# Environmental Activity Report

Ftech Group Environmental Report 2015



### EditorialPolicy

" How each base of the group working on initiatives ", "How the information being shared between groups." In F-TECH group, since officially published the first environmental report in 2010, we have consistently committed to report the efforts mainly on environmental impact and quality assurance having 2 big themes along the increase of overseas bases because of the progress of the business.Our group's Green House Gas emission in 2014, 75% was overseas group companies. 12th mid -term plan that started from 2014 (including environment area), first year has ended. Our group is still developing, but because of the continuation of information sharing in the environment and quality conference, results has been appearing even it is little by little. In this 6th Environmental Report, we tried to make an understandable report for stakeholders about the efforts we have done, and the future aim. Also in the future, from the point of CSR (Corporate Social Responsibility), not only about environmental aspects but also we will further report about social aspects. About guidelines, we will refer the Ministry of Environment " Environmental Reporting Guidelines (2012 ver.)."

About F-tech group, we will write "F-TECH Group" or "Our Group", and about F-TECH, we will write " F-TECH" or "Our Company" in this report.

# Reporting term

Results of FY2014 (04/2014 ~03/2015) and activities in previous terms. About the future of prediction and planning and targetsIn this report, the predictions about the future of F-TECH Group (F-TECH INC. and its 16 consolidated subsidiaries companies) is also written. These descriptions is a prediction, based on the current information when this report was written. Therefore, the results of business activities in the future may be different to the predictions described in this report.

# Organization

★Facilities in Japan

Affiliated company in Japan

Affiliated company overseas

F-TECH INC. [3 facilities]

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

Domestic company/ Affiliated company [4 facilities]

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

Subsidiaries in overseas [11 companies, 13 facilities]

- •F&P Mfg., Inc. [Ontario, Canada] (F&P)
- •Dyna-Mig, A division of F&P Mfg.,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)
  F.E.G. de Queretaro S.A. de C.V. [Queretaro Mexico] (FEGQ)
  F&P Mfg., De México S.A. DE. C.V [Guanajuato Mexico] (FPMX)
- •F.tech Zhongshan Inc. [Guangdong, China] (FTZ)
- •F.tech Wuhan Inc. [Hubei, China] (FTW)
- 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) ※F.tech R&D(Guangzhou)Inc. was added from this report.

**※FUTIAN MOULD TECHNOLOGY (YANTAI) CO., LTD,** Michigan /R&D NA Office and F.tech R&D North America Inc.NC. European Branch are excluded in this report because they are not mass production factories and therefore, they do not make impact on the environment.



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# We established the "G\_Ftech EnMS\*", a group-wide energy management system.

\*G Flech EnMS: Global Flech Energy Management System

The first year of its operation started in 2014 when the F-TECH Group started the 12th mid-term plan. In addition to the mid-term plan, we also began promote the group globally through the slogan-" Realization of the environment top runner by the evolution of energy management." In fiscal 2014, we were able to successfully implement the plan in all the four areas namely, "Production", ' Management", "Business activities", and "Development/ Engineer." We believe that sharing each site regularly in the F-tech "World Environment Conference" held annually since 2009, has been fruitful. "G\_Ftech EnMS" was identified as a group with standard system for the evolution of energy management (see P15). This is based on the Kameyama plants energy management system , which was the first domestic auto parts professional manufacturer to have acquired the ISO50001 authentication. This system has been developed taking into account the requirements of ISO50001 and energy-saving knowhow. Initially, the system based on G\_ Ftech EnMS will be promoted in the domestic and overseas group in 2015. In the overseas base, we had a kick-off of the ISO50001 in North America benchmark base (F&PA) in July 2015. We also held a briefing to domestic group companies in parallel. In future, we aim to effectively utilize the G\_Ftech EnMS system at all the domestic and overseas production bases to enhance the corporate competitiveness through reduction in energy costs and contribute to global environmental conservation.

We have issued the "Biodiversity Guidelines ", and launched the "Forest development of F-TECH" plan.

Our group has been constantly working towards ecosystem conservation. Although our contribution may not be substantial, as corporate citizen, we are trying to extend as much help as possible. In order to raise the level of activity more as a group in the future, we issued "F-tech Group Biodiversity Guidelines" (see P.6).

In February 2015, F-tech signed the "Saitama Prefecture Forest Development Agreement" with the Saitama Prefectural Agriculture and Forestry Corporation and implemented the " First F-TECH's Forest Development" program in May 2015. Under this program, we have attempted at thinning the 3.1 ha company forest area in Moroyama-machi, Saitama Prefecture with the help of three domestic offices and FEG, Reterra's employee and family volunteers. We aim to work on different activities on the theme of biodiversity in each site.

We will seek Chassis System Manufacturers from individual part by the evolution of ultra-precision plastically processing technology as a starter.

As per the policy of the 12th mid-term plan - "We will be a chassis system manufacturer with an overwhelming competitive edge," we are steadily working on technical development to achieve both "safety, high rigidity" and "light weight." In 2014, we started working on ultimate plastic processing technology with the introduction and mass production of new high-performance precision press equipment (see P7). The aim is to fulfill the requirements of conventional or more of the high level, based on the development of electric and fuel-cell vehicles . It is also aimed to achieve energy-saving and low-carbon manufacturing resources in an environment area at the same

We will start a new challenge by group integration as a cultivated strength.

The "G-FQS," which was started in the fiscal year 2014 , has expanded to overseas group companies in terms of environmental aspects and quality. In the "28th Global Quality Joint Meeting," we have unified the direction to establish a new assurance system as a chassis system manufacturer. In the future, we will focus on increasing the quality in all kinds of initiatives such as quality, environment, and technology by strengthening the unified global group framework as a base. We will also continue to challenge and create a new "F-TECH likeness" by reexamining the strengths and characteristics of our group and our social responsibility.

#### 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

#### ■ 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.

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 longterm 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.

### 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

- Reducing environmental impact through product lifecycle
- Reducing CO2 when a vehicle running by reducing its weight
- Conduct reservation of resources and energy in all business activities
- Continue to produce zero waste in all business activities
- Work on social contribution activities that lead to preservation of biodiversity.
- Comply laws and regulations of environment
- Conduct continuous improvement of Environmental Management System and prevent pollution
- Set environmental purposes and objectives and review regularly
- Develop high environmental consciousness human through energy conservation activities and environmental conservation activities



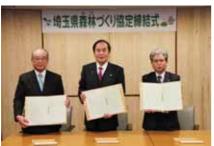


# **Biodiversity Conservation**

F-TECH started "Company Forest Development" in 2015 as a part of environmental conservation and social contribution activities. The "Company Forest Development" is an initiative carried out in cooperation with 1) the Saitama Prefecture that "supports forest development activities" and "carries out public relation"; 2) forest owners that "provide the forest" and "provide a place to interact"; and 3) companies and organizations that " provide worker and funds, and carry out interaction with local community, employee welfare, environmental education." The initiative has gained much attention in the society and is in accordance with the corporate motto of F-TECH - "Build a prosperous future contributing along the national society."

### ■ Signing ceremony of the Company Forest Development.

F-TECH signed the "Saitama Prefecture Forest Development Agreement" with the Saitama Prefecture and the Public Interest Institute of Saitama Prefectural Agriculture and Forestry Corporation. The "Company Forest Development" signing ceremony was held at Saitama Prefectural Government on February 4, 2015. As per the agreement, F-TECH is required to undertake forest maintenance activities, such as thinning and pruning, in the forest of Moroyama-cho, Saitama Prefecture.



Picture from the left, Mr. Kimura, Chairman of F-tech Co. (the then President); Mr. Ueda, Governor of Saitama Prefec Maeda, President of Saitama Prefectural Agriculture and

At the signing ceremony, Kimura , the then President and Chairman, said, " As well as making a rich forest with the employee, I want to nurture a rich mind and mitigate the everyday stress by working inside the forest.

# 1 72 people participated in the First activity

A total of 72 people participated in the First F-tech Forest Development program on May 23, 2015. The participants included employees and their families from the Headquarter and Kuki plant, Haga Technical Center, FEG, and Reterra.

The Moroyama forest, where the activity was held, is devoid of direct sunlight due to the lack of gaps between the crowns of the trees in the forest. Therefore, we reduced the number of trees by thinning in order to make the forest healthy.



