic human rights while promoting procurement activities that give adequate consideration to working environments, occupational safety and health.

Building Sound Business Relationships

It is the JAMCO Group's desire to build fair and healthy business relationships with our business partners, to develop together, and to be a good partner in contributing to society.

Needless to say we are complying with all laws and ordinances, and are dealing honestly with our business partners. To promote fair and transparent transactions we have made our guidelines clear in a "Compliance Handbook", which has been distributed to all of our officers and employees.

Furthermore, as a global corporation with subsidiaries and affiliates abroad, we naturally comply with international rules and respect the culture and customs of each country as well as strive to build relationships of mutual trust with our business partners.

Promoting CSR together with our Business Partners

JAMCO has been promoting procurement that adheres to social norms in accordance with the laws and ordinances of each country and region.

However, in response to growing social demands in recent years, we think that it is necessary to work with our business partners on CSR and to fulfill our responsibilities to society more actively.

We will share CSR procurement policies with our group companies and cooperate with our business partners to promote initiatives throughout the supply chain.

Responding to Conflict Minerals

Tantalum, tin, tungsten and gold are 4 minerals (conflict minerals) produced by the Democratic Republic of the Congo and surrounding countries, and the funding of armed insurgents causing atrocities in these countries with these minerals has become an international problem. So as to not facilitate conflicts in those areas, JAMCO declares we do not use materials recognized as conflict minerals, and we are responding appropriately to requests for reviews and reports on conflict mineral regulations from customers.

We are also requesting suppliers of raw materials related to these four kinds of minerals to submit a pledge that the materials we purchase not to contain conflict minerals.

Promotion of Green Procurement

In order to continuously address environmental concerns in all corporate activities and reduce environmental burdens in the life cycle of products being produced and sold, JAMCO has established "Green Procurement Standards" by which we are committed to procuring materials and products with minimal environmental impact.

With our Shareholders and Investors

We will strive to disclose information and return profits in a timely and appropriate manner and through thorough communication comply with the expectations of our shareholders and investors.

Disclosure of IR Information

JAMCO places great importance on timeliness, fairness, accuracy, and continuity in disclosing corporate information such as management strategy and financial information. Based on this, JAMCO establishes regulations concerning information management and disclosure, properly conducts disclosures based on laws and ordinances, and is working to ensure transparent and fair disclosures of financial information and non-financial information. In addition, we have established an IR web-site on the JAMCO corporate site and are working to disclose investment information in a timely and accurate manner.

Communication with Shareholders and Investors

JAMCO recognizes the importance of disclosing information in a timely and appropriate manner in order to secure the rights and equality of our shareholders while cultivating a better understanding of our company. Accordingly, in addition to issuing annual general meeting of shareholders and financial reports, we also hold financial results briefings twice a year for securities analysts and institutional investors, and explain the business results and management policies, etc. JAMCO is also actively engaged in communication with shareholders and investors through various external activities.

Results of IR Activities in FY2019

Type of IR Activity	Frequency of Activity
Financial Results Briefing	2 times (2nd Quarter Financial Results Briefing, Fiscal Year-End Financial Results Briefing)
Small Meeting	4 times
Individual Meeting	25 times
Factory Tour for Institutional Investors	1 time
Company Briefing for Individual Investors	1 times



Financial Results Briefing



Factory tour for Individual Investors (Niigata Factory)

Policy of Shareholder Return

JAMCO is performing efficient management based on basic management policies and individual company policies, and is making stable and continuous returns for shareholders by improving profitability.

Preparing for unforeseen circumstances due to business risks and other factors, and taking into consideration the funds necessary for future capital investment, it is essential to retain internal reserves for continued growth, but we believe that maintaining this balance will lead to profits for all shareholders.

With the Local Community

The JAMCO Group, which operates in various domestic and overseas regions, aims to be a trusted company, treasuring relationships with local communities.

Social Contribution Activities by JAMCO

JAMCO promotes various social contribution activities such as interaction with local residents, education / academic support, and joint research and development through collaboration with overseas companies.

JAMCO employees help clean up leaves in Musashinonomori Park

In December 2019, JAMCO employees in the Chofu District (Chofu Factory) cleaned up fallen leaves at nearby Musashinonomori Park.

This activity was suggested as an expression of gratitude to the Park for the factory being allowed to borrow space to hold its annual firefighting drill. The Park's management gladly accepted the offer.

While the clean-up was short, only lasting a total of an hour and a half, park and JAMCO employees (twelve people in total) gathered close to twenty 90-liter bags worth of fallen leaves and other debris. JAMCO will continue to actively carry out activities like this one in close cooperation with local communities.



Collection of Empty Contact Lenses for the Eyecity Eco Project Expanded to Other JAMCO Offices & Group Companies

JAMCO began participating in HOYA Corporation's empty disposable contact lens case collection program starting with its Head Office and Tachikawa District in September 2018. As of October 2019, the company had collected nearly 6,800 cases, and in November expanded this activity to include company offices in Sendai, Narita and Mitaka together with Group companies Niigata JAMCO Corporation, Miyazaki JAMCO Corporation, Tokushima JAMCO Corporation and JAMCO AEROMANUFACTURING Co., Ltd. Having collected about 13,000 cases in total as of July 2020, it appears that expanding the activity to company offices nationwide has resulted in it being annexed as an environmental conservation initiative that JAMCO employees can participate in.



