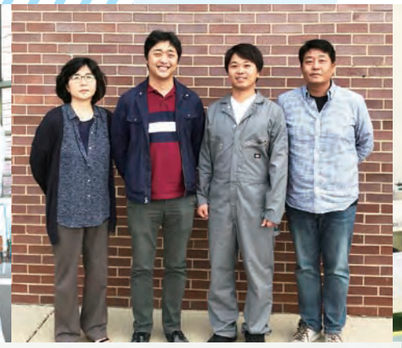
SMIC

SMIC CSR REPORT 2019











SMIC

Senju Metal Industry Co., Ltd.

23 Senjuhashido-cho, Adachi-ku, Tokyo 120-8555

TEL: (+81) 03-3888-5151 (Reception)　FAX: (+81) 03-3870-3032

www.senju.com

©2019 Senju Metal Industry Co., Ltd. All rights reserved.

SMIC Group CSR Information

https://www.senju.com/en/csr/

Email Address

web@senju.com

This report is made of material from well-managed, FSC®-certified forests and other controlled sources. It uses Non-VOC ink, which does not include volatile organic compounds, and is printed with Toray Waterless Plates®, which do not require a dampening solution containing alkaline developer or isopropyl alcohol.

Senju Metal Industry Group

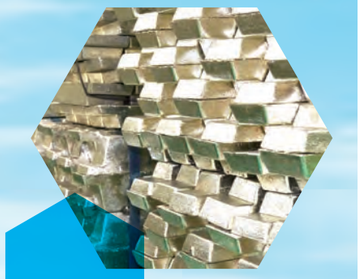
CSR Report











LOOK AT THE WORLD

Editorial Policy

SMIC Group strives to report on key challenges and topics of high social importance in order to determine materiality.
We declare that this report was made in compliance with the requirements of the GRI standards,
and reports the results of our efforts to solve social problems through our business.

Period Covered	April 1, 2018 - March 31, 2019 (Includes some information from April 2019 onwards)
Report Scope	26 group companies (includes non-consolidated subsidiaries and associated companies). Note that SMIC's environmental initiatives are listed separately.
Key Changes	No changes in the number of consolidated subsidiaries.
Membership	RBA, JWES, JIEP, JEITA, JAPIA, TEA, JCCI
Publication History	Current Issue: October 2019 (Previous Issue: November 2018)
Next Issue	October, 2020
Reference Guidelines	GRI Standards, Environmental Reporting Guidelines, ISO26000

*The GRI standards comparison table will be posted on our CSR website.

Disclaimer

This report contains descriptions of plans and strategies pertaining to the future activities of SMIC, as well as predictions and forecasts related to its business performance. Such descriptions include estimates and forecasts formed with information gathered and analyzed based on what is available at the time of creation. Please be aware that SMIC and its related companies assume no responsibility whatsoever for damages or losses occurring either directly or indirectly from the use of the information or content included in this report. Furthermore, the original text of this report was written in the Japanese language and has been translated into English and Chinese languages for reference. If there are any discrepancies between the Japanese version and the English or Chinese versions, the Japanese version shall supersede the other versions. Please be aware that SMIC assumes no responsibility whatsoever for any and all damages occurring from misunderstandings caused by translated versions of this report.

CONTENTS

Editorial Policy and Table of Contents ····· 1
Message from the President and Management Philosophy ····· 3
SMIC Group's Vision and CSR ····· 5

Feature: Safety

Part 1 **Business Activities and Safety**

Thoroughly Integrating Safety ····· 7
Safety in Manufacturing Facilities ····· 9
Safety in Indirect Departments ····· 9
Safety in Society ····· 12

Part 2 **Interview with Directors**

Passing the Baton to the Next Generation ····· 13

Society

Relationships with Customers ····· 17
Relationships with Suppliers ····· 18
Relationships with Local Communities ····· 19
Relationships with Employees ····· 21

Environment

Environmental Philosophy and Policy ····· 22
Eco-Factories ····· 23
Environmental Activities ····· 24

Management

Governance ····· 25

Corporate Profile ····· 26



The 81st anniversary of our founding has been a year for considering how we will build SMIC Group's future over the next 10 years, 20 years, and beyond. In terms of trends in corporate social responsibility, sourcing of conflict-free minerals as defined by the U.S. Dodd-Frank Act enforced in 2013 has changed to become "responsible mineral sourcing," expanding the scope of target minerals and target countries. For labor environments it will be crucial for us to make improvements, not only within our own companies, but also throughout the entire supply chain.

Global concerns over quality, sourcing, and labor environments has been recently on the rise, and our customers demand that we ensure safety. As companies that provide universally beneficial products, we hold the safety and security of all our stakeholders to be of top priority. Therefore, we have decided "safety" is the theme of this year's CSR Report, with contents that enable us to continue being a safe and secure company for our customers, employees, and society.

Fulfilling Our Corporate Social Responsibilities, Achieving the SDGs

In 2015, the UN General Assembly adopted the Sustainable Development Goals (SDGs). The SDGs consist of 17 goals divided into 169 targets relating to the environment, society, and the economy. They are a fundamental set of goals aimed at creating a society and "leaving no one behind.

"Our company is engaged in CSR and corporate activities to become an outstanding company that helps realize a sustainable environment, society, and economy, based on our Management Philosophy.

We listened to our customer's demands, and are striving to provide products and services that are both high in quality and socially and environmentally friendly. We will continue working to build a system that allows our customers to use our products with peace of mind through safe and secure conflict-free mineral sourcing, and augmenting our production facilities both in Japan and abroad to reinforce our production system.

Furthermore, to realize Society 5.0, a new society for the future, we are promoting the automation and IoT integration throughout our manufacturing equipment, lightening the workload on employees, and working to improve our workplace environments. In conjunction, while we boost our efforts to reduce long working hours and prevent harassment regarding personnel management and industrial relations; we are building our company to be a place where all employees can work comfortably and excel through our initiatives that ensure equal conditions and equal pay for equal work, and our support for balancing childcare and elderly care with work.

As part of our activities to realize a sustainable society, environmental conservation and classroom lessons are two ways in which we are deepening our engagement with members of local communities surrounding our production facilities both in Japan and abroad.

Last year, SMIC was selected by the Ministry of Economy, Trade and Industry as "The Driving Company for the Regional Future." With humility we accept this role as a company to drive the region's future. We will devote ourselves day in and day out to be a company that is a paragon not only in the economy, but also for the environment and society as well.

Management Philosophy

Perform our mission as a socially valued institution via providing universally beneficial products

"Company" is a place where all employees share core values and are able to use the lines of communication as a "dojo" for the mastery of oneself. It is our strongest desire that company growth is directly interwoven with employee happiness – materially and spiritually. In the face of modern society, as the foundation of a company's existence, we are expected to continue to provide universally beneficial products year after year. Our management philosophy is to harmonize societal goals with employee desires, thereby enabling our mission to be a valued institution sharing peace, happiness and progress to all of society.

Three key pillars are necessary under this philosophy in order to advance company development and ensure the success of our mission: Ability, Integrity and a Fighting Spirit. These pillars are the three sacred treasures that form the cornerstones of every aspect of life.

When these pillars are indomitable inside our institution, a bright, peaceful and vigorous workplace will naturally emerge. We are confident that with this workplace as a driving force we will overcome any challenges and the company will continue to grow as long as this pioneering spirit is encouraged each and every single day. Together, let's take this philosophy to heart and embrace it as our belief, and build a bridge of peace and friendship across the entire corporate landscape while progressing into joyful, healthy lives.