The participants worked eagerly during the activity because of the new experience. This program resulted in increased spread of sunlight in the forest. In addition, the children who could not participate in the thinning activity showed their enthusiasm by preparing sign boards and coasters by cutting the tree branches into round slices.

After the activity, there were several comments from the participants such as, " It was a good mood diversion. I' d like to participate next time too." "I' m glad to be able to experience the thinning that can't be done usually." "It was good to have in touch with the other business sites and group companies we usually not get involved in everyday s business.'

The participants could heal their everyday's tiredness by the minus ion of the forest and also improved their environmental awareness. In addition, this activity helped in enhancing the relationships between the employees and their families. We intend to conduct the "F-tech Forest Development" program regularly in the future to strive towards the betterment of the society and help reduce the environmental impact as a corporate citizen.

### Companies and organizations

- Funding of forest maintenance
- · Provision of the labor force, such as tree planting, mowing and others
- Use of forest as welfare for employees

Forest Development Agreement



#### Saitama Prefecture

Support of Forest

3

- Development activities
- Public relations Certification of forest CO2 absorption

#### Forest owner

- · Provision of forest
- · Provision of location to interact

Mechanism of Forest Development of companies



# Issued biodiversity guideline of the F-TECH group.

In the "Millennium Ecosystem Assessment" report, which was carried out under the initiative of the United Nations from 2001 to 2005, it has been pointed that "In the past 50 years, the deterioration of the world's ecosystem is proceeding at unprecedented speed." The continuous maintenance of a rich ecosystem and biodiversity in the future is an important environmental issue, along the suppression of the climate change. Therefore, the "Convention on Biological Diversity" was issued. In our group, we promote biodiversity on our own in each site. In consideration of such global trends, we issued the group common biodiversity guidelines in January, 2015 in order to further strengthen biodiversity efforts.

#### Aim

The Biodiversity Guideline is the guidelines for F-TECH group initiatives for biodiversity.

#### 2 BasicIdea

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 Prioritymeasures

#### 3.1 Contributions to society

We shall actively contribute to society through activities which leads to the conservation of biodiversity\*1,\*2, with the goal of building a 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

Ecosystem Diversity: Various types of natural environments such as forests, rivers, grasslands, tidelands, and coral reefs.

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

Gene Diversity: Diverse uniqueness of shape, pattern, ecosystem among a same species resulting from the presence of variation in their genes.



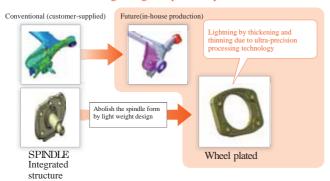
In recent years, automobile technology has made a great progress, including the development of electric vehicles (EV) and fuel cell vehicles (FCV) that are digitized in conjunction with IT technology. F-tech has issued a company-wide policy which states "We will be a chassis system manufacturer with an overwhelming competitive edge" in the 12th mid-term three-year plan. We hope to meet all the needs of the world along with true globalization by "chassis system development and peripheral components, aggressively pursue "light weighting, pursuit reducing environmental impact."

As part of these efforts, in December 2014, we introduced a precision press equipment of high rigidity and high performance to the mother plant, Kuki plant, and began mass production. As the ultimate plastic processing technology, the equipment was named FUT-1\* to aim for further high-added value in production technology.\*F-TECH Ultimate Technologies System

# Towards the construction of ingenious ultra-precision plastic processing

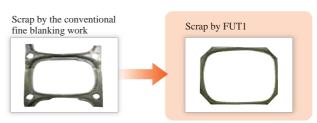
Fuel consumption regulations of automobiles tend to be severe worldwide, particularly in developed countries. The next generation environment-friendly vehicles, such as electric vehicles and fuel cell cars, have to be equipped with a heavy battery; hence, this calls for further weight reduction in the vehicle body. However, vehicle body rigidity must also be considered for both weight lightening and safety. Therefore, in F-tech, we introduced the FUT-1 as a first step in pursuing a new production technology that enables the production of "lightweight", "high rigidity", "ultra-precision" and "friendly to environment" products. For example, as shown in the below figure of the wheel plate, we were able to lighten the vehicle body by 15% compared to the conventional products. For this, we greatly improved the morphology by removing the unnecessary parts via design change and by thickening and thinning via the new press equipment. We believe that enhanced technology can greatly contribute to weight reduction of the whole vehicle by continuing to expand to various parts.

#### Achieved 15% lightning compared to previous model

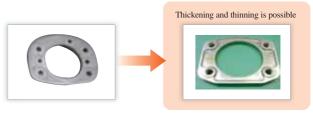


# Moreover, weight reduction can also result in high-quality products and saves energy.

In the ultimate plastic working technology with FUT-1 as the core, we seek to minimize the scrap as the first step. At the newly introduced precision press equipment, the material and the mold are dramatically fixed. This will help improve the drastic yield and allow ultra-precision machining and removal of useless meat (photo).



The second stage involves the establishment of molding technology, development of design technology by thickening and thinning, and precision molding by the press. We carried out various simulations to determine the extent of thickening and thinning required for clearing the obtained rigidity at the design stage. Thus, we will attempt to reduce the rigidity of parts and their weights, which will lead to saving of energy and resource optimization by eliminating the post-processing with in-mold complete forming.





In addition, precision machining is for scrap parts from post-molding products. In the third stage, the scrap parts are reused as other components, including new components for resource and cost saving. In the future, we will further strengthen the integrated production processing system from the development stage up to the mass production stage, and push forward towards the establishment of ultra-precision plastic processing technology with all groups in order to exert the "overwhelming competitiveness that forbid the others" globally by focusing the vector of the team across the organization.



#### Environmental impact reduction effect is expected.

In the introduction of this state-of-the-art press equipment, it is expected to also reduce CO2 emissions. (See the figure on the right) The Company estimates that using the LCA technique as an example the REAR AXLE BEAM1 1 unit, it is expected that energy-saving performance 4% with the new equipment, the yield improvement of 2.9%, 5.4% by scrap secondary use, and CO2 reduction of a total of 12.3% if the CO2 emissions in the manufacture of so far was 100.



#### Substances with environmental impact change per 1 unit REAR AXLE BEAM



Conventional Future

# The 12th mid-term plan(environment area) of F-TECH group has started

The plan, which started from 2014, set the goal in the 4 areas "production", "management", "development/ engineer" \*, " corporate activities", and " Implementation of environmental top runner due to the evolution of energy management" as a slogan and have been developing the activities. In the production area, as a result of our efforts towards the achievement of the 2020 global environmental targets by gathering with the group , we achieved the 2014's goal. In management area, we established and issued Global F-tech Energy Management System (G\_Ftech EnMS) as a group common system(see P.15).

In the future, we will ensure the achievement of the 2020 global environmental targets by the operation of this G\_Ftech EnMS. In the development/ engineering area, weight reduction technology and unique processing technology is evaluated high from the customers and the market as a strength of F-tech. In corporate activities area, we issued a "Biodiversity Guidelines" to show the direction for the biodiversity of the group(see P6). We will strive to improve the strengthening and the corporate value of competitiveness by these comprehensive efforts in the future.