After being donated to HOYA, the collected cases are processed into a variety of recycled products. HOYA features JAMCO's efforts with regard to this project as an Eyecity eco Project Corporate Case Study on its website. Eyecity eco Project Corporate Case Studies : <https://www.eyecity.jp/eco/company/>



(Ltd.)Niigata Jjamco



(Ltd.)Miyazaki Jjamco



(Ltd.)Nakajo Jamco



(Ltd.)Tokusima Jamco

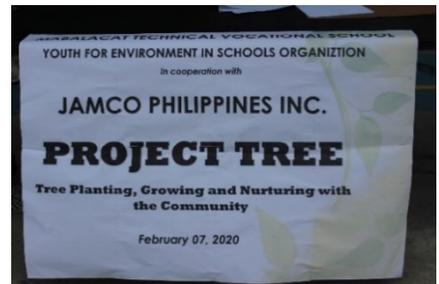


(Ltd.)Jmaco Manufacturing

JAMCO Philippines Joins in Planting Trees at Local School

Similar to last year, JAMCO PHILIPPINES, INC. participated in tree planting activities in FY 2019 as part of its social contribution activities.

The company has put together a Project Team that regularly participates in activities that contribute to the local community.



JAMCO's Purchase of Work Cloths Contributes to Preventing Global Warming

JAMCO currently commissions Midori Anzen Co., Ltd. to produce an original uniform that is worn by the company's factory employees. Midori Anzen introduced its Carbon Offset Uniform to help mitigate global warming. Carbon offsetting is an international initiative for reducing the emission of greenhouse gases (GHG), which attribute to global warming. Each uniform that JAMCO purchases contributes to the reduction of around 3 kg of CO₂, which is the equivalent to the amount emitted by driving a family car a distance of twelve kilometers.

JAMCO's purchase of a total of 1,317 uniform tops and bottoms between April 2019 and March 2020 means that the company was able to contribute to eliminating the emission of 3,951 kg of CO₂.



Midori Anzen's Original Label



Carbon Offset Certificate Issued by Midori Anzen

JAMCO Assists with Firefighting Drill Held by Natori City, Miyagi Prefecture

Group company JAMCO AEROMANUFACTURING Co., Ltd. assisted Natori City, where the company is based, with its annual firefighting drill by offering the use of the parking lot in front of the company factory to park the many vehicles to be used in the event

Among the vehicles used were fire department trucks and engines, as well as Self-Defense Force vehicles.

Due to the drill's large scale, it was covered in *Koho Natori*, the public relations magazine published by the City.



The factory parking lot before the drill



Fire trucks and many other vehicles gathered together in the parking lot

Prefectural Forest Firefighting Drill at Medeshimadai Natori City Also Holds First Drill Including Citizens
On May 25, a prefectural forest firefighting drill simulating a large-scale forest fire was held on the grounds of Medeshimadai Central Park to verify how relevant organizations would cooperate in such a situation. The scenario involved a forest fire breaking out on the west side of Medashimadai and being spread by strong winds. 22 organizations, including local police and fire departments, and the Ground Self-Defense Force participated in this check of their first responses and preparedness in communicating and cooperating with each other. Municipalities in the Prefecture take turns holding this drill annually. Due to the unique geographical characteristics of Medeshimadai, where residential areas are in close proximity to forests, a drill was also held this year that involved local residents, the first of its kind. Participants practiced first response and reporting fires by dialing 119.



名取市発行の新聞より 令和元年7.1 / 広報なとり

For the Global Environment

JAMCO is proactively addressing global environmental issues and conservation activities through one of the company's management philosophy commitments: "To coexist with nature and contribute to the creation of a prosperous society".

Environmental Initiatives

JAMCO performs energy saving measures, green procurement, reduction and recycling of waste materials, investigations into chemical compositions of materials used, and promotes the use of alternate materials for those containing hazardous substances. In the Aircraft Components Manufacturing Division (Mitaka) and the headquarters (Tachikawa No. 4 building), we have acquired environmental management system certifications by certification and registration bodies and are continuously working to maintain them.

We will continue working to further reduce our environmental impact as the importance of efforts to address global environmental issues increases further.

History of Activity

In July 1998, we established a basic environmental philosophy as our declaration on the global environment, set out environmental corporate action guidelines, started systematic environmental conservation activities, and in September 1999 we established our "Environmental Regulations".

The head office at that time, the Chofu Head Office District (Chofu Site), took the lead of the entire company by developing activities, and in February 2000 we received our ISO 14001 certification.

In April 2001 we completely revised our "Environmental Regulations" and started company-wide deployment of environmental conservation activities.

In July 2010, we established a new "Environmental Operation Standard (EOS)" and began taking measures so that even sites that do not have ISO 14000 certification can tackle environmental conservation activities conforming to this certification.

Basic Environmental Philosophy / Environmental corporate action guidelines

Basic Environmental Philosophy

Global environmental conservation for the survival of human beings is a common desire throughout the entire world.

