

Environmental Activity Report 2017

F-tech Group Environmental Report 2017



Editorial Policy

In the final year of the 12th medium-term plan, this report focuses on progress of initiatives in the global group, which has been focusing on environmental and social aspects.

Regarding "global development of ISO 50001", following the North American benchmark base in FY 2015, we featured the completion of installation in China benchmark base in FY 2016. F-tech is progressing step by step such as ensuring 90% or more of the grasping rate of greenhouse gas emissions from business partners excluding North America region and developing biodiversity group widely. In the new medium-term plan, we began preparing to issue environmental reports at each group's sites. In addition, the Group Environmental Report will also evolve as a CSR report in the future, so the stakeholders can easily understand F-tech's efforts.

As a guideline, we are referring the Ministry of the Environment's "Environmental Reporting Guidelines (2012 edition)".

In this report, we will write "F-tech Group" as F-tech group or our group. For "F-tech INC" we will write as F-tech or our company.

Reporting Period

Includes the results of FY 2016 (April 2016 - March 2017) and some previous efforts.

About future forecast, plan and target

In this report, it is also written about the future forecasts of "Reportable Organization" that is written on the right hand side.

These statements are forecasted based on the current information when we wrote this report, so it is not a deterministic information. Therefore, the results future business activities may differ from the forecasts described in this report.

Reportable Organization

★ Domestic office, ○ Domestic Group Companies, ● Overseas group companies

F-TECH INC. [3 sites]

- ★ Head office, Kuki Plant [Shobucho, Kuki, Saitama]
- ★ Haga Technical Centre [Hagamachi, Tochigi]
- ★ Kameyama Plant [Kameyama, Mie]

Domestic company/ Affiliated company [4 company]

- Fukuda Engineering Co., Ltd. (FEG) [Kazo, Saitama]
- Kyushu F-tech Inc. (QFT) [Yamaga, Kumamoto]
- Reterra Co., Ltd. (Reterra) [Chichibu, Saitama]
- Johnan Manufacturing INC. [Ueda, Nagano]

Subsidiaries in overseas [11 companies, 13 sites]

- F & PMfg., Inc. [Ontario, Canada] (F&P)
- Dyna-Mig, a division of F & PMfg., Inc. [Ontario, Canada] (DYNA-MIG)
- F & P America Mfg., Inc. [Ohio, USA] (F&PA)
- F & P Georgia, a division of F & P America Mfg., Inc. [Georgia, USA] (F&PG)
- F. tech R & D North America Inc. [Ohio, USA] (R&DNA)
- FEG de Queretaro, S.A. de C.V. [Queretaro Mexico] (FEGQ)
- F & Pmfg., de Mexico S.A. de C.V. [Guanajuato Mexico] (FPMX)
- F. tech Zhongshan Inc. [Guangdong, China] (FTZ)
- F. tech Wuhan Inc. [Hubei, China] (FTW)
- F. tech R&D (Guangzhou) Inc. [Guangdong, China] (FR&DCH)
- F. tech Philippines Mfg., Inc. [Laguna, Philippines] (FPMI)
- F. tech R&D Philippines Inc. [Laguna, Philippines] (FR&DP)
- F. tech Mfg. (Thailand) LTD. [Ayutthaya, Thailand] (FMTL)
- PT. F. TECH INDONESIA [KARAWANG INDONESIA] (FTI)

※ Yantai Fukushima Kimiki Co., Ltd, Michigan Branch Office, and European Branch Office are out of reporting target, because they are not mass production plants and does not have significant environmental impact.

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Set the target for 2030 and aim to achieve "Environmental Top Runner" for the entire group

Even in the 12th Mid-term Environmental Plan, achieved our targets in all areas

The F-tech Group completed the 12th Mid-Term Plan and achieved almost the plan in the environmental field.

Regarding the "Strengthening of environmental technology", we are steadily promoting group development of energy management systems. Beginning with the acquisition of ISO 50001 certification at the Kameyama Plant in 2013, and issued a group-wide system "G_Ftech EnMS" in 2015, and in the same year we have finished introducing in North American as a benchmark base, and in 2016 two benchmark bases in China. We are currently introducing to the Asia Pacific region. In recognition of these global developments, we received "Energy Management Insight Award" in June 2016, "Energy Conservation Case Energy Conservation Category Energy Conservation Center Chairperson Prize" in January 2017.

(P5-6, P12)

For fiscal 2016, we were able to achieve our plan in all four areas of "production", "management", "corporate activities", "development/engineering". However, due to the global production system responding to world wide automobile sales growth and the impact of capacity building capacity expansion, CO2 emissions, water resource usage, and waste emissions are increasing. Based on these results, F-tech set a new global environmental goal for 2030 this year.



and we will make a new pillar of three items: CO2 emissions, water resource emissions and waste emissions. (P9) We will continue to promote the continuation and establishment of the "World Environmental Conference" and the "Biodiversity Annual Reporting System" including the group development of the energy management system in our group.

Efforts of development and procurement departments are steadily evolving

In development, we are continuing to adopt resin materials in addition to high-tension materials and aluminum materials that contribute to weight saving, for more light weighting, high-function and resource saving. We also evolved our unique analysis technology further.

(P13)

Regarding strengthening the management of the value chain that is also included in the mid-term plan, we have secured a grasp ratio of 90% or higher for grasping greenhouse gas emissions from business partners that began in fiscal 2011, except in North America. We will continue to maintain and improve. (P7, P14)

[Back to Basics, Challenge for New] Go back to basics and evolve initiatives

13th Mid-Term Plan starting in FY 2017, we set a new policy of "Back to Basics, Challenge for New". "Back to Basics" is to master commonplace. For example, we think that the basis of every effort is "human resource development". Even in the development of energy management, in order to establish a high level of consolidation by the group, we have set new goals of developing leaders to build foundations at each site. We also aim to publish environmental reports for each production site to foster voluntary environmental awareness. (P7-8)

In order to meet the demand of society, it is necessary to build a more efficient production and development system to increase production capacity in the future. Under these circumstances, we must achieve stringent 2030 targets with each environmental objective. While treating the fundamentals, we will continue to evolve towards new growth with "Challenge for New" aiming for the environment top runner in the automobile industry. By doing so, we will fulfill our social responsibilities and respond to the expectations of all stakeholders.

August, 2017

President & CEO

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Company Principle

From a global perspective, we strive to contribute to our society and to improve the quality of life through manufacturing of highest quality products with ambition and sincerity.

Our action guidelines

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■ Compliance with laws and ordinances

We will always give top priority to ethically appropriate actions in all of our activities. We will always comply with the laws, ordinances, and the rules. Each of us will act with common sense as a responsible member of society, so as to ensure a high level of legal compliance at the company.

■ Compliance with company regulations and rules

With appropriate understanding of the purpose of establishing company regulations and rules, which have been established for ensuring a working environment in which every one of the associates can work together with equal rights and opportunities, we will always act in compliance with these company regulations and rules.

■ Traffic safety

As people engaged in production of automotive parts, we will always be in compliance with traffic rules, and we will always strive for exemplary safe driving with a readiness to give way to others on the road.

■ Conservation of the environment

Based on an understanding that the Earth is an invaluable asset to the whole of humankind, we will strive to minimize, and ensure optimum disposal or treatment for, any waste related to manufacturing, and to utilize natural resources and energy in more efficient ways.

■ Increase in the corporate value

With an understanding that the continued survival of a company relies on the creation of values, we will strive to raise the corporate value as a company winning recognition from the general public, trying to continue securing profit on a long-term basis.

■ Information and public disclosure of information

We will make clear distinctions between private or confidential information and information to be disclosed to the public, and we will strive to provide accurate information that is useful to our customers, and to disclose information that should be made public in a timely and appropriate manner.

■ Fair business transactions

We will not engage in any unreasonable or irrational business practices and we will not provide benefits or preferential treatment to anyone beyond common sense or generally accepted ideas, always evaluating various conditions based on comparisons in an impartial manner and conducting business transactions that are sound and fair.

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Environmental Principle

In order to become the top runner in the area of the environment in the automotive industry, we will make the utmost effort to establish a future with rich nature and low carbon by having each of our associate's extending their understanding of global environmental issues and proactively engaging in the continuous preservation of the environment in all areas of our corporate activities.

Basic Policies

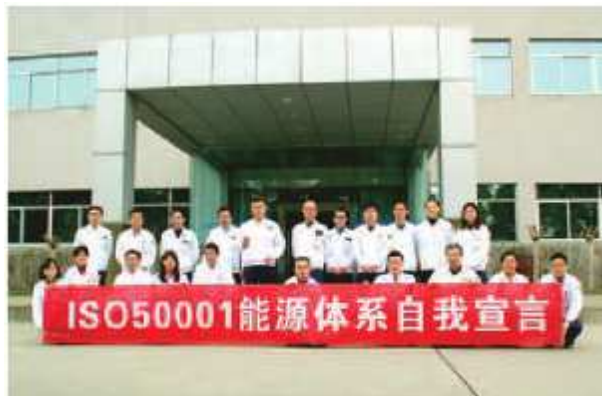
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- (1) In order to form a sustainable society, we will work on reduction of environmental burden and conservation of biodiversity in all business activities related to the manufacture of undercarriage automobile parts.
 - Work to reduce environmental burden throughout the product's life cycle.
 - In the development area, we will reduce CO2 emissions by reducing the weight of our products.
 - Conserve resources and save energy in all our business activities.
 - Continue zero emissions of waste in all our business activities.
 - Work on social contribution activities leading to conservation of biodiversity.
- (2) Comply with laws concerning environment and energy and other requirements to agree.
- (3) Strive to continuously improve the environment and energy management system and prevent pollution.
- (4) Establish environmental and energy targets and review them on a regular basis.
- (5) Ensure that you can use information and necessary resources to achieve environmental and energy targets.
- (6) Train people with high awareness of the environment through energy saving activities and environmental preservation activities.
- (7) Strive to introduce energy-efficient products, equipment and services.
- (8) Disclose environmental information on business activities appropriately.

Introduction of ISO 50001 has also been completed at two benchmark Chinese bases. Energy management system is steadily evolving.

The FTEC Group launched global expansion of ISO50001 from benchmark bases in each region from 2015 in the 12th Mid Term Environmental Plan (2014 - 2016), which is based on the slogan "Realization of Environmental Top Runner by Evolving Energy Management" .