#### The 12th Mid-term Plan for Environmental Category (2014~2016)

Target: F-TECH group (Japan 7 bases, Oversea14 bases)

O: Target achieved  $\triangle$ : Achieved more than 70% less than 100% × : Achievementof less than 70% — : Excluded

소프 1-1	展開内容	計画	時 期		
領域		実績	2014年度	2015年度	2016年度
生 -	Activity to reduce GHG emission rate*1	Plan	[ Improvement by 4% (as compared with FY2010) ]	[ Improvement by 5% (as compared with FY2010) ]	[ Improvement by 6% (as compared with FY2010) ]
		Result	13% improvement	_	_
		Evaluation	0	_	_
	Activity to reduce water resource consumption rate * 2	Plan	[ Improvement by 4% (as compared with FY2010) ]	[ Improvement by 5% (as compared with FY2010) ]	[ Improvement by 6% (as compared with FY2010) ]
		Result	8% improvement	_	_
		Evaluation	0	_	_
	Activity to strengthen controls over the value chain	Plan	[ Improvement in GHG data accuracy ]	[ Preparing for activity for reduction ]	[ Pursuing activity for reduction ]
		Result	Improvement in GHG data accuracy	_	_
		Evaluation	0	_	_
マネジメント	Activity to ensure compliance with ISO 50001 at overseas production locations at benchmark level	Plan	[ Preparing for overseas rollout ]	[ Completion in NA ]	[ Completion in China ]
		Result	Issued G_Ftech EnMS	_	_
		Evaluation	0	_	_
	Activity to achieve certification for ISO 14001 (2015 revised version)	Plan	[Establishing system]	[ Establishing system / Achieving certification ]	[ Achieving certification ]
シメ		Result	Establishing system	_	_
シ		Evaluation	0	]	<u> </u>
	Activity to ensure successful achievement of ISO 14001 certification at new mass-production locations	Plan	[ Establishing system ]	[ Establishing system / Achieving certification ]	[ Achieving certification ]
		Result	Establishing system	_	_
		Evaluation	0	_	_
企業活動	Activity contributory to local communities	Plan	[ Sharing information ]	[ Rolling out activity ]	[ Continuing activity ]
		Result	Sharing information at the global conference	-	_
		Evaluation	0	_	
	Activity for the conservation	Plan	[ Establishing guidelines ]	[ Pursuing activity ]	[ Continuing activity ]
		Result	Establishing guidelines	_	-
	of biodiversity	Evaluation	0	_	_

<sup>\*1</sup> Activity to reduce GHG emission rate

<sup>\*</sup>For the target of "development / engineer" we will refrain from publication from the point of view of confidential information.

CO2 emission (t-CO2) per1million sales

<sup>\*2</sup> Activity to reduce water resource consumption rate

<sup>:</sup> Water resource consumption (m³) per 1 million sales

#### 3 sites in Japan\*1 Plan /Result

 $\bigcirc$ : Target achieved  $\triangle$ : Achieved more than 70% less than 100% Achievement of less than 70% -: Excluded

Range *2	Item	FY2014 targets	FY2014 Results	Evaluation	FY2015 targets
地球温暖化の防止(生産)	Improvement of CO2 emission  Examinee: Head Office, Kuki plant, Kameyama plant, HagaT/C	CO2 emission basic unit *4 Improved by 1.0% (as compared with FY2013)	CO2 emission basic unit Worsened by 5.8% (as compared with FY2013)  **Although the Co2 emission basic unit has been significantly worse due to sales decline, we have achieved the goal of Co2 reduction by implementing countermeasure.	×	CO2 emission basic unit Improved by 1.0% ( as compared with FY2013)
	Reduced CO2 emission more than 1% by implementing countermeasure *3 (as compared with previous term)  Examinee: Head office, Kuki plant, Kameyama plant & Haga T/C	Reduced CO2 emission by implementing countermeasure Kuki site: 45.0t CO2	Kuki site : 88.3t-CO <sub>2</sub> Achievement rate : 196.2%	0	Kuki site: 45.0t-CO <sub>2</sub>
		Reduced CO2 emission by implementing countermeasure Kameyama site: 50.1t CO2	Kameyama site: 181. 8t-CO <sub>2</sub> Achievement rate: 362.9%	0	Kameyama site: 50.1t-CO <sub>2</sub>
		Reduced CO2 emission by implementing countermeasure Haga site: 14.9t-CO2	Haga site :21.2t-CO <sub>2</sub> Achievement rate :142.3%	0	Haga site: 14.9t-CO2
(マネジメント)国際規格の認証取得	国際規 規格 Improvement of Environment on Energy Management		0	ISO50001 overseas rollout North America benchmark base complete	
ジント) 得	and Energy Printingerion			O	Training Energy diagnosis auditor 10 peope/all sites
(企業活動)	Fulfillment of social responsibility	Activity contributory to local communities  Implementating more than 1 activity/each site	Kuki: 1 activity (River cleanupactivity)  Kameyama: 2 activities (Adoptprogram, cleanuparoundplant)  Haga: 1 activity (Cleanup acticvity around T/C)	0	Participation rate 20% per each site regular employee or more
		Activity for the conservation of biodiversityEstablishing guidelines	Issue guidelines  * For more information information , see P6	0	Ftech forest Implementing activity

 $<sup>\</sup>divideontimes 1$  3 sites in Japan: Head Office Kuki Plant, Kameyama Plant, Haga T/C

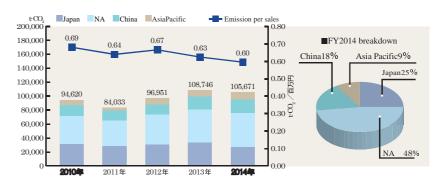
<sup>\*2</sup> Area: Inside ( ) is the area name of 12 mid-term plan

<sup>\*3</sup> Reduction of CO2 emissions by measures: Regardless of emissions, evaluate based on the amount reduced by measures.

<sup>\*4</sup> CO2 emission basic unit : emission (t-CO2) per1millionNETsales

# We are working on environmental impact reduction by sharing the issues and countermeasures with the entire group.

Total greenhouse gas emission is increasing, but the emission per sales is moving toward steady improvement since 2012. We think the results began to appear in the numerical value, because the effective measure in the world environment conference that was started in 2009 has been shared and horizontal development in the entire group.In the future, we will work further to promote greenhouse gas reduction by Global F-TECH Energy Management System, which was published in March 2015.



Data of greenhouse gas was collected from energy used at factory, research institution and transportation.

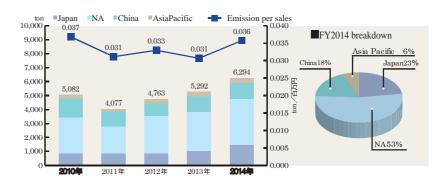
Tapan including Kuki plant, Kameyama plant, Haga Technical Centre and other Japan affiliate companies' data.

Water resources usage is increasing, but the usage per sales has steadily improved since 2012, as well as greenhouse gas. Particularly, the water reduction that worked at painting process in FMTL's effect was large, and it is linked to the improvement of the entire group.

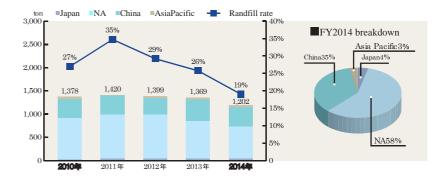


\*"Japan" including Kuki plant, Kameyama plant, Haga Technical Centre and other Japan affiliate companies' data.

Amount of waste emission is increasing, and also the amount of emissions per 2014's sales is increasing too. This is due to the start of new plant in North America which has painting process, and waste discharged from the plating process which the domestic related company has started.

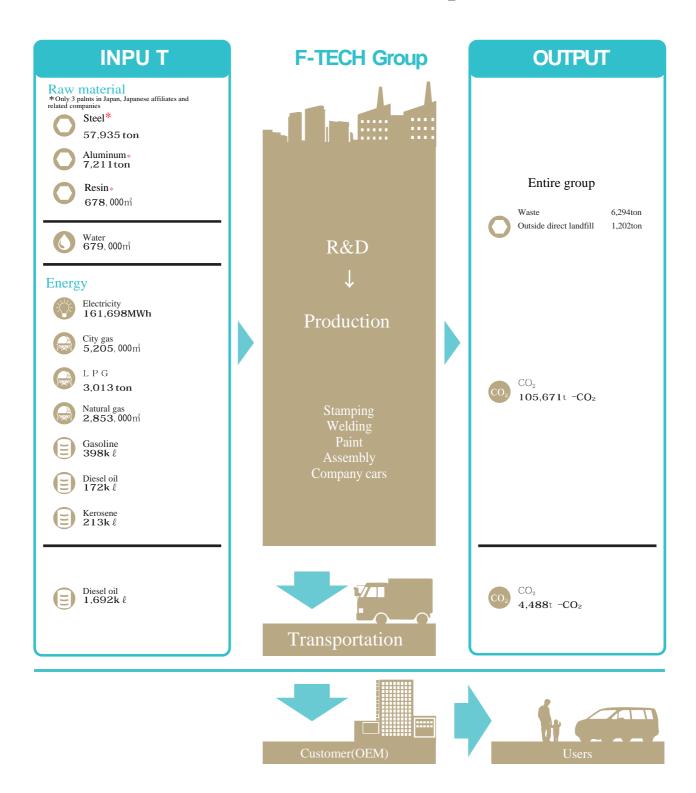


Direct landfill waste is on the decline, also direct landfill rate is declining every year. Especially in recent years of aggressive efforts to landfill waste reduction in North American bases have appeared in a result.