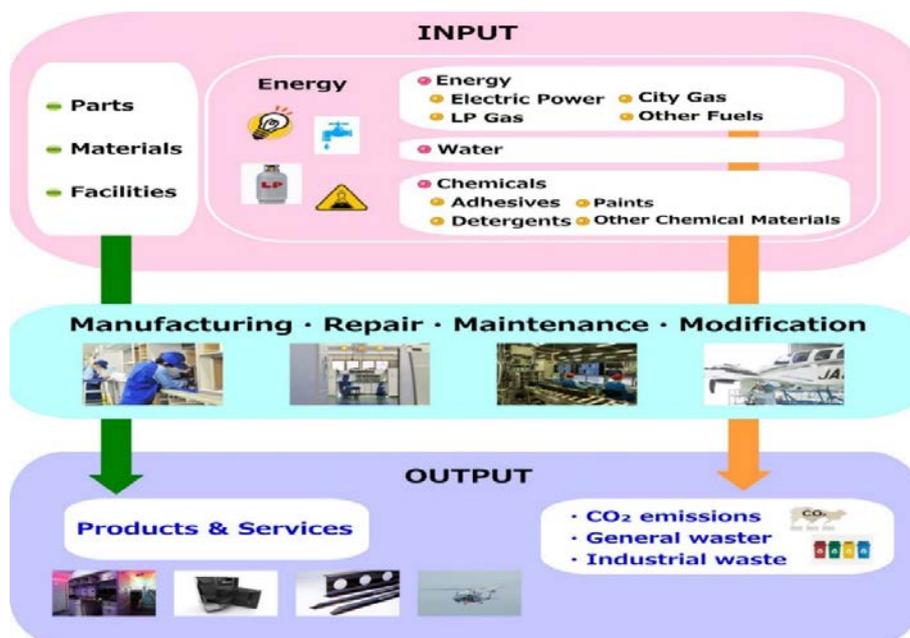
As a company operating globally, the JAMCO Group positions global environmental issues as one of the most important management issues, and we will contribute widely to society conducting corporate activities as a company that is friendly to the global environment and is capable of coexisting with richness.

Environmental Corporate Action Guidelines

- (1) Nature conservation
In our product development, production and service activities, we will strive to protect the environments of our regions, and the globe.
- (2) Effective utilization of resources
To seek efficient usage and reuse of resources, and the application of products with less environmental impact in the development, production and service.
- (3) Compliance with environmental laws and regulations
Comply with the environmental laws and regulations of national and local governments.
- (4) Environmental conservation system
Following the basic philosophy and this guideline, we will formulate environmental policies throughout the entire company and each site, establish an environmental conservation system, periodically review, and maintain and improve the system.
- (5) Promotion of environmental conservation activities
Promote educational and awareness activities so that all stakeholders are informed of the basic philosophy and this guideline, and all of them understand and act.
- (6) Displaying environmental conservation activities
Display our basic philosophy and this guidance both inside and outside of the company.

JAMCO's Business Activities Related to the Environment

JAMCO specializes in the field of aircraft and are engaged in the manufacture and repair of aircraft interior products and components, maintenance and modification of aircraft and aircraft equipment. The figure below shows the relationship between our business activities and the environment. In conducting our business, we consume a lot of resources and discharge various substances. In order to reduce the environmental burden on both input and output, we strive to quantitatively grasp the environmental burden.

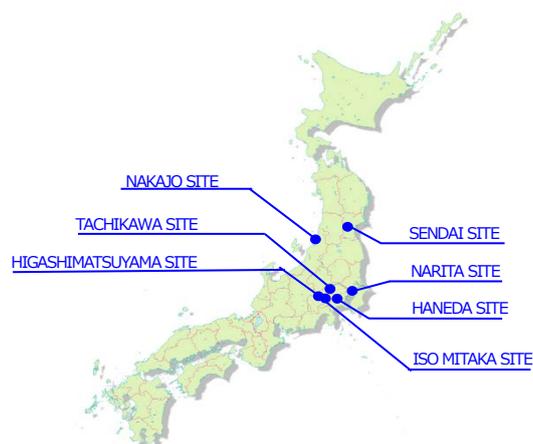


Environmental Conservation Activities Promotion System

Company-wide Promotion System

JAMCO engages in environmental conservation activities having put in place a system for promoting these activities together with an environmental management system (EMS). The company's President serves as Chief Environmental Management Officer and is responsible for supervising our environmental conservation activities, while the Executive Officer in Charge of Corporate Administration & Human Resources, serving as the chairperson of the Global Environmental Committee, is in charge of driving these activities and carrying out environmental management reviews.

We have established specific sites within each district to perform environmental conservation activities as an integrated unit, with the site's Environmental Committee promoting these activities in an organized manner. Each site sets individual environmental targets based on JAMCO's Environmental Basic Philosophy and Environmental Corporate Action Guidelines as objectives to achieve during the financial year. The sites work on continuous improvements related to the targets by systematically promoting environmental conservation activities and checking their progress through internal environmental audits. Sites that have received ISO certification undergo conformity assessments through periodic reviews by a certification body to determine whether their ISO 14001-based EMS is being operated properly and if continual improvements are being made.



- Sites with ISO Certification: Aircraft Equipment Manufacturing Division (Including the Aircraft Interiors and Components Group Engineering Department, Manufacturing Engineering and Quality Assurance Departments, and Components Group located in Mitaka), Head Office (Building 4 Tachikawa: Secretarial Office, Audit Department, Human Resources General Affairs Department, Accounting Finance Department, Quality Assurance Department, Information Systems Department)
- Tachikawa site: Aircraft Interiors and Components Group (Head Office Corporate Planning Department and Mitaka representative of the Technology Division technology management unit structure analysis group, including the interior equipment technology, First Section, 3rd Design Group)
- Nakajo site: aircraft interiors and equipment Division aircraft interior components manufacturing division purchasing supply section supply Nakajo group
- Narita Site: Aircraft Maintenance Division Parts Maintenance Factory (Including Business Promotion Office, Sales Department and Parts Maintenance Factory of Aircraft Maintenance Division located in Mitaka)
- Haneda Site: Aircraft Maintenance Division Parts Maintenance Factory Equipment Group (located in Haneda)
- Higashi Matsuyama Site: Aircraft Maintenance Division, Parts Maintenance Factory, Maintenance Group (located in Higashi Matsuyama)
- Sendai Site: Aircraft Maintenance Division Aircraft Maintenance Factory (Including Technology Development Office and Quality Control Office)

*The Miyazaki site was closed with the phasing out of the Miyazaki Office in March 2020.