June, 1960

The late Mr. Senju Sato, Honorary Chairma

As President:	June, 1960 - June, 1978
As Chairman:	July, 1978 - May, 2008
As Honorary Chairman:	June, 2008 - October, 2008

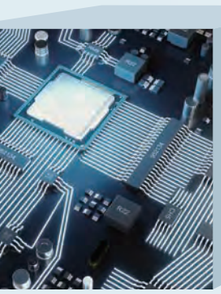
What are the SDGs?

The Sustainable Development Goals (SDGs) are common goals for all of humanity to achieve by the year 2030, set forth in "Transforming our world: the 2030 Agenda for Sustainable Development", which was adopted by the UN General Assembly in September 2015. Companies are expected to play an active role in achieving the 17 SDGs and their 169 targets.



SMIC Group's Vision and CSR

SMIC Group is engaged in CSR and corporate activities aimed at being an outstanding company that helps to realize a sustainable environment, society, and economy, based on our Management Philosophy, by maintaining sincere relationships with our customers, employees, suppliers, local communities, the global environment, and other stakeholders.









Progression of Our Entire Society

Local Communities

- Prevent accidents/disasters at business sites and provide disaster support in surrounding areas
- Respect local cultures/customs and contribute to local communities

Customers

- Provide safe, secure, and stable products and services
- Properly provide eco-friendly products/services and information

Suppliers

- Fairly select and conduct transactions with suppliers
- Maintain corporate value and support socially responsible investment

SMIC

Global Environment

- Prevent global warming and reduce waste production
- Discontinue use of conflict minerals and control chemical emissions

Employees

- Fairly evaluate, treat, train, and fulfill employee allocation
- Consider occupational safety and both mental and physical health

Management Philosophy

Growth of the Company and Employees Contributing to customer satisfaction and a better society

Working together with all stakeholders to realize a better society

Key challenges for the SMIC Group and stakeholders to address together

The Global Reporting Initiative (GRI), an international guideline for sustainability reports, amended its guidelines in May 2013 to G4 and in October 2016 to GRI Standards with the goal of changing their approach for information disclosure from an exhaustive one to one focused on key challenges (materiality). In order to disclose the integrity of our management through people and how we communicate and develop globally with our stakeholders, SMIC is identifying the materiality of the five aspects stipulated in the code of conduct of the RBA (Responsible Business Alliance: renamed in October 2017 from EICC) and of contents reported in the monthly CSR meetings, based on the following four-step flow recommended by GRI.

step 1 Identification of key issues and events

- GRI aspects and important RBA self-audit items
- Identification of the scope of impact

step 2 Prioritization

- Severity assessment for stakeholders and the company
- Qualitative and quantitative assessment in the monthly CSR meeting

step 3 Validation

- Assessment of the scope, impact and period of GRI items
- Approval and disclosure by the management team

step 4 Review

- Distribution and disclosure of documents in hard and soft copy
- Analysis and summary of opinions in the monthly CSR meeting for utilizing in future meetings

Thoroughly Integrating Safety













Global concerns over quality, sourcing, and labor environments have been recently on the rise, and our customers demand that we ensure safety. As companies that provide universally beneficial products, we hold the safety and security of all our stakeholders to be of top priority. Therefore, we are working to thoroughly ensure safety in both our manufacturing facilities and indirect departments.
The following is an introduction of how we ensure safety in our manufacturing facilities and indirect departments, and our related companies that provide safety to society.

Safety in Manufacturing Facilities

Sourcing → **Materials Management** (Storage/Reception) → **Solder Manufacturing** (Smelting → Casting) → (Product Management) → **Analysis** (Analytical Inspection) → **Shipment** → **Customers**

Sourcing
- CSR sourcing
- Conflict-free

→ Relationships with Suppliers P.18

Warehouses
- 3D automated warehouses
- Autonomous robot carts

→ Automated Equipment P.9

Furnaces
- Robots for automation

→ Automated Equipment P.9

Bar solder, billet, ingot
- Automation

Quality Management
- Weight management / Factor analysis

→ IoT Analysis Systems P.9

Product Safety
- Ensuring safety by analysis

→ Analysis (Product Safety) P.10

Packing
- Automatic weighing and packing robots

→ Automated Equipment P.9

5S Activities

→ 5S Activities P.9

Safety of Employees

→ **Focus**
Sprinkler equipment installed in facilities in case of disaster P.9

→ **Focus**
Conducting evacuation drills, firefighting drills, and first aid training P.10

BCP
Strengthening backup systems in cooperation with domestic and overseas bases

→ BCP (Business Continuity Plans) P.10



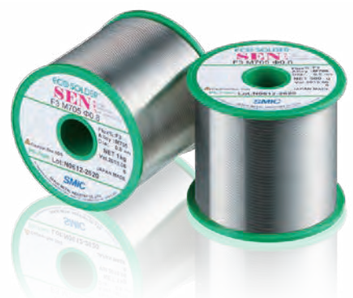




Safety in Indirect Departments

→ Safety in Indirect Departments P.9-11

- Quality Activities
- Human Resources Management
- Intellectual Property
- Information Security
- Business Audits



Safety in Manufacturing Facilities

Automated Equipment

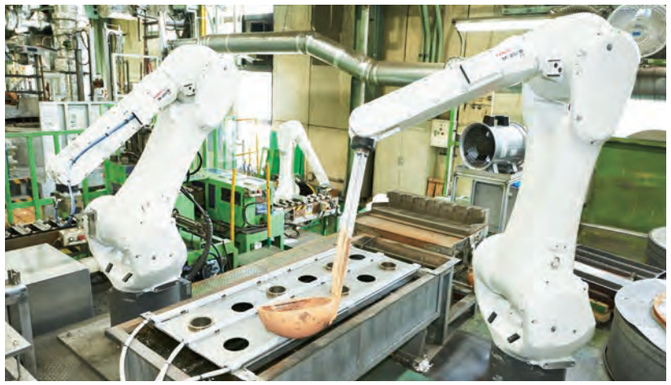
Previously, manufacturing, packing, and logistics for our products required significant human labor, which placed a great physical and mental burden on our employees. In order to reduce this burden, improve safety, and improve the quality and productivity of the products we manufacture, our Manufacturing Department is introducing equipment for automation and robotization. Currently, our main facility - the Tochigi Segment - is the center of this effort, but we are actively introducing equipment for automation and robotization equipment at each of our production bases in Japan and overseas. We are also developing and progressing toward the next generation of the SMIC Group.
In addition, our Logistics department has introduced a 3D automated warehouse that can automatically store and retrieve solder materials on high-rise racks. They have also introduced autonomous robot carts that transport products without human assistance in the warehouse, reducing the burden on employees and making work more efficient.



3D automated warehouse
(Tochigi Segment Logistics Department)



Autonomous robot carts
(Headquarters Logistics Department)



Solder pallet automatic manufacturing robot (Tochigi Segment Manufacturing Dpartment)

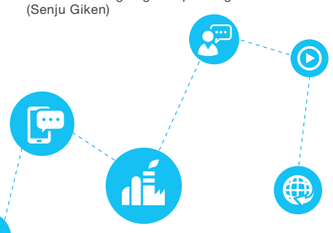


Automatic weighing and packing robots
(Senju Giken)

IoT Analysis Systems

We have installed an IoT analysis system in the automatic soldering and packing equipment at the Tochigi Segment, which collects and aggregates information such as the weight of each solder bar manufactured, as well as the temperature around equipment and the temperature inside solder baths, and keeps the weight of manufactured products constant by linking data with analysis and automated equipment. In the future, we plan to introduce IoT analysis systems in other automated facilities in order to conduct advanced product management.





