Innovation & Action

INOAC

INOAC CORPORATION CSR REPORT 2019

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Corporate Philosophy

INOAC intends to create a beautiful forest, comprised of many trees of varying character, rather than merely growing a single tall tree.

In its efforts to achieve a better life, INOAC has specialized in not only a single business, but has cultivated four business “seeds” : polyurethane, rubber, plastics and composite materials. Today it has developed into a conglomerate, supplying diverse products and services, thereby contributing to society.

Innovation & Globalization

INOAC Corporation is leading the world in polymer chemistry and working to be a more global organization with energy and individuality through quick decisions and actions. We will determine our behavioral guidelines and maintain our brand as one that can be trusted by local society, customers and everyone related to INOAC by implementing and achieving our corporate philosophy with actions consistent between inside and outside the company.

Action Guideline

Challenge	Think resourcefully and take action without fear of failure
Profits	Act to expand business continuously and realize profit growth
C S	Act to enhance customer satisfaction
Teamwork	Exhibit originality and act trustworthy
Honesty and Trust	Be reliable and avoid falsehood
Responsibility	Carry out each duty with responsibility

| Report period | This report is based on the activity results of INOAC Corporation in FY 2018 (January 1 through December 31, 2018).
*The contents of FY 2019, FY 2017 and earlier are partly included.
| Coverage | This report is based on the activity results of INOAC Corporation, partially including domestic and overseas INOAC GROUP activities.
| Issued | September 2019
| Referential guidelines | ◎Environmental Report Guidelines FY 2018 ◎ISO26000

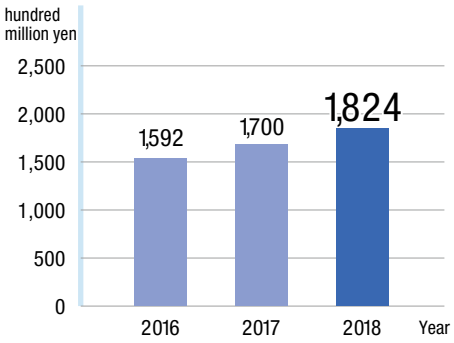
Contents

Company outline

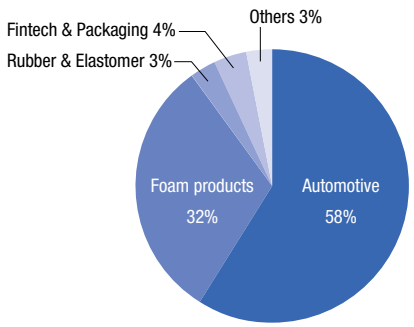
Company name	INOAC CORPORATION
Established	1954
Incorporation Capital	720 million yen
Representative	Chairman & CEO Soichi Inoue
Employees	1,917 (as of December 2018)
Sales	182.4 billion yen (as of December 2018)
Main Businesses	Development of functional materials based on polyurethane, rubber, plastics and composites, as well as the manufacturing of products utilizing these materials contributing to a variety of fields closely related to daily life such as automotive, two-wheeled vehicles, information technology equipment, housing and construction materials, and consumer products.
Head Office	2-13-4 Meieki Minami, Nakamura-ku, Nagoya, Aichi 450-0003
Head Office (Tokyo)	4F Osaki West-city Bldg., 2-9-3 Osaki, Shinagawa-ku, Tokyo 141-0032
Offices and Plants	Anjo, Sakurai, Kira, Shinshiro, Yana, Ishimaki, Nanno, Seino, Hanyu, Hadano, Toyohashi, Taketoyo
Main Sales Offices	Sales branches: Tokyo, Chubu, Osaka, Kyushu　Sales offices: Sapporo, Tohoku, Hamamatsu, Hiroshima
R&D Centers	INOAC Technical Center Co., Ltd.　Jinno R&D Center
Overseas Locations	North America, Central America, China, other Asian countries

Sales

Sales trend



Sales by division as of FY 2018



Network

Major domestic locations

Our affiliated, associated and joint venture companies from Hokkaido to Okinawa, in addition to the nationwide network of INOAC CORPORATION, have established a close production and sales network, enabling us to provide our customers with the most appropriate solutions.

<Associated companies>
Inoue Rubber Co., Ltd.
INOAC International Co., Ltd.
INOAC Technical Center Co., Ltd.
INOAC Housing & Construction Materials Co., Ltd.
HUKLA Japan Inc.
INOAC Living Co., Ltd. and others

<Affiliated companies>
Hokkaido INOAC Co., Ltd.
Tohoku INOAC Co., Ltd.
Higashi Nihon INOAC Co., Ltd.
INOAC Elastomer Co., Ltd.
Nishi Nihon INOAC Co., Ltd.
Kyushu INOAC Co., Ltd.

<Joint ventures>
BASF INOAC Polyurethane Co., Ltd.
ROGERS INOAC Corporation, and others

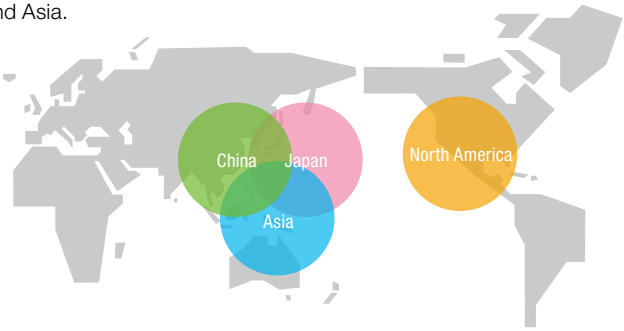
Major overseas locations

We have constructed a system of proposing and supplying research, development, material processing, molding technique and mass production at 13 countries and regions worldwide, mainly in North America and Asia.

<North/Central America 18 companies>
USA 10 companies
Canada 3 companies
Mexico 5 companies

<China 18 companies>
China 17 companies
Hong Kong 1 company

<Asia 35 companies>
Thailand 13 companies
Taiwan 3 companies
Indonesia 6 companies
Vietnam 5 companies
Korea 1 company
Singapore 3 companies
Philippines 1 company
Malaysia 1 company
Sri Lanka 2 companies



Message from the President

Now is the time when the true value of INNOVATION and ACTION is put to the test

INOAC CORPORATION
President & COO

Toyohiko Okina

In a rapidly changing world

The state of the society we live in has been changing at a dizzying speed in recent years. This is not only limited to the automotive industry, which is said to be going through a once in a century revolution. Many companies are also pursuing reforms to respond to the constantly changing needs of the world. Their survival depends on it, and our company is no different.

In FY 2018, we saw an increase in revenue, but profit growth was hampered by raw material manufacturers in Japan and abroad raising their prices one after another. This was due to rises in crude oil prices, distribution costs and electricity rates. Nevertheless, we made steady capital investments, constructing new plants in Yukuhashi, Fukuoka Prefecture, Nishio, Aichi Prefecture, and Kurihara, Miyagi Prefecture. While the final result may have been a decrease in profit, raw material costs have started to drop in FY 2019 and the new plants have also commenced operations. We hope to catch this tailwind and work to turn it into a profit increase.

Creating factories that are worker-friendly and rooted in the community

When building new factories, we are particularly focused on incorporating AI and IoT technologies to create facilities with even greater efficiency and productivity. While this is in part a measure to save manpower in anticipation of a future decrease in the working population, it is also an initiative to reduce the burdens of the employees working in each of the locations and to improve safety. While the pursuit of quality is a top priority for us as a manufacturing company, the main force that supports this goal is our employees. As such, we will aim to create environments that are comfortable to work in by encouraging a work-life balance and improving the training system. We are also working on improving our risk management structure by implementing a system that allows even a small issue in the field to be immediately

shared by all the companies, so it can be dealt with before it grows in a critical incident.
Additionally, factories should be rooted in the community and operated based on a positive relationship with the local residents. As such, when we construct a new factory, we make sure to explain what the business is, its significance and the effects the factory may have on the surrounding environment. We respond earnestly to any criticism or demands and only start construction when we have reached a full and mutual understanding. We also keep in mind the importance of continued contribution to the community, such as creating jobs and holding social events on occasion even after operations begin.

The seeds of sustainability that we have sown

In this report, we feature the topic of plant-based products as part of our efforts to develop products that are both earth-friendly and human-friendly. However, such initiatives are nothing new to our company. When I joined the company over 40 years ago, the first development work I was involved in was developing materials using palm oil. Back then, I had simply assumed chemicals were all derived from fossil fuel, so I was surprised by the company's desire to explore the possibilities of plant-based materials. At the same time, research was also being conducted on ways to convert products back to their raw materials, and those efforts have likewise come to fruition in the shape of product development using recycled goods. This topic will also be featured in the report. Such technologies with an awareness for sustainability have continued to be cultivated over many years and have built the foundation that enables us to respond to our customers' needs today. I find this high gratifying, not only as a member of executive management but also as a former engineer who helped sow the seeds.