* The Quality Assurance Department changed its name to the Quality Planning Department from July 2020.

Global Environmental Committee

The Global Environmental Committee has a variety of responsibilities at each site that include performing management reviews on site activities, environmental target and objective achievements, internal environmental audit implementation, and the corrective and preventative actions being taken there. At the same time the Committee also reports on and reviews changes in legal and customer requirements. The Global Environmental Committee Secretariat devotes its efforts to the education of employees in relation to environmental conservation. In addition, it gathers and disseminates information to enable the efficient and effective implementation and improvement of environmental activities Group-wide.

Environmental Audit System

In order to improve environmental conservation activities, internal and external audits are carried out periodically to confirm whether the activities are being performed appropriately in conformance with associated requirements, and if they are being maintained in an effective manner.

The internal environmental auditing team is made up of internal auditors who fulfill qualification requirements that are determined by internal regulations. Internal environmental audits follow an audit plan and check sheet. We focus on on-site audits that verify the consistency between administrative procedures and how activities are being performed. We link this to improvements in activities by gathering together the results of each audit into individual reports and requesting that corrective action be taken for non-compliant items. Every financial year we summarize the results of the internal audits and reflect them in the management review.

Major Initiatives

At JAMCO, we are working on environmental conservation activities through various initiatives within our business activities.

Promotion of Environmental Conservation Activities

Environmental conservation activities throughout the year are summarized by management review, and issues are reviewed for improvement.

For the important action items decided through the review, each site continuously performs the PDCA cycle: Environmental objectives/targets/implementation plans/measures (Plan), implementation of measures (Do), confirmation and implementation result reports on the achievement of environmental objectives/targets (Check) and management review (Action). Through such continuous efforts, in response to various movements and changes in the environment, we are encouraging environmental awareness of our company.

Management of Environmental Impact Assessment and Regulatory Compliance

We extract the aspects of our business activities that affect the environment, and in particular those items requiring improvements or special control under environmental laws and regulations are deemed to be significant environmental aspects.

Areas which require adherence to laws and regulations, such as "emergency situations" and "wastewater", independent standards are established and periodic checks are made to strengthen control measures.

Management of Chemical Substances

Chemical substances used in our business activities are regulated by laws and regulations depending on their properties and degree of risk or hazardousness, etc. Regarding substances with a particularly high degree of risk, we set up management procedures in the internal regulations and control them appropriately, to ensure stability of contents and accurate inventory. In addition, workers actually handling chemical substances possess the necessary qualifications and are working properly in accordance with the management procedures.

Energy Management

We are striving to reduce energy consumption by establishing management standards to streamline energy use (for air conditioning equipment, lighting equipment, etc.) in our company regulations.

Reduction of Waste and Recycle Rate Improvement

Jamco has implemented initiatives to reduce waste based on the 3R (Reduce, Reuse, Recycle) idea.

(1) Thorough Separation Control

Invested in facilities that thoroughly sort and collect waste by the type of material, and converting metals and paper (copy paper, cardboard, newspapers, etc.) to valuable resources, etc.

Additionally we are working on reducing and recycling other kinds of manufacturing waste.

(2) Recycle Rate Improvement

Increased the types of items which can be recycled, via material recycling and thermal recycling, additionally by investigating and consulting with waste disposal contractors.

(3) Proper Waste Management

JAMCO continues to implement initiatives to reduce waste based on the 3R (reduce, reuse, recycle) concept.

Additionally, the company conducts frequent on-site surveys of and collects information from waste disposal contractors to confirm that the disposal of waste products is being carried out appropriately. The information includes ascertaining disposal processes, control of manifests and other records, and certification renewal.

(4) Equipment Containing PCBs (polychlorinated biphenyl)

As of December 2016, JAMCO had disposed of all PCB-containing equipment and confirmed that the disposal had been performed in a safe manner.

Results of FY2019 Activities

Energy-saving Initiatives

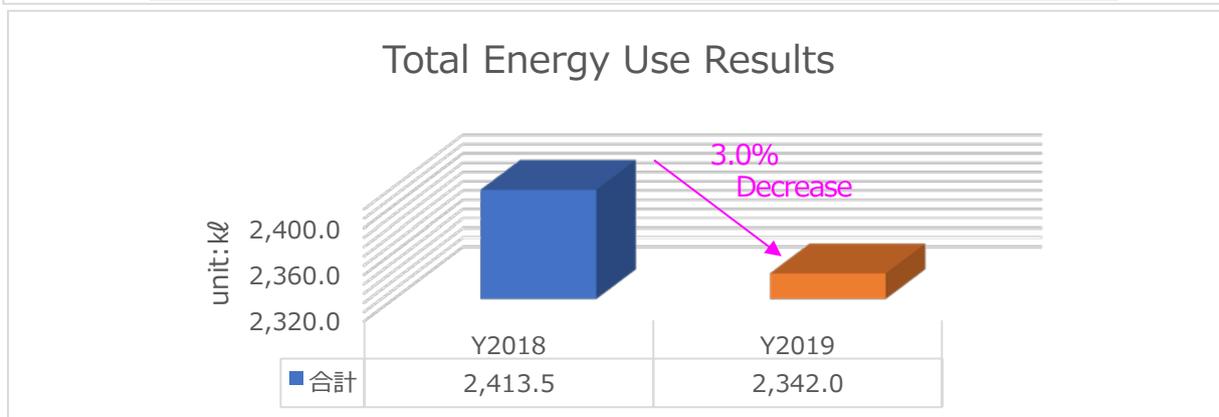
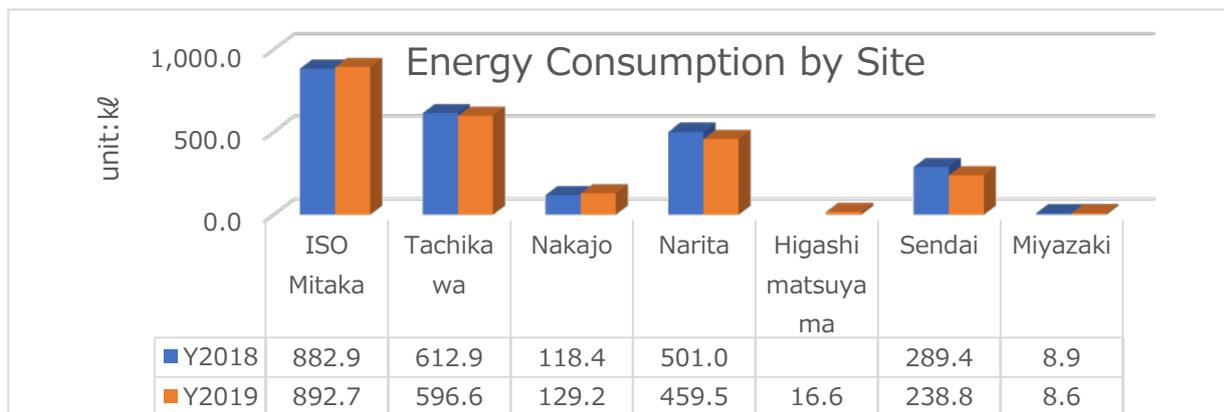
<FY2019 Company-wide>