\*"Japan" including Kuki plant, Kameyama plant, Haga Technical Centre and other Japan affiliate companies' data

# In all of the process, all of the sites, strive to " visualization" of environmental impact.



<sup>\*</sup>Amount of material combines 3 facilities and affiliates in Japan. Other amounts are combined of the F-TECH Group.

<sup>\*</sup>CO2 emission in OUTPUT was calculated multiplying the amount of energy consumption in INPUT by CO2 conversion factor.

<sup>\*</sup>Referred calculation method of CO2 issued by Ministry of Economy, Trade and Industry and WRI/ WBCSD "The Greenhouse Gas Protocol"

<sup>\*</sup>Power consumption in Japan was calculated based on the latest factor of each power company

<sup>\*</sup>Date period is 04/2014 - 03/2015

# Enhancement of the management area is also a major pillar of the Group's medium-term plan.

#### All F-TECH Environmental Management System Environmental education

In Japan, we started to acquire certification of ISO 14001 from 1998, because F-tech Group thought addressing environmental problem is the most important issue company should address. In 2009, overseas production bases have completed the certification, and we have established an environmental management system in all F-Tech. In 2013, the newly established production base, Mexico and Indonesia has started the efforts to certification.

### Organizational Structure

Our Group has started the construction of an environmental management system in all F-Tech from 2008. We established "All F-tech environment organization" by installing practical personnel in each base, and center director of overseas bases as the responsible person. F&P mfg., De Mexico S.A.DE.C.V & PT. F. TECH INDONESIA which was established newly are preparing for the environment organization, with the goal of certification of ISO14001 of fiscal 2016.

# Legal compliance

Laws and regulations related to the environment, is enormous vary widely by country and region. In some oversea bases, to ensure the compliance, they sign consultant contract with external specialized agencies.

In the three domestic offices, we introduced the electronic manifest system of industrial waste, and working to level up of law-abiding management of waste disposal. Also, we confirm the transition state for the incident report or regulatory standards at the corporate environment conference that is held once in three months, in addition we implement comprehensive check of laws and regulations once a year to ensure the legal compliance.

Ftech Environmental Management Organization

In our company, ISO14001 basic course is registered as an essential subject of company, and we are focusing on environmental education to employees by implementing the energy-saving training and internal auditor training course.

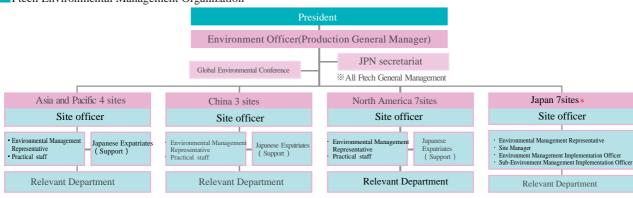
Oversea sites are also doing environmental education by their original way. In the Philippines site they are working to raise environmental awareness among employees through environmental activities, like making a Christmas objects(see photo) and birdhouse using scrap wood and place it are the company. As part of the waste reduction awareness, Canada site held a waste reduction ideas contest among all employees. A lot of good ideas got together.





#### Internal environmental audit

In the F-Tech Group, under the environmental management system at each site, regularly conduct internal environmental audits to ensure the compatibility of the environmental management system.In addition, in order to perform a valid audit, we regularly hold internal environmental auditor training, and strive to continuously expand the auditors. In fiscal 2014, we held internal auditor training 4times in the 3domestic sites, and 20 new auditors was born.



### We held "Global Environmental Conference" by gathering all F-tech groups.

In the entire group, we share 61 environment effective measures.

In F-TECH Group, we have been held the world environment conference by gathering all environment officers every year from 2009. Fiscal Year 2014, we held it in Kumagaya, Saitama Prefecture on November 11 to 13. In the meeting, we had a progress check of the F-TECH group environmental targets that is conducted every time and shared the environment effective measures. We have an award for outstanding environmental measures every time in this meeting, this time "Optimization of painting equipment start-up time" utilizing the energy management system data of Kameyama Plant won the Grand Prize (photo). In addition, China site (Zhongshan) won the Excellence Award by carrying out an appropriate process according to the components of each waste water treatment, "paint wastewater collection improvement", and as Idea Award, DYNA-MIG of Canada won it 2 years in a row by "automatic indoor air conditioning arrangement according to building automatic operation system (BAS) operation". All kinds of original measures were reported from each site. In F-tech-Group , we are trying to complete energy visualization\*1 in all production sites as a goal and part of energy management evolution, so in the conference we confirmed the infrastructure introduction situation to realize the visualization of energy. As a result, almost all of the production base \*2 conducts the visualization of energy. In the future, we will take advantage of the mechanism of ISO50001 to connect to the improvement activities based on the collected data, and we will raise the level (see P15).

\*1 Energy Visualization: Enable to understand the energy use by the introduction of always measurable energy management system or portable measuring instrument. \*2 Except newly established bases.







Photo of awards ceremony, Kameyama plant (upper left),FTZUpper right), DYNA-MIG(lower left) and environmental measures

We deepened the understanding about the ISO14001 standard revision and new environmental technology.

We invited lecturers from general the Japan Automobile Research Institute which is a certification authority of our ISO14001, to deepen the understanding of the amendments of ISO14001 that is scheduled in 2015, among all participants. In addition, we had a presentation about the new environmental technology of water treatment and exhaust gas treatment from Aience Co., Ltd.. The Aiensu has a waste water treatment technology to purify the water by spreading a fine air bubbles in the intense flow to the entire aquarium. In the Kameyama Plant, we purify the wastewater that is discharged from the production process by introducing this waste water treatment technology. In the Kuki Plant, introduced this exhaust gas treatment apparatus equipped with the water purification system. We will proactively share information about new environmental technologies in the field of the world environment conference in the future too.





Japan Automobile Research InstituteA speaker: Mr. Uramune

Aience LimitedCEO Mr.Yoshida

#### Honda Motor Co., Ltd. Yorii Automobile Plant tour

We visited Honda Motor Co., Ltd. Saitama Factory Yorii Automobile Plant which is in the Saitama Prefecture Osato-gun Yorii (hereinafter referred to as Yorii Automobile Plant). Yorii Automobile Plant is an environment top runner factory began operating in July 2013. The Yorii Automobile Plant is also the "Production mother responsible for the evolution of technology factory', with the aim of significantly raising the cost competitiveness, process reduction and process integration, and compact line had been introduced to advance the process shortening. We were allowed to tour the energy center that manages the energy, cogeneration and Mega Solar. There was a voice from many participants that "It was good to visit a perfect factory."



Honda Motor Co., Ltd. Yorii Automobile Plant

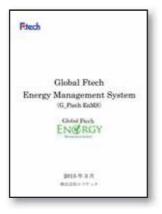
# Issued G\_Ftech EnMS \*, we will start the domestic and overseas group expansion of ISO50001.

#### Issued an Energy Management System of the common group.

In the F-TECH group, we issued a group-wide energy management system "G\_Ftech EnMS" in March 2015, we are working for further evolution of the energy management.G\_Ftech EnMS is based on the energy management system of Kameyama site which acquired ISO50001 the first as the domestic auto parts professional manufacturer.In the future, we will strengthen our competitiveness through energy cost savings and global environment conservation by greenhouse gas reduction, by effective use of this G\_Ftech EnMS in all production bases.

\* G\_Ftech EnMS: Global Ftech Energy Management System





### Briefing conducted in Japan Group companies

Department of G\_Ftech EnMS has held a briefing about G Ftech EnMS in May 2015 at Reterra, a group company in Japan. In the briefing, explained the contents of the ISO50001 standard requirements and G\_ Ftech EnMS, to deepen the understanding. In addition, the manufacturing sector that actually uses a lot of energy participated, and conducted an energy review\*1 ( energy saving diagnosis), which is one of the ISO50001 requirements.