Activities for F & P AMERICA MFG., INC. In North America were completed in FY 2015, and in FY 2016, Zhongshan Inc. [Guangdong, China] (FTZ) and Wuhan Inc. [Hubei, China] (FTW) 2 sites were also Completed.



Started with proficiency in G_Ftech EnMS

In January and March 2016, EnMS team members, consisting of about 30 EnMS administration officers, department chiefs, secretariat, department staff in each office, and base manager heads at each of the two sites and 4 members of F-tech's EnMS specialty team gathered and activities began gigantically.

First of all, in order to deepen our understanding of the Group's common energy management system "Global Ftech Energy Management System (G_Ftech EnMS)" issued in 2015, F-tech's EnMS specialized team provided the EnMS team members at both sites with the following information: " General requirements requirement general", " Energy view", " Equipment management register", " Energy management standard", " Energy visualization", "Energy conservation diagnostic foundation", and so on.

*1 G_Ftech EnMS: A group-wide energy management system formulated based on the requirements of the ISO 50001 family standard and energy saving know-how of F-tech based on the energy management system built at the Kameyama plant in the domestic production base.

*2 Equipment management register :One of G_Ftech EnMS's form that allows to grasp energy conservation point of view for main processes / equipment and grasp the energy usage in each process / equipment.

*3 Energy Management Standard: One of G_Ftech EnMS form, a manual that shows the operation and management standard values of facilities that everyone can minimize the amount of energy used.

Built a new system making full use of existing systems

We divided into three teams of system construction, painting and infrastructure and advanced by 2-way communication between F-Tech's EnMS team members and each department officer.

The system construction team finally completed the integration by repeatedly discussing and revising for several months in order to realize smooth operation while taking advantage of the existing system as much as possible based on the concept of the new system.

The painting team and the infrastructure team first proceeded with the development of "equipment management register * 2" and "energy management standard * 3" in conducting energy conservation diagnosis.

Difference between ISO 14001 and ISO 50001

ISO 14001 and ISO 50001 are very consistent , and for organizations already certifying ISO 14001 (environmental management system), ISO 50001 (energy management) is easy to introduce.

So why does our Kameyama Plant certify ISO 50001 as well as ISO 14001 and further expand to each group company? That is because ISO 50001 = energy cost saving = international standard against attack directly connected to company profit.

ISO 50001 is deeply specialized in energy, for ISO 14001 covering not only the energy but also the environmental fields such as air, water quality, noise, vibration etc. widely and shallowly.





Reduced energy cost for about 27 million yen. Specify 30 measures for 2 sites based on energy conservation diagnosis

After familiarization of G_Ftech EnMS and system construction, FTZ conducted energy saving diagnosis in April 2016 and FTW in June.

In G_Ftech EnMS deployment to the group, it is important to grasp and analyze energy usage in each process / equipment and how effective energy saving measures can be implemented. First of all, F-tech's EnMS special team became a diagnostician, and checked the equipment management register that was prepared in each department, against other informations and the actual equipment, finally energy saving measures were identified. As a result, the energy cost was expected to be reduced by 26,995 million yen per year. Based on comprehensive evaluation after diagnosis, examined priorities and formulated the mid-term plan. Confirmed the contents that can be addressed immediately until implementation.

It became a brilliant internal auditor lecture class

Approximately one year after the kick-off, as a culmination, F-tech's EnMS specialized team held lectures to the members of the EnMS team about an internal auditor course of ISO 50001. Confirmation of ISO 50001 standard requirements and contents of G_Ftech EnMS, and conducted a simulated audit

that was divided between the auditor and the auditee. In the simulated audit, witnessed the appearance of the auditee accurately answering the deeply excavated questions from the auditor. For the actual internal audit conducted after the course, 15 internal auditors participated in total of 2 sites. Was able to realize the results of about one year's activity, discovered 18 pointing matters totally.

From now on, we will focus on training "Energy-saving core human resources" and accelerate the introduction to all production bases

Through these activities, FTZ completed its self-declaration* in December 2016 and FTW in February 2017. F-tech will continue to support for independent activities at two sites in the future.

Also, in the 13th Mid-Term Plan starting in FY 2017, we will state "Enrichment of energy-saving core talent training curriculum". (P7 Mid-term Plan) This is due to the close up of human resource "Energy-saving core talent" who will become the leader in the base in order to continue independent energy conservation activities at each site through introduction in North America and China, and we will continually aim to penetrate the Group's energy management more speedily than ever to Asian Oceania benchmark bases and other production bases.

* Self declaration: A method of declaring the compliance with the standard by ourselves, unlike the third party certification

External Evaluation/Awards

Clean Energy Ministers Meeting "Energy Management Insight Award"

The Kameyama Plant received the Energy Management Insight Award from the Clean Energy Ministerial Meeting, an international meeting aiming to promote the dissemination of clean energy. F-tech was awarded as one of 32 companies in 19 countries.



In February 2017, as a representative company of this award, we reported cases of activities at the International Workshop (held in Jakarta, Indonesia) organized by the IPEEC organization Energy Management Action Network (EMAK).

Energy Conservation Grand Prize 2016 Energy Conservation Case Category "Energy Conservation Center President Award"

F-Tech received the "Energy Conservation Center President Award" at the Energy Conservation Grand Prize (Energy Conservation Case Division) of the FY2016 sponsored by the Energy Conservation Center of the General Foundation.



* Organized by: Japan Energy Conservation Center, Sponsor: METI

Honda Green Convention 2016 Global Competition "Excellence Award", Japan Regional Competition "Excellence Award"

F-tech's "From Japan to the World! Energy management evolution by utilizing group common EnMS." was selected as a Best theme in the purchasing domain. Presented at the main competition held in "Twin Ring Motegi" in January 2017 in the audience gathered by more than 280 people including Honda Motor Co., Ltd. executives, overseas group companies, business partners and others. As a result, we won an Excellence Award at the Japan Regional Competition and Global Competition.



Honda "Excellent Gratitude Award"

F-tech received the Excellence Gratitude Award "Environmental Prize" that Honda Motor Co., Ltd. awards to suppliers who made excellent efforts in reducing environmental burdens in product life cycle according to "Honda Green Purchasing Guidelines". It was highly appreciated for group development of ISO 50001 and reduction of greenhouse gases based on ISO 50001. It will be the third time to award, following 2011 and 2012.



The 12th Mid-Term Plan (Environmental Area) 2014 - 2016 * 1

「Achieved our targets in all areas, "Evolution of energy management" in the core.

The group development of ISO 50001, which is an important measure of this mid-term plan, began with the publication of Group Common Document (G_Ftech EnMS) of energy management system, and the deployment to North American benchmark base and China benchmark base was completed as planned.

In strengthening the management of the value chain, worked to improve the accuracy of GHG data of suppliers (business partners), and in the final year we secured a grasp ratio of over 90% for the entire group (excluding North America region). In biodiversity and contribution activities to the local community, first issued biodiversity guidelines and accelerated activities within the group by sharing information with environment promoters at each site at the World Environmental Conference.

■ Results of the 12th Mid-Term Environmental Plan (2014 - 2016) & 13th Mid-Term Environmental Plan (2017-2019)

Area	Contents	Plan	Period		
			2014	2015	2016
Production	Reduction of greenhouse gas emission intensity	Plan	Improve 4% (compared to 2010)	Improve 5% (compared to 2010)	Improve 6% (compared to 2010)
		Result	Improved 16.2%	Improved 21.8%	Improved 12.8%
		Evaluation	○	○	○
	Reduction of water quality source usage intensity	Plan	Improve 4% (compared to 2010)	Improve 5% (compared to 2010)	Improve 6% (compared to 2010)
		Result	Improved 10.0%	Improved 10.6%	Improved 7.8%
		Evaluation	○	○	○
	Reduction of waste emission intensity (started from the 13th Mid-Term Plan)	Plan			
		Result	Start from the 13th Mid-Term Plan		
		Evaluation			
Management	Issuance of environmental report at production base	Plan			
		Result	Start from the 13th Mid-Term Plan		
		Evaluation			
	Compliance with ISO 50001 at overseas benchmark bases	Plan	Start overseas deployment	Complete North America	Complete China
		Result	Issued G_Ftech EnMS	Completed F&PA	Completed FTZ,FTW
		Evaluation	○	○	○
	Acquisition of ISO 14001 (2015 revision) certification 2014 ~ 2016 Target:F-tech 2017 ~ 2019 Target:F-tech Group	Plan	System construction	System construction	Migration registration
		Result	System construction	System construction	Completed migration registration
		Evaluation	○	○	○
	Acquire ISO 14001 certification at new launch mass production base	Plan	System construction	System construction / Acquisition of certification	Acquisition of certification
		Result	Prepared system construction	System construction	Completed FPMX
		Evaluation	○	○	○
	Training energy-saving core human resource	Plan			
		Result	Start from the 13th Mid-Term Plan		
		Evaluation			
Business Activities	Contribution activities to the community	Plan	Information sharing	Horizontal development	Ongoing development
		Result	Information sharing at World Environmental Conference	Horizontal expansion within group	Annual reporting system started
		Evaluation	○	○	○
	2014 ~ 2016 Responding to biodiversity 2017 ~ 2019 Evaluation of biodiversity (business activity area)	Plan	Formulate Guideline	Develop activity	Ongoing development
		Result	Formulated and issued guidelines	Developed activity	Annual reporting system started
		Evaluation	○	○	○
		Plan			
		Result			
		Evaluation			

* 1 Refrain from announcing the goal of "development / engineering" from the viewpoint of confidential information.

* 2 Grasping rate is calculated based on the transaction amount with our group for each supplier concerning the product for the main customer of our group.

* 3 F-tech completed the migration to the 2015 version in November 2016.

13th Mid-Term Plan (Environmental Area) 2017-2019

To the whole group "Environment top runner" Newly set the global environmental target of 2030.

In order to contribute to sustainable regional and social realization, we have formulated the "Group Environmental Targets for 2030". The Paris Agreement, the Fifth Assessment Report issued by the Intergovernmental Panel on Climate Change, the Three Objectives to be achieved in 2030 with the 2030 Agenda for Sustainable Development "Reduction of CO2 Emission Unit", "Water Use Reduction of basic unit" and "Waste emission intensity unit" have been set.

Specifically, in the 13th Mid-Term Plan, we will continue to pursue our activities with the aim of "realizing the environment top runners" in the four areas. In the activities of ISO 50001, we will work to train energy-saving core talent at each site in order to establish independent energy management at each site at a high level. Therefore, in this mid-term plan, we aimed to complete trainer development as the foundation. In order to respond to the accountability of environmental information, the FTEC Group aims to issue environmental reports for each production site. By doing so, we will work on the development of self-assessment activities.