Objective: Reduce energy consumption

"Electricity, city gas, LP gas, type A fuel oil, gasoline, diesel fuel, kerosene"

Target: Reduce energy consumption by 1% or more compared with FY2018

We are working to reduce our energy consumption by driving energy conservation and efficiency in our production processes, and by reducing fuel consumption through such means as using inverters in our production equipment, air conditioning systems, lighting fixtures and air compressor



CO ₂ Emissions	4,754t-CO ₂	4,618t-CO ₂
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* All energy consumption amounts are in terms of kiloliters (kl) of crude petroleum

During the past year, energy consumption was reduced at each site by introducing high-efficiency air conditioning equipment. Additionally, approximately 50 kl of energy consumption was reduced by reviewing which sites were still using mercury vapor and fluorescent lighting and replacing those with LED lighting (reductions in energy consumption: 75% or greater by switching from mercury vapor to LED; 50% or greater by switching from fluorescent to LED). In FY 2019 1,417 mercury vapor and fluorescent lighting fixtures with LED lighting were replaced thus reducing the number of mercury vapor and fluorescent lighting fixtures in use to 3,676 as of the end of March 2020 (see following table).

Lighting Fixtures Replaced with LED (FY 2019)

Site	Mercury Vapor →LED	Fluorescent Lighting →LED
	Unit : EA	Unit : EA
ISO Mitaka Site	0	470
Tachikawa Site	0	0
Nakajo Site	0	0
Narita Site	0	500
Sendai Site	143	304
Total	143	1,274
		1,417

※Mercury Lamp 114EA/1000w→LED 250W、Mercury Lamp 29EA/400W→LED 60W、
Fluorescent Lamp 1,274 台/80W (40W×2 lamp type) →LED 37W (37W×1 lamp type)

Mercury Vapor & Fluorescent Lighting in Use (as of the end of March 2020)

Site	Mercury Vapor	Fluorescent Lighting
	Unit : EA	Unit : EA
ISO Mitaka Site	3	1,085
Tachikawa Site	21	1,506
Nakajo Site	0	63
Narita Site	0	200
Sendai Site	10	788
Total	34	3,642
		3,676

Through afore-mentioned energy conservation activities, energy consumption was reduced for FY 2019 to 2,413.5 kl, or 3% less compared with FY 2018's 2,342 kl, thus achieving the target of 1% or greater reduction (see following table for measures for reducing energy consumption in place at each site). Additionally, carbon dioxide (CO₂) emissions in FY 2019 were reduced to 4,618 t, 2.9% less than FY 2018's 4,754 t.

Energy Reduction Measure Implementation Status

Measures Taken (Including operations)		I S O Mitaka Site	Tachikawa Site	Nakajo Site	Narita Site	Haneda Site	Higashi matsuy ama Site	Sendai Site	Miyazaki Site (*)
Transformers	Transformers	○							
	Transformers	○	●						
Air Compresso rs	Stopped night operations by installing an evaporator		○		○				
	Reduction of discharge pressure	○							
	Introduction of energy-saving equipment (Inverter type)	○			○				
Air conditionin g systems	Strict observance of temperature setting (28 ° C in summer, 20 ° C in winter)	●	●	●	●	●	●	●	●
	Regular filter cleaning	●	●	●	●	●	●	●	●
	Introduction of energy-saving equipment (inverter type, heat pump type)	●	●	○	●			○	○
Lighting	Frequent turn out (Such as during breaks)	●	●	●	●	●	●	●	●
	Cleaning of lighting equipment	●	●	●	●	●	●	●	●
	Introduction of high-efficiency lighting equipment	●	○	○	●			●	
Production equipment	Application of heat insulating paint to heating furnace	○							
Lifting Equipment	Number of elevator cars changed		○						
Other	Turning off OA equipment when not in use	●	●	●	●	●	●	●	●
	Demand meter settings	○	○		○				
	Introduction of fuel-efficient automobiles	○	○	○				○	
	Reduction of the number of vending machines	○							○
	Man-hour reduction	●	●	●	●	●	●	●	●

*The Miyazaki site was closed in March 2020 due to the closure of the office.