Analysis (Product Safety)

Analytical inspections of our products are conducted at the Industrial Analysis Service Tochigi Laboratory, a third-party organization and an affiliated company of SMIC.
Industrial Analysis Service is an associated company established when the Chemical Analysis Department of SMIC was separated and made independent in 1972. It has technological capabilities backed by nearly 70 years of experience and achievements accumulated starting before that separation, as well as state-of-the-art analytical equipment, which it uses to conduct ultra-high precision and detail analytic inspection.
We have established a system that can produce analysis results in as little as 6 hours after receiving a request for product analysis and inspection.



BCP (Business Continuity Plans)



Solder Powder Material



Solder powder manufacturing facility in Chicago, USA

SMIC Group has established a risk management system that evaluates, analyzes, and takes measures against various risks in preparation for emergencies such as natural disasters, earthquakes, fires, explosions, and outbreaks of infectious disease, in order to minimize damage and improve ability to implement business continuity. The Group has also established a promotion system and action plan for early recovery of important operations.
Also, in the event there are production sites that have difficulty with production due to an emergency such as a natural disaster, we are strengthening our backup system so that production can continue in cooperation with other production sites in Japan and overseas. In addition to Senju Giken in Miyazaki, which manufactures solder balls and flux, and Senju Electronic in Iwate, which manufactures solder balls, in fiscal year 2019, we established a preform manufacturing facility in Nishiwaki City, Hyogo Prefecture and a manufacturing facility for solder powder used in solder paste in Chicago, USA.

Focus

Conducting evacuation drills, firefighting drills, and first aid training

SMIC Group conducts evacuation drills, firefighting drills, and lifesaving classes (AED classes) every year, following the guidance of fire departments and security companies, in order to save employees' lives in the event of disasters such as earthquakes and fires. Last year, one of our employees collapsed in a state of cardiopulmonary arrest at the Tochigi Segment, but that employee's precious life was saved as a result of swift cardiopulmonary resuscitation, AED, pulse checks, and notification through collaboration within the company. SMIC will continue to conduct training and lectures to teach lifesaving skills.



We received a letter of appreciation from the Moka Fire Department for the achievement of saving a life at the Tochigi Segment.

Safety in Indirect Departments

5S Activities

5S is a grouping of workplace environment maintenance and improvement activities, which create a comfortable work environment, improve work efficiency, and contribute to improving quality, productivity, and safety. In the SMIC Group, 5S Promotion Committees organized at each work site conduct 5S patrols at workplaces every month to identify issues and make improvements.
These 5S Promotion Committees promote 5S improvements in their own departments by actually finding and learning the improvements and issues in each department. Furthermore, 5S Promotion Committees aim to raise the level of the company overall by holding discussions aimed at making improvements.
We will continue to promote 5S activities throughout the SMIC Group in order to improve our workplace environments.



Focus

Sprinkler equipment installed in factories in case of disaster



SMIC Group installs sprinklers in manufacturing facilities, offices, and research buildings in preparation for fires caused by disasters.

Quality Activities



SMIC provides material products to customers in various fields, including electronic devices such as smartphones and personal computers, as well as automobiles and home appliances.
We consider quality to be one of the pillars necessary to meet customer demands, and promotes quality improvement activities in the factory every single day.
We also conduct product analysis and inspections at our Industrial Analysis Service, which is a third-party organization, and determine whether the quality is acceptable or not to prevent fraud and counterfeiting in inspections.
In 2018, we shifted our certification from ISO/TS16949, the international quality management system standard for the automobile industry, to IATF16949. We will continue our efforts to raise quality and make continuous improvements, so that we can deliver products that satisfy our customers.

Safety in Indirect Departments



Human Resources Management

Workplace harassment and long working hours have become serious social issues. SMIC Group believes that it must take no actions which diminish the mental health of employees, nor deprive them of their willingness to work or willingness to live, and considers preventing such actions to be an important issue in labor management. Therefore, the Group promotes various measures and improvements to prevent such actions, which include the following. Specifically, we prevent harassment through internal reporting systems that include "smile emails" and self-reporting systems, and also control and direct long working hours by tracking working hours and workplace presence hours using the attendance management system.
We will continue to create work environments where employees can work with peace of mind and full of vigor.

Intellectual Property

To put it simply, intellectual property is *valuable information*. Technology, knowledge, and know-how resulting from achievements in R&D and improvement activities at our manufacturing sites are in fact valuable information.
Our Intellectual Property Department provides support and assistance for acquiring rights to valuable information (for example, obtaining patents) and for concealing that information (for example, managing know-how as a company secret).
SMIC Group makes efforts to protect its products and prevent infringement on the rights of third parties in order for customers to use our products with peace of mind. We also aim to help with business activities for sustainable growth, as well as contribute to the creation of value useful to society, by effectively using our intellectual property system.





Information Security

In addition to BCP/DR* measures, SMIC Group is further enhancing the operation of its information security management in response to the damage caused by cyberattacks that have occurred in recent years.
Currently, it is said that even with enhanced defense measures against cyberattacks, prevention will not reach 100%. Therefore, it is incredibly important to formulate a basic action plan so that when damage does occur, it can be contained and restored quickly.
We consider it to be very important for us to educate employees on rules and threats and update them from time to time moving forward.

*DR: Disaster Recovery

Business Audits

SMIC Group conducts internal audits (business audits) for the entire group, working to enhance corporate governance in order to do risk and management and prevent scandals.
With the purpose of maintaining sound corporate compliance, our Business Audit Department conducts "security audits" based on the Foreign Exchange and Foreign Trade Act, "CSR audits" based on the RBA Code of Conduct, and "information security audits" concerning the handling of confidential information inside and outside the company. These audits are conducted at all of our bases both in Japan and abroad (176 locations), with 293 items requiring correction detected in fiscal year 2018. These corrections were made promptly in each department, contributing to continuous improvement of our management system.



Safety in Society

Senju Sprinklers







Safeguarding Society by Valuing Human Lives and Property





Head Manufacturing Line



Head Production Process Model D

Corporate Profile

Company Name	Senju Sprinkler Co., Ltd.
Headquarters Address	23 Senjuhashido-cho, Adachi-ku, Tokyo 120-8555
TEL	03 (3870) 5011
FAX	03 (3881) 3199
President	Setsuo Tanaka
Established	April 8, 1974
Capital	JPY100,000,000
Employees	192 (As of January 1, 2019)
Business Portfolio	Manufacture and sale of fire sprinkler head alarm valves and simultaneous release valves Manufacture and sale of fusible stoppers for high-pressure gas containers

Since its success in developing the first domestically-manufactured and officially-authorized fire sprinkler heads in 1963, Senju Sprinkler has provided products the ensure the safety and security of people's lives, including sprinkler heads, related valve products and safety stoppers, of which it boasts the top share in Japan.
By using a special solder with a low melting point in our fire sprinkler heads, the company has realized an accurate temperature sensing mechanism that takes advantage of the characteristics of the metal, thereby contributing to high quality and reliability.
Senju Sprinkler continue to deliver the finest products for protecting people's lives and property, through the synergistic effects of using the SMIC Group.