Target:: F-tech Group (7 domestic sites, 14 overseas)

Period		
2017	2018	2019
Improve 6%(compared to 2013)	Improve 7.5%(compared to 2013)	Improve 9%(compared to 2013)
Improve 4%(compared to 2013)	Improve 5%(compared to 2013)	Improve 6%(compared to 2013)
Improve 4%(compared to 2013)	Improve 5%(compared to 2013)	Improve 6%(compared to 2013)
Preparation for issue	Internal issue	Official issue
Start Asia Pacific	Complete Asia Pacific	North American deployment
System construction	Migration registration	Ongoing development
Maintain the level of FY 2016		
Plan Training Curriculum	Build training curriculum	Complete Trainer training
Maintain the level of FY 2016		
Understanding the current situation	Measure consideration	Brush up of guidelines

: target achieved, : achievement degree 70% or more and less than 100%,
x : achievement degree less than 70%, -: not applicable

2030 Global Environmental Targets

CO2 emission intensity unit^{*1}

26% improvement

Base year: compared to 2013 year

Indicator: Sales^{*2}

Water usage intensity unit

17% improvement

Base year: compared to 2013 year

Indicator: Sales^{*2}

Waste intensity unit

17% improvement

Base year: compared to 2013 year

Indicator: Sales^{*2}

^{*1} CO2 emissions

[Target]

Energy used in the factory

[Excluded]

Logistics, company car, welded CO2 gas

^{*2} In order to increase consistency with greenhouse gas emissions and water resources use, from this report, sales figures include inter-group transactions.



Infrastructure for sharing problems and countermeasures in the group has been completed.

Actual trends in CO2 emissions

CO2 Emission

CO2 emissions in fiscal 2016 increased due to the increase of production capacity at overseas bases and the increase of production number at the overseas bases.

By region, CO2 emissions increased by 34% in Asia Pacific region, 16% in China region, 6% in North America region, and 8% in Japan region. The increase in the Asia Pacific region was due to an increase of the production number increased by 21%, and the work in the painting has increased by 20% compared with the previous year in China.

In the future, our group will analysis the factor even futher at each site and improve by sharing information regularly.

Water resource usage

Regarding of water resource usage, the usage amount slightly increased compared to last year. About the water usage base unit, last year Asia Pacific Region increased, due to the troble of the pipes and valves, but it has not recur there after, and decreased by 13%. In the China region it increased by 20%, same as the CO2 emission. North America region decreased by 2%, Japan region increased by 8%.

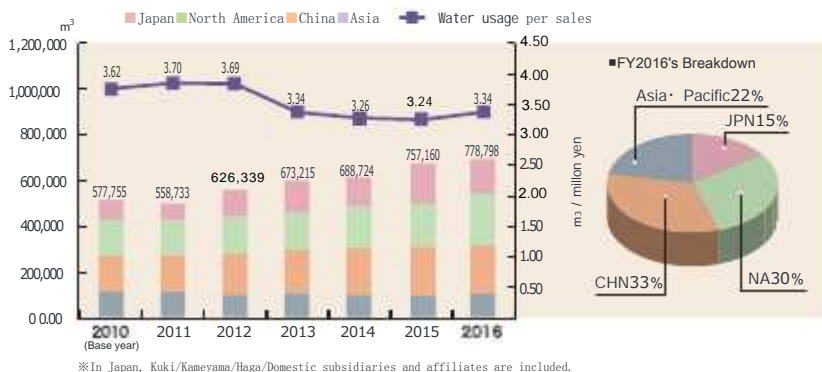
Waste emissions

Waste emissions are on an increasing trend.

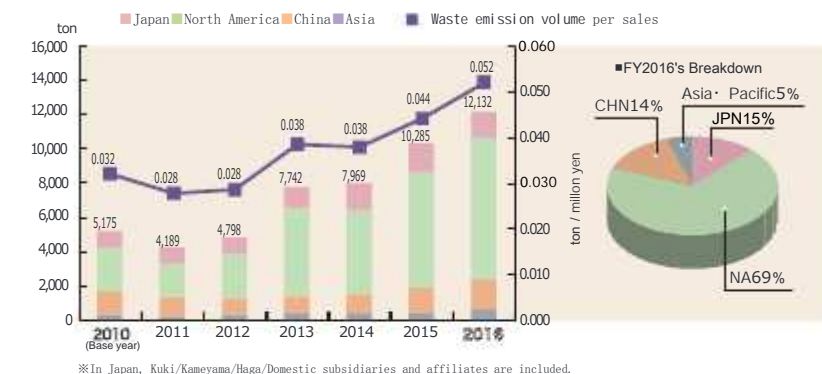
Looking by the region, waste emissions increased by 53% in the Asia Pacific region, 19% in the China region, 23% in the North America region, and 12% in the Japan region, compared to the previous year. Since production expansion is expected at overseas bases in future, F-tech will strive to 3Rs to reduce waste discharge.



Actual trends in water resource usage



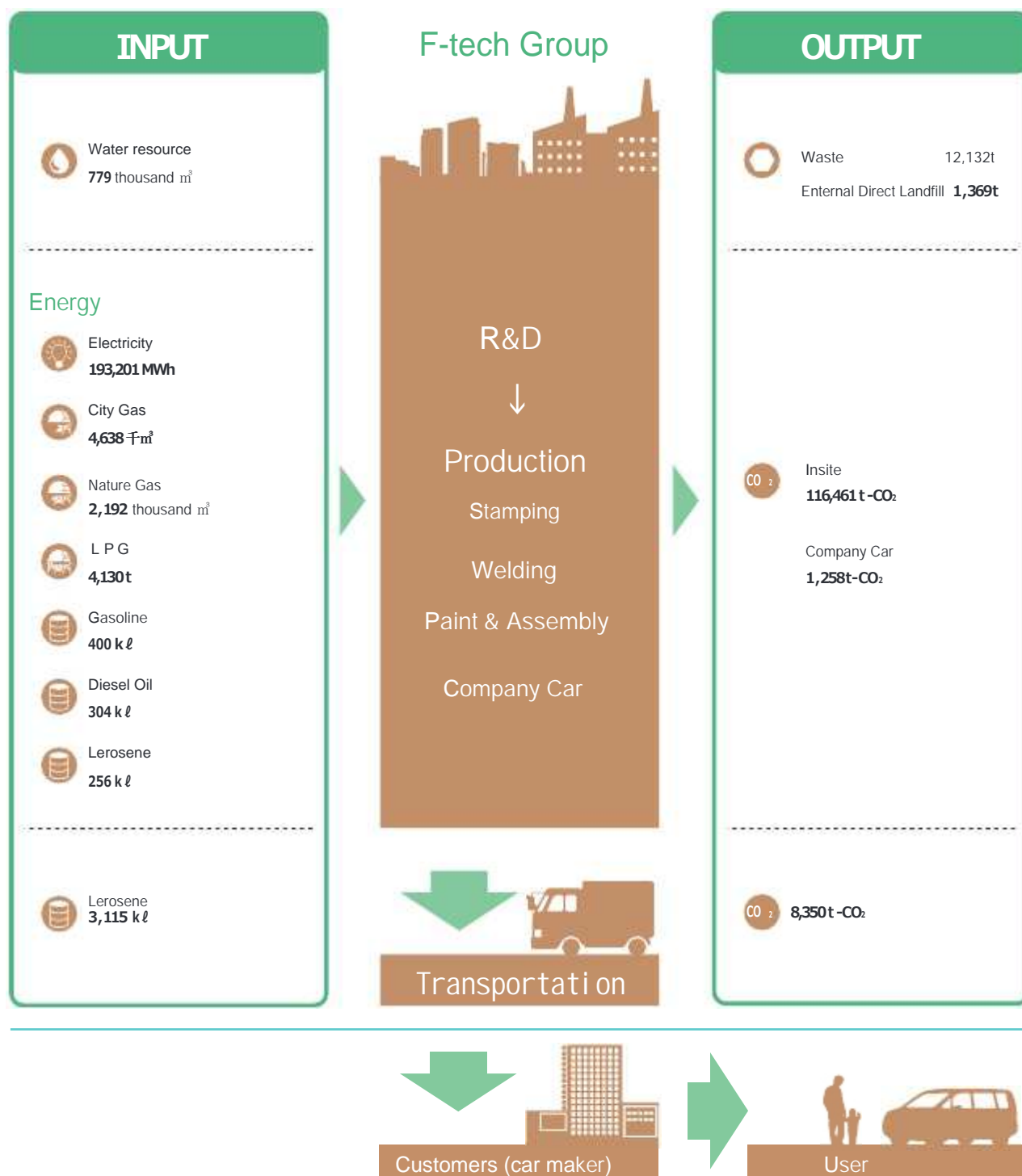
Actual trends in waste emission volume



Trands of actual landfill volume of waste



Believe that visualization of the environmental impact of the entire group is the first step in our approach



- CO₂ emission in OUTPUT was calculated multiplying the amount of energy consumption in INPUT by CO₂ conversion factor.
- Referred calculation method of CO₂, issued by Ministry of Economy, Trade and Industry and WRI/WBCSD "The Greenhouse Gas Protocol"
- Power consumption in Japan was calculated based on the latest factor of each power company
- Reported data period: April 2016 ~ March 2017

Group development of energy management system Trying to train "Energy-saving core talent".

All F-tech Environmental Management System

F-tech Group considers environmental problems to be one of the most important tasks that companies should address. In Japan, we began working toward obtaining certification of ISO 14001 from 1998. Even at overseas production bases, we acquired certification in 2009 and have established an environmental management system in F-the group. Even at the newly established Mexico production base, certification registration has been completed in May 2017.

Organizational

Since 2008, the Group has started to build an environmental management system in F-tech group. We have established the F-tech group environmental organization by establishing a person in charge of practical affairs at each site, and the directors of overseas sites as the responsible person.

Compliance

The law concerning the environment is vast, depending on the country and region. In some overseas bases, we have consultant contracts with external specialized agencies to ensure compliance with laws and regulations. At three domestic plants, we are introducing an electronic manifest system for industrial waste to improve the level of management of waste disposal. In addition to check the status of notifications against the status of notifications and regulatory standards we are holding the company-wide environmental conference held once every three months, and also planned a new course called "compliance obligation course" from 2017, to conduct compliance evaluation methods and the contents of laws by gathering law enforcement personnel to ensure compliance with the legal comprehensiveness of the entire group.