●	Measure taken
○	Maintenance item
	Not applicable

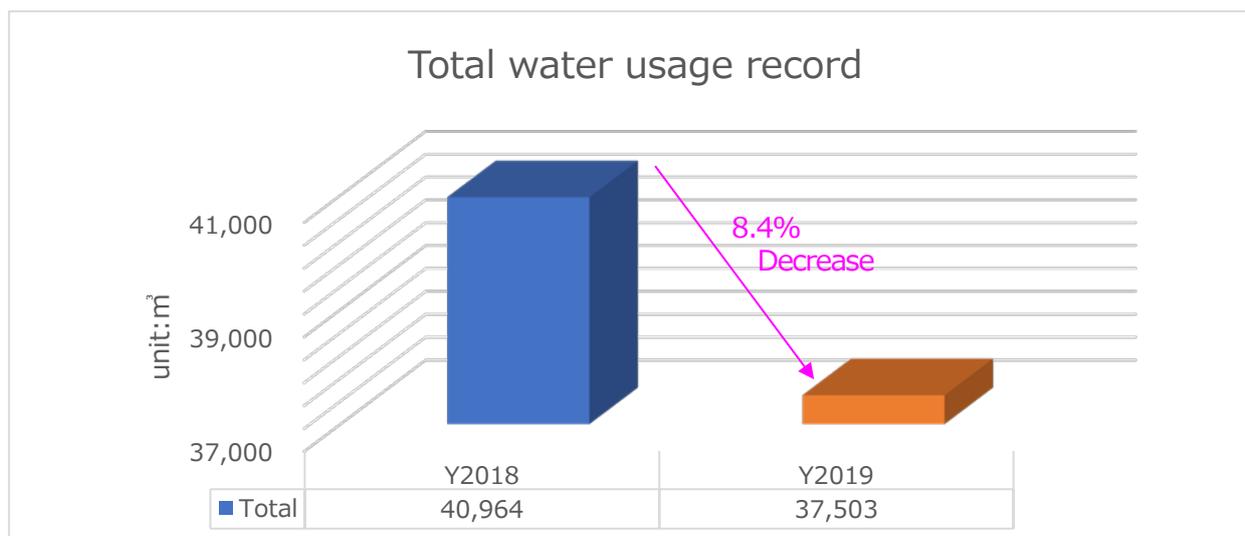
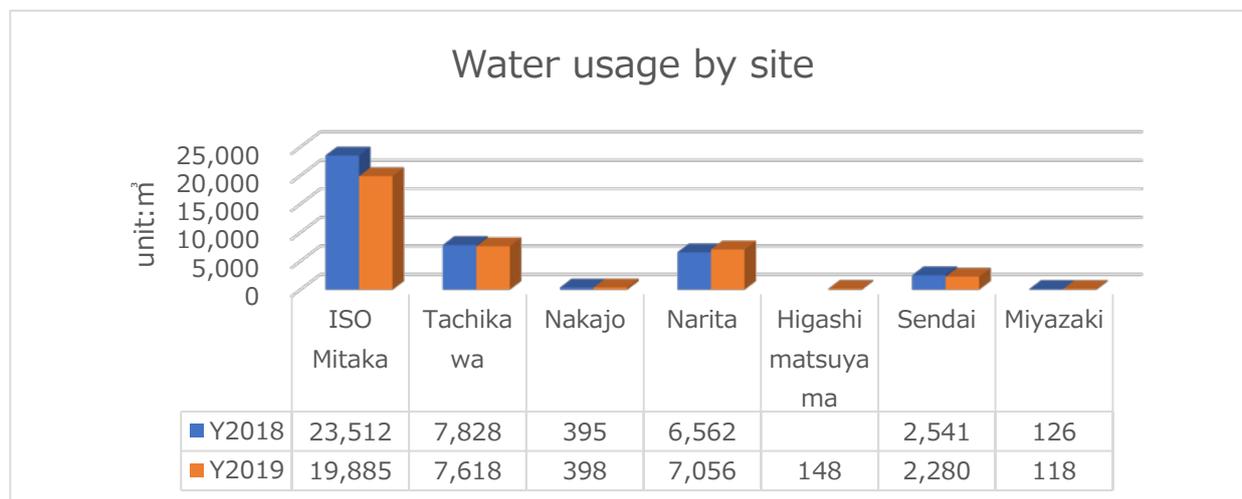
Water resources Initiatives

<FY2019 Company-wide>

Objective: Reduce water usage.

Target: The actual results for FY2018 or less.

Water conservation efforts have been implemented throughout the company with the goal of reduce the water usage in business activities.



By implementing recirculating water systems to cool equipment, water consumption for FY 2019 was reduced by 8.4% compared to FY 2018.