Taking on further challenges as a member of society

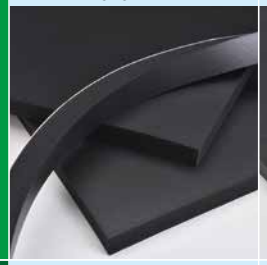
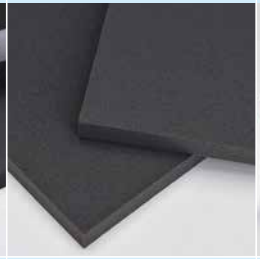
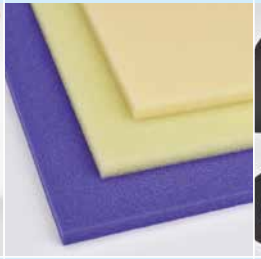
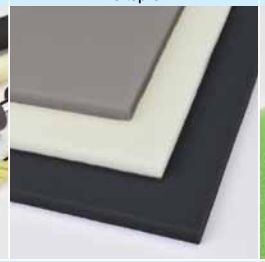
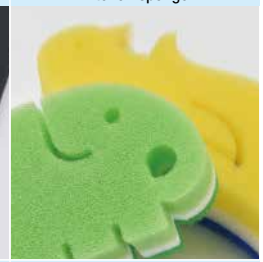
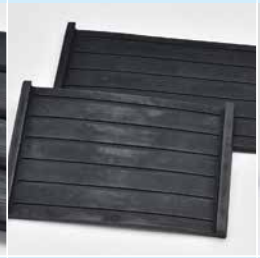
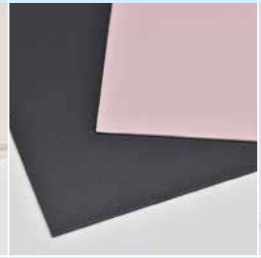
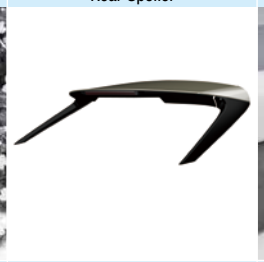
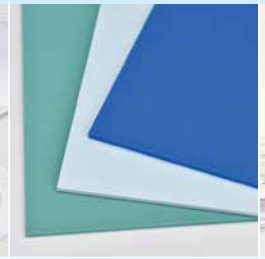
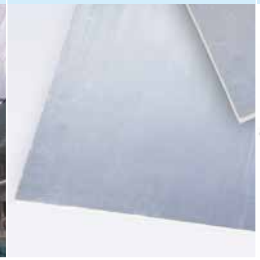
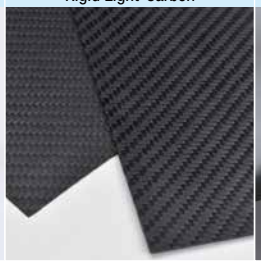
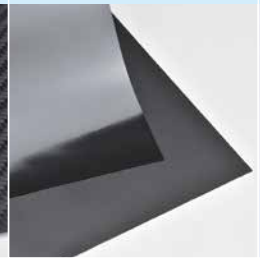
In addition to the initiatives I have touched upon, we have also been engaged in various CSR activities, such as providing reconstruction aid to people living in disaster-stricken areas, support for cultural activities and education as well as sports grants. At the core of these activities is our belief that a company is a member of society, and as such, it is our duty to contribute to its improvement and advancement. After all, the inherent purpose of our business as a company that develops and provides various materials is to bring about a better society. We must never forget that mindset and continue refining our technologies so that we can quickly and flexibly respond to our customers' expectations.

I believe the changes that I mentioned at the beginning will only accelerate further from now, such as the rapid progression of digitalization, constant changes in international affairs, and the decrease of birthrates and aging of society in Japan. As a company that has continued to work with innovation and action, the situation we are facing now puts our true value to the test. We will continue actively taking on challenges to pave the path to a new era and provide affluent lifestyles to as many people as possible.

We will greatly appreciate your continuous guidance and encouragement.

Business overview

INOAC materials utilized in a variety of fields

Material \ Fields	Housing & Construction	Industrial Machinery	Transportation	Distribution & Packaging	Electric Products	IT Equipment	Medical & Welfare	Consumer Products
Urethane	PORON® WA 	CELLDAMPER 	CELLASTO® 	Color foam® 	PureCell® 	EXROTH® 	Moltopren 	Kitchen sponge 
Rubber	Seam gasket for houses 	Crawler Pad 	Track Pad 	Rubber Wheels 	Ksil™ 	TransCool 	Wheelchair Tires 	Latex Sponge Puffs 
Plastic	U-Polypie 	Waterflex 	Rear Spoiler 	P•E-LITE® 	VAFTER 	FOLEC® 	MAPS® 	Injection Blow Molding Bottle 
Composites	THERMAX® (lightweight headliner material) 	THERMAX® 	Lightweight Headliner 	Cool System 	Rigid Light-Carbon 	PureCell® 	Rigid Light-Carbon (prosthetics) 	INOTACK® (garden tape) 

INOAC brands

We focus on adding functional value by making the most of the ideas and technologies based on the materials we have created. Our original products utilizing various materials, including complete interior items offering both design and function, support our comfortable lives.

IRC Tire was founded in 1926 as a manufacturer of tires and tubes for bicycles. Since then, we have produced daily-use tires for comfortable riding and racing tires for world-class racing, building upon our experience in manufacturing and business. For the past 30 years, we have conducted business overseas as well. We will continue adding value as we meet our customers' needs through IRC brand products.

HUKLA is a total-interior brand focused on beautiful form and comfortable lifestyle. We produce top-quality furniture with excellent design and high-grade materials to provide our customers with a pleasant feeling and healing. We believe that the HUKLA collection will make your life more comfortable than ever with natural texture and a variety of colors and patterns.

Smile is an original brand developed by INOAC for at-home nursing care, including mattresses, cushions and bedroom floor mats. We have utilized a variety of materials and technologies for the brand' s lineup, and have pursued a sensation that is soft to the touch. "Smile" is a play on sumire, the Japanese word for the flower violet. We have worked to create products that make both those who provide care and those who receive care smile.

Technological innovation

R&D

INOAC Corporation is engaged in R&D, full of creativity, in view of the future under the motto of making life affluent. We are always providing new materials to a wide range of fields such as the automotive industry, information and communication industry, electronics industry, industrial materials and consumer products. We achieve this by fully using compounding, foaming and molding technologies with various kinds of urethane, plastic and elastomer that are mainly polymeric and also by using other techniques for composite materials. Simultaneously, we are advancing our R&D to reduce environmental burdens, save weight and energy, and provide highly functional new products and new processes.

Research and development system

We are advancing our original new material development by regarding high-polymer material technology such as polyurethane, rubber, resin material and more as our core technology. These efforts are led by our employees at the INOAC Technical Center, Jinno R&D Center, and the Global Technical Division. We are also promoting new material development and applied development research with an eye toward the future with an arrangement of R&D systems in the US, China, Thailand and other countries, emphasizing the importance of collaborative research and technological development with domestic and overseas universities and public research institutions.

The technical sections of each department develops products that aim to satisfy customer needs, such as with products that utilize the molding process and material composition techniques as well as by adding high functionality to urethane foam, such as heat and shock resistance. The process development sections also created and is actively installing original manufacturing lines that are automated and more compact than they were before.

JAPAN
INOAC Technical Center Co., Ltd.

CHINA
Shanghai INOAC Polymer Products Co., Ltd.

USA
INOAC USA, Inc.

THAILAND
INOAC (Thailand) Co., Ltd.

Feature story

Earth-friendly and human-friendly product development

INOAC's environmentally conscious products that meet the people's needs

The issues of marine pollution caused by microplastics and the treatment of non-recyclable plastic wastes are now social issues of a global scale. As such, strong expectations are being placed on the plastic industry and each manufacturing company to confront these problems. Our company is dealing with the environmental problems by promoting a shift to the use of plant-based resins. Demand for plant-based products is rising rapidly due to the minimal stress they put on the environment, and this demand is expected to accelerate even more in the future. In addition, as part of our efforts to reduce waste, we are reusing thermoplastic resins by pulverizing and modifying process waste, which could not previously be recycled. We are also carrying out product developments that make a shift to using carbon neutral materials in the place of plant-based resins to reduce carbon dioxide emissions.

We are also a member of the Nano Cellulose Vehicle (NCV) project, which is carried out by various industrial, academic and government institutions, including Kyoto University and 21 other universities, research institutes and companies. The aim of the project is to research the possibilities of cellulose nanofiber (CNF) from various different angles. Not only is CNF a natural material, it is also highly effective as a reinforcement filler for resins, and we anticipate that it will be of significant value in the future. CNF is ideal for creating light but very rigid products and has contributed to making cars lighter and more fuel-efficient. Indirectly, it can also contribute to reducing energy consumption.

In order to continue meeting the diverse needs of the global market going forward, we will actively promote the use of plant-based resins, research recycling methods and develop foam products that are lightweight and have heat insulating properties, which contribute to saving energy.

Kentaro Iwanaga
Division Director
Global Technology Development Division

World-leading R&D and human resource development

In order to propose and provide new solutions to society, each of our departments and affiliated companies are engaged in developing environmentally friendly products, with our company's R&D efforts centered at the INOAC Technical Center and the Global Technical Division. Outside of Japan, such as in North America and China, we are likewise developing environmentally friendly products that meet the needs of each region. We share information among the entire group and are committed to further advancing and enhancing our technological capabilities. We are also actively engaged in human resource development by working together with raw material manufacturers and our customers both in Japan and overseas, while also collaborating with educational institutes and gathering information at exhibitions. In addition, we organize research opportunities abroad to always keep up with the latest information as we move forward with our R&D.

Continuing to be a manufacturer of earth-friendly and human-friendly materials

The social structure as we know it, with mass production, mass waste and mass energy consumption, will no longer be possible. To realize a recycling-oriented society, the role of materials is extremely significant and their needs will likely rise even more. Developing technologies that lead to decreasing environmental burdens and saving energy is a field that Japan has been leading in over the years. Going forward, as a material manufacturer that supports various industries, we will strive to develop and provide products that are considerate of the earth and its people's lives.

Case.1 Product development using plant-based raw materials 1

The polyolefin sheet that reuses sugarcane pomace

At I-Sheet Industry Co., Ltd. of the INOAC Group, we are doing R&D of polyolefin sheets that use sugarcane pomace as part of its raw materials.

The sheet has the same physical properties and quality as the existing petroleum-based one, and can be similarly vacuum formed and used.

In addition, the sheet does not emit extra CO_2 when combusted due to partially consist raw material (=plant) that absorbed CO_2 in the atmosphere.

The sheet is compatible with the CO_2 life cycle (“plant absorption” → “manufacturing bioplastic” → “combustion and atmospheric emission”),

and can be said to be a product that contributes to a recycling-oriented society.

Sugarcane cultivation does not cause deforestation and environmental destruction due to it being grown in areas that are converted from pastures.

The material has another advantage point compared to materials derived from corn: manufacturing energy costs are lower and has no competition with food or feed.

We are expanding the sheet sales as an alternative to petroleum-derived food and industrial trays.