Environmental education

At our company, ISO14001 basic course is registered as essential subject of the company, and energy-saving training and internal auditor training course etc. are carried out, and we are putting emphasis on environmental education for employees. By FY 2016, 28 employees of F-tech and 32 employees in overseas site participated in the "Energy Diagnostic Fundamentals Course", which started in FY 2015. We also register this course as essential subjects of the company and are focusing on developing human resources capable of energy diagnosis through energy review of ISO 50001.

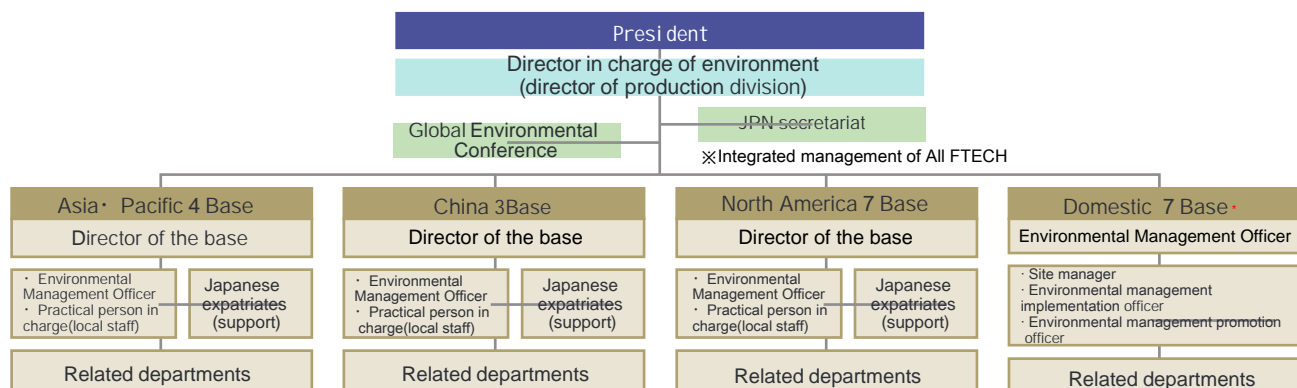
In addition, the Group organizes social contribution activities and biodiversity activities as part of employee environmental education, and employees actively participate. In addition, we are implementing environmental education that devises every branch overseas. For example, in Philippine bases, we donate cleaning tools made from waste to neighboring elementary schools. At Canada, children from local scout groups participate and produce nest boxes, and we strive to improve employees' environmental awareness and contribute to the local community.

Internal environmental audit

The Group regularly implements internal environmental audits based on the environmental management system and energy management system (P 12) at each site to ensure system compatibility.

We regularly hold internal environmental auditor courses in order to conduct effective audits and continuously strive to expand auditors. Auditors of various divisions participate in the audit, and we conduct highly fair audits. In the internal audit of fiscal 2016, 31 auditors participated in the internal audit.

FTECH Group Environmental Management System



* Domestic subsidiaries and affiliates are included for 7 domestic sites.

7th Global Environmental Conference

In F-tech Group, environmental managers gathers from domestic and overseas group every year since 2009 and holds world environmental conferences. 29 people from 12 sites were gathered at Dyna-mig in Stratford, Canada, for 3 days from September 27th ~ 29th for the 7th Global Environmental Conference.

Regarding environmental effective measures, which is also one of the main objectives of the conference, this time 82 types of measures are shared within the group. 4 domestic & foreign bases that received high praise from attendees were selected for prizes and awarded.

At the end, participants gave positive comments such as "It was a good experience to visit overseas bases with no opportunity to visit normally," and "Would like to share more excellent measures of Japanese and North American bases".



Presentation of environmental effective measures from each site



Group photo in front of Dyna-mig building

- **Grand Prize : Kuki Plant (Japan)**
Developed high cost-effective measures
- **Excellent Prize: F & P (Canada)**
Introduced a system for purifying water by installing a magnetic filter that catches iron to the hot water washing process in the painting process
- **Idea Award : F & PG (USA)**
Digitized the paper records by using the tablet on the model line. Introduced a system that monitors information in real time
- **CSR Award (Newly established): F & PA (USA)**
Activities to protect trees with insecticides from larvae of alien species

Issued energy management system "G_Ftech EnMS"

Establishment to the whole group starts from the training of "energy-saving core talent"

In March 2015, the F-tech Group issued a group-wide energy management system "G_Ftech EnMS" to focus on energy management.

G_Ftech EnMS is based on the energy management system of the Kameyama Plant that acquired ISO 50001 for the first time by a domestic auto parts specialized manufacturer in October 2013 and additionally it was formulated including the requirements of the ISO 50001 family standard and the energy saving know-how of F-tech. In FY 2015, based on G_Ftech EnMS, we carried out horizontal development to overseas group.

First we began with the North American benchmark base and completed in February 2016 at F & PA in Ohio, USA.. Subsequently, in fiscal 2016 we have completed implementation at China benchmark bases (FTZ and FTW). Planing to expand to the Asia Pacific benchmark base in FY2017.

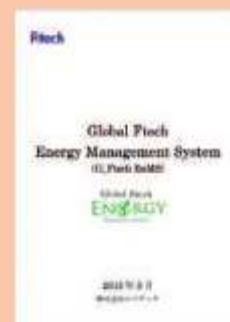
Also, in order to establish energy management throughout the F-tech Group, human resources who promote energy conservation activities at each site will be important. From fiscal 2017 we will focus on training such human resources (= energy saving core talent).



EnMS Internal auditor training course



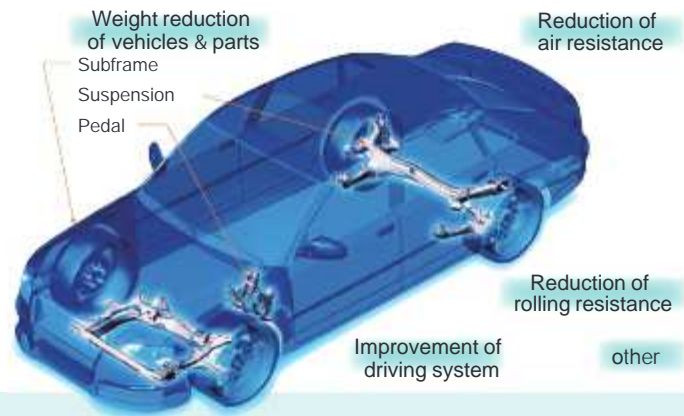
Energy saving diagnosis



Group common document issued in 2015

Responding to the demands of society and customers, while strengthening global fuel efficiency regulations.

While reducing energy usage and CO₂ emissions is being said, regulations on fuel efficiency of automobiles are being strengthened not only in developed countries but also in emerging countries. Therefore, in order to satisfy the regulations of each country / region in the automobile industry, we are pushing hard to develop such as weight reduction of vehicles and parts, improvement of engine efficiency, reduction of air resistance.



Contributing to weight reduction by using high tension material *, aluminum material, and resin material.

We adopt aluminum material for a wide range of products ranging from small pedal parts to large parts subframes. Recently Honda NSX's aluminum pedal arm and mass production of subframe of new type fuel cell vehicle CLARITY FUEL CELL have started. Aluminum adoption is one of the indispensable ways in clearing the 2025 fuel efficiency regulation value in North America.

F-tech are also involved in the development of materials for high-tension materials cooperation with automobile manufacturers and steelmakers. We have already reduced the sheet thickness while maintaining strength by aggressively adopting high-tension material also in F-tech main products such as subframe and axle beam. It contributes to improving fuel economy by realizing weight saving.

Predicting collision performance by enhancing F-tech's proprietary analysis technology

F-tech design by utilizing optimization simulation and mechanism simulation independently developed to respond to customers' strength endurance durability and increasing needs for vehicle performance improvement. Optimization simulation is a method of examining product shape without waste. Recently, we applied this optimum simulation for collision performance, and we are developing further weight reduction products.



Mechanism simulation is a method to examine the vehicle performance etc. by calculating not only the parts but also basic structure and the movement of the vehicle itself. We also adopt painting simulation for painting products that are painted by electrodeposition. This makes it possible to examine in advance the main part of the paint test that had been dependent on actual product validation so far.

In addition, by conducting simulation of yield optimization in parallel, we are striving to conserve resource by minimizing material waste while being lightest and highly functional.

Products designed in this way are widely adopted in Honda global strategic vehicles including CIVIC and CR - V, global models such as GM 's Equinox and Chevrolet Camaro.



Sharing the world's top level technology 5 pole collaboration / development is undertaken on a 24-hour system.

At F-tech, development centers in Japan, North America / Europe and Asia are solidarity and development is possible by 24-hour basically. In the West European OEM global model (development based in China), utilize the cloud service by making full use of their respective strengths such as China (development contact point), North America (product development), Japan (prototype and productivity verification), Philippines (manufacturability analysis), we are doing speedy management by sharing various data.

*High tensile strength steel: Steel material with improved strength compared with ordinary steel material due to addition of alloy components and control of structure. Compared with the case of using general steel materials, it can be made thinner, contributing to weight reduction.

Ensure the non-inclusion guarantee of harmful chemical substances in the entire group according to the common rule specified by G-FQS.

F-tech Group Green Purchasing Concept

The F-tech Group has established the basic philosophy of green procurement as "F-tech Green Purchasing Guidelines" to purchase environmentally friendly parts, materials and products with priority.

Formulation of green purchasing guidelines

In the F-tech Green Purchasing Guidelines, we currently ask the suppliers of F-tech Groups in Japan and overseas to provide the following contents.

- Construction of environmental management system
- Compliance with environmental laws and regulations
- Conduct management of chemical substances contained in products
- Grasp and reduce greenhouse gas emissions

In July 2013, we started to request, including suppliers for overseas bases, and by March 2014 we deliver green purchasing guidelines to 130 business partners. F-tech are striving to continuously protect the global environment by promoting green procurement with our business partners.

Purchasing policy explanatory meeting

In April 2017, we held a purchasing policy explanatory meeting and 55 suppliers in Kuki area and the Kameyama area attended. Among them, we introduced case studies of our environmental activities, we again asked for cooperation with the greenhouse gas emissions survey, and we were able to grasp the situation of our business partners. Thank you very much.