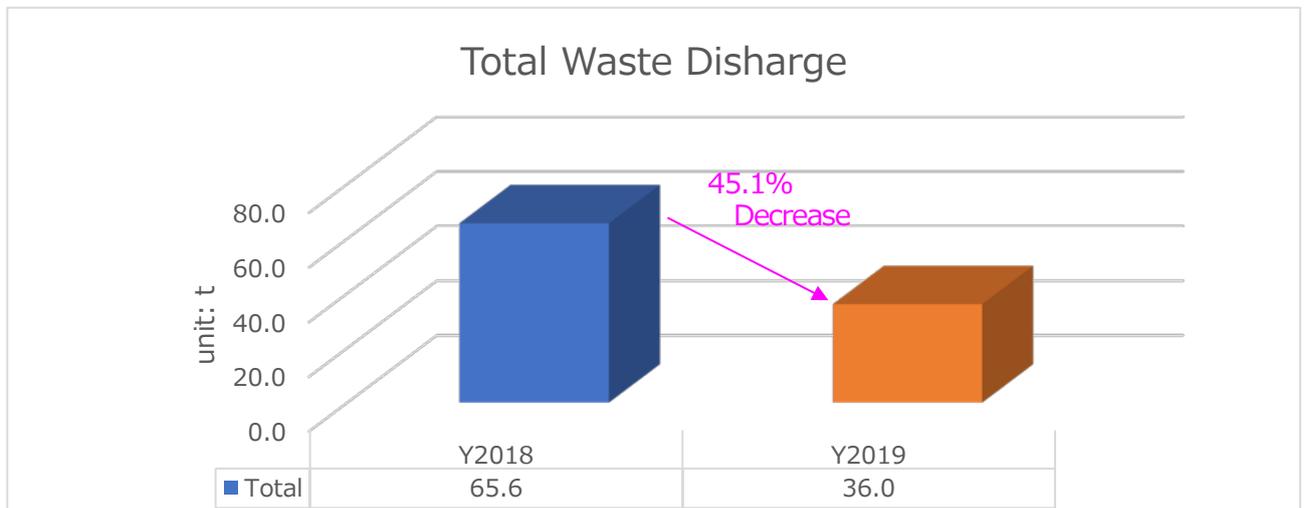
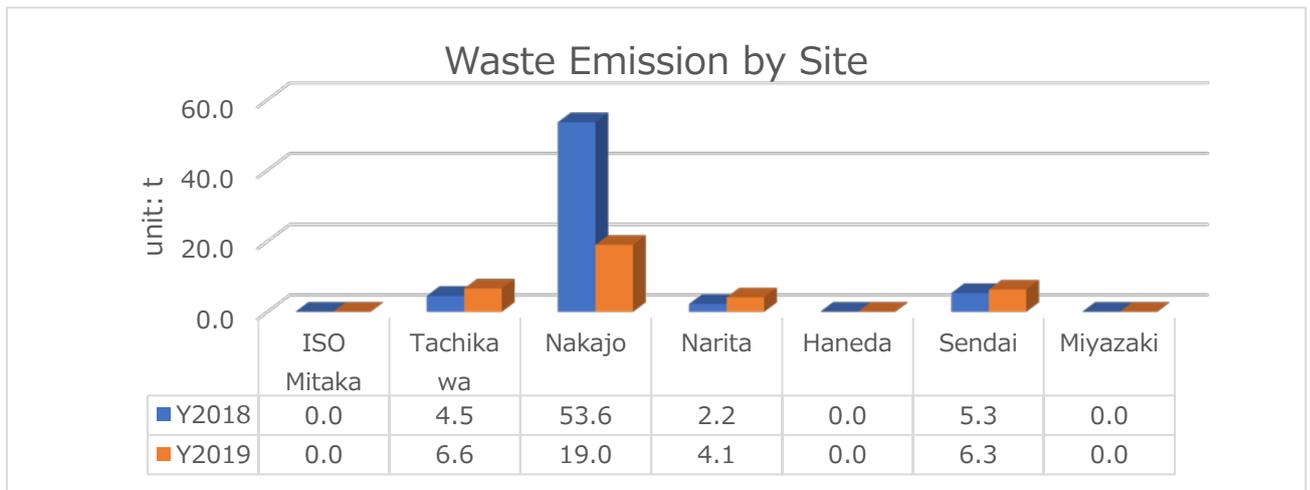
Waste Reduction Initiatives

<FY2019 Company-wide>

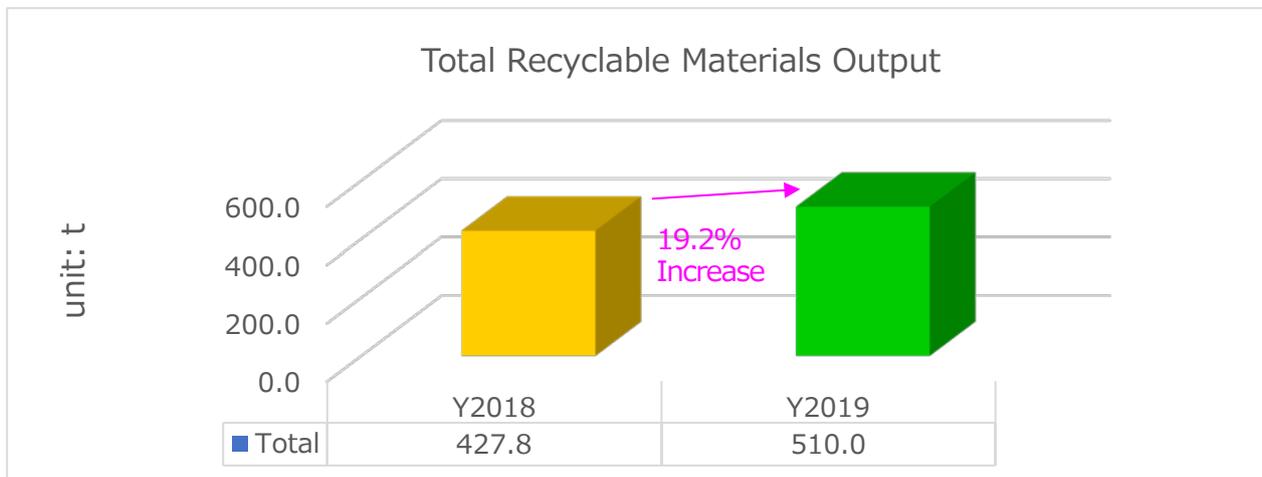
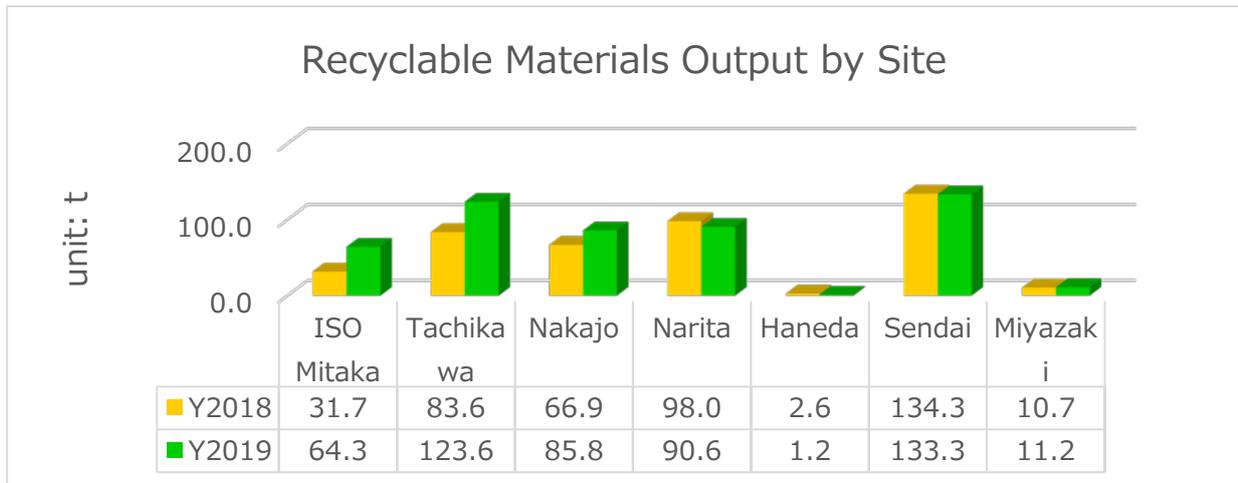
Objective: Reduce waste emissions.