F-TECH becomes the diagnostician, and confirm the measured data and equipment operational status of energy to identify improvement opportunities \*2. In 2015, we plan to continue to hold a similar briefing at Kyushu F.tech Inc.and JOHNAN MANUFACTURING INC., to promote domestic group expansion.

- \*1 Energy Review: to determine the energy performance of the organization based on the data and other information to certain opportunities for improvement. (Quoted from ISO 50001: 2011 3.15 energy review)
- \*2 Improvement of opportunity: opportunity to improve the energy performance





Briefing in Reterra ( Photo left)

Energy-saving diagnosis (photo right)

### Start overseas expansion from 2015

2015 fiscal year, we will horizontal development to overseas group based on the G\_Ftech EnMS. First of all, starting from the North American benchmark base, gave the kick-off of ISO50001 at the F & PA, Ohio in July (photo). In addition, F-TECH also participated and built EnMS and had implemented preparation of energy review, which is most important. During fiscal 2015, complete until the management review in F&PA, and we are planning to complete the introduction to the North American benchmark base. After that , deployment to the China benchmark base (FTZ and FTW) and Asia Pacific benchmark base by medium-term, and we are planning to evolve energy management in the entire F-TECH Group.



Commemorative photo of ISO50001 kick-off in F&PA

# We will strive to prevent global warming, also including the value chain according to the common rules that are defined by the G-FQS.

# Concept of F-Tech Group Green Purchasing

In the F-Tech Group, we have established the basic idea of green purchasing to buy giving priority to parts, materials and products that are friendly to the environment as the "F-Tech Green Purchasing Guidelines."

#### Development of green purchasing guidelines

In the "F-Tech Green Purchasing Guidelines", we ask the following contents to the current domestic and foreign F-tech Group suppliers.

- Construction of environmental management system
- Compliance with environmental laws and regulations
- Implementation of the management of chemical substances in products
- Grasped and reduction of greenhouse gas emissions

In our company, distributed to about 70 companies of suppliers, started the request to suppliers of overseas bases in July 2013, and now we distributed the green purchasing guidelines to about 130 suppliers by March 2014. Accordance with the Green Purchasing Guidelines, we will strive for continuous environmental conservation by promoting green purchasing with our suppliers.



# Grasp of greenhouse gas emissions in the value

In the world's common greenhouse gas calculation guidelines "GHG Protocol", not only greenhouse gas to be discharged in the business activities of our Group, we have been encouraged to identify risks and reduce opportunities related to greenhouse gases in the value chain. In our Group, accordance with the guidelines, started to grasp the greenhouse gas emissions of suppliers from 2011, and by 2013 we nearly completed grasping. In the future, further enhance the accuracy of the data, we will strive to be suppressing global warming including the value chain.

### Management of Chemical Substances in Products

In the F-TECH Group, for chemical substances contained in products regulations and customer requirements that are enacted around the world, we constructed management system at each sites and implemented correspondence IMDS surveys.

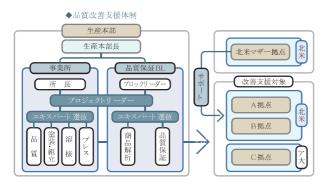
We developed "F-tech Products Chemical Substance Management Standards", to define substances that are prohibited or regulated because they are harmful to humans and the environment, and we strictly prohibit the use of these substances. Also, F-TECH is working to eliminate these substance through green purchasing activities, and to supply products that do not contain these substances. In addition, we also defined the substances where hazardous property is concerned and added the same standards to managing the chemical substances contained in product regulations of each country.

In Japan, we regularly carry out the quality system audit, including the management of chemical substances in products to the suppliers. 2013 fiscal year, increased the number of employees who can conduct an audit for the management of chemical substances in products. In the overseas group companies, for suppliers management and research of chemical substances contained in products in the Global F-Tech Quality Standard (G-FQS) fixed group common rules to start the operation from the 2013 fiscal year, and we will also continue in 2014 too.

And to continue to ensure the non-containing guarantee of hazardous chemicals, we will continue to carry out the quality system audit for the entire F -TECH group accordance with the common rules that are defined in the G-FQS in the future.

# In the entire global group, we will work to achieve high quality standards.

In recent years, customer tends to evaluate the entire group globally, so the evaluation of the whole group drops if one of the base's quality deteriorate.F-TECH Group with the goal of "achieving the high quality standards", will conduct quality improvement assistance from Japan for the quality target unreached base. First, 2 sites in North America, 1 site in Asia and Oceania in 2015, and we will achieve a level up for the entire group. In addition, as an indicator of the " achievement of high quality standards", we will expand the measures to award the "Quality Award" from each customer at each F-TECH Group bases as a target.



# Held "the 28th Global Quality Joint

Held "the 28th Global Quality Joint Meeting" at Kuki ( Japan) on 3 to 5 June 2014, gathering the person in charge of domestic and foreign 14 bases. At the meeting, shared information about "policies and measures" of 2014, improvement measures, and each sites quality conditions. The vector got together towards the achievement of the F-TECH Group's business plan of the 12 medium-term business plan, "Be a chassis system manufacturer with an overwhelming competitive edge." In addition, we visited the new administrative building and new technology building of the splendidly full revival "Haga Technical Center" which got a major damage in the Great East Japan Earthquake of March 11, 2011.



Photo of Haga Technical Center tour

### Global development of " critical process assurance standards"

For F-TECH that produce a critical safety components, management of the process that affects the functionality of the product is the most important. We raised "quality assurance mechanism for the important process management strengthening co nstruction'

(the mechanism to ensure the important management items that lead to important quality issues reflects to the field) as a priority measures in 12 medium-term plan , and began to develop " critical process assurance standards' from last year, which will be the base. In Fiscal Year 2015. completed the verification of the same criteria of actual process of " critical process assurance standards" which was created based on domestic site, and started full-scale application in 3 sites of North America and aim to complete in November.



拠点	展開項目	2014年	2015年	2016年
	キックオフ	★キックオフ		
<b>=</b>	「重要行程保証基準」作成	<b>▼</b> ▼	<b>▼▼</b> 正式発行	
内	実工程検証	▼▼量産	機種検証 ▼	▼新機種検証
.,	【国内拠点】新機種展開	▼	▼	İ
海	【北米地域】新機種水平展開		▼▼ ○	検証・評価
	【ア大地域】新機種水平展開		▼_	▼ ○ 検証·評価
外	【中国地域】新機種水平展開	!	▼_	▼ ○ 検証・評価

# Quality Award

Quality awards from a variety of customers in a wide range of areas by the stable supply of high-quality parts and thorough a high level of production management. In North America's site, won the award 2 years in a row from 2013. \*The name written in the ( ) is the winning site

Fiscal Year 2014's award result

NA

- HONDA Supplier Performance Award (F&P)
- · HONDA Excellence in Quality Award (F&P)
- HONDA Excellence in Delivery and Quality Award (F&PA)
- · HONDA Supplier Performance Award (F&PA)
- · TOYOTA Achievement Award (DYNA-MIG)
- China
- HONDA Supplier Quality Award ( FTW)
- Asia Pacific
- Mitsubishi Motors Product Excellence Award (FPMI)







# First, we began fixing risk assessment in the four domestic sites.

In F-TECH Group, we established the occupational safety and health policy at each site with the "incident that results in serious injury or illness 0" as continues goal every year, and work on disaster prevention. In Japan, Health and Safety Committee that consist from 4 sites\*1 and FEG members to oversee occupational safety and health, in Fiscal Year 2014, approached within the policy of " Construct a production ( safety) constitution that can flexibly respond to a change of work environment, and aim to achieve Odisater workplace" against the background of the personnel review by the business restructuring. As well as to discuss the safety measures of facilities and disaster prevention, we carry out thorough rules compliance and discovery of unsafe location by patrol regularly the field. We also established a safety and health committee in each domestic site, and promote and plan a safety and health plan based on the policy. In the overseas bases, we are working to set up a safety and health committee in each region. In North America, Safety and Health Committee Secretariat in each site once a year gather, and held a North American security personnel meeting to conduct information sharing.

\*1 Head Office, Kuki Plant, Kameyama Plant, Haga T / C and Equipment Center

### Safety education

In the F-TECH Group, implement various kinds of education about occupational safety and health. In Fiscal Year 2014, four domestic sites and FEG, worked on fixing risk assessment.