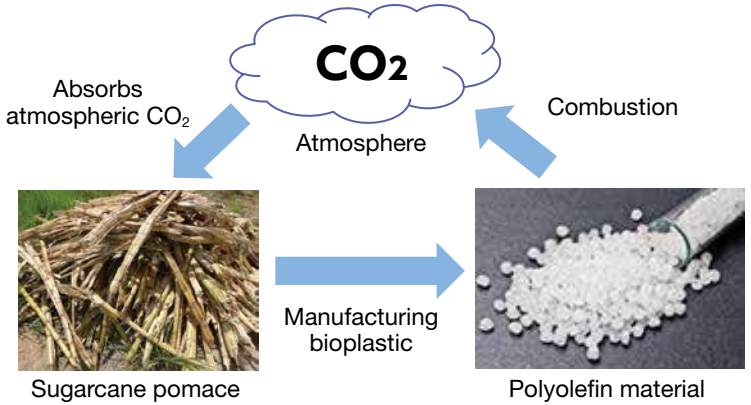
Junichiro Kasada
Development Technology Section
I-SHEET Industry Co., Ltd.

Characteristics of materials using sugarcane pomace

- **Can be used in the same way as existing petroleum-based products**
  Same physical properties, quality, formability.
- **The material that can contribute to a recycling-oriented society**
  CO_2 lifecycle
- **No negative effects on environmental protection or food problems**
  No deforestation required for manufacturing.
  Sugarcane pomace is not used for food and feed.

【CO_2 lifecycle diagram】

*This product is not biodegradable



Product examples

- **Trays for food and industrial components**
  (Alternative to petroleum-based products)

Case.2 Product development using plant-based raw materials 2

Development of urethane foam using plant-based raw materials

We believe that in order to contribute to a sustainable society, one of the important activities for companies is to effectively utilize limited resources.

Although most of our company's main material, urethane foam, is petroleum-based, we are also engaged in developing plant-based raw materials to prevent the depletion of limited fossil fuel resources and to be more environmentally friendly.

We are currently working to develop products with a high percentage of plant-based raw materials by using polyols derived from plants (e.g.: castor oil, palm oil, soybean oil).

By continuing to carry out product developments that increase the percentage of plant-based raw materials, we hope to contribute to the reduction of CO_2 emissions with carbon neutral materials and prevent global warming.

Yasumasa Goto
Urethane Technology Section
Foam Products Department
High Functional Material Division

■ Maintaining the same properties as existing (petroleum-based) products

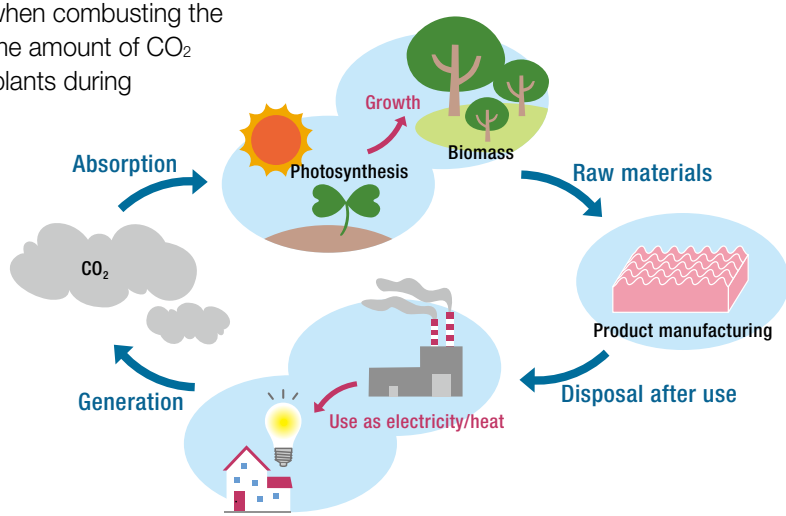
Products made from plant-based raw materials are generally hard and tend to weaken easily, so it is difficult to develop products that can maintain the same properties as those made from petroleum-based raw materials. However, with the product we are currently developing we have achieved a level of maintaining the same properties as existing products.

■ Advantages of using plant-based raw materials

- Reduction of CO_2 concentration with carbon neutrality
  →Prevents global warming
- Reduction of dependence on fossil resources
  →Prevents the depletion of limited resources

■ Reducing CO_2 emissions with carbon neutrality

Using plant-based raw materials contributes to reducing greenhouse gases because the CO_2 emitted when combusting the product is the same amount of CO_2 absorbed by the plants during their growth.



Case.3 NCV Project participation

Cellulose nanofiber (CNF) to make products lighter

The Nano Cellulose Vehicle (NCV) Project is run jointly by industrial, academic and government institutions, and our company has been participating in it since its establishment. The project's goal is to make vehicles lighter by utilizing CNF.

Led by Kyoto University and the Ministry of the Environment, the NCV Project is aiming to make vehicles over 10% lighter by 2020 by utilizing next-generation CNF, which is a fifth of the weight of steel and over five times stronger. For our part in the NCV Project, we will test the possibilities that CNF has as automotive components by March 2020 and aim to apply it commercially by FY 2025.

We are currently working to further strengthen resins by using CNF to develop resin vehicle components with foamed resin molded articles, which also make the product more lightweight. By adding 10% of CNF to the resin material and applying our foam molding technologies, we have succeeded in making the molded articles 20% lighter than before.

Through our R&D efforts, we will contribute to making the shift to carbon neutral materials, reducing the use of petroleum-based resin and improving fuel efficiency by making vehicles lighter.

Hiroaki Suzuki
Director
Evaluation Technology Section of the Development Division
Global Automotive-related Products Division

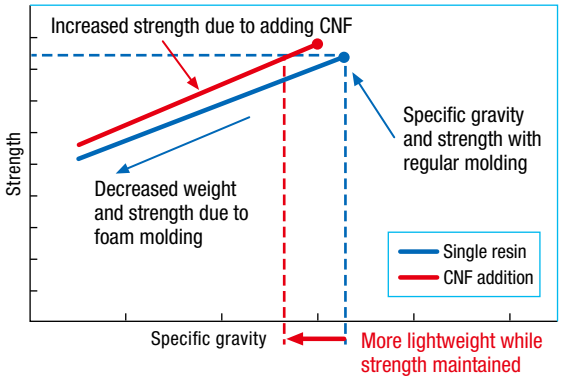
NCV Project

The NCV Project was launched by the Ministry of the Environment to improve automobile fuel consumption by making vehicles lighter and to reduce CO_2 by applying CNF—a lightweight and high-strength next-generation material—to the automotive field. Kyoto University leads the project and more than 20 industrial, academic and governmental institutions participate.

Strengthening resins by adding CNF

●Characteristics of the technology and product

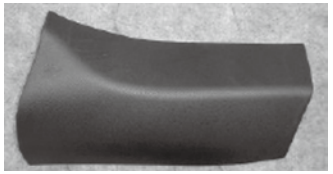
Adding CNF strengthens the resin to supplement a decrease in strength caused by foaming.

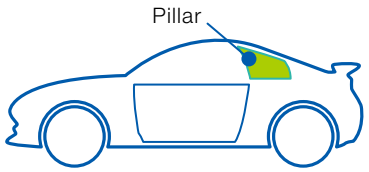


Product example

●Foamed resin injection molded article

(Car interior pillar: product with 10% CNF addition)





Case.4 Realization of material recycling

Recycling process waste of polyethylene foam

We are planning to start material recycling by turning the process waste of polyethylene—produced during the manufacturing (vacuum forming) process of automotive components—into material pellets and reusing them for different products. Our ultimate goal is to reduce the over 4 tons of industrial waste produced on average every month by 100% and achieve a “ZERO” industrial waste reality.

In our developments, we will focus our efforts on establishing a recycling method that takes into consideration the volume reduction method, defoaming method and cross-link cutting method for cross-linked foam.

Until now, we have been undertaking thermal recycling, which reuses the energy produced when combusting industrial waste. However, from now on, we will also be undertaking material recycling, which reuses industrial waste as a different product.

Going forward, we will proceed with developments with the aim of establishing a technology capable of transforming all recycling pellet materials back into products.

Shinji Sugie
Subsection Chief
Resin Product Development Section of the Development Department
Global Automotive-related Products Division

Yoshihisa Takamori
Resin Material Development Section
Material Technology Department
Global Technology Development Division

To achieve a zero industrial waste reality

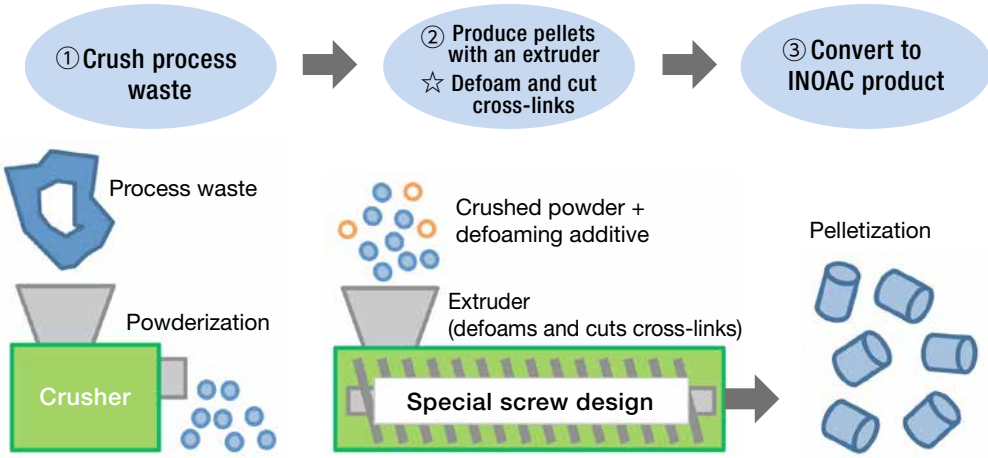
Our aim is to reduce the over 4 tons of industrial waste produced on average every month by 100%.