Target: The actual results for FY2018 or less.

Based on the concept of the 3Rs (Reduce, Reuse, Recycle), Wastes generated from business activities are classified into three categories, wastes (general wastes and industrial wastes are disposed of by landfill), recycled materials (general wastes and industrial wastes are recycled), and valuable resources. The discharge status of waste and recycled materials is as follows.



By enforcing separation activities to prevent recyclable and valuable materials from mixing in with regular waste, total waste output for the entire Group for FY 2019 decreased by ~~was~~ 45.1% less than that of FY 2018 by changing to waste disposal contractors that provide recycling services.



The total amount of recyclable materials output in FY 2019 increased by 19.2% compared with FY 2018. This was due to promoting related efforts that included changing to waste disposal contractors that provide recycling services. A breakdown of the materials recycled is as follows:

① ISO-certified sites:

Recycled approximately 13 t of waste in FY 2019 that resulted from the replacement of production equipment

Recycled approximately 6 t of waste in FY 2019 that was scheduled for disposal as regular waste in FY 2018

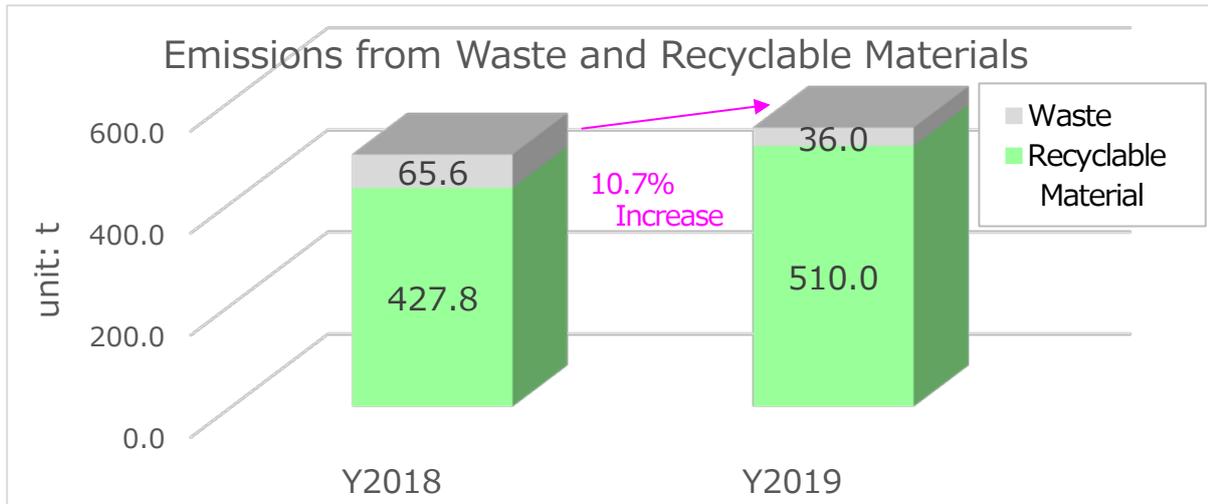
② Tachikawa Site

Recycled approximately 21 t of waste in FY 2019 that resulted from the replacement of chemicals used in production processes

Recycled approximately 20 t of wood pallets that became unnecessary after product delivery

③ Nakajo Site

Recycled approximately 18 t of packaging materials that became unnecessary after product delivery



	Y2018	Y2019
Total Emission (t)	493.4	546.0

While our total output of both waste and recyclable materials for this year increased by 10.7% compared with FY 2018, by changing to waste disposal contractors that provide recycling services we worked to reduce our burden on the environment and moved ahead with reducing waste and increasing recycling.