Grasping of greenhouse gas emissions in the value chain

In the GHG Protocol, which is a common guideline for calculating greenhouse gas emissions, it is recommended to identify risks related to greenhouse gases and opportunities for reduction in the value chain as well as greenhouse gases emitted by the Group's business activities. In accordance with these guidelines, F-tech group began grasping suppliers' greenhouse gas emissions from FY2011 and establish a grasping system in all regions except North America in 2013, and we will continue to work on grasping in the value chain.



※Target is, suppliers concerning F-tech's products for Honda Motor Co., Ltd.

※The calculation method of greenhouse gas is based on "Greenhouse gas emissions calculation and report manual" of Ministry of Economy, Trade and Industry • Ministry of the Environment.

※In fiscal 2016, as the domestic workload increases, the amount of greenhouse gas emissions in the value chain area also increasing.

Management of chemical substances in products

In response to regulations on chemical substances contained in products that become stricter worldwide from year by year, the Group has established a management system at each site and conducts IMDS surveys and others. We strictly prohibit the use of these substances that are harmful to human and the environment, also the substances that are prohibited or regulated by law, by stipulating in the "F-tech Chemical Substance Management Standards". We are also working to eliminate the target substances through green purchasing activities and offer products that do not contain these substances. In addition, for substances concerned about hazards, it is similarly stipulated in the same standard document, and comply with the regulations of chemical substances contained in each country.

Specifically, we have established common rules for the research about chemical substances contained in products and management of the value chain. In addition, F-tech conducts confirmation of the management system of chemical substances contained in products under quality system audit for new customers. We regularly provide education to the person, who is in charge of quality system audit.

We will promote initiatives toward "Realizing high quality at the world top level".

As the final year of the mid-term plan

Established the basis of the group quality assurance system.

In fiscal 2016, "strengthening global mother functions and building a foundation for chassis systemization" is set as the goal, and as the final year of the mid-term plan's final year, Strengthen and promoting basic quality 7 measures Improvement of quality in important problem occurrence base Work to strengthen the structure of all our bases, by the global quality assurance response of the new model in the ceter.

From FY 2017 we will promote activities by aligning vectors in all regions and bases toward "realizing world top level quality".

In our new medium-term plan, we will endeavor to strengthen the structure of the entire group with a new quality assurance system

This fiscal year will be the start of our new medium-term plan. In order to realize the overwhelming competitive QCD constitution as a global mother for the supply of high quality products, particularly in terms of strengthening the quality assurance and management system, we established a new "quality assurance office" as a mother function in Japan, strengthened the skewer function of all regions and bases, mainly in Japan. In the final year of the new midterm plan, we will work with the goal of halving the quality defect (50% reduction) at all sites in fiscal 2017 to achieve 'customer registration defect' 0".

As a major measure, we will put "New Quality 7 Measures" in our business plans at each of our bases, promote the strengthening the evaluation of the launch of the new model globally, and aim at achieving the goal at all the bases.

31st Global Quality Joint Meeting held

On 13 th to 15 th June 2017, quality departments in 15 domestic and overseas bases and related department, like purchasing division, gathered and held the "31st Global Quality Joint Meeting". The main theme of this time is to match the vector to achieve the goal and solve the problem in order to achieve the global target which is the 13th medium term plan goal from fiscal 2017. Therefore, we shared the efforts of each headquarters towards registration problem "0", understanding and confirmation of the action plans, and quality targets at each bases. On the final day of the meeting, we visited the Kameyama Plant and the Toyota Industrial Technology Commemoration Hall, and learned the history of manufacturing, and renewed the feeling for achieving the goals of the new mid-term plan.



Picture above : Discussion at the meeting
Photo below : Participated members

I . 『New / quality 7 measures』

- ① Establishment of QMC activities leading to prevention of recurrence and prevention
- ② Expansion of fixing reduction(Loss fee/fixing "Zero")
- ③ Thorough implementation of equipment inspection and maintenance
- ④ Thorough education and training
- ⑤ Ensure adequacy of inspection and appropriate implementation
- ⑥ Monitoring of fulfillment status by self-assessment(Internal audit・Quality patrol・5S・ Monitoring of fulfillment status by deployment etc.)
- ⑦ Eradicate important quality problems by "IPAS deployment"

II . Strengthening of global new model start-up activities

Strengthen of new model startup in all bases

Implement strengthen measures and new model development. We will unify the start-up promotion items and evaluation method at all bases and start stable upgrading of new models by executing appropriate evaluation at the level required for each milestone.

Implementation of global safety declaration assessment

Quality assurance managers and quality assurance offices will participate in promoting and evaluating the launch of new models at all global bases.

Especially, in new models / parts that will be produced at multiple bases, we will share preliminary countries' launch information etc, and crush problems beforehand and ensure recurrence prevention.

Strive to prevent work-related accidents by thorough 5S activities and risk assessment at domestic and abroad.

In the new mid-term plan, we will continue to strive "safe working places"

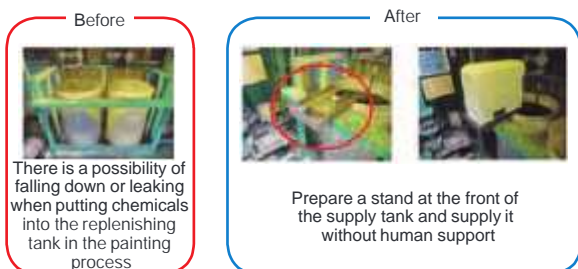
The F-tech Group continues to set Occupational Safety and Health Policy at each site every year with the goal of "disaster 0" And working to prevent disasters..

The company-wide safety and health committee, which is organized at four domestic plants * and FEG's committee members, in FY 2016, activated by the basic policy of "re-strengthening the establishment of risk assessment based on three actuals and prevention of occupational accidents". Particularly, we strengthened the response of the revised Occupational Safety and Health Law enforced in June 2016 throughout the company. Based on the idea of "Back to Basics" which is also the business policy of the new mid-term plan (FY 2017 to FY 2019), in FY 2017, we declared "Returning to the basics and thoroughly implement 5S and build a safe workplace without disasters". As priority items, we plan to ①prevent recurrence by sharing disaster information that occurred in the past, and ②prevent work-related accidents by risk assessment (facilities, specified chemical substances).

Strengthen risk assessment at domestic business sites

Domestically, the Occupational Safety and Health Law revised in 2014 was enacted in June 2016, evaluating danger or health disorders to protect workers' health, implementing risk assessment to examine risk reduction measures, etc. was obliged. The Companywide Safety and Health Committee has established in-house rules such as evaluation criteria for risk assessment for newly adopted or changed work methods or procedures of business, and newly adopted or changed raw materials which we handle. We also conducted risk assessment by grasping highly important operations for that have not undergone risk assessment at each business site. Approximately 20 people including department managers and persons in charge at each site participated in the "Specific Chemical Risk Assessment lecture" held at the head office • Kuki site, inviting experts from Saitama Industrial Health Integrated Support Center as part of internal education.

Risk assessment improvement case (Kuki plant painting process)



Fixing the importance of continuing 5S activities

< FMTL >

F.tech Mfg., (Thailand) Ltd. Strengthened "5S activities" in FY 2016. The circumstances that once again taught "5S activity" is the change of the production environment accompanying the mass production shift of the new model. Employees from Japan took part in the position of leadership in view of the good opportunities to strengthen "5S activities" which is the starting point of production activities (stable production and safety environment) due to the increase in number of people and changeover.

All departments reported "5 S Declaration Statement" to unify the intention of "5 S Activity" should be participated by all, and started a factory inspection activity in small groups centered by safety environmental committee members. Through this activity, employees who participated, learned the importance of continuing "5S activities" as well as specific cleaning activities and garbage separation work. We will continue our activities so that our activities will continue to be established among our employees.

Safety environmental committee member factory patrol



Possibility of injury by the broken curb



Repaired of curb block

Achieved 10million hours of no occupational accident

< F&PG >

22,100 occupational accident has occurred in the whole state of Georgia in 2015, which F&P Georgia is. Under these circumstances, F & P Georgia achieved 10 million hours of no occupational accident. It will be calculated that no occupational accident have not occurred for about seven years. This is a result of continuous steady daily safety patrol activities and employee education.

In commemoration of this, we co-hosted a health fair along with a memorial ceremony. About 400 employees and their families enjoyed plant tours and bingo games on the day. From now on, we will strive for safety with all employees aiming for 11 million hours of no occupational accidents.



Employee of F & P Georgia

More than 20% of the whole domestic employees in fiscal 2016 Many initiatives were also carried out at overseas bases

Establishment of biodiversity initiatives

In fiscal 2015, we gathered initiatives for biodiversity from all F-tech Group as "Biodiversity Yearly Report.". Until now, several information sharing was held at the Global Environmental Conference once a year, but based on the report received by "Biodiversity Yearly Reporting System", we began sharing information within the group.

At F-tech, target of more than 25% participation rate was set up at each site, and 372 people totally from 3 bases participated in the activities, and also many activities including new initiatives were carried out at overseas bases.

【FY 2016 target】

F-tech: Base Employees Participation rate 20% or more
F-tech Group: Continue initiatives to biodiversity

【FY 2016 results】

F-tech

Rate: 47% Number of participants: 372

Activity base: 3 bases, number of activities: 5

F-tech Group

Number of participants: 1,214

Activity base: 12 bases,
number of activities: 36

Use of turnip juice anti-freezing agent

Dyna-Mig, A division of F&P Mfg.,Inc.
(Canada Ontario)

Conventionally, sodium chloride antifreezing agent was used, but we began using the squeezed juice of the turnip as a anti-freezing agent of the stairs taking into consideration the environment more. Sodium chloride antifreezing agent has little effect on iron stairs, and it was causing rust, but the turnip squeezed juice prevents freezing and does not rust the stair.



Juice of turnip



Stairs with anti-freezing measures



Parent and child picking up garbage



Employees who participated in the cleaning activities and their families

1st family gathering garbage pick up activity

F&P Georgia, A division of F&P America Mfg., Inc.
(Georgia, USA)

In order to provide a beautiful environment to creatures in habiting the ponds and rivers, we conducted a cleanup activity for about 3km on the surrounding boardwalk. We held a game for children to compete for the amount of garbage collected in one day in order to have fun picking up garbage. Prize were also presented to the winners.

In order to continue this activity, the second activity is planned to pick up garbage in the local parks.