Kuki plant invited lecturers from outside and held AED training. Conducted traffic safety education for the new employees and worked to raise awareness and safety sensitive. Kameyama plant carried out in-house training, and verified from the high disaster point about risk assessment in the actual field.

As a result, about 100 cases were found totally in all sites and it had been improved. (see photo)As a result of these approaches, in the Kuki Plant and Kameyama Plant, achieved non-accidents for 3million hours\*2, and it is still continuing now. In Fiscal Year 2015, we schedule to address re-strengthening the fixing on risk assessment, and achieve a prevention of occupational accidents.

\*2 Disaster-free operations record certificate awarded internal regulations (Ministry of Health, Labor and Welfare)



There is a risk that the hand might be pinched, because supporting the work piece with one hand and start with the other hand.



Prevent hand pinch by changing to both hand start.

In North America sites, they introduced a blue LED light to inform the approach of forklifts to the pedestrian by irradiating light on the road surface. This effort was first effective in DYNA-MIG of Canada, and it was horizontal developed in the North American security personnel



Blue LED light Forklift, that was introduced in North America

In the emerging country sites, they are working on hazard prediction training in order to fix safety disaster prevention awareness. Among them, the FPMI in Philippines, are promoting the training in their own educational materials by replacing 5S (organize and tidy, cleaning, cleanliness, discipline) to the local language.

#### Interaction with local in traffic safety class (Kameyama)

In the Kameyama Plant they held a parent-child traffic safety class on December 14, 2014, and 33 local residents attended. By the blind spot experience and children jump out experiment, got an impression " it was possible to feel the jump out of danger, was the good opportunity to reaffirm the blind spot of the car." The people attended in the class could re-recognize the importance of traffic safety, and also could communicate with the local residents.





Photo of traffic safety class in Kameyama Plant

# Achieved incident that results in serious injury or illness 0 for 800million hours in F&

Incident that results in serious injury or illness 0 for 9 years from June 2006, the result of all employees has fully understood the lessons for past disasters and implemented commitment to safety.

We will continue to be able to maintain the zero accidents hours.



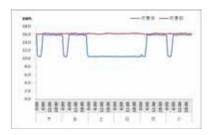
# Global Activities

### Kuki Plant

Implemented energy conservation measures by reviewing the energy utilization of the paint circulation pump.

The paint circulation pump for stirring paint in the painting process included the inverter control that set the motor rotation speed to 46 Hz. In the fiscal year 2014, we introduced a high-efficiency IPM motor that consumed low power and reviewed the method of equipment operation. We also distinguished every required rotation speed during the operation and non-operation of the motor cycle of the paint circulation pump. We changed the equipment operating time plan to weekly control in order to match the production plan and saved 38% of energy, 27,840 kWh/year and 11 ton-CO2, by reducing the number of rotations to 46 Hz during operation and 40 Hz when not in

In addition, we also changed the operating time of six compressors used in the Kuki plant to allow the operation of a new high-efficiency compressor. As a result, we could save 5,563 kWh and reduce 2t-CO2 emissions. In the future, we intend to address the number of rotation control of the cooling water circulation pump.



The effect of the power usage of paint circulation pump

#### Kameyama Plant

Prompted the fixation of CSR activities

In 2007, F-tech, in cooperation with the Kameyama City as the first participating company in the Adapt Program (foster parent system of the park, green space), held management volunteer activities as "F-Tech Green Partners" in the north of a city-owned factory. Even though this activity was held on holidays in May, July, and October of 2014, many employees actively participated (60~75 people every time) in each event. In addition, as a contribution to the local community, the walkways and U-shaped groove around the Kameyama site are being cleaned once every two months by employees from each department in rotation during the working hours since 2014. The aim of this activity is to deepen the awareness of social contribution to the community.

In the future, we will promote activities to reduce CO2 emissions and connect to the training of high environmental consciousness in employees through CSR activities. Even at the Kamevama site, we are planning to participate in the "Making forest by Companies" program.



Group photo of " Adapt Program" participant



Implementation scene of " Adapt program"

# Haga Technical Center

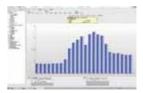
Introduced visualization of power (power monitoring equipment).

In Haga T/C, we have promoted power reduction activities, but due to the lack of detailed power usage data , we could not determine the effects of the measures carried out and the cause of increase or decrease of monthly power usage. Therefore, it was not possible to strike the precise measures for power reduction. Accordingly, in 2014, 56 power sensors were installed in the entire Haga T/C, Accordingly, in 2014, 56 power sensors were installed in the entire Haga T/C, including all buildings and major equipments. We also installed a power data collection personal computer in the Administration Department. In addition, we have introduced a demand control system of the air-conditioning system to suppress the peak power consumption that was linked to the total power usage of Haga T/C.

Thus, to take advantage of this system, we intend to promote the daily activities from 2015 onwards to reduce power cost and CO2 emissions while allocating the accumulation and analysis of power data mainly to the environment committee.



Power monitoring system " Andon' manufactured by Omron Co.



Power data analysis tool Graph Viewer Pro' manufactured by OMRON

### Kyushu F.tech Inc.

Recycling by fractional packing materials

We worked on recycling the packaging materials of the brake pedal for "X-Trail hybrid," whose mass production had started from March 2015 for Nissan Motor Kyushu Co., Ltd. The brake pedals were packed in cardboard boxes and delivered to the plant (2000 units/month or 24 boxes/ month). Each cardboard case is separated at the field site into cardboard and resin (PP) and taken as a valuable resource. It is not a large amount of money as a valuable resource, but it is believed to have contributed as environmental activities. We will continue similar activities, even if the number of purchasing and shipping business increases from abroad, which is anticipated.





Brake pedal packed in resin (PP) and

#### Reterra Co., Ltd.

Building reconstruction project from the heavy snow damage

In February 2014, three buildings collapsed in the Chichibu factory because of heavy snow. Fortunately, the production plant building was safe; therefore, the products could be shipped without much delay. We launched "Reconstruction Project" as soon as the dismantling and leveling of the damage was finished. After the establishment of a temporary warehouse, we created an architectural drawing in consideration of ' Energy-saving, Working environment, work process, and shipment distribution." We began its construction in August 2014 and completed the work in November; by December 2014, we could restart the operations. The reconstructed building can secure 700 m² floor area because of the revision of the Factory Location Act ( mitigation in green area 25%→15%). Moreover, eight large solar collecting windows were installed on the ceiling, as well as windows that can be opened on the wall. Furthermore, the adoption of LED lights reduced 21,900 kWh/year, 460,000 yen/year, and 9ton-CO2/year compared to the conventional mercury lamps, and it was converted into a bright building with reduced power consumption. Presently, we are rebuilding another collapsed building and intend to make it 2-story high with a total floor area of 1,800 m². We also plan to install LED lights in this new building.





Shot/Finishing building completed

#### JOHNAN MANUFACTURING INC.

Started operation of garbage station and installation of natural daylight-intake window

In 2014, we approached two improvements as environmental improvement activities. The first improvement was aggregating the internal garbage dump in one place, ("Garbage Station") that was previously scattered in five locations. This made the maintenance checking of garbage station and separation situation easier and also enabled thorough sorting activities.

The second improvement was establishing natural lighting by incorporating windows in the factory roof (13 places). The windows can be opened and closed according to the factory temperature such that it can suppress power usage of air conditioning by creating air circulation inside the factory. In addition, the illuminance in the factory will also rise and lead to comfortable and safe working environment. We will also maintain continuing efforts later this year and reduce power usage and CO2 emissions within the entire factory.



Garbage Station completed



Installation of natural daylight intake window

# Activity Highlights of Global Group Companies

#### FPMI (Philippines)

Awarded "Industrial Park Christmas Contest Grand Prix", "HCPI\*1 Excellent Thanks Award"

Since 2011, we have implemented a project to produce Christmas decorations using the factory wastes with the help of the Waste Management Team. This project will improve employee's creativity and intelligence, and its purpose was to be aware of the importance of waste recycling. Waste paper, plastic, bottles, paper cups , food packing materials, and wood wastes were used for preparing decoration items. In 2014, we participated in a contest sponsored by Laguna Industrial Park Association and were awarded the Grand Prix.