Goal
Reduce industrial waste by 100%

Process waste of polyethylene foam

Convert to pellets

Recycling process



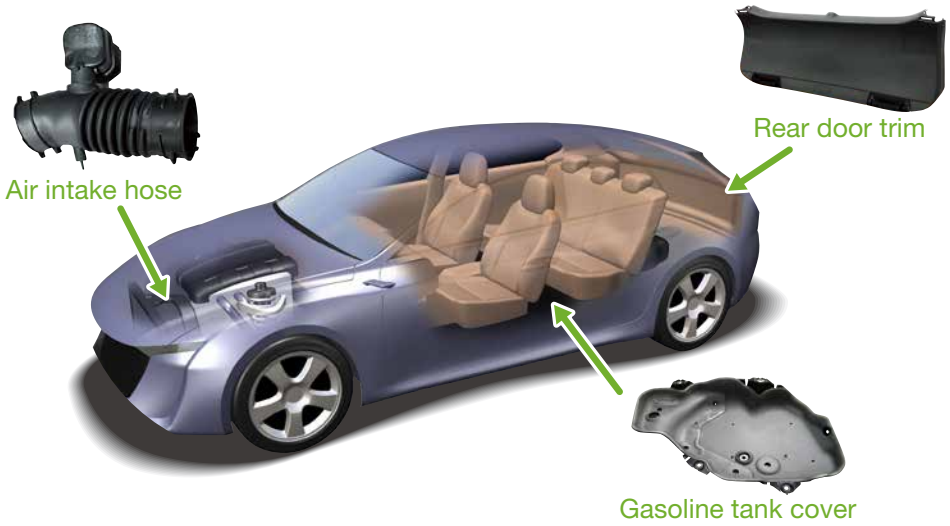
What INOAC can do for the automotive industry

The history of the automotive industry in Japan stretches back over 100 years, but it has been facing a major turning point in recent years.

Since the financial crisis following the bankruptcy of the Lehman Brothers, the global economy has faced multiple crises, and the trade war between the US and China has intensified this year. All of this has continued to greatly affect Japan's automotive industry.

A crucial challenge that automotive-related companies must take on in order to pave the way for the future of Japan's economy is to flexibly respond to external factors, such as changing economic environments, and strive to achieve sustainable growth across the entire automotive industry. Aside from economic issues, the automotive industry must also contend with environmental issues as represented by CO_2 emission regulations.

As a manufacturing company with a division dedicated to automotive products, we at INOAC believe it is our duty to be aware of how much our activities affect the earth's environment, and at the same time, find a way to progress that is more in harmony with the environment.



Examples of environmentally compatible products 1

Product name **"Gasoline tank cover" to reduce volatile fuel**

Theme **Compatibility with exhaust gas regulations** **Keyword** **Thermal insulation**

Gasoline-fueled vehicles inevitably leak gasoline vapor, which is raised as one of the causes of environmental pollution. Therefore, Japan and other countries are carrying out measures (evaporative emission regulations) to reduce the amount of gasoline vapor that escapes from the tank. To tackle this issue, we developed a tank cover that prevents vapor leaking from the gasoline tank.

Characteristics

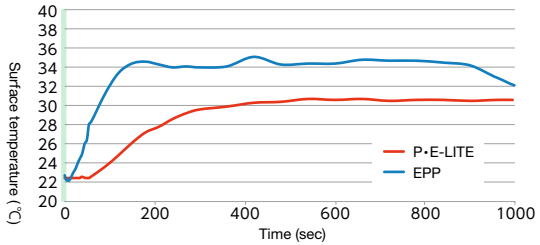
What is a gasoline tank cover?

It is a cover that insulates the gasoline tank to prevent the tank temperature from rising.

Thermal insulation

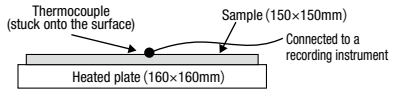
Our product uses P·E-LITE (foamed polyethylene), which demonstrates greater thermal insulation compared to the more commonly used polypropylene foam beads (EPP).

■ Measurement of surface temperature



*Representative values measured by our company

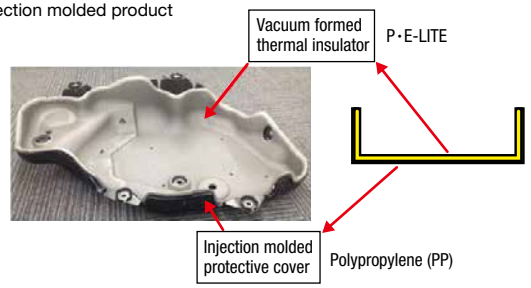
Measurement method: The assessment sample (material) was placed on a 60°C plate and the surface temperature of the assessment sample was measured.



Form superiority

The cover can be vacuum formed or bent to fit the shape of the tank for a better finish.

■ Vacuum formed + injection molded product



Examples of environmentally compatible products 2

Product name **"Rear door trim" made lighter with large-scale injection molds**

Theme **Compatibility with CO_2 emission regulations** **Keyword** **Lightweight**

Improvements to resin foaming technologies have enabled us to produce lighter rear door trims, which are large-scale injection molded articles. We have succeeded in making them lighter than the previously used polypropylene-molded articles while maintaining the same strength and precision.

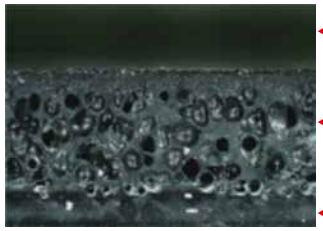
Characteristics

Achieving both lightness and rigidity with large-scale injection molding technologies

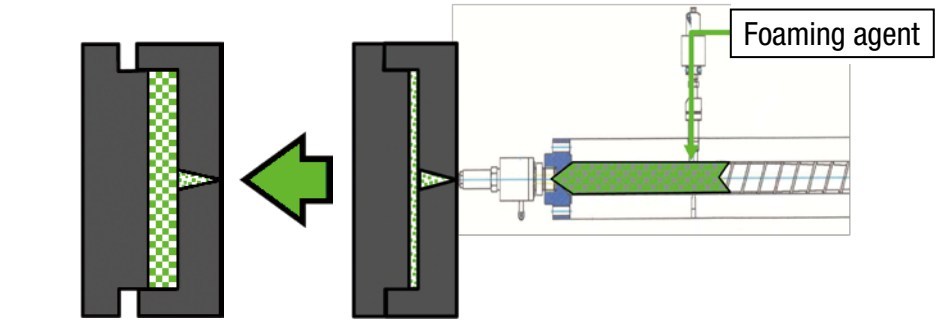
After the foamed resin is injected, the core back process* is applied to the die to expand the gas inside. This causes the foam to line the surface of the die, making it thicker and lighter.

This makes it possible to create a structure comprised of solid surface layers and a foam layer (in the middle). It furthermore increases the thickness of the plate, thereby ensuring lightness and rigidity.

Cross-section



*Core back
A method used during foam injection molding, where the volume of the die cavity is increased to expand the foam bubbles and create a high magnification foam-molded article.



Examples of environmentally compatible products 3

Product name **"Air intake hose" made lighter with Thermoplastic Olefinic Elastomer**

Theme **Compatibility with CO_2 emission regulations** **Keyword** **Lightweight**

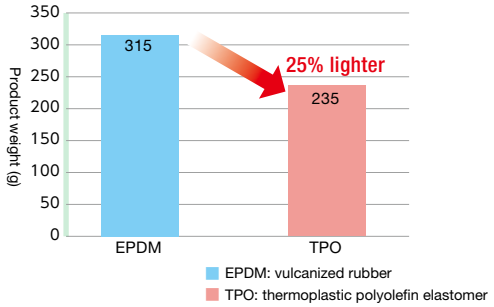
The intake hose requires a level of flexibility that can withstand the engine' s vibrations at engine room temperature. Vulcanized rubber (EPDM) has commonly been used, but we are currently making a switch-over to thermoplastic polyolefin elastomer to make the product more lightweight.

Characteristics

About the air intake hose

An intake hose that carries air from outside to the engine.

Effect on weight



*Representative values measured by our company

Thermoplastic polyolefin elastomer (TPO)

A material produced by physically mixing a polymer with plasticity and a polymer with elasticity.

The material can be used for regular injection molding and is also recyclable.

Keeping down manufacturing energy

Producing vulcanized rubber requires a vulcanization reaction to occur within the die, necessitating high temperatures and a lengthy molding cycle. However, thermoplastic polyolefin elastomer is formed by cooling plasticized material inside the die. The die temperature during the molding process therefore remains low, which keeps down manufacturing energy and CO_2 emissions during the manufacturing process.

Environmental management

Environmental vision

INOAC respects the natural environment of our irreplaceable earth and contributes to realizing an affluent society that is comfortable to live in through technology harmonized with our environment and environment-friendly corporate activities.

Environmental policy

①We comply with environment-related laws and regulations and other requirements, and implement business activities that society can trust.

②We promote reducing CO_2 emissions such as by saving energy to prevent global warming.

③We work on resource conservation, waste reduction and recycling to contribute to a recycling-oriented society.

④We appropriately manage chemicals that may influence the environment and reduce the risk to preserve our environment.

⑤We actively develop products with less environmental impacts, contributing to the conservation of nature throughout the lifecycles of the products.

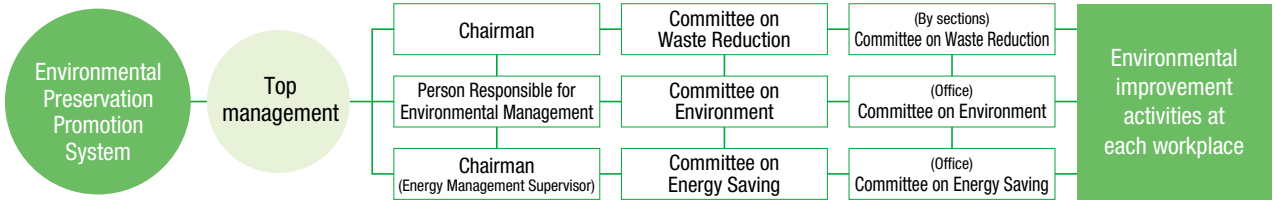
⑥We promote environmental management, educate employees about the environment, implement environmental audits and continue to improve.

⑦We contribute to establishing a sustainable society through local environmental preservation work as good corporate citizens.

Environmental management system

In order to promote environmental activities in an organized fashion, the Person Responsible for Environmental Management implements the integrated management of the environment under the direct control of top management. In addition, the whole company also engages in environmental activities under the direction of the Committee on Environment. We organized specific section committees to handle industrial waste and energy saving to further improve the two areas and to promote environmental management in cooperation with each committee. Furthermore, we are managing our objectives so that the activities conforming to ISO 14001:2015 that began in 2017 are more closely integrated with our main business and will hopefully take deeper root in the company.