Industrial Analysis Service



Corporate Profile

Company Name	Industrial Analysis Service Ltd.
Headquarters Address	23 Senjuhashido-cho, Adachi-ku, Tokyo 120-8555
TEL	03 (3881) 0541
FAX	03 (3881) 0547
President	Yuji Kawamata
Established	February 8, 1972
Capital	JPY20,000,000
Employees	104 (As of January 1, 2019)
Business Portfolio	Material testing and analysis Characteristic tests of soldering flux Environment-related Worker dispatch business

Supporting High Quality and Reliability, Contributing to the Conservation of the Global Environment

Industrial Analysis Service originated as the Chemical Analysis Department of SMIC, but was established as its own company in February 1972 following the separation of our nonferrous metal analysis business. It promptly provides accurate analysis data on various materials as well as substances that are problematic to the environment. In particular, it provides analysis data for four different phthalate esters that have been added to the RoHS Directive (introduced in July 2019 and banned from the market in the EU) as substances that may cause adverse effects to the human body, such as disrupting as disrupting the endocrine system and causing reproductive toxicity. It also performs analysis of PFOA, which has been added to the list of REACH restricted substances as a hardly decomposable organic fluorine compound that adversely affects animals and the human body, and content of which is required to be less than the threshold of 25 ppb*, leading the company to receive many more analysis requests from customers.
In the future, the company will continue to contribute by expanding its analysis areas (which currently include solder materials, RoHS/REACH, material analysis, and environmental analysis) in order to contribute to the safety of society and the preservation and protection of the global environment.

*ppb: Parts Per Billion

Passing the Baton to the Next Generation

Safety is Everything

Representative Director Tomohide Hasegawa and Director Tetsuya Okuno, who assumed office in December 2018, spoke about "safety," the main theme of this year's CSR report, and discuss how they want to pass the baton to the next generation for the next 100 years of the company.



Representative Director
Tomohide Hasegawa

Joined the company in 1982. After serving as General Manager of the Osaka Sales Office and CEO of Senju Metal (Hong Kong) Co., Ltd., he assumed the post of Representative Director in 2018. His hobbies include reading and motto is "I shall live this life, for no other life is more worth living than this one." (Saneatsu Mushanokoji).

Director
Tetsuya Okuno

Joined the company in 1982. After serving as President of Senju Comtek Corp. and Executive Officer of the International Business Department, he assumed the post of General Manager of the Tochigi segment and Director in 2018. His hobbies include golf, and mottoes are "Be humble, honest, and calm" and "Passion to Win".

Performing our mission as a socially valued institution based on Management Philosophy

Interviewer **Since you have been newly appointed as Representative Director and Director respectively, please tell us your thoughts and ideas as you take over and carry on the Management Philosophy created by the late Honorary Chairman Senju Sato.**

Hasegawa Our management philosophy was first made about 60 years ago, and it has been integrated into the very foundation of SMIC ever since. Our company has developed in line with this Management Philosophy, so I can really feel the great legacy of Mr. Sato. When I joined the company, we were not yet active globally, but because we sincerely fulfilled the roles we were given without ever giving up, we eventually became able to supply the world with beneficial products, and we can now compete with some of the best companies in the world.

I want our employees to keep this Management Philosophy in mind as we work towards 100 years in business.

Interviewer **And your thoughts Mr Okuno?**

Okuno Last year, I became the director of the company's main manufacturing facility, the Tochigi segment, and I am now responsible for overseeing the entire manufacturing department. That reminded me that the foundation of our company is manufacturing. Our Management Philosophy of "Providing beneficial products to the world" means that we will continue to make things beneficial to the world in the era we live in. While the truly great things we have cultivated over the long history of the SMIC Group will continue to be passed down, I think there are many other things that we must change as our times and environment change.

Interviewer **The government is advocating "Society 5.0," a society that utilizes technologies such as AI and IoT. How do you intend to develop SMIC as we approach our 100th anniversary?**

Hasegawa I think that objects solder is used for have changed significantly. At the time when we first joined the company, solder was used in many household appliances such as TVs, but since then it has spread to the semiconductor industry, which includes personal computers and smartphones. In the future, EV (Electric Vehicle) and AI/IoT related industries will form the heart of the market.

When products that were not electrically driven before are digitized and a CPU (Central Processing Unit) is installed, we can enter a new industry. This will change the standards for development and manufacturing, including the conventional industry rules. Our company will not change in the sense that we will continue manufacturing alloys including solder, but I think we have to learn a lot in order to grasp the essence of our customer's demands. Our Sales Department and R&D Department need to actively acquire information, so we provide opportunities to study in-house.

Okuno Some customers have changed their own industry. For example, companies that did not make cars before now make cars. Even our factories can feel that our customer base has expanded and the usage and demand for our solder products are changing. New technologies are emerging from various fields, so it is necessary for us to develop products that support them.

AI, IoT, robotization, and other aspects of Society 5.0 all apply directly to our factories. Our factories are also taking the initiative to learn new technologies such as AI, IoT, and robots, and have started to incorporate them on the manufacturing floor. I believe it is important for us to introduce these things in the industry ahead of the competition so that we can increase the value added on the manufacturing floor.

Improving quality and providing safety to customers.

Interviewer **The main theme of this year's CSR report is "Safety." Please tell us your thoughts and initiatives regarding quality and safety.**



We will change what must be changed adapting to shifts in our era and environment

Hasegawa We established the Industrial Analysis Service 47 years ago. Since then, we have worked to supply high-quality and safe products to customers by entrusting our internal inspection process to the Industrial Analysis Service as a third party organization.

Okuno In the media, there is growing concern about the reliability of quality inspections, but I feel that we can give our customers peace of mind by not only performing in-house checks, but also having third parties perform inspections. In order to improve quality, it is important that we consistently perform 5S (sort, set in order, shine, standardize, and sustain). Working on 5S helps us to toughen our resolve, reduce accidents in the workplace, and improve the quality of our products by keeping out contaminants. We started 5S activities 20 years ago, and have implemented them more thoroughly in the past 10 years, so I think 5S has really taken root in our company.

One of our new initiatives is robotization. In the past, we had so-called "3D jobs" (difficult, dirty, and dangerous jobs) and poor workplace environments where people handled heavy or hot objects. However, by thoroughly implementing 5S and introducing robots and automated equipment, we have been able to build factories that are friendly to our workers as well. The President and the rest of our management team are actively investing in robotization and automation, so our factories are working to make sure that investment does not go to waste.

Interviewer **What about ensuring stable supply to our customers?**

Okuno The 2011 Tohoku Earthquake and Tsunami was a major motivating factor for ensuring stable supply. It awakened the whole world to the importance of disaster recovery as well as BCP (business continuity plans). We conduct thorough risk management, source with multiple purchases or at multiple factories, and always confirm the soundness of our suppliers.

Hasegawa This year, we established a new preform manufacturing facility in the Kansai Region of Japan and a new powder manufacturing facility in the USA. Now we constantly review our supply system, including our supply chain, in order to meet the needs of customers around the world.

Supporting safety for society through responsible sourcing and recycling

Interviewer **Many natural minerals are used for solder materials. Please tell us what initiatives you have undertaken.**

Okuno I'll use tin as an example. Our company is the only solder manufacturer that is a member of the RBA (Responsible Business Alliance), and we have joined the "conflict-free" declaration, which is to say we do not use materials sourced from conflict zones. Our sourcing personnel go to tin smelters around the world where we source our materials to conduct regular inspections.