FPMI supports the environment CSR of HCPI, and in 2014, our efforts of tree planting activities, battery donation, and CO2 reduction program were evaluated and awarded the "Excellence Thanks Award." award ceremony was held at the HCPI the 23rd Supplier Conference in the Grand Ballroom of Solea Resort on May 13, 2015.



HCPI " Excellent



made from factory waste

\*1 HCPI: Honda Cars Philippines Inc.

#### FMTL (Thailand)

Improved the usage of electricity and water.

In 2014 fiscal year, we reduced 43,124 kWh electricity usage (27.73 t-CO2), which is equivalent to 163,872 THB electricity costs by changing 400 w mercury lamp to 150 w Hi-Bay lamp, such as metal halide lamp in the factory. We also attached a switch to each lamp so that they can be turned off when not in use. In the welding process, we reduced 65,816 kWh electricity usage (42.32t-CO2), which is equivalent to 253,807 THB electricity cost by improving the air leakage. In the office, we were able to reduce the electricity usage of overtime hours by attaching a separate switch to the entire office and turning it off appropriately

In the painting process, we have reviewed the water maintenance frequency of surface conditioning process from one month to four months, and water of the fifth and sixth washing step and pure water washing step from once a week to once a month. Due to this,  $90,375 \ell$  of water, which equivalent to about 11% of the total water consumption, was reduced, which is equivalent to 542,250 THB wastewater treatment costs.



#### FTW (China)

Reduced the heavy metal emissions by treating chemical wastewater alone

We could reduce the emission of heavy metals by introducing the chemical wastewater treatment facility in the painting process in November 2014. The treatment facility can handle the heavy metal in the chemical waste water (nickel) alone. It is composed of two types of treatment processes, chemical treatment and bio treatment, which can reduce COD, BOD, SS, and heavy metal in the wastewater.

The heavy metal content in the waste water was 0.5 mg/. \*1 by the treating method until now, which was treating degreasing wastewater, chemical wastewater, and electro deposition wastewater together, but because of this improvement, heavy metal was reduced to 0.2 mg, and it was able to contribute to the environmental improvement.

\*1 Countries regulation values of water quality: 1.0mg/.

Before the improvement of paint wastewater treatment flow After the improvement of paint wastewater treatment flow





#### FTZ(China)

Achieved the painting process wastewater reuse rate of more than 60%

In 2014, we worked on the reuse of paint wastewater as per the request of "More than 60% recovery rate " "Introduction of online monitoring system" from the Environmental Management Bureau of the district government

We worked on the reuse of three out of four types of wastewater at the painting process. After treating the wastewater of the chemical conversion process with RO system, pure water was used for spray, a certain amount of the concentrated water was used in the chemical conversion process, and the remaining amount was discharged outside. Wastewater of boiler was used for scrubber deodorizing furnace and cooling tower, which was directly collected after being cooled. After treating the wastewater of electrode position process with UF equipment, pure water was used as spray, a certain amount of the concentrated water was used in the electrode position process, and the remaining amount was discharged outside. The COD concentration was lowered by promoting the decomposition of organic matter with cultured anaerobic microorganisms in the wastewater. The recovery situation and PH value of wastewater can be seen at real-time on the online monitoring system. The investment cost of this improvement was 1,040,000 yuan, but the highest wastewater reuse rate was 61.5%, which is equivalent to 12,000 ton of reduced annual wastewater and 70 ton annual sludge treatment amount. We could also reduce 423,000 yuan in terms of costs.



Painting process wastewater flow

# Activity Highlights of Global Group Compa

#### DYNA-MIG (Canada)

Awarded "Award of Excellence" \*1 for three consecutive years

We were awarded "The company's Excellence Award for electrical consumption saving" at the awards ceremony of Festival Hydro Inc. in 2014 for participating in the company's energy-saving program. The achievement has observed our work toward power saving. We also received the incentive\*2 for the completion of this program. There is "Improvement of energy efficiency of the ventilation system," "Drive attachment to the ventilator," "Replacing lighting inside the factory and outside the factory including the parking lot" in the contents of the program.

- \*1 The prize is awarded to the company who contributed to peak power reduction or power consumption from Festival Hydro Inc., which is a power company of local Stratford Inc.
- \*2 It is a system in which the amount of money that was invested in efforts to save energy are paid back from Ontario Power Authority and operated by Festival Hydro Corporation.



Awards ceremony at Festival Hydro Inc. in 2014Ysni Semsedini, a Chief Executive Officer of Festival Hydr center) Keith Ehgo from DYNA-MIG ( left) Brian Mills( right)

### F&P (Canada)

Continuation of "Energy Management" and "Visualization Efforts"

In 2014, we attached a meter to read energy load/distribution at real time at 10 places by cooperating with the local power company. This enabled easy access to the data and its constant monitoring. In addition, we introduced a 90 kw compressor and provided 600 CFM compressed air to reduce power usage. This compressor has Variable Speed Drive (VSD) that can supply power matched to the demand while minimizing the power use.

Moreover, we are also working on recycling of wastewater. Concentrated water discharged from the RO system was previously discharged directly to the sewer. Later on, we plan to reuse the wastewater in the sprinkler and toilets and reduce water usage.



Power data that was visualized by the system

\*VSD: Variable-Speed Drive

#### F&PA (USA)

Carried forestation activities in the "Make a Difference Day"

F&PA employees and their families took part in the forestation activities in the "Make a Difference Day" on October 25, 2014. This day is considered as the largest volunteer day in the United States. Every organizers and participants work on some kind of improvement in life or other things. As a result of consultation with local organizers, F&PA choose beatification activities of district area. The Troy Brukner Nature Center is responsible for such activities in the River's Edge Wild Protected Area. The Nature Center is a non-profit organization that promotes the understanding and appreciation of wildlife protection through conservation, education, and rehabilitation.

Seven employees and their families participated in the activities. They planted 20 pieces of white pine and maple at the entrance of the district, hiked the canyon, and enjoyed observing the birds. At the valley, they enjoyed a small waterfall that can be seen only in the humid season and were fascinated by the unique ecosystem that is created by the rare plants and animals.



Implementation scene of the forestation of F&PA employees and their families

#### F&PG (USA)

Improvement of material flow ~Reduction of forklift mileage by factory layout changes~

We plan to change the compactor room \*1 to dock doors \*2 so as to improve the material flow. First, we intend to move the packing machine and the recycling box nearby the production site to improve the utilization efficiency. Waste was reduced along with the activation of recycling activities. The pick-up truck used to come twice a week, but now it comes once a month and a half, and we could reduce the waste storage space too. Next, we intend to reduce 84.5% mileage annual of work process for paint finished product by remaking the compactor room to dock door after organizing it. The mileage of forklift carrying a target component (one day) was 8.3 miles before the improvement, but it reduced significantly to 1.2 miles after the improvement.

- \*1 Compactor room: A room to compress the factory waste with the compressor
- \*2 Dock door: Door for loading the products on the trailer



Flow after the improvement

# Aiming to full-scale entry into the European automobile manufacturers by the establish of the 5th development sites.

Aiming to further expand transactions with European car manufacturers following the Michigan Branch Office opened at the United States in January 2014, in the same year of August we opened a European Branch Office in Dusseldorf, Germany. It will be five research and development sites in the world adding the existing sites, Japan, Philippine, and China. As a foothold in Europe, to understand the requirements of the European automobile manufacturers, we will try close contact to the customer and the market.

#### Start of the world deployment chassis system proposal

F-TECH Group, raised "Be a chassis system manufacturer with an overwhelming competitive edge" as our policy in the 12th medium-term plan, aim to expand transactions with the Global automobile manufacturers, and we are promoting "truly global", " strengthening of environmental technologies", "transformation into a chassis system structure \*" which is strategic objectives of the 12th mid-term three-year plan. In the research and development department, we have promoted the technology preparation so we can play the role up to chassis system. Expand the challenge to perform the full-scale trading of the technology from three years ago based on the European automobile manufacturers. Along with it, in order to provide further efficient development by advanced simulation technology leading the industry more near the each car manufacturer, Michigan Branch Office of R & D North America & European Branch Office has been established.\* Chassis system constitution: Shifting the system to complex development, from the chassis development alone, to peripheral components (chassis systems).