F-tech Group Biodiversity Guideline January 2015 issued

- ① Aim: The biodiversity Guideline is the guideline for F-tech group initiatives for biodiversity.
- ② Basic Idea: F-tech's mission statement is "From a global perspective, we strive to contribute to our society and to improve the quality of life through manufacturing of highest quality products with ambition and sincerity". Based on this principle, we strive to "preserve biodiversity" *1,2 and "build a sustainable, affluent society". Moreover, we are continually aware that our business is benefitted and impacted by biodiversity and we act as a company always with this in mind.
- ③ Priority measures
- 3.1 Contributions to society:
We shall actively contribute to society through activities which leads to the conservation of biodiversity, with the goal of building an sustainable affluent society.
 - 3.2 Contributions through technology:
We will strive to preserve the ecosystem by reducing the environmental impact of the market by the evolution of environmental technology and weight reduction of the product, to maintain the global environment.
 - 3.3 Developing employees to be highly environmentally aware:
Through in-company training and our contributions to society, we shall work to deepen each and every one of our employees' awareness of the importance of biodiversity, and engender in them a strong awareness of the environment.
 - 3.4 Information disclosure:
To improve societal awareness about biodiversity, we will actively disclose the results of the activities conducted in the F-tech Group.

Definition of words

*1 Biodiversity: The abundant variety of living organisms that exist on earth. It indicates the rich individuality and connection among living organisms.

*2 Diversity: - Eco system Diversity: Various types of natural environments such as forests, rivers, grass lands, tide lands, and coral reefs.

- Species Diversity: Various living organisms ranging from plants and animals down to microbial organisms such as germs.

- Gene Diversity: Diverse uniqueness of shape, pattern, eco system among as a mespecies resulting from the presence of variation in their genes.

Japan, North America, Asia and Oceania, China

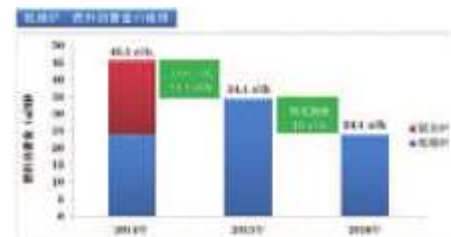
Continuing activities at 21 sites in 4 regions around the world.

Kuki Plant (Kuki city, Saitama Prefecture)

Reduction of gas consumption by adjusting opening / closing degree of drying furnace hot air outlet

In the painting process, odor containing organic solvents generated when baking the electrodeposited paint product in a drying furnace has been processed by combustion decomposition at high temperature, but it was changed to scrubber type (water washing type) from the combustion type deodorizing furnace. However, due to the change in the deodorization process, the use of the deodorizing furnace waste heat to the drying furnace was abolished, so it was necessary to raise the drying furnace temperature by 5 °C. Therefore, focusing on the heat release at the entrance and exit of the drying furnace, we worked on reexamination of hot air blowout opening / closing degree in the drying furnace.

Before the improvement, since the hot air outlet was fully open at all locations in the furnace, heat release occurred from the outlet near the furnace entrance and exit, but the discharge port around the furnace entrance and exit was fully closed, the discharge port inside the furnace was fully opened. By adjusting the degree of opening and closing, drying oven temperature can be operated at the temperature before the deodorization process have been changed. The annual effect led to the reduction of 37,600 cubic meters of gas, 78,160 kg-CO₂.



Change of gas consumption of drying furnace

Kameyama Plant (Kameyama city, Mie prefecture)

Energy conservation initiative by reducing air consumption

At the Kameyama Plant, we are actively working to reduce the amount of compressed air used at factories. Compressed air is produced by an air compressor, but the amount of electricity used by the air compressor accounts for approximately 11% of the electricity consumption of the entire plant, and each department has been continuing repair work on air leaks for a long time in each department. In FY2016, we worked on reducing the amount of air used in each process.

In the stamping section, the scrap discharge assistance was changed from the air blow to the discharge in the double acting motion of the air cylinder. In the welding section, the pressure setting of the air equipment used for positioning and holding the parts to be welded was reduced to the minimum pressure that does not affect the quality, and at the places where air blowing is required, the air saving valve was used as the pulse air. Even at the painting assembly division, we are working to reduce the amount of air use by changing the air blow nozzles used for cooling the cutting tools and cutting chips during the cutting process to reduce the amount air in our whole plant.

With these measures, since the required air pressure and the amount of air used on the user side were reduced, it was possible to lower the discharge pressure of the air compressor, leading to a significant reduction in electric energy. We will continue to make positive improvements in the future and aim for further energy conservation.



Air Saving Valves



Energy saving Nozzles

Haga Plant (Haga Town, Haga-gun, Tochigi Prefecture)

Power reduction of hydraulic pressure source for hydraulic fatigue testing machine

At the Haga Plant, a large capacity hydraulic source (test facility) held for evaluating fatigue durability of developed parts occupies a large percentage of total electric power consumption. Even after the employees returning home, we are working the equipments unattended and strictly observing the schedule. In order to reduce the environmental burden in the past, we worked on equipment shutdown during the long holiday period, but sludge * was generated from the cooled hydraulic fluid. From the circumstances even during the consecutive holidays, equipment was turned on to prevent trouble.

By independently investigating and analyzing the chemical composition and contamination condition of chemical oil, we could able to stop the equipment during the consecutive holidays with no trouble by adding ingredients that are short due to aged deterioration, and decomposition and removal the sludge. Because of this initiative, we could reduce 51,043kWh, 19t-CO₂ annually. We will consider and promote power reduction initiatives other than long-term consecutive holidays.



*Sludge is a precipitate such as oil and rust which deteriorates and accumulates in the tank. If it is left over, it will cause equipment trouble and environmental pollution, so it is necessary to remove it by suction or filtration.

Fukuda Engineering Co., Ltd. (Kazuo City, Saitama Prefecture)

Reduction of water usage

In FEG, the use of tap water has been increasing in recent years. As a result of examining the cause, we found that there is a problem with the cooling tower used in the PV test building. Maintenance of the cooling tower in the PV testing building was done only once a year, so the cooling fan was stretched and the rotation speed was dropping. As a result, the cooling efficiency dropped and the amount of water evaporated increased, so the amount of water added to the cooling tower was increasing. Therefore, we prepared a daily inspection sheet of the cooling tower and carried out maintenance and cleaning on a regular basis, the cooling efficiency became normal. As a result, the amount of water evaporated almost disappeared and the amount of water added to the cooling tower decreased. As a result, we were able to reduce 54m³ of annual water usage.



Regular maintenance and cleaning of the cooling tower

Kyushu F-tech Co., Ltd. (Yamaga City, Kumamoto Prefecture)

Acceptance of visit social studies from local elementary schools and internship

As a social contribution activity every year since 2010, we accept visit social studies from the local elementary schools and internships (company practice) for students of Kumamoto Prefectural Kamimoto Commerce and High School in Kumamoto Prefecture. Fifth grade children of Yamaga City Hachiman Elementary School visited the company in fiscal 2016. We took about 2 hours to guide the students through the factory and explained the functions and processes of BRAKE PEDAL using DVDs and samples.

Kyushu F-tech will continue to provide local children with opportunities for visit social studies and practical training, and will continue to cooperate as a company that contributes to the community.



explanation to elementary school students



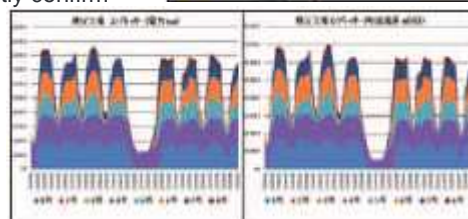
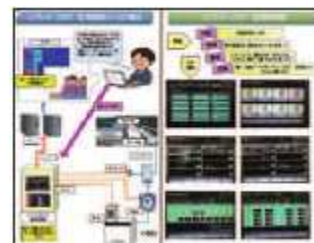
Descriptions of each process in the factory

Riterra Co., Ltd. (Saitama Prefecture, Chichibu-gun Ogano)

Visualization of electric energy by "compressor monitoring system"

Production volume of aluminum casting products is 60% at Chichibu factory and 40% at Ryogami factory, annual energy usage at Chichibu factory is 3,800 kl, CO₂ emission is amount 8,000 t - CO₂, government designated as "energy management designated factory" and we are working to reduce energy consumption as a company-wide target. The Chichibu factory had an annual electricity usage of 7,500 Mwh and the compressor's power consumption accounted for about 40%. Constructed and started operation a system that was made in-house by the measure project team in 2016, to stabilize (automatic control, monitoring, and recording) air discharge volume by controlling the operating number of medium size compressors, which we have 8 units. In the company network, it was possible to instantly confirm the amount of electricity in the past, discharge volume, operation time, electricity usage, etc. Visualization of the specified period graph helps us to identify inefficient compressors.

In 2016 we updated two 75 kW compressors that were declining (aging), reviewed the operation order of the number control (priority is given to the high efficiency compressor), stopped one 55 kW compressor (reduction effect of about 330,000 kWh), so that the compression of the compressor power has been improved to 33% of the factory.



Data measured by monitoring system

Jhonan Manufacturing Co., Ltd. (Ueda City, Nagano Prefecture)

Change of plating factory wastewater treatment facility

In Jhonan Manufacturing Plant, the parts processed by stamping are plated on site, 800,000 units per month. The waste liquid generated by the plating process occurred on average of 70 tons per month, and 110 tons when there are many. Therefore, waste liquid treatment equipment was changed to evaporation concentration equipment to reduce waste liquid generated as industrial waste. By introducing this evaporation concentrator, Before introduction 70ton per month ➡ After introduction 25ton per month was able to reduce 65% on average per month.

We will continue to reduce industrial waste, reduce power consumption, and reduce CO₂ emissions from this fiscal year in the whole company.



Evaporation concentrator

F & P Mfg., Inc. (Ontario, Canada)

Reduction of power consumption by changing to LED lighting

F&P Mfg., Inc. strives every year to implement energy saving programs. One project completed was to replace the 700 ton Press straightener motor and control system from an eddy current control to a variable frequency control which consumes less electricity with an annual power savings of 100,800KWH. F&P did receive a cost rebate from the utility company for this project.

The largest project implemented was the replacement of T5 fluorescent production task lighting in the Assembly area to a new more energy efficient LED style. Changing of fluorescent lighting to LED technology has improved lighting levels, save energy, reduce operating costs and reduced maintenance cost. A total of 434 fluorescent light fixtures were replaced with LED lighting with an annual energy savings of 288,518 KWH. F&P did also receive a cost rebate from the utility company for this lighting project. F&P was fortunate to be recognized by the electrical utility company for energy savings and was presented with Certifications of achievement.