Hasegawa As part of our duty to make responsible use of limited resources, we have collaborated with TAK-G to make effective use of resources starting roughly 40 years ago. Recently, as the manufacturing industry has become more conscious of the environment, demand has increased for solder products using recycled materials. I feel that our efforts to establish internal and external systems that can collect and recycle solder sold by us are meeting the needs of customers and society.

Okuno The solder we collect contains impurities and various metals, so it cannot be recycled as it is. TAK-G has established technology that can produce tin material with the same or higher purity than tin purchased from tin smelters, and our production has increased accordingly.

Ensuring employee health and safety, and making an environment where they can excel

Interviewer **Please tell us about "safety for employees" as it pertains to ensuring the health and safety of employees and making an environment where they can work with peace of mind.**

Hasegawa As a pillar of our efforts to maintain employee health, we have established a system for the company to pay for cancer insurance premiums and medical expenses.

Last year, we renovated our employee dormitories for both men and women, with an emphasis on making a comfortable working environment, such as enhancing the employee cafeteria.

In addition, we have established systems such as reduced working hours for childcare and elderly care, as well as leave from work to accompany a spouse who has been transferred out of the area. These efforts are intended to make a comfortable environment and continue to be a company where all employees find it rewarding to work.

Okuno Recently, in accordance with "work-style reform" promoted by the Japanese government, we have decided on a set maximum amount of overtime work, have managed attendance by day and by month, and have reassigned our workforce according to circumstances, so as to ensure that employees do not have to work excessively long hours.

On the business side, our production volume is increasing, so I think that it is essential for us to automate equipment and introduce robots to avoid conflict with work-style reform. In addition, we are reviewing the risk situation in our factories, promoting safety measures and disaster countermeasures, and are working on a project to install sprinklers - a product made by one of our associated companies - in all our factories.

Interviewer **In the past year, have you made any big decisions regarding management?**

Hasegawa Our biggest reform in management was to reorganize the SMIC Group with a holdings company. We are working to make major structural changes such as effectively utilizing human resources, capital, and funds by placing our existing subsidiaries and associated companies under SMIC.

Okuno By converting to a holdings company structure, we will be able to promote the same pay and same conditions for the same work within the SMIC Group, there will be more opportunities for exchanges between our bases and for career advancement, and it will be easier to make capital investments. This is an important initiative for our 100th anniversary.

Hasegawa Diversity has also become increasingly important. Currently, we have 14 bases overseas. Even so, it is necessary to promote localization in the true sense of the word, so that local employees take the lead role in operations, rather than employees dispatched from Japan.

We are also aiming to make workplaces where female employees are comfortable working, feel motivated, and find their work to be rewarding. Director Yuka Sato's presence in our company has significantly changed general awareness at our domestic bases, but there are still some areas where the advancement of female employees is totally inadequate when compared to our overseas bases. In the future, we will establish a work environment and systems in which each individual can play an active role regardless of their gender, nationality, age, etc.

Interviewer **The two of you gave us a very clear picture of SMIC's ideas and initiatives on safety, as well as your thoughts looking forward to the 100th anniversary of our company's founding. Thank you very much.**

Introducing Society 5.0

Society 5.0 is the next generation following hunter-gatherer society (Society 1.0), agricultural society (2.0), industrial society (3.0), and digital society (4.0). The Japanese Cabinet Office advocates and Japan aims to realize this future society, which balances economic development with social issues such as regional disparities in medical and nursing care or labor shortages, by using technology such as AI and IoT to analyze, share, and judge various types of information collected from around the world (big data).



Made by modifying the Cabinet Office Society 5.0 (https://www8.cao.go.jp/cstp/society5_0/index.html)

Aiming to create a workplace where the individual can feel fulfilled via effective human resourcing under a holding company structure



Relationships with Customers

Reference: Responsibility for society
https://jp.senju.com/ja/csr/social_responsibility/

SMIC Group develops and manufactures safe and secure products. In order to provide product information accurately and promptly, our departments in charge of sales and service are working to provide the latest information through customer service, exhibitions, and events. In addition, we have opened a contact portal on our website.

Quality and Safety Policy

SMIC Group has established the following quality and safety policies based on our management philosophy.

1. We shall comply with related laws and regulations as well as customer demands, and improve customer satisfaction by supplying products and services with consideration for quality and safety.
2. We shall construct, implement, and maintain a quality management system in accordance with our established quality manuals, and continuously improve the effectiveness of this system.
3. We shall set quality policies and targets for activities, conduct regular reviews and as necessary, and evaluate opportunities for improvement (intervals, frequency, and circumstances) of the management system.
4. We shall evaluate the necessity of changes to our quality management system, and if changes are necessary, we shall review our system to maintain its adequacy in light of our management philosophy.

Security Export Control System

SMIC Group has developed and enhanced its export control system by establishing a Security Export Control Headquarters with the Representative Director as the chief officer of Security Export Control, in order to avoid violating laws and regulations; to comply with laws and regulations; and to implement appropriate export controls with regard to the export of cargo and provision of technology regulated by the Foreign Exchange and Foreign Trade Act, the US Department of Commerce, and export control regulations in various countries; from the perspective of non-proliferation of weapons of mass destruction and prevention of excessive accumulation of conventional weapons. In accordance with this basic policy, we have established "Security Export Control Regulations" and submitted them to the Ministry of Economy, Trade and Industry. We are also conducting internal audits every year in order to maintain our compliance. SMIC is recognized by the Ministry of Economy, Trade and Industry as a company that has established a voluntary system for security trade management.

TOPICS

Intel Corporation bestowed the SCQI Award

Senju Metal Industry Co., Ltd. awarded the Supplier Continuous Quality Improvement (SCQI) by Intel Corporation on March 7, 2019.
This is the most prestigious award given to supplier companies that have achieved excellent results. In FY2018, only 6 out of approximately 20,000 suppliers were given the SCQI Award. We earned this award due to our achievement of outstanding quality and performance against Intel's goals. SMIC supplies solder materials (solder balls, flux, paste, bars, and wires) which are all crucial to Intel's success.



Relationships with Suppliers

SMIC Group is working to establish a safe and secure supply chain, including conflict-free mineral sourcing.

The Path to Conflict-Free

In January 2011, the Group joined the Responsible Business Alliance (RBA) and since then has worked to build close relationships with customers in the electronics industry. As a member of the RMI (Responsible Minerals Initiative) since 2014, we have actively encouraged smelters to undergo the RMAP (Responsible Minerals Assurance Process) examination and obtain third-party certification, and in February 2015 we reported that all of our smelters were RMAP certified. Since the third year, when stricter compliance with the SEC (U.S. Securities and Exchange Commission) final rules were implemented as a requirement, we have continued to call on all our suppliers to renew RMAP certification. We will continue striving to maintain a safe and secure supply chain for products such as solder bars, resin flux cored solder, preforms, anodes, pastes, and balls.

Sourcing Activities

SMIC has clarified the basic stance of its purchasing policy (respect business partners, and do fair and honest sourcing) and CSR sourcing policies for sourcing with suppliers.
In addition, the basic stance we require of suppliers includes 14 items with reference to the requirements of ISO 9001, ISO 14001, and the supply chain assessment guidelines stipulated by RBA.

We conduct audits on Japanese and international business partners through our Sourcing Department, as well as the related R&D Department and Manufacturing Department, in accordance with our annual plan.
In FY2018, we confirmed that there are no problems through our supply chain assessment, with cooperation from our Japanese and international business partners.