■ Environmental Preservation Promotion System



Internal environmental audits

We implement internal environmental audits to check the operational state of our environmental management. The audit team consists of two to three employees who have completed the auditor training prescribed by the company, and checks if the environmental management system is appropriately operated, maintained and improved. Within these activities are also some interactions with auditors from neighboring sites and efforts to improve the quality of the audits themselves that are conducted to reinforce on-site checks.

External environmental examination

We ask the Japan Quality Assurance Organization (JQA), which is an external certification registration body, to implement examinations to check if the environmental management system is appropriately operating in accordance with ISO 14001:2015.
In FY 2018, the audit expanded to include Higashi Nihon INOAC Co., Ltd. No areas were found to be in need of improvement as a result, and the auditors determined that the system is being maintained. As a general opinion, they suggested taking on the challenge of turning risks and opportunities into goals that conform to the work of each individual department.

Environmental management

Summarization of major activities in FY 2018

The results of INOAC's main work for the environment in FY 2018 are shown in the table below. In terms of reducing CO_2 emissions that result from energy use, the Committee on Energy Saving continued to take the lead in various initiatives, which enabled us to reach our objectives. In terms of reducing waste disposal, we moved forward on recycling and reducing waste output, such as by carrying out measures against defects. However, we were unable to reach our objectives because the market standards for valued resources have become stricter year after year. In terms of reducing the emission of substances subject to the Pollutant Release and Transfer Register (PRTR) system, we were unable to reach our objective by a small margin. This was because the effects of the various measures we undertook last year reached a point of leveling out, and also because we transferred and closed several facilities, which resulted in the disposal of waste substances.

Items to be worked on	Policy and objectives of activities in FY 2018		Activity results in FY 2018	Results
Reduction of energy consumption	Factory-related site	Intensity (CO_2 emission/production sum) 0.684 or less [CO_2 emission 61,095 t-CO_2 (2017 result)]	Intensity 0.644 [CO_2 emission 59,563 t-CO_2 (2018 result)]	Objectives reached
	Office-related site	CO_2 emission 178,383 kg-CO_2 or less	CO_2 emission 173,753 kg-CO_2	Objectives reached
Reduction in waste	Factory-related site	Intensity (treated amount/production sum) 0.0637 or less [Treated amount 5,684 t (2017 result)]	Intensity 0.0731 [Treated amount 6,766 t (2018 result)]	Objectives not reached
	Office-related site	Treated amount 1,524 kg or less	Treated amount 1,133 kg	Objectives reached
PRTR substances Reduction in release and transfer amounts	Intensity ((release amount + transfer amount)/production sum) 1.96 or less [Release amount + transfer amount 175,450 kg (2017 result)]		Intensity 2.04 [Release amount + transfer amount 188,693 kg (2018 result)]	Objectives not reached
Environmental improvement work	Environmental improvement cases (total in the entire company) 1,250 cases or more		1,561 cases	Objectives reached
Environmental communication	Issue CSR report		Issued	Objectives reached

* Business places from which environment data are collected to summarize major activities are shown below.

Objectives reached Objectives not reached

INOAC CORPORATION Anjo Plant, Sakurai Plant, Nanno Plant, Yana Plant, Ishimaki Plant, Ikeda Plant, Ikeda Second Plant, Ono Plant, Jinno Plant, Ukiha Plant, Headquarters (Nagoya / Tokyo), Osaka branch

INOAC Housing & Construction Materials Co., Ltd. Ibigawa Plant, Kofu Plant

Kyushu INOAC Co., Ltd. Kikuchi Plant, Ukiha Plant, Kita-Kyushu Plant

Techno Foam Japan Co., Ltd. Headquarters, Saitama Plant

Kyushu Color Foam Co., Ltd.

Higashi Nihon INOAC Co., Ltd.

* Higashi Nihon INOAC Co., Ltd. was added to the data collection range.
* The measurement for managing the objectives of energy use was changed from the used amount of crude oil equivalent to CO_2 emissions.
* The measurement unit for managing the objectives of waste treatment was changed.

Compliance with environmental laws and regulations

At INOAC, we identify environmental laws and regulations that are relevant to our business activities and manage them on a daily basis. As part of the Environmental Management System, we prevent environmental pollution and otherwise conduct environmental risk management to ensure that we properly comply with laws and regulations related to noise and industrial waste treatment, through monitoring, measurement, and assessment at each plant. We will continue strictly adhering to environmental preservation agreements with local government in line with corporate ethics, including environmental laws and regulations.

Main environment-related laws and regulations in our business

Air	Air Pollution Control Act, Automobile NOx PM Law, Act on Special Measures against Dioxins
Water quality and soil	Water Pollution Prevention Act, Purification Tank Act, Sewerage Act, Soil Contamination Countermeasures Act
Noise, vibration and malodor	Noise Regulation Act, Vibration Regulation Act, Offensive Odor Control Act
Chemical substances	Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof, Poisonous and Deleterious Substances Control Act
Resource conservation and recycling	Act on the Rational Use of Energy, Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging, Act on Rational Use and Appropriate Management of Fluorocarbons, Act on Special Measures concerning Promotion of Proper Treatment of PCB Wastes, Waste Management and Public Cleansing Act
Disaster prevention	Fire Service Act, High Pressure Gas Safety Act
General and others	Factory Location Act, Act on Improvement of Pollution Prevention Systems in Specified Factories, Radio Act

*Local government ordinances are omitted.

Training for emergencies

We identify accidents and emergencies in accordance with the characteristics of each business facility, and periodically implement training to prevent environmental pollution such as fires and chemical leakage (oils, solvents, etc.) from facilities. General disaster training was held at the Anjo Plant on May 29 and November 8, 2018, and individual training is implemented in accordance with the characteristics of each department, including training for preventing raw materials from flowing out and evacuation drills at night. In other facilities, trainings for emergencies are implemented as preparation.

Anjo Plant: Fire-fighting team spraying water

Sakurai Plant: Training in early fire extinguishment

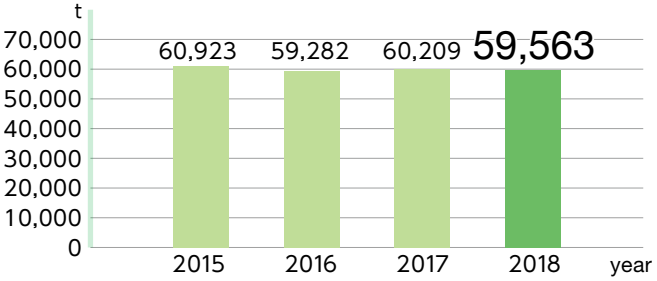
Nanno Plant: Measures against raw material leakage

Reducing the environmental burden 1

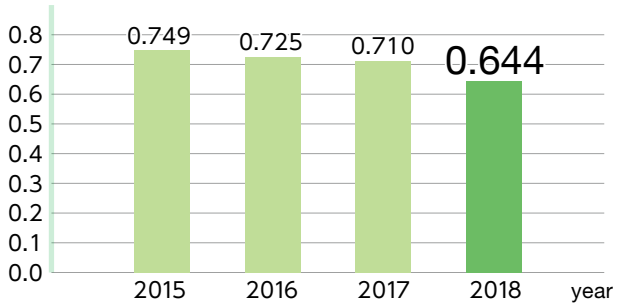
Reduction of energy consumption

To help to prevent global warming, we have been engaged in efforts to reduce CO_2 emissions by promoting energy saving. Specifically, we have been promoting the following activities: reducing electricity use by equipping cooling towers with inverters and placing shade films on windows; reducing the use of heavy oil for controlling die temperatures by applying a thermal insulation coating material to the die and preventing heat release; and taking measures to insulate boiler room tanks and factory roofs. In 2018, CO_2 emissions resulting from energy use decreased a little—approximately 9% in terms of intensity—compared to 2017.

■ Energy use (CO_2 emission (t-CO_2))



■ Energy use intensity (CO_2 emission (t-CO_2))/production sum (million yen))



[Efforts]

Key efforts to promote energy saving in 2018

- Installing a low temperature drying room that uses waste heat to reduce the amount of energy used for drying
- Reducing the use of heavy oil for controlling die temperatures by applying a thermal insulation coating material to the die and preventing heat release
- Measures to prevent air leakages by using ultrasonic air leakage detectors
- Insulating factory roofs using the cover construction method
- Reducing electricity use by equipping cooling towers with inverters
- Reducing the use of air conditioning electricity by lining windows with INOAC's CELL SHADE
- Covering boiler room tanks with a thermal insulation jacket
- Managing LED illuminance with a control switch


Applying CELL SHADE to windows


Tank covered with a thermal insulation jacket


Die thermal insulation coating material

Other work for preventing global warming

INOAC is working on preventing global warming from other perspectives too. During the summer, we hold a summer eco-style campaign to educate our employees on how to save energy, such as by promoting cool biz, our energy saving attire campaign. We also work on cooperative transportation and smooth deliveries, a modal shift to railway and maritime transport, and consolidation of distribution bases. In addition, we participate in the CO_2 Reduction and Lights Off Campaign propelled by the Ministry of the Environment every year. In FY 2018, we implemented the campaign at 10 facilities, including those of our group companies, on June 21 (summer solstice) and July 7 (Star Festival).

Reducing the environmental burden 2

Activities to reduce waste

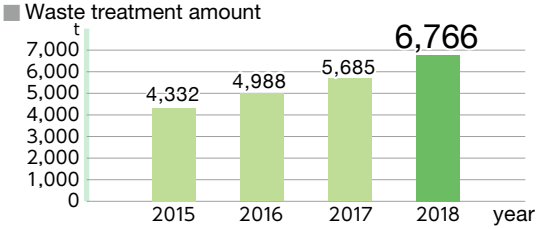
All Committees on Waste Reduction throughout our company take the lead in promoting waste reduction activities. These include cutting back on losses by reducing defects and improving yield; expanding on the use of recycled materials, such as by separating and recycling used paper; and promoting the sales of recycle mats produced by using material remnants (see article on the right for more details). However, the market criteria for buying valued resources are becoming stricter every year, which gives us no other choice but to dispose of resources as industrial waste in many cases.

