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Corporate Social Responsibility Report 2016

Sahaviriya Steel Industries Public Company Limited

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Vision

Leading Innovative and Reliable
Steel Company

Mission

Innovate premium value steel product
and service for customers, create
sustainable shared value and trust
for stakeholders

Values

integrity

i

We do
what we say

Fighting spirit

F

Never give up

aim for
excellence

a

Anything is
possible

can change

c

Be the leader
of change

teamwork

t

One for all,
all for one

service-mind

s

Deliver more than
expected

Message from the Group CEO and President



Year 2016 was a year when Sahaviriya Steel Industries Public Company Limited or SSI was in the process of Business Rehabilitation – from the time when the Company submitted an application for Business Rehabilitation to the Central Bankruptcy Court (the “Court”) on 1 October 2015, the subsequent Court order for the Company’s Business Rehabilitation and appointed the Company as a Plan Preparer on 10 March 2016, until the Court order approving the Company’s Business Rehabilitation Plan designating the Company to be the Plan Administrator (the “Plan Administrator”) on 15 December 2016.

Throughout the past year, the Company has remained committed to sustainable development as a pillar of Business Rehabilitation as well as a solid foundation for our business to perform and continue to grow, under the advice and supervision of the Company’s Good Corporate Governance Committee following the economic, social, and environmental sustainability programs.

Significant Sustainability Performance

Economic

Although in 2016, the Company was mostly in the process of Rehabilitation Plan preparation, the Company was still able to make a net profit from the normal operation from its core business.

(1) We developed and delivered Premium Value Products (PVP) to customers totaling 479,359 tons, accounting for 39% of total sales, an increase of 3% from the previous year.

(2) We purchased goods and services from Bangsaphan community worth Baht 173 million, generating income for 401 businesses and community enterprises.

(3) In 2016 SSI group at Bangsaphan plant employed 2,088 employees, of whom 1,623 were employed in Prachuap Khiri Khan Province, or 77.73%, and also additionally, 627 sub-contractors.

Overall in 2016, the Company’s business activities continued to contribute economic values in Thailand totaling Baht 4,701.43 million.

Social and Community

The Company has implemented 39 social and community projects (including SSI volunteering of 15 activities). There were 17,220 stakeholders gaining benefits from the activities.



The first part is social capital development, which focuses on empowering the underprivileged in society. Thailand Iron Man Mini Marathon 2016, a collaborative CSR project with Thai steel alliances, raised Baht 2 million funds to support organisations for underprivileged, contributing Baht 20 million funds cumulatively in 9 years period since the inception of the event.

The second part is the community development in 4 main areas: education quality development, environmental improvement, career promotion and income enhancement, and SSI volunteer activities.

- **Education and youth**

1) In 2016, the Sahaviriya Funds for Bangsaphan Educational Developments Project extended to 4 local schools. Three schools have demonstrated impressive results. The average scores of the ordinary national educational test (O-NET) of Bangsaphan School, Ban Nong Chan School and Ban Wang Yao School were 59.2, 54.9 and 46.82% respectively, which are higher than 44.98%, the national average score. In addition, Ban Thong Mongkhon School, another participating school, was aware the funding and started implementing the plan for the first year.

2) Sahaviriya Group's Technician Development for Steel Industries Project 2016, a collaborative project between Sahaviriya Group and Bangsaphan Industrial and Community Education College, which allowed the company to have more access to skilled workers. There were 553 students across 9 classes graduated from this project. Out of this number, there are 142 persons working with companies in Sahaviriya Group.

3) Ban Don Sa-nga's youth council Project supervised by the company has its strength to develop its own plan to improve its community. Importantly, Ban Don Sa-nga's youth council is the only youth council in Prachuap Khiri Khan Province to be registered as a social development organisation, which can present work plans to receive financial support from Prachuap Khiri Khan Province's social welfare promotion fund. Furthermore, we promote community education through giving scholarships, local curriculum development – To Be Engineer Project – and Sufficiency Economy Schools for Sustainability Project.

- **Career promotion and income enhancement**

We established community banks in 4 subdistricts around the plant under Sahaviriya Ruam Pattana Project. At present, there are 18 community banks, with Baht 28,495,366 total funds and 3,114 members.

- **Environmental quality improvement**

We collaborated with relevant parties to create environmental awareness promotion and campaign – e.g. SSI Beach Clean-up Activity, Two-wheels Preserve Bangsaphan Project, SSI Waste Recycling Bank for Schools Project, and Youth Conservation Camp – with 1,342 people participating.

- **SSI volunteer activity**

There were 15 activities in 2016, with 254 staff members participating with 2,032 volunteering service hours, and 201 people from local community with 1,608 hours.

Environment, Safety and Occupational Health

A variety of projects promoting awareness and