CSR Sourcing Policy
❶ Senju Metal Industry Co., Ltd. "Quality and Safety Policy"
❷ Senju Metal Industry Co., Ltd. "Environmental Policy"
❸ Senju Metal Industry Co., Ltd. "Purchasing Policy"
❹ Senju Metal Industry Co., Ltd. "Basic Stance Required of Suppliers"
❺ IATF 16949* requirements that must be considered for deliverables
❻ Environmental management requirements that must be considered for deliverables

*IATF 16949: an international quality management system standard for the automotive industry



Visit to Fenix Metals recycling smelter in Poland

Basic Requirements of Suppliers
❶ Compliance with laws and social norms
❷ Promotion of sound business management
❸ Emphasis on achieving quality, deadlines and stable supply
❹ Emphasis on Business Continuity Plans (BCP)
❺ Consideration for the environment
❻ Prohibition of sourcing from conflict zones
❼ Emphasis on Value Engineering (VE)
❽ Emphasis on providing information
❾ Emphasis on initiatives to shorten the material sourcing period
❿ Strict confidentiality
⓫ Emphasis on utilizing IT
⓬ Information security
⓭ Eliminating ties to anti-social forces
⓮ Social contributions

Relationships with Local Communities

SMIC Group is actively involved in efforts to contribute to the local community at each of its bases in Japan and overseas, through cultural and educational support and through environmental conservation activities.

Donating and visiting to orphanages [Date: October 8, 2018] (Senju (Thailand) Co., Ltd.)

"The Orphanage Foundation of Thailand Directions Save" was established in 1974 as an organization which supports education for children of all races in order to prevent social offenses and raise children to be good citizens. Senju (Thailand) Co., Ltd. and our Thai joint venture company Thai Solder Industry Corp., Ltd. agree with the goals of this organization, and our representatives have visited the childcare facilities operated by the organization in order to donate food and other items.



Donating smart TVs to local elementary schools and teaching lessons on ecology [Date: December 17, 2018] (Senju Solder (Phils.) Inc.)

Senju Solder (Phils.) Inc. has donated smart TVs for e-learning to improve the educational environment of children who will be responsible for the future of the Philippines, and has conducted on-site lessons in environmental conservation and 5S since 2012.

In 2018, we donated a smart TV to Sta. Cruz Elementary School and taught a lesson about the importance of sorting and recycling waste.



Cleaning activities at Zoo Negara (Malaysian National Zoo) [Date: October 20, 2018] (Senju (Malaysia) Sdn. Bhd.)

Zoo Negara, a national zoo in Kuala Lumpur, Malaysia, is run by the local NGO "Malaysian Zoological Society." It is also supported by aid from corporations and the labor of volunteers. Senju (Malaysia) Sdn. Bhd sent 17 volunteers to the zoo as support for the organization. Under the guidance of the zoo staff, they enthusiastically assisted in cleaning, painting, and food preparation in the zoo and in animal enclosures.





Communication volunteers for children with physical disabilities [Date: March 16, 2019] (Senju Electronic (Taiwan) Co., Ltd., Senju Metal Industry Co., Ltd. Kaohsiung Branch)

A total of 58 volunteers from Senju Electronic (Taiwan) and SMIC Kaohsiung Branch participated in a communication volunteer program held by the Angel Heart Family Social Welfare Foundation, which supports children with disabilities as well as their families, and the Social Affairs Bureau of Kaohsiung City Government. At Labor Park in the city of Kaohsiung, Taiwan, children and their families went on walks and made sketches with the volunteers.



Artisan classes

In order to raise awareness of and interest in manufacturing, SMIC conducted the following initiatives in FY2018, where it conducted soldering lessons and sponsored manufacturing lessons.

- Career development support for local technical high schools (soldering lessons)
- Exhibited at the Asahi Shimbun "Jobs Museum" with Shinjuku Takashimaya (conducted soldering workshops)
- Exhibited at the Adachi Manufacturing Festa
- Sponsored Taiyo Yuden Co.,Ltd. "Artisan Classes"
- Sponsored "Electronics Interactive Lesson" at the TDK Museum



Development of waterfront environments for fireflies to flourish [Date: June 2, 2018] (Tochigi Segment)

The Tochigi Segment has become a member of the "Moka Environmental Partnership Conference," a volunteer organization sponsored by the Environment Section of the Moka City Government, and we have cooperated in nature conservation and forest stewardship in the city over the year. In June 2018, 10 employees from the Tochigi Segment participated in developing the waterfront environment by removing crayfish and planting so that fireflies can live on the waterfront in nature parks in the area.





Conservation activities in a local wildlife preserve [Date: June 18, 2018] (Senju Comtek Corp.)

Senju Comtek Corp.'s Chicago factory is located in Illinois, where the NPO "Preservation Foundation of the Lake County Forest Preserves" is engaged in activities to protect native species that inhabit the local Grant Woods Forest Preserve.

Senju Comtek Corp. supported this activity by sending eight volunteers including both employees of the Chicago factory and their families to conduct conservation activities in the preserve.



Maintenance of bamboo grove [Date: April 22, 2018] (Senju System Technology)

"Kintaro Club," is an NPO based in Toyama City, Toyama Prefecture where Senju System Technology is located, and is working to regenerate forests in the area.

Every year in the spring, they recruit volunteers to maintain bamboo groves in the Kureha Hills. In 2018, five volunteers from Senju System Technology participated in thinning thick bamboo and various trees.

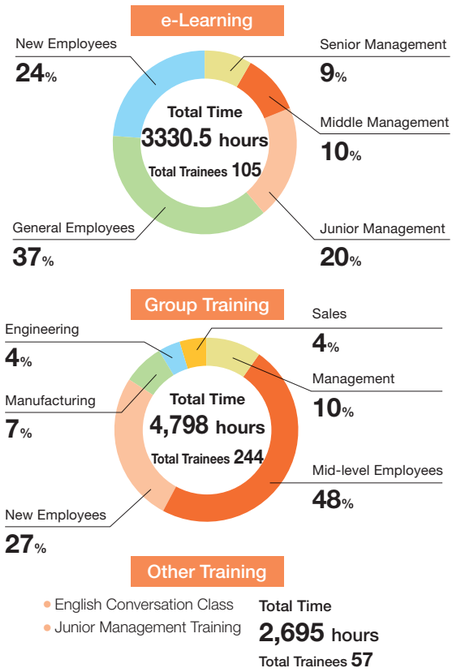


Relationships with Employees

SMIC Group promotes the respect of diversity, maintenance of good health, and develops human resources in consideration of the work-life balance of its employees.

Employee Training

The basic training policy of SMIC is a commitment by all employees to constantly acquire new knowledge, and develop personnel that can make reasonable judgments from a broad perspective. In FY2018, a total of 406 trainees attended at total of 10,823.5 hours of lessons, including e-learning, group training, and other forms of training. Employees involved in manufacturing attended on-site improvement training and joined in meetings to report on what they learned during the training.



Diversity Workshops

SMIC holds diversity workshops with two main purposes. The first is to effectively respond to our constantly changing business environment and diversifying customer needs by respecting and actively utilizing individual differences. The second is to "realize a workplace where employees feel happy, and can stay longer with peace of mind and sense of fulfillment," by believing in employees' potential, so that they can demonstrate their unique strengths. In FY2018, we held six such workshops with a total of 56 participants.