Activities to reduce the use of environmentally hazardous substances

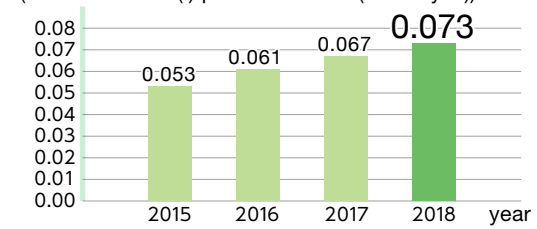
INOAC uses PRTR substances, such as tolylene diisocyanate (a raw material for polyurethane foam) as well as xylene and toluene (used in coating processes). We are making efforts to cut back on the amount of these substances we use, release and transfer, such as by promoting the use of an alternative to 1-bromopropane, which was continued to be used as a cleaning agent. However, increases in production and the demolition of old facilities resulted in having to dispose of waste substances, raising the amount released and transferred by approximately 8%. Output intensity remained mostly level.

* We completed a total switch-over from 1-bromopropane in May 2019.

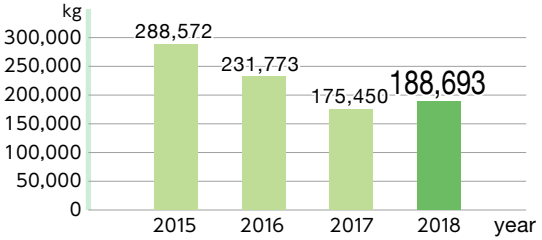
■ Waste treatment amount



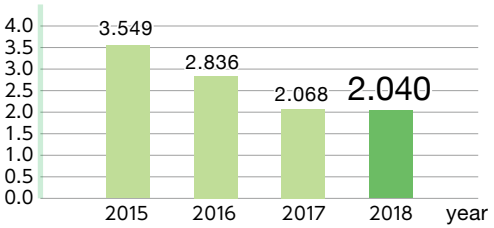
■ Waste treatment amount intensity
(treated amount (t)/production sum (million yen))



■ PRTR substance release and transfer amount (kg)



■ PRTR substance release and transfer amount intensity
(release and transfer amount (kg))/production sum (million yen))



Development and sales promotion of the recycle mat “Pellemat”

Pellemat is the name of a product we sell that is made using the material remnants of rubber sponges produced at our company. They are first crushed into chips and then hardened into sheets. Since rubber sponges have an airy layer, the mat is lightweight and demonstrates excellent thermal insulation in addition to reasonable cushioning. Furthermore, the surface is not slippery, which makes it the perfect work mat for factory floors to alleviate foot fatigue while working. In this way, we are contributing to waste reduction by utilizing what used to be unneeded material remnants that would have otherwise been disposed of in landfills as industrial waste.


Rubber sponge skins
(unneeded material remnants)


Chips (after being crushed)


Product (after being formed)



Examples of use: work mat
(to reduce foot fatigue for standing work)

Business places from which environment data are collected on pages 17 and 18 are shown below.

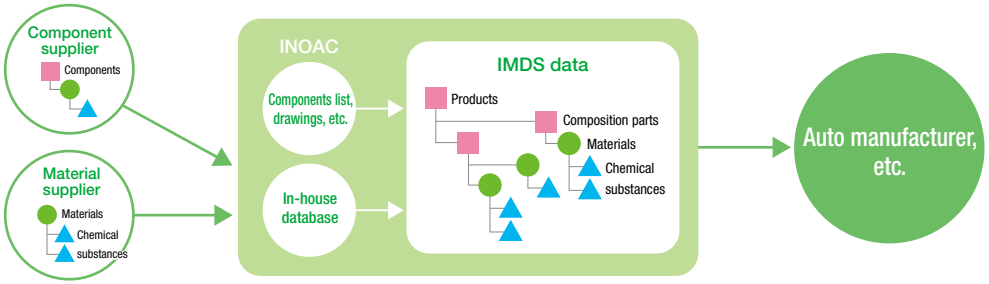
◎INOAC CORPORATION/Anjo Plant, Sakurai Plant, Nanno Plant, Yana Plant, Ishimaki Plant, Ikeda Plant, Ikeda Second Plant, Ono Plant, Jinno Plant, Ukiha Plant, Headquarters (Nagoya/Tokyo), Osaka branch
◎IINOAC Housing & Construction Materials Co., Ltd./Ibigawa Plant, Kofu Plant ◎Kyushu INOAC Co., Ltd./Kikuchi Plant, Ukiha Plant, Kita-Kyushu Plant ◎Techno Foam Japan Co., Ltd./Headquarters, Saitama Plant
◎Kyushu Color Foam Co., Ltd. ◎Higashi Nihon INOAC Co., Ltd.

Management of chemical substance information

Promoting IMDS, chemSHERPA and more

INOAC registers information on chemicals and reports it to our customers through IMDS*1, especially in the automotive field, which is our main strength. We have a management system to obtain the necessary information via our supply chain and to register the information into IMDS.

■ Information collection through IMDS in INOAC – reporting process and chemical management system



We are also prepared to collect information and report to our customers using the chemSHERPA*2 format, which is widely used in the industrial world, especially the electrical machinery industry. (The format was changed from the previously used JAMP format to the above).

*1 IMDS (International Material Data System): A database for transmitting and obtaining information on materials and chemicals over the internet for the automotive industry, which was originally developed to comply with the EU ELV Directive.
*2 chemSHERPA: A unified format to transmit information on chemicals contained in products in the supply chain, which the Ministry of Economy, Trade and Industry took the initiative in developing.

Establishment of in-house database

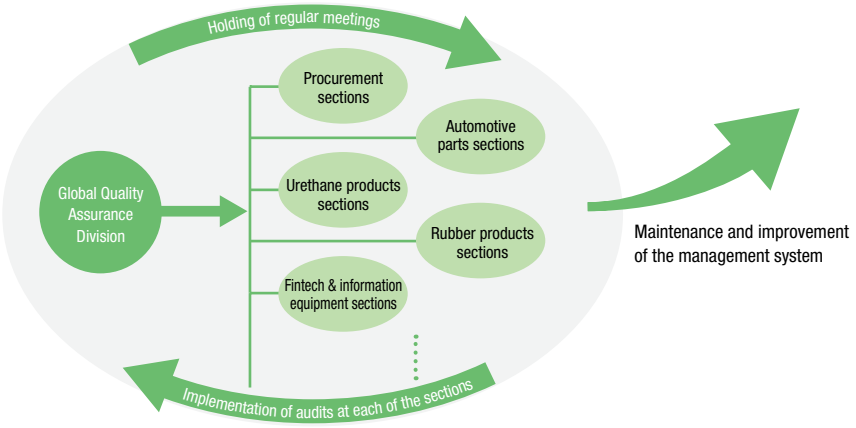
The Automotive Division operates the in-house database through which information on chemical substances contained in purchased parts and raw materials is managed in an integrated manner. By updating this database and being able to flexibly adapt to changes to legal regulations, we strive to improve quality, work efficiency and the reporting accuracy of information we register in IMDS and when examining the chemical substances contained in our products.

Establishment and execution of green procurement criteria

In addition to listing chemical substances regulated by laws and regulations as well as our customers, we also create a list of chemical substances that we should reduce after understanding their content. We show the lists as green procurement criteria to suppliers and use them to obtain information on chemical substances contained in raw materials to be purchased.

Communication about chemical substance management

The Global Quality Assurance Division is a company-wide organization and leader regarding environmental management. It brings together the chemical management sections in each department once every two months for a meeting. They review the green procurement criteria, check the management system, establish or change operation rules, and exchange opinions concerning the latest trends in chemical regulations, such as the REACH regulation and RoHS Directive. They also periodically audit the management system in each department to maintain and improve an appropriate and reliable management system.



Quality improvement efforts

Transparency of quality is necessary for global competition

The INOAC Group has implemented a comprehensive management system based on ISO 9001 to guarantee quality and provide products and services that our customers can be satisfied with and use safely with confidence. Furthermore, we are engaged in efforts to improve quality by collaborating with our customers. In recent years, quality fraud has become a large social issue and trust in Japanese manufacturing is wavering. Against this backdrop, the global trend is moving toward enforcing the transparency of product development and the manufacturing process as well as clarifying responsibility.

Basic policy

Quality that can satisfy all customers

- Zero critical quality issues
- Ensure transparency of quality

Efforts

1. Activities to prevent serious issues in advance

①Product component audit for critical quality

We conduct audits and guidance at our production sites in Japan and abroad to improve quality and prevent any serious quality issues in advance that can threaten our company' s existence through the loss of social trust.

②Quality audit of new products

We conduct audits on products created using new technologies, new materials, new processes or for new purposes. Our goal is to prevent serious quality issues in advance.

Audit members

President, Global Technology Development Division, Global Production Management Division, Legal Affairs Section, Intellectual Property, Global Quality Assurance Division, department supervisor, product technology supervisor, quality assurance supervisor, sales supervisor

Audit areas

Material quality, product characteristics, product performance, structure, exterior, comparison with similar products, product safety, production safety, quality risks

2. Promotion of automation and IoT

We are promoting automation and the use of IoT to evaluate and inspect products. This improves the trustworthiness of our evaluations and inspections while also making them visual. By doing so, we are building a system that ensures the transparency of quality and enables us to quickly ascertain and respond to any issues that occur during the production process. Furthermore, we are utilizing the data we collect to prevent any issues in advance. Featured here are examples of how we have brought automation and IoT into the processes of measurement and inspection at our production sites.

①Improving the transparency of quality with automation and IoT in the production process (measurement and inspection)

During the production process, automated measuring devices automatically determine whether the measured production conditions and dimensions data are acceptable or not. The information is shown in real-time on monitors on the production floor and in the office and is easy to understand. This allows us to monitor product quality with a high level of transparency. The measured data is saved onto the hardware every few seconds and they are linked with barcodes to enable precise traceability. We are utilizing the accumulated data to manage production conditions with the aim of improving and stabilizing quality.

Automated measuring device for pipes

An automated measuring device measures the outer diameter and thickness and conducts an external inspection in-line so that no irregularities are overlooked.

②Improving the transparency of quality by adding IT to test management

We are working to integrate IT into test management with the goal of improving quality transparency and customer trust. By linking the stock and shipment systems to build an integrated management system, it now allows us to stop the shipment of products that have not completed the test evaluation or those that do not meet the evaluation standards. We can share information with various departments on each of the product' s test items, evaluation results, whether they can be shipped, state of progress and so on. This will prevent the shipment of products that are defective or have not completed evaluation, which will lead to improving trust from our customers. Furthermore, since the test evaluation results are inputted automatically into the computer, we can avoid human error such as mistakenly putting in wrong data. This improves data trust and work efficiency.