#### European Branch Office



Start from one room





### Mobilized collective effort of group R & D members

Talking specific, in order competing projects of European automobile manufacturers, Japan, North America, China, the Philippines, R & D work together, and F-TECH Group research and development department has begun the challenge together. The results for summarized lighter propose by all F-TECH Group R&D members, we received a very high evaluation, and were able to get the order from the European car manufacturers. And more, we became to be evaluated from the development manager of automaker as " best supplier." In order to be a continue growing company as a chassis system manufacturers in the future, in the area where F-TECH Group has not expanded , such as Europe and inland of China, we will continue to develop and establish the optimal supply system.

#### Michigan Branch Office







#### AluMag\*Attending the symposium

Lightweight technology of the F-TECH was recognized, and we received an invitation and joined German AluMag\* Symposium, which has high awareness in Europe. We talked about the lightweight technologies such as friction stir welding technology, CAE = optimization, and hot bulge in front of attended automobile manufacturers around the world. There are many questions from the participants, and realized that there is a strong interest against our technology.

\*AluMag: Headquartered in Germany, and hosted a symposium such as linking the OEM and suppliers all over the world.



# Committed compliance awareness at domestic and abroad

### Corporate Governance

At the F-tech group, we aim to set long-term goals for the company and maximize revenues for the shareholders as a principle of Corporate Governance while organizing a business management structure ( Board of Directors, Board of Auditors) and a global structure that can work at compliance and risk management.

In order to monitor our business operation in an objective manner, we have created an Operating Officer system while external auditors, Board of Directors, and Board of Auditors monitor and audit our operations.

The Board of Directors has a term of one year to accommodate the volatile business environment. The Board of Directors consists of nine directors who make decisions relating to critical business matters. In addition , one high independent director from the outside is appointed so as to receive opinions and suggestions from multiple perspectives based on the wealth of experience and deep insight. We intend to take the advantage of objective management oversight.

The Board of Auditors constitutes four auditors (two outside auditors). Each Corporate Auditor audits the job performance of the Board of Directors through surveys of the status of the property and work and the attendance of Board of Directors, according to the audit policy.

We have five divisions and two offices, and each section has a director. The Management Meeting consists of 9 directors and a total of 16 members of Senior General Managers and General Mangers. They are responsible for discussing business matters to be decided upon by the Board of Directors. In our facilities overseas, we have placed a director in North America, China, and in each region of Asia for independent and efficient operation of business.

# Internal Control

A department in charge of internal control recognizes the risks that are related to its major operations, chooses a responsible person and holds meetings to prevent the occurrence of loss. There is also an independent audit department, which is under the direct control of the president. It has five internal auditors, and they audit each department

As of March 31, 2015, we have issued "Internal Control Report" stating that our internal control related to financial report is valid.

### Corporate Ethics Committee

In October 2004, we established "Corporate Ethics Committee" (Chairman: Director and Senior Managing Operating Officer, also Compliance Officer) to confirm our compliance situation and develop policies.

In addition, about a certain act suspected and against the law and the Articles of Incorporation and social ethics, we established a system in which a whistleblower is protected by establishing "Business Ethics Improvement Proposal Counter" so that the company and any of its subsidiaries' employees can report or consult directly to the company. We established a dedicated external proposal counter in the law firm in 2015 to create a better environment for the proposer to propose by expanding the proposal window.

We have established a specific "Our Code of Conduct" in November 2004, as well as ensured its implementation through a corporate group. We also developed "Our Action Guideline and "Rules and Regulations of Compliance" in June 2006 to improve corporate ethics. In 2010, we revised the "Rules and Regulations of Compliance" for employees for ease of understanding and then distributed it to all employees. In 2015, we intend to continue practicing well-known compliance via posters and the company magazine in not only domestic but overseas companies too.

# Risk Management

In the F-tech group, we developed "Risk Management Regulations" in June 2006. When a risk occurs, we have a system in which an emergency headquarters headed by the president will be set up immediately to correspond to the situation by following the regulations.

Usually, the director who is in charge of risk management officer overlooks company-wide, domestic and overseas operations. In addition, each domestic site, subsidiary and overseas group companies carried out an annual self-verification using a checklist that was created in response to the business. They reported the result at the "Risk and Compliance Committee," which was installed in 2014. The Committee deliberated and verified the results of the group companies.

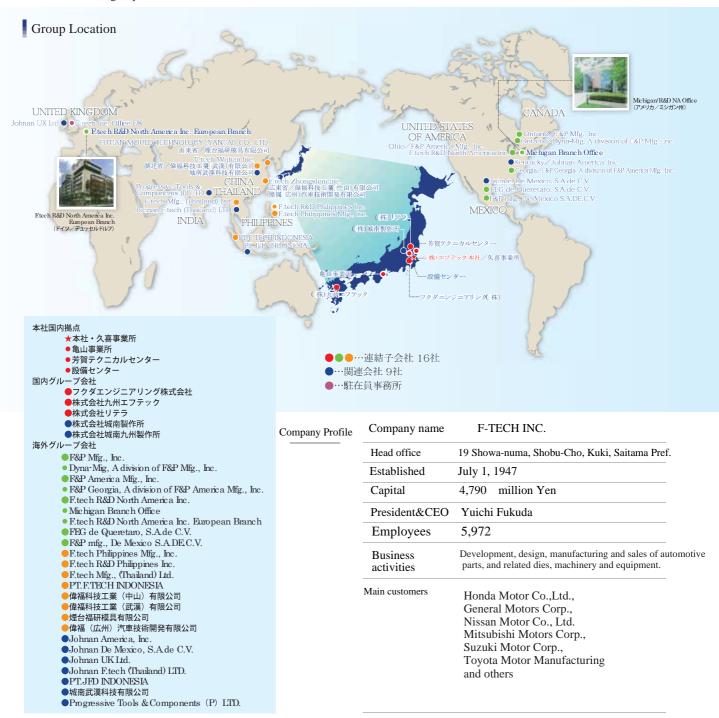
The Committee is set up to wash out the problems related to the risk and compliance spanning the entire company of our corporate governance, and as part of strengthening internal control system, and follow-up the risk control, improvement of the manifest risk, and spread prevent recurrence company-wide. We held the 1st Risk and Compliance Committee in March 2015.

F-TECH Group will work to supply high-function under body parts, responding to various social request and evolution of the automobile, based on corporate philosophy "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".

# To a global

We are expanding the network to Central South America, China, Asia, Europe led by North America.

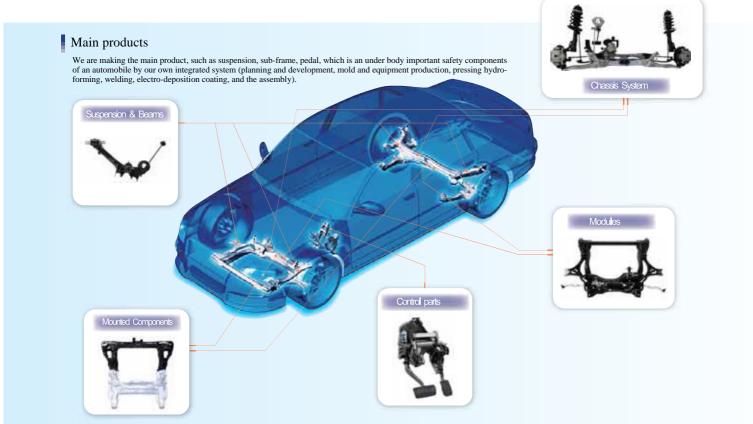
Not only production base, as well as to develop a responsive system to the customer needs by setting up a development sites in each region, and promote information exchange in all aspects such as quality, development, production and the environment, to raise the level of the entire group.

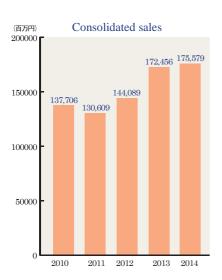


# chassis system manufacturers

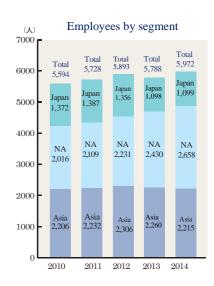
We aim to be the No.1 of "chassis system manufacturers" from individual parts.

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.











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