Accepting Reduced Assigned Working Hours

Regardless of measures (working obligations) decreed by the Child Care and Family Care Leave Law for workers who are raising children until they begin elementary school enrollment, we will take measures to reduce assigned working hours for employees who have children after entering elementary school who apply for said reductions.
Already, many female employees with children in elementary school are using this system to help balance parenting and their career.

Fostering Employee Wellbeing

Various Systems		Frequency/Period	Details
Health Management	General Health Examinations	1 time/year	Implementing general health or lifestyle-related disease medical examination for employees.
	Lifestyle-related Disease Medical Examination	2 times/year	
	Special Health Examination	2 times/year	We conduct health examinations with special items for employees engaged in work that can harm the body.
Welfare	Cancer Insurance System	25 years old or older	The company pays the insurance premiums for employees 25 years of age or older who enroll in cancer insurance, thereby reducing the burden of unexpected cancer-related diseases on employees.
	Medical Expense Reimbursement System	As needed	The company bears part of the cost of medical insurance required for treatment of illness and injury suffered by employees in their private lives.
	Consultation Office	Any time	The company offers counseling about the workplace and work matters through an external service.

Environmental Philosophy and Policy

Environmental Philosophy

We recognize that all humanity has the duty to protect and conserve the global environment. To achieve the common goal of creating a sustainable society, we are fully committed to implementing environmentally sound business practices and help preserve the beauty of nature and diverse ecosystems.

Environmental Policy

We strive to integrate the environmental values to the SMIC group worldwide and systematically promote full participation of all employees in environmental activities towards a sustainable society.

1. Our commitment to the environmental goes beyond complying with environmental laws and regulations. By adopting stricter self-imposed standards such as chemical substance management, we pursue to achieve a higher level of environmental control. Furthermore, we aim to work in harmony with communities and local government on the environmental awareness.
2. We recognize that business activities are related to the environmental challenges not only on a local level but also on a global scale. By focusing on the following four initiatives, we are dedicated in developing environmental action plans to achieve continuous reduction in environmental impact.
   1) To prevent global warming, we are committed to conserve energy and reduce greenhouse gas emissions.
   2) To conserve the Earth's natural resources, we aim to save resources and minimize waste generation through efforts that include reducing, reusing, and recycling.
   3) To protect the environment and human health, we strive to reduce and/or eliminate the use of environmentally harmful chemicals.
   4) To protect the Earth's ecosystems such as wildlife habitat, forests, oceans, and to conserve biodiversity, we will participate in environmental preservation activities such as tree planting.
3. By enabling environmentally conscious design, we intensify our efforts to develop environmentally conscious products that will focus on various life-cycle stages for contributing to the society. In addition, we will work together with the suppliers by sharing information and responsibilities.
4. By effectively integrating Environmental Management System and Quality Management System, we strive for continual improvements in the environmental performance by establishing goals, training, and audits to reduce pollution and environmental impacts.
5. Enhance communication with local communities, exchange information, and actively engage in the local environmental preservation activities to fulfill our responsibilities as good "corporate citizens".
6. Establish environmental policy, environmental targets and goals, and reassess periodically and as needed.

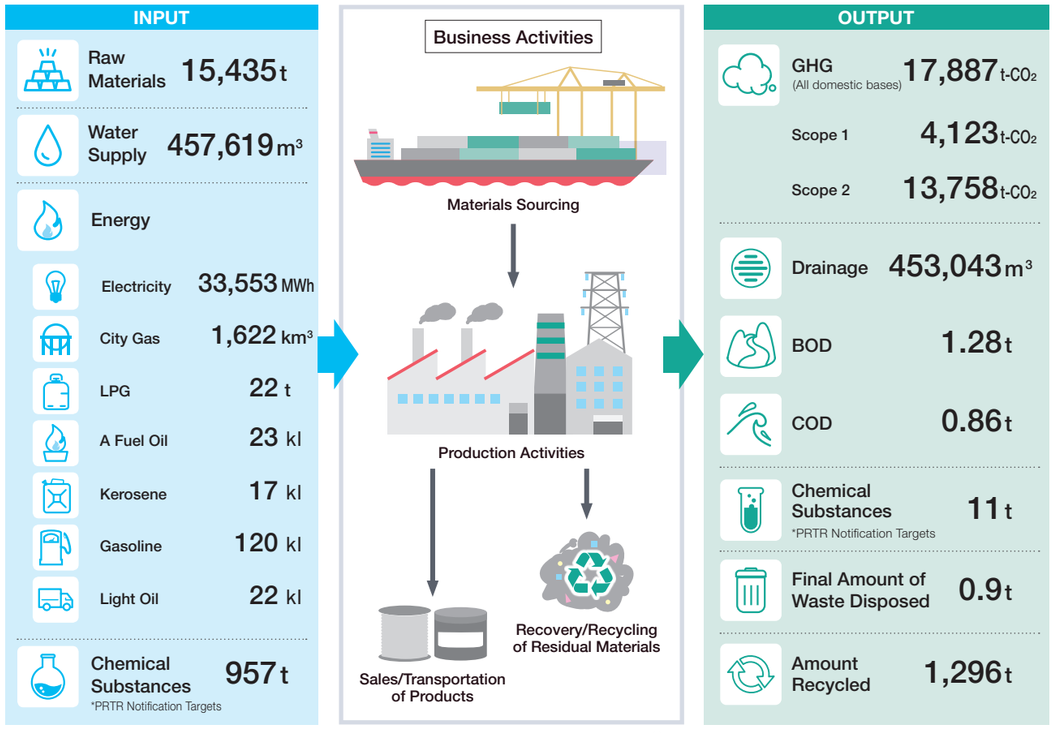
Senju Metal Industry Co., Ltd.
President **Ryoichi Suzuki**

Eco-Factories

SMIC Group not only engages in product development and manufacturing, but also promotes energy conservation and 3R activities (reduce, reuse, and recycle waste), and operates in compliance with environmental laws and regulations to reduce environmental pollution risks so that we can carry out environmentally-friendly production activities.

Global Warming Prevention: Environmental emissions from business activities in FY2018

By quantitatively monitoring and measuring the environmental load associated with our business activities, we can grasp both input and output information such as the amount of energy we use and our emissions, and also save energy and reduce, reuse, and recycle waste. We have also implemented environmental improvement activities especially reducing the amount of specified chemical substances we use. In FY2018, our GHG (greenhouse gas) emissions at all our Japanese bases were 4.3% lower than in 2011, compared to our target value of -2%, and, we managed to achieve total emissions of just 17,887 tons.

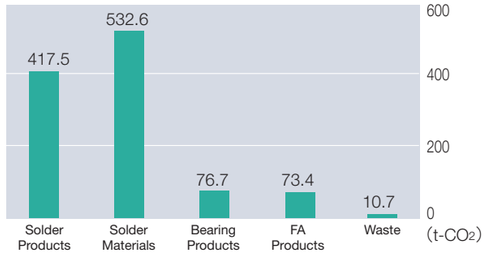


Intake/output diagram of Tochigi Segment, which accounts for the majority of all our Japanese bases

Carbon dioxide emissions from transportation

Our carbon dioxide emissions from logistics in 2018 were as shown on the right. The annual consignment volume of cargo in Japan is calculated from the transport segment and distance for each product category, and we monitor the items required by Scope 3. We also monitor CO2 emissions related to employee commutes.

Carbon dioxide emissions from transportation



Environmental Activities

SMIC Group has developed its own eco-friendly equipment and eco-friendly products that realize energy savings, in consideration of the global environment. We will continue to promote further energy saving moving forward.