Contributing to society and community 1

The INOAC Group promotes activities that contribute to society and communities through various opportunities, such as providing technical support, human resource training and support for culture and sports.

Quest Career in HaNoi Sponsorship of a career event in Vietnam

Quest Career in HaNoi is an international event that aims to connect Vietnamese students with Japanese companies. We have been sponsoring and participating in this event since 2017. INOAC endorses the purpose of Quest Career in HaNoi and gives presentations to Vietnamese students about our corporate philosophy and the history of expanding our business in Vietnam. As a global organization, we convey the best of Japanese companies with the hope of becoming a bridge that connects local students with Japanese companies.

Support for the Japan Wheelchair Basketball Federation

INOAC is an official supporter of the Japan Wheelchair Basketball Federation (JWBF). In addition, Inoue Rubber—an INOAC Group company—is an official supplier and supports the federation by providing tires and tire exchange support as well as engaging in the development of wheelchair basketball tires.

Joint industry-academia research with Jissen Women's University

From September 2017 to March 2018, INOAC worked on a joint research project with students at Jissen Women's University. We worked with 3rd year students in the Product Design Laboratory (Prof. Tadashi Tsukahara) in the Department of Human Environmental Sciences, Faculty of Human Life Sciences. Their second term seminar topic was to conduct research on the development of everyday commodities that utilize sponge properties. The objective was to design a product by thinking out of the box, unconstrained by existing products. INOAC was in charge of providing the materials and creating prototypes. The students conducted market research to look up existing products and understand market needs. They also learned about the products handled by each department at INOAC through a presentation and about the characteristics of sponges by visiting the Higashi Nihon INOAC's production plant. After creating several prototypes, giving a mid-term presentation and conducting a design review, they held a final presentation in June 2018. In this way, we work on joint industry-academia projects to provide practical opportunities to nurture independent working members of society.

Contributing to society and community 2

The entire INOAC Group works together to provide recovery and reconstruction aid in support of areas damaged by natural disasters in Japan and abroad.

Mattress donation to disaster-stricken Sulawesi, Indonesia following the earthquake

On September 28, 2018, Sulawesi, Indonesia was struck by an earthquake and tsunami. INOAC provided aid by sending mattresses that were produced and donated by our employees, who worked on the entire process themselves with the desire to help their fellow citizens.

Mattress and goods donation to evacuation shelters following the Hokkaido Eastern Iburi earthquake

In the wake of the Hokkaido Eastern Iburi earthquake, which struck on September 6, 2018, INOAC donated company-made mattresses to evacuation shelters and provided essential commodities to residents living near the Sapporo Office. In addition, on the day the earthquake struck, Tohoku INOAC Co., Ltd. immediately established a support system and delivered goods to the affected areas through Hokkaido INOAC Co., Ltd. In this way, the entire INOAC Group engages in contribution activities by cooperating with various locations and offices.

Support to areas affected by flooding in western Japan

In July 2018, Japan experienced recording-breaking rainfalls across the country, but which were particularly concentrated in western Japan. Nishi Nihon INOAC Co., Ltd. provided supplies to evacuation shelters as well as cut polyurethane foam, used for cleaning, to prevent mud water caused by the rain from flowing into buildings. By understanding what was really needed in the disaster-stricken area, we were able to utilize our products in ways that differ from how they are usually used.

Diversity efforts / Promoting work-life balance

Promoting female employees

INOAC positively uses female employees and creates an environment where female employees can contribute to the company, fully demonstrating their skills and knowledge for their work after we bring out their potential. Every year, we hold a seminar on promoting women's success at work, aimed at female candidates for management positions to encourage them to broaden their perspectives and advance their careers. We also hold a seminar every year aimed at male managers on the subject of promoting women's success at work. In this way, we are creating a system that supports female employee success.

Work related to the enforcement of the Act on the Promotion of Female Participation and Career Advancement in the Workplace

Following the enforcement of the Act on the Promotion of Female Participation and Career Advancement in the Workplace in April 2016, we have been engaged in promoting women's success at work with the three goals below. They are designed to encourage female employees to demonstrate their potential and develop their careers in many departments over a period of five years from April 1, 2016 to March 31, 2021.

Goals

1. To raise the proportion of female subsection chiefs to that of male subsection chiefs, we will aim to promote 10% of female candidates to the position of subsection chief this term.
2. To find more female candidates for management positions, we will increase the proportion of female participants in training courses for mid-grade employees and subsection chiefs to 10%.
3. We will make the usage rate of managers' annual paid vacation equal to that of general employees'.

Employment of challenged persons

In order to realize a society where everyone's possibility is broadened, we actively hire challenged persons. By doing so, we found that employees become more considerate toward others and that it creates heightened awareness.

Users of the continuous employment system

Since January 2015, we have been actively engaged in creating an environment in which senior citizens can effectively put their careers to use. We are increasing wages for employees who continue to work with us, thereby introducing a system that makes it worthwhile to rise to positions of responsibility.

Welcoming international employees

We invite international employees working at overseas local subsidiaries to the mother plant in Japan and welcome them as trainees to improve their techniques and skills for human resource development. By bringing back and utilizing their knowledge and experiences learned in Japan, localization is facilitated and globalized know-how is handed down. We also welcome technical interns from overseas local subsidiaries. Working at a specific production site for a certain period of time in Japan allows them to return home and contribute to work site improvements.

System to support balancing work and childcare

We are working to support creating a balance between work and family to have an employee-friendly workplace and promote women's remarkable work. According to the regulations regarding childcare leave, employees are able to take leave until the child is two years old. Special (paid) leave is also available to attend to sick or injured children: five days are provided to employees with one child and ten days to employees with two or more children. In addition, we offer a system of reduced working hours, which can be used for up to three years (available until the child finishes third grade in elementary school). We also institute five days of special paid leave when a spouse gives birth to a baby.

List of systems to support balancing work and childcare (enforcement year)

- Maternity leave for spouse (before 1980)
- Implementation of flextime system (1990)
- Regulations regarding family care leave (1990)
- Happy holiday leave (1991)
- Regulations regarding childcare leave (1992)
- Regulations regarding measures for maternity health management (1998)
- System for paid half days off (2000)
- Family support holiday leave (2005)
- Sick/injured childcare leave (2005)
- Regulations regarding childcare leave amended (leave period extension) (2005)
- System of reduced work hours for childcare (2008)
- Family care leave (2010)

Human resource development

Employee Education

Employee Education is offered by the Global HR Division as opportunities for INOAC Group employees to grow and enhance their abilities. As part of Employee Education, 50 types of programs are available that offer a wide range of training, from introductory training for new employees to those for employees in management positions. The training programs are available throughout the year. In addition, we also offer an OJT system and support for acquiring qualifications.

Stratified Education

The company offers Stratified Education for employees to understand the roles they are expected to fulfill at different levels of employment as new employees, young employees, mid-grade employees and managers. The programs help employees acquire the knowledge and skills necessary to fulfill such roles. Stratified Education combines a balance of awareness education, knowledge education, skills education and management education to improve the abilities of our employees. Some programs include lodging training and networking within the company.

Professional Training

Professional Training aims to provide employees with basic knowledge, specialized knowledge and skills required for their fields of work.

Sales sections: Trainings that aim to enhance the sales skills of employees at the beginner and medium levels.
Engineering sections: Trainings to learn about the basics of engineering (from material design to formation to post-processing) and about intellectual property (such as drafting applications and conducting patent searches), etc.
Manufacturing sections: Trainings on the basics of manufacturing, handling machinery and electricity, etc.

Global HR Development

The INOAC Group deploys its factories and offices globally in more than 50 locations. In order to develop the human capital that is ready for progress in globalization, INOAC stresses its Global HR Development activities. One such program is the Pre-Overseas Work Training, which is held over the course of a year. Units are prepared for employees who are candidates for overseas posts on topics such as risk management, mindset, communication and specialized education, all of which facilitate a reformed global awareness. The training system is systematic and also includes an opportunity for candidates to listen to the experiences of senior employees posted abroad. Furthermore, starting this year, we rolled out the new Trainee System, which allows young employees to experience practical training abroad. With this program, we are aiming to develop global leaders at an early stage, who will go on to fulfill central roles, whether in Japan or abroad, as intermediaries to the world.

Harassment prevention

INOAC implements the following measures against harassment in the company.

1. **Declaration and publication of company policy**
   INOAC declares the company policy concerning harassment including sexual and power harassment.

2. **Establishment of consultation desks**
   Consultation desks to address harassment in the workplace are established in the Global HR Division in each area on a nationwide scale. Consultation desks for women and labor union consultation desks are also established.

3. **In-house research on actual conditions**
   The Power Harassment Questionnaire is administered annually to all employees to gain an understanding of the actual conditions.

4. **Harassment education**
   All managers at INOAC are required to attend the Harassment Lecture.

Personal development

The Distance Learning Program and Qualification Acquisition Support Program are available for employees who are looking for motivation to learn. The Distance Learning Program offers 100 courses every year and participants get a refund of half the cost upon completion of the course. With the Qualification Acquisition Support Program, the company sponsors employees to take qualification exams that have been recognized by the regulations. Through these sorts of continuous efforts, the entire company is engaged in supporting personal development.

Safety and health / Disaster prevention

Principles and basic policy for safety

1. Safety is the basis of the very existence of the company.
2. All accidents and hazards are preventable.
3. Safety is achieved through the awareness and responsible action of each employee.

Based on the safety policy above, safety is prioritized above all, and this is demonstrated through action. The practice to stop, call and wait when a risk is predicted is also being followed. Our yearly activity plans include activities organized by the Ministry of Health, Labour and Welfare and monthly activities that past disasters have taught us to be of critical importance. We strive to improve the safety, health and disaster prevention levels at all of our locations by repeating training and improving any weaknesses we find in our safety, health and disaster prevention assessments.