Change to LED lighting

Dyna-Mig, A division of F&P Mfg.,Inc. (Canada Ontario)

Awarded "Save on Energy Award" *1 for Industrial Retrofit

By participating in the " Save ON Energy " Programs DYNA-MIG was recognized for its efforts for Industrial Retrofit for electricity consumption savings. DYNA-MIG received incentives *2 for the completed programs. It was noted at the Awards ceremony " DYNA-MIG ' s stewardship in energy conservation is an example to our community " . A few of the programs included: Installed LED lighting in the GM production area, added LED flood lights to new cells, Added E-Drives (energy efficient drives) to the weld exhaust.

*1 Prize that is awarded to companies that contributed in peak power reduction or electricity usage reduction by the local power company " Stratford Festival Hydro Corporation "

*2 Refund system of investment amount spent for initiatives to energy conservation, Which Ontario Power Authority funded, and managed by Festival Hydro Corporation.



In FY2016, (from left to right in picture) Jeff Graham (Vice-President of Engineering and Operations, Festival Hydro), Terry Young (Vice-President Conservation and Corporate Relations, IESO), Lisa Thompson (Huron-Bruce, MPP *3), Randy Pettapiece (Perth-Wellington, MPP), Patty Mann (Manager of Projects & Procurement, Festival Hydro) joins DYNA-MIG's Brian Mills and Angela Blum with the company's Save on Energy Award for electrical consumption savings at the Festival Hydro Recognition Awards.

*3 Members of the local council

F & P America (America, Ohio)

Reduce electricity Usage through the Purchase of Compressed Air

Between September and November 2016 FPA transitioned to a system of purchasing compressed air from an air supplier rather than replacing the old, outdated air compressors and their on-going maintenance costs. An air compressor audit performed by the local electricity supplier estimated that FPA would save 850 K KWh of electricity or prevent 597 metric tons of CO2 emissions. FPA is tracking electricity savings for this project.

The project involved the strategic placement of four new screw compressors in two different outdoor locations to balance the air supply to the factory in the most efficient manner. The air management company guarantees full pressure and constant dew point in the supply of compressed air to the Plant. This is achieved through their proprietary software program which can cycle between the four air compressors, and adjust to small fluctuations through a variable speed feature on one of the four compressors. Maintenance service is supported 24 hours, 7 days a week.



Outdoor air compressor room



AtlasCopcoGA 315, 369 horsepower screw air compressor



Control panel

F&P Georgia, A division of F&P America Mfg.,Inc. (America Goergia)

Ph Level Monitoring System - chemical reduction

F & P Georgia installed a pH sensor to automatically detect when pH levels become out of range. If they are out of range the system automatically sends it back through waste water for treatment and does not stop the flow process. This has saved 1430 gallons (33%) of treatment chemicals per year.

The pH balance of the drinking water served by the Board of Water Supply (BWS) occurs naturally in the 7 to 8 range. This means that the water ranges from being neither acidic nor alkaline (pH 7) to being only slightly alkaline (pH 8).

Manufacturing companies cannot allow wastewater to be disposed of in a manner dangerous to human health, therefore have to regulate the pH level output from manufacturing processes that end up going into the City Water System.



Improvement of pH level monitoring system

F.techR&DNorthAmericaInc.(America Ohio)

Promoting the recycling of paper and iron

In September 2016, we installed a trash can (100 L) for paper recycling in the office to "protect the global environment". Succeeded in recycling more than 70,500 liters of paper in 2016 with paper from existing confidential documents shredder. Currently we are also working on "paper document reduction". Strive to reduce the number of documents to be kept, reduce the necessary storage space, and also increase the amount of recycling.

We also place importance on the iron that is recycled worldwide. It is not an exaggeration to say that suppliers of iron parts are obligated to reduce energy, prevent landfilling and emission of greenhouse gases, and contribute to the rebuilding of iron. Recycled 22 tons or more of iron in 2016. We also reproduce safely light bulbs, batteries, and spray cans by using special equipments. We will continue recycling at R & DNA and pursue further improvements.



Paper recycle trash bin



Spray can recycling device

FEG de Queretaro, S.A. de C.V. (Mexico Queretaro)

Reduction of greenhouse gases CO2 and energy savings

In FEG Queretaro Mexico we changed the halogen lamps to LED Lamps in the warehouse and all production area, and also, exchanged the acrylic board of the roof so that natural light can enter, and saved 7% of electricity in 1year.

As for the reduction of greenhouse gases, which is considered to be the most important, we reduced CO2 emissions by reducing electricity consumption. By taking these actions we will continue to contribute to the improvement of our environment.



Warehouse and manufacturing area lighting

F&P mfg.,De Mexico S.A.DE.C.V. (メキシコ グアナフアト州)

ISO 14001 certification registration in May 2017

FPMX strengthened the separation of waste from 2016. In order to have all employees recognize the importance of sorting waste, we strive to raise awareness about environment as well as safety in the time called "5 minutes core" of the whole morning assembly and daily team morning assembly. In addition, we installed five kinds of garbage bins for sorting paper, plastic, sludge, burnable garbage, and unburnable garbage in cafeterias, offices and factories. We also dig a hole in the premises to reduce waste and make mulch with dead leaves etc collected. Mulch leaves are spread on the premises every year when trees are planted, returned to nature, and are used for the growth of trees.

FPMX has registered ISO 14001 certification in May 2017. With this opportunity, we will strive to reduce the environmental burden even more with all employees. We plan to reuse wooden pallets and unnecessary wood, to build a small hut, and grow trees for planting in it.



Dead leafing work for mulch



Sorting trash bin installed in the office

F.tech Philippines Mfg.,Inc. (Philippines Laguna)

Waste into Craft Donation

Our main objective for this project is to raise awareness not only for FPMI associates but also for the community to put into practice the concept of 3R ' s (Reduce, Re-use and Recycle).

FPMI donates waste bins and dustpans that were made from our collected empty chemical containers. These items were created by our Associates. Provided with labels for biodegradable and non-biodegradable, this will also help others to identify and properly segregate different kind of wastes. Two beneficiaries of these items were public schools here at Binan Laguna.



A handmade trash can reusing empty cans.
There is also a separation display.

F.tech R&D Philippines Inc. (Philippines Laguna)

Further enhance our activities in society, environment and safety

Donating goods to a chosen institution has been a part of the FRDP ' s annual Christmas thanksgiving culture such as old clothes and gifts given to home for the aged . Last Dec. 2016 the Company through its Associates donated needed goods to Elsie Gaches Village, a home to children and adults with developmental disorders.

As starter, the Company promotes environmental awareness internally and externally by influencing the way people think and act through reading and setting up a corner in the Bulletin/communication board. A new tag line was added on our standard email signature, which reads: " Think before you print. SAVE paper. Good for the environment. Good for our business " . Using recycled papers are strongly encouraged among associates. Continuous learning on safety is through the conducts of regular internal Safety Awareness Orientation to its Associates.



Elsie Gaches Village Poster



Bulletin Board to Increase
Environmental Consciousness

F.tech Mfg. (Thailand) Ltd. (Thailand Ayutthaya)

Promote activities by raising environmental development activity plan

- 1 . Switch to LED lighting activity ~ Switched 206 pieces
By switching lighting, the power consumption was 19,038 kWh / year, the cost was 69,869 Bht / year, and the CO 2 emission was 12.24t-CO2 was reduced.
- 2 . Reduction of air leakage in production line
The power consumption was about 73,443 kWh, the cost was 269,535 Bht / year, and the CO2 emission was about 47.22 t - CO2 reduced.
- 3 . Procurement activities on environmentally friendly goods (green purchasing)
Chaged to recycle fiber 19% tissue paper from virgin fiber 100% tissue paper.
- 4 . Contribution to the community & society
Based on the F-tech corporate policy, we aim to create value, contribute to the national society and create a rich society. This year, as part of social contribution activities, we painted the elementary school ' s walls with approximately 30-40 employee volunteers.



LED lighting installed in the factory



Volunteer activities at elementary school

PT.F.TECH INDONESIA (Indonesia Karawang)

Baby food distribution to nearby village

Since KIIC Industrial Park (Karawang International Industrial City) were PT .F.TECH INDONESIA started operation in 2008, we are carrying out activities as a joint CSR program, baby food is supplied and distributed to villages in the vicinity of KIIC according to the children's health examination date.

In conducting business in Indonesia, cooperation of neighboring villages is very important, so we visit each neighboring village with other companies of KIIC. In the future, we are planning to have the employees to participate, and deepen the awareness about social contribution to the region.



Visit neighboring villages
and distribute baby food

F.tech Wuhan Inc. (Hubei, China)

Improvement of lamp in welding robot process

In the welding robot process, the lamp is already changed to LED, but due to the long use the surface of the cover is damaged by the sputter, lighting effect was impaired and maintenance is difficult. Because the maintenance cost also rises, replaced the lamp to an projection lamp. The projection lamp is easy to maintain with glass material, and the life of the lighting has also increased.

Before improvement, 8 LED lights of 18 W were required for one process, but after improvement the brightness can be obtained with two 20 W LED projector lamps in one process. The annual electricity consumption was 6,480 kWh, and the cost was 4,800 yuan reduced.



Replace the lighting lamp in the welding robot process with an LED projection lamp

F.tech Zhongshan Inc. (Guangdong, China)

Energy conservation efforts by adjustment of pressure and air ratio

In 2016, we established the ISO 50001 energy management system under the guidance of F-tech. In the second support in April 2016, the energy conservation diagnostician of F-tech, proposed the following three energy conservation points of view and promoted efforts.

1. Adjustment of compressor pressure value: Tried several times and gradually lowered the pressure value. As a result of adjusting the pressure value from 0.7 to 0.68 MPa, the electricity usage amount is about 19,929 kWh / year, the cost is about 16,939 yuan/year has been reduced. (see figure)
2. Welding equipment Air pressure adjustment: As a result of adjusting the air pressure of the equipment at the welding site from 0.6 to 0.5 ~ 0.55 MPa within the range where the product quality is guaranteed, the electricity usage is about 3,957 kWh / year and the cost is about 3,363 yuan/year has been reduced.
3. Adjustment of paint boiler air ratio: Advised by ISO 50001 supporter and adjusted the boiler air ratio from 1.4 to 1.14 (China's standard value is 1.15 or less). Natural gas consumption amount about 18,309 cubic meters annually, about 76,901 yuan reduced.