Eco-friendly Equipment

Recycle of waste clearing liquid

The Bearing Manufacturing and Research Department at the Tochigi Segment recycles the waste liquid produced form the hydrocarbon cleaning liquid used to clean products. This is done with a recycling distillation system, and approximately 90% of the waste liquid is recycled and reused.



Deployment of electric power monitoring

SMIC Group collects and aggregates data on our electricity usage and monitors this visually with graphs. By graphing the relationship between the amount of electricity we use on working days and ambient temperature, we can see that our electricity system uses a lot of electricity for cooling in the summer and for heating in the winter, as well as the variation in our electricity usage even on working days of the week. This lets us take action.
At our headquarters and the Tochigi Segment, our power usage status is displayed on large monitors in order to raise employee awareness of power saving.



Eco-Products

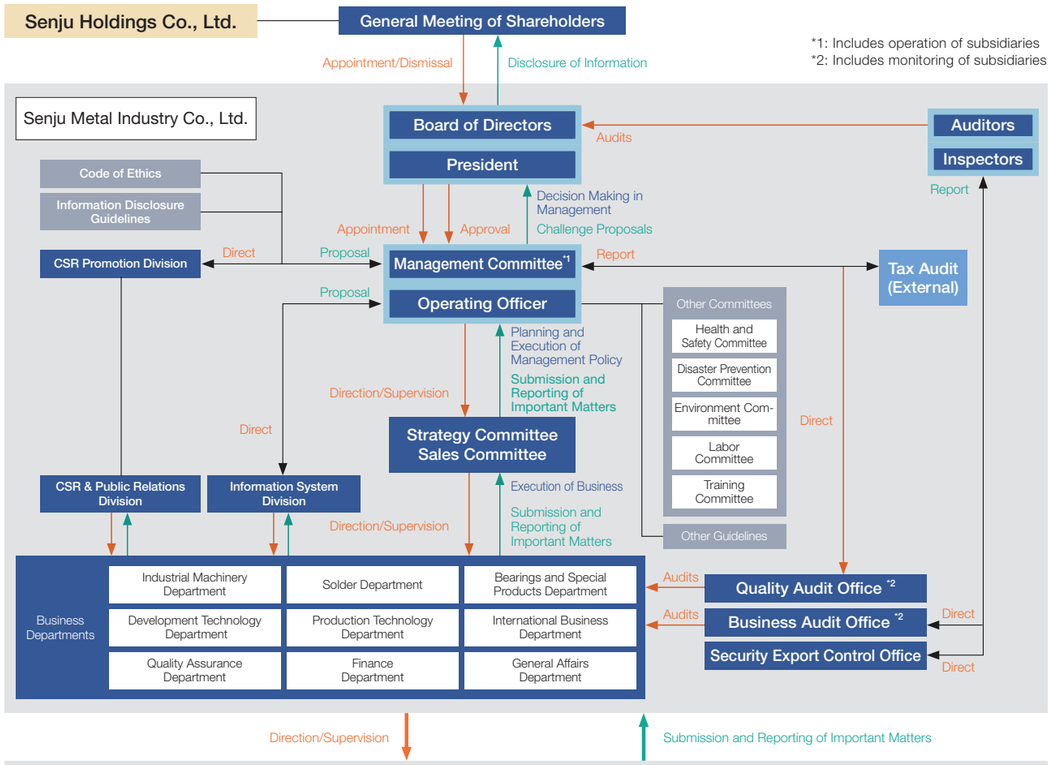
SMIC is focused on the development of eco-friendly products in order to further reduce the environmental impact of all of our products, which include solder materials, soldering equipment, and plain bearings. Even after the lead-free solder M705 - which we developed in 2001 - was adopted as an industry standard, we have continued to develop products that create new value, with various usages and our management philosophy always in mind.
In recent years, we have announced our "L29-145HF" solder paste, which can be soldered at a temperature about 50°C lower than M705 in order to reduce CO2 emissions, and which has both drop impact resistance and heat fatigue resistance.



Governance

SMIC is striving to strengthen its corporate structure through the placement of corporate auditors, inspectors, tax audits, and the establishment of the CSR Promotion Headquarters, Management Committee, and Strategy Committee, in addition to the General Meeting of Shareholders and the Board of Directors called for by laws and regulations.

Corporate Governance



Board of Directors

The Board of Director consists of 5 directors, 1 corporate auditor, and 1 inspector. It follows relevant laws and regulations as well as the Articles of Incorporation to appoint or dismiss executive officers and make resolutions on the agenda from the Management Committee, as the final decision-making body of SMIC business management.

Management Committee

The Management Committee consists of directors and executive officers. It deliberates on legal matters and determines or approves important matters in the execution of business. It also submits matters related to business execution to the Board of Directors that should be deliberated or decided by the Board of Directors.

Auditors and Inspectors

We have appointed one auditor and one inspector. These officers carry out audits of daily management activities, including the execution of duties by directors. Auditors attend meetings of the Board of Directors, fulfill their duties to prevent illegal or seriously unreasonable resolutions, and conduct activities that comply with laws and regulations.

Fraud Prevention

Our employment rules clearly state the importance of compliance, and employees follow these rules with integrity in order to maintain order in the company.

SMIC's basic CSR policy "Fair Transactions and Ethics" and CSR Practice Target "Ethics" both prohibit acts of bribery, in order to prevent corruption.

Senju Metal Industry Co., Ltd.

DUNS# 690663091

Established: April 15, 1938
Headquarters: 23 Senjuhashido-cho, Adachi-ku, Tokyo 120-8555
President: Ryoichi Suzuki

Business portfolio

- Smelting, alloying, casting, and spreading of metal; manufacture and sale of processed products
- Manufacture and sale of metal powder and bearings
- Manufacture and sale of soldering solvents and adhesives
- Manufacture and sale of soldering equipment
- Manufacture and sale of fire extinguishing equipment parts (affiliate companies)
- Manufacture and sale of machinery and equipment related to the above items

Business scale (non-consolidated)

Net Sales: JPY58,060,000,000
(April 1, 2018 - March 31, 2019)
Capital: JPY400,000,000
(As of March 31, 2019)

Facilities in Japan and abroad

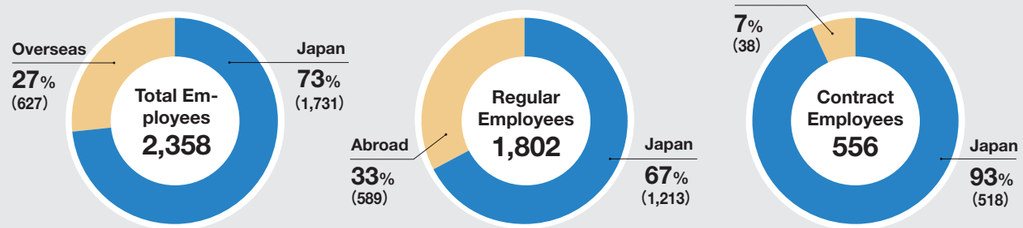
Japan: 20 (8 of which are manufacturing bases)
Abroad: 32 (15 of which are manufacturing bases)
*As of March 31, 2019

Countries where we do business

Thailand, Czech Republic, Germany, Philippines, USA, Malaysia, Mexico, South Korea, Taiwan, China
(Major domestic customers: 570 / Major overseas customers: 1,050)

SMIC Group Employees

Domestic and Overseas Employee Distribution



Gender Distribution