Safety Practitioners Conference

1. Summary from the FY 2018 Conference
   - ①Reports on safety, health and disaster prevention activities
   - ②Statistics and analysis of disasters in the INOAC Group
   - ③Notices and changes in the Industrial Safety and Health Act
2. Education and awareness raising to prevent occupational accidents
   - ①Efforts to prevent occupational accidents
     - Kyushu and Tohoku (via TV conference)
3. Policy for FY 2019
   - ①Explanation on safety, health and disaster prevention activities in FY 2019
   - ②Proposals from the Work Union

Safety Conference

All INOAC safety and health committee meetings

The following safety activities are led by the top management and attended by all members of the company.

◎Central Safety and Health Committee meeting: Held four times a year
◎Field inspection by officers: Held twice per year
◎Safety Practitioners Conference: Held six times per year
◎Safety and Health Committee meeting at each location: Held monthly

Through these activities, INOAC enhances the company-wide awareness of safety, health, disaster prevention and building organizational culture. We hold these meetings on safety to prevent the reoccurrence of disasters.

Field safety inspection by top management

Developing safety-conscious workers with the Safety Dojo

The Safety Dojo lets employees experience work hazards in safe settings using 15 simulators that enable the employees to see, hear and feel the hazards. The experience helps build a workplace capable of achieving the zero-disaster standard by enabling the employees to become more sensitive to potential hazards, able to predict them and ensure safe work practices.

Safety dojo (1,000 people have participated)

Activities to enhance employee health

Managers are improving to enhance their skills and knowledge so that they can lead by example.

◎Establishing mental health and harassment consultation desks
◎Establishing an outdoor smoking space to separate smoking
◎Reducing road surface temperature as an environmental measure
◎Organizing education and trainings by industrial physicians and the health insurance association
◎Taking preventive measures against heatstroke

Heat insulating pavement
(reducing road surface temperature by reflecting infrared rays)

Disaster prevention activities

Acting under the Crisis Management Regulations helps minimize damage by natural and other disasters and ensures early restoration.

1. Large earthquakes
◎Measures to alleviate earthquake damage to buildings and facilities
◎Safety and disaster prevention equipment and stockpiles for earthquakes
◎Post-earthquake response
◎Stockpile of mattresses to contribute to the community

2. Measures against fires, storms, and floods
◎Prevention of fires and explosions in manufacturing facilities
◎Preparation and establishment of structures against storm and flood damage
◎Establishment of a weather information distribution system

3. Disaster prevention education
◎Establishment of a disaster prevention training center

Disaster prevention training center

Supply chain management

Procurement basic policy

❶ Promotion of global procurement activities

We aim to enhance global procurement and the relationships we share with our valuable suppliers by utilizing our domestic and overseas bases.

❷ Compliance with laws, social codes and internal regulations

We comply with laws, social codes and internal regulations, and promote healthy and open procurement activities.

❸ Promotion of fair, just and sincere procurement activities

We provide our valuable suppliers with fair and just competitive opportunities to promote sincere procurement activities.

❹ Procurement considering the environment and human rights

We conduct procurement with consideration for the earth's environment in accordance with INOAC's environmental policies. In addition, we give due consideration when dealing with the procurement of raw materials that may cause human rights issues or social problems, such as the use of conflict minerals.

❺ Construction of partnerships on the basis of mutual trust with our valuable suppliers.

We construct firm relationships of mutual trust and cooperate with our valuable suppliers to maintain and improve mutual technological capability and quality.

Optimal procurement at our bases across the globe

We contribute to the countries where our bases are located by procuring local raw materials and components. At the same time, we also aim to build good relations with our valuable suppliers by thinking of optimal quality and cost as well as long-term trade. Furthermore, we promote higher strategic procurement capable of responding to global production.

Enhancement of partnerships with our valuable suppliers

Together with approximately 80 valuable suppliers, we formed the INOAC Cooperative Assembly, where we engage in various activities. For example, we invite representative speakers from our valuable suppliers to the whole group presentation conference and ask them to give us presentations about the work they do to promote compliance and risk management or to share with us the work that goes on in their subcommittees. In this way, we aim to enhance the level of all participating companies, both our own and those of our partners'.

Promotion of green procurement

In order to keep up with environmental regulations that become stricter every year, we revise the INOAC Green Procurement Criteria on a yearly basis and promote procurement activities that are considerate of the environment. In addition, we are also working to reduce the burdens we place on the environment, such as by looking for ways to enhance loading efficiency as a means to improve procurement logistics.

Measures regarding conflict minerals

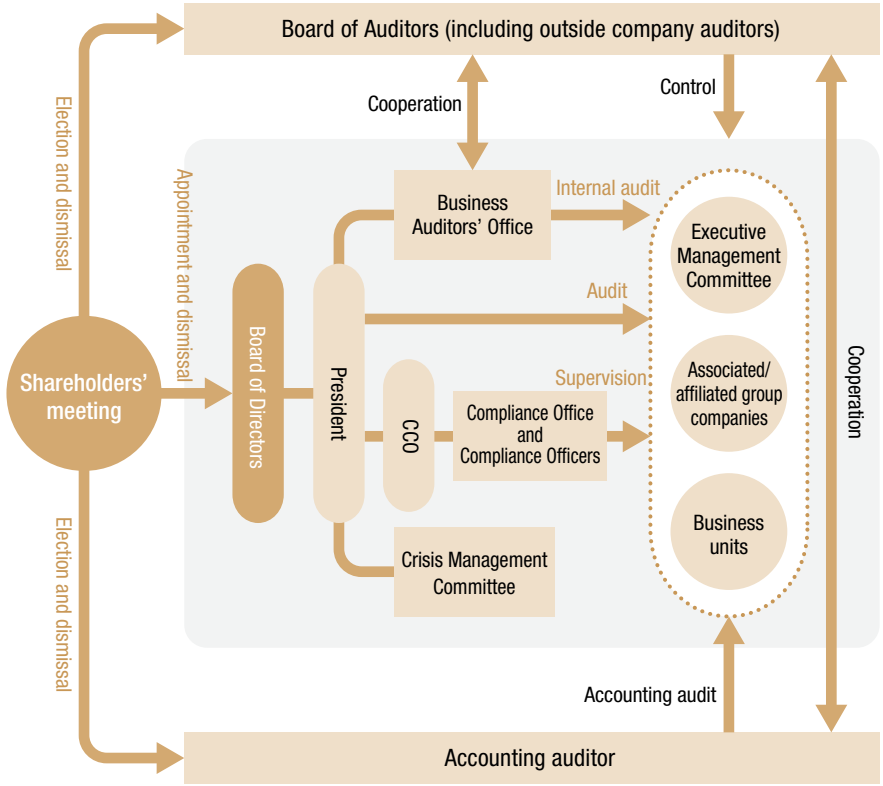
The Democratic Republic of Congo has one of the world's richest mineral resources, however, it is also a region—along with neighboring countries—embroiled in ceaseless warfare. Minerals produced in this region become a source of funding for organizations involved in human rights violations, environmental destruction, corruption and illegal activities. Our policy is to not use such conflict minerals, and we are working with each of our business partners to disclose this information.

Corporate governance

Our basic view on corporate governance

INOAC considers the improvement of corporate governance as an important management task to raise the group's performance, value and social credibility.

■ Corporate governance structure (management structure)



[Corporate governance structure]

Board of Directors

Comprised of 10 members, the Board of Directors decides important issues in INOAC's business. Each board member reports the execution, financial and performance statuses of his/her division, based on which the Board supervises and controls the business executions of the company.

Executive Officer System

In order to separate supervisory and executional responsibilities, INOAC has introduced its Executive Officer System. Each Executive Officer, endowed with his/her own authority from the Board, acts as the head of the department, group company or major functional organization to speed up decision-making, optimize business operations and handle critical business executions.

Board of Auditors

The Board of Auditors is composed of three company auditors including two outside company auditors. The company auditors attend important meetings, such as board meetings, and audit the execution of duties by the directors by inquiring about the status of their operations on the business.

[Internal Control System]

Various measures are implemented to ensure that business executions comply with applicable laws as well as the company's articles of incorporation.

Compliance

System promoting compliance, and employee education on the Corporate Code of Conduct.

Information management

Management of documents with the Document Control Procedure that defines the responsible unit and storage period for each document.

Control structure as a corporate group

Establishment of the Associated Company Document Control Procedure for associated and affiliated companies. Clarification of the execution rules and auditing by the company auditors when necessary.

Risk management

The Executive Management Committee manages each risk and Crisis Management Committee meetings are held when necessary. The Negative Information Hotline is always ready to obtain risk information quickly and establish a response structure.

Compliance

Basic views on compliance

INOAC believes that the compliance requirement goes beyond simply following the applicable laws and requires each employee to act with a high level of ethics. In order for INOAC to satisfy its corporate responsibilities and expectations from customers, only following the applicable laws is insufficient; employees must also recognize their social responsibilities as part of the corporation.

Compliance education

In addition to the development of the internal regulations, an educational program aimed to raise awareness of the compliance requirements is provided to sales representatives, staff in charge of procurement, new employees and mid-career hires at all INOAC business locations. The educational program looks at examples of compliance issues that occurred in other companies and conducts case studies of how such issues could occur in one' s own workplace. The program also spends time discussing any questions that arise during day-to-day work operations. Through these efforts, we are working to raise each individual' s awareness of compliance.

Internal reporting system

In order to thoroughly enforce compliance, the company must act immediately if a violation occurs by any chance. To this end, INOAC has established the Help Line through which anybody may consult with both the legal department and the external law firm about his/her concern. Internal Reporting and Whistleblower Protection Regulations are also in place so that whistleblowers are protected from any further retaliation.

Compliance and Ethics Program and Policy

The Compliance and Ethics Program and Policy has been implemented with the Compliance Office established within the Tokyo Headquarters. A Chief Compliance Officer (CCO) to lead the Compliance Office and Compliance Officers for each business location in Japan and overseas and each unit have been appointed. A structure to enhance employee consciousness toward compliance is being established with necessary internal regulations being developed.

Internal audits

Internal audits are conducted at each unit and domestic group company to inspect compliance, risk management and law observance. Areas that are deemed in need of improvement are tracked regularly to raise the governance standards of the whole INOAC Group.

Negative Information Hotline

The Negative Information Hotline (consultation line) has been established so that employees can report not just compliance issues, but also any issues regarding product quality, safety and environment, sales, procurement and more. When such issues arise, the company will be able to respond immediately and take measures to prevent damages from spreading.

【Inquiries】

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