F.tech R&D(Guangzhou)Inc.(Guangdong, China)

Reduction of air conditioning energy by change to closed louver

The first floor of the FR & DCH is the laboratory. However, the doorway shutter specification was bad, there was a slight gap, and there was no protective function to ensure safety. In addition, the upper part of the entrance was an open louver structure for ventilation, requiring a lot of energy to control indoor humidity and temperature.

Therefore, by changing the shutter and replacing to a closed louver, we secured power saving and safety together with optimum test environment.



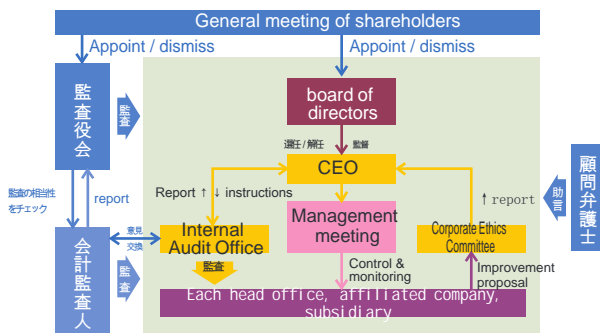
Shutter and open louver before improvement



Improved shutter and retractable louver

As a global company, evolve to improve sustainability (CSR).

Corporate governance



The Group aims to maximize corporate sustainability and long-term shareholder value as the basic goal of corporate governance, and along with the improvement of the management organization (Board of Directors, Board of Corporate Auditors), we are working on the development of a systematic system that is global and tackling to compliance and risk management.

The Company has introduced an executive officer system to separate management oversight and business execution functions, strengthen decision-making and oversight functions at the Board of Directors, and to promptly execute operations. In addition, by selecting one highly independent external director in order to objectively monitor the management, we incorporate external perspectives into management based on opinions and recommendations from a multilateral perspective. Regarding directors, the term is set to one year so as to respond promptly to changes in the business environment. The Company's board of directors is composed of ten directors (including one outside director), making decisions on important matters as a decision-making body for the company's management and other matters concerning statutory matters, supervising business execution.

F-tech group has a board of corporate auditors and the board of corporate auditors consists of four corporate auditors (including two outside auditors). Each corporate auditor audits the performance of the duties of the directors through attendance at the Board of Directors, investigation of the status of business and property, etc., in accordance with auditing policies and task assignments determined by the Board of Corporate Auditors.

Regarding business execution, we have appointed executive officers for each department, and we have a business headquarters system with six company-wide functions and two-room system. We held a Management Meeting consisting of 10 Directors and a total of 18 Executive Directors, etc. to deliberate on matters to be resolved by the Board of Directors and deliberate on important matters of management within the scope of authority delegated by the Board of Directors. In overseas operations, we have appointed supervisory officers in charge of each region in North America, China and Asia and Oceania Province, and we are fully equipped with a system to achieve autonomic completion and efficiency of business.

Internal control

In addition to recognizing the risks related to the major business execution by the division in charge, establishing a management officer from a professional point of view, and hold a meeting and prevent the risk

loss beforehand, and 5 Internal Audit Department officer, which is an independent business audit department under the direct control of the president, carries out audits of the business execution status of each department. We submitted an "Internal Control Report" that judges the internal control over financial reporting as of March 31, 2016 is effective.

Corporate Ethics Committee

In October 2004, the Company held a "Corporate Ethics Committee" (Chairperson: Director of Management Division in charge of Compliance Officer), etc. consisting of executive officers as institutions to verify, improve and comply with compliance status of compliance at any time and make decisions on response policies of important projects that can not be handled by divisions, including protection of proponents, and instruct improvement to relevant divisions, so that we can strictly check compliance status of compliance at all times. In addition, we have established a "Corporate Ethics Improvement Proposal Counter" to improve the system that protects internal whistleblowers. In FY 2015, we set up an external proposal window dedicated to our company who can also accept anonymity at the law office and established a corporate auditor / external director proposal window to further establish an environment where proposers are more likely to propose.

In November 2004, we stipulated the Code of Conduct based on the improvement of corporate ethics and legal compliance to prevent violating laws and ordinances and the articles of incorporation beforehand as "our action guidelines" and promote compliance at our company and our subsidiaries. We are carrying out activities. In June 2006, we stipulated "compliance regulations" to ensure compliance. In FY 2015 we will revise our "Action Guidelines and Improvement Proposal Point for Corporate Ethics" brochure, which revises our "Action Guidelines" more clearly, to the entire employee and foster a vibrant corporate culture.

Risk management

The Group recognizes the risks associated with major business operations, and the department in charge sets up a manager in charge from a specialized standpoint, holds meetings, and prevents loss crises in advance. In June 2006, we set up "Risk Management Regulations", we decided the person responsible for management of individual risks, and we are improving the risk management system. In the event of an unforeseen situation, we set up the headquarters with the president as the general manager, the vice president or the supervisor in charge as the headquarters in the management headquarters, after consultation with counsel attorneys etc, prevent loss expansion to minimize the impact on the environment.

Normally, Director of Risk Management Officer Director of Production Division globally supervises. In addition, we conduct self-verification using checklists created according to business each year for each domestic base, subsidiary company and overseas group company, and send the result to the "Risk Management Committee / Compliance Committee" (from year 2015 2 times), we deliberate and finalize the results of the verification of the group-wide results by the Board of Directors, and are promoting strengthening risk management.

To a global

Group Location



- ★本社・久喜事業所
- 亀山事業所
- 芳賀テクニカルセンター
- 設備センター

■内グループ会社

- フクダエンジニアリング株式会社
- 株式会社九州工フテック
- 株式会社リテラ
- 株式会社城南製作所

海外グループ会社

- F&P Mfg., Inc.
- Dyna-Mig, A division of F&P Mfg., Inc.
- F&P America Mfg., Inc.
- F&P Georgia, A division of F&P America Mfg., Inc.
- Ftech R&D North America Inc.
- Michigan Branch Office
- Ftech R&D North America Inc. European Branch
- FEG de Queretaro, S.A.de C.V.
- F&P mfg., De Mexico S.A.DE.C.V.
- Ftech Philippines Mfg., Inc.
- Ftech R&D Philippines Inc.
- Ftech Mfg., (Thailand) Ltd.
- PT.FTECH INDONESIA
- 偉福科技工業（中山）有限公司
- 偉福科技工業（武漢）有限公司
- 煙台福研模具有限公司
- 偉福（ 廣州 ） 汽車技術開發有限公司
- Ftech Inc. Office UK
- Johnan America, Inc.
- Johnan De Mexico, S.A.de C.V.
- Johnan UK Ltd.
- Johnan Ftech (Thailand) LTD.
- PTJFD INDONESIA
- 城南武漢科技有限公司
- Proressive Tools & Components (P) LTD.

Company Profile

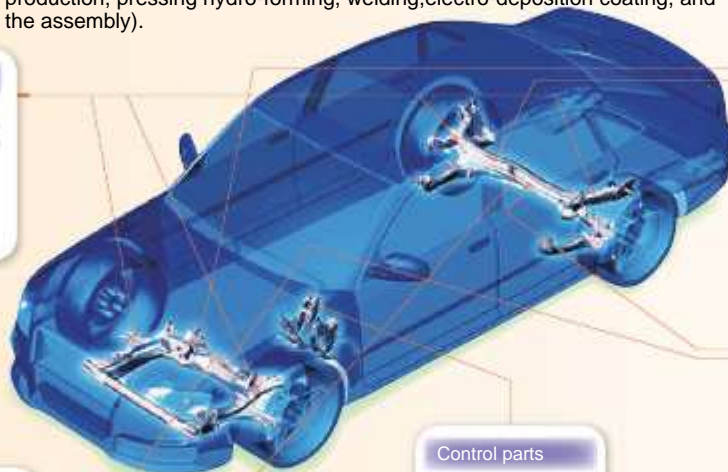
name	F-TECHINC.
Head office location	19Showa-numa,Shobu-Cho,Kuki,SaitamaPref
Founding	July 1st, 1947
Capital	5,615 million yen
Representative	President & Ceo Yuichi Fukuda
Employees	8,918 people
Business contents	Development, manufacture and sale of automotive parts and associated molds, machinery and equipment, etc.
Main customers	Honda Motor Co.,Ltd., General Motors Corp., Nissan Motor Co.,Ltd. Mitsubishi Motors Corp., Suzuki Motor Corp., Toyota Motor Manufacturing and others

Chassis system manufacturers

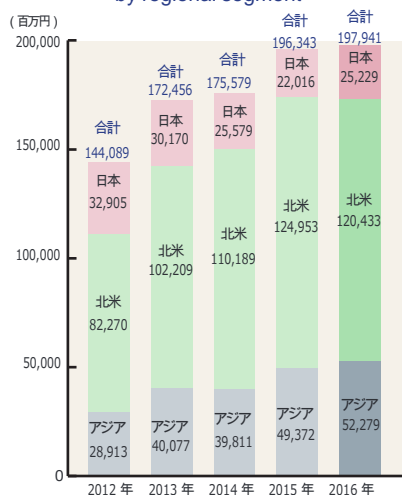
Aim to be the No.1 of "Chassis system manufacturers" from individual parts.
Responding to the development of automotive technology such as FCV, EV, we are working on building a new system from planning and development to production, to provide chassis system not just only the individual parts.

Main products

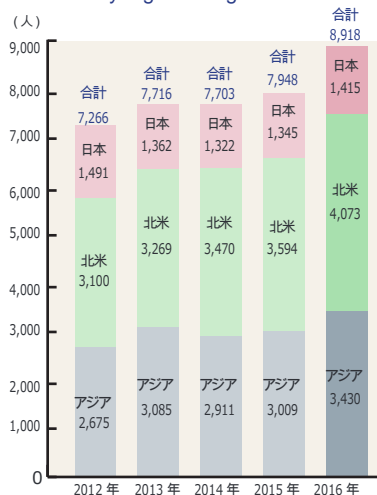
We are making the main product, such as suspension, sub-frame, pedal, which is an underbody important safety components of an automobile by our own integrated system (planning and development, mold and equipment production, pressing hydro-forming, welding, electro-deposition coating, and the assembly).



Consolidated sales and sales results by regional segment



Number of employees by regional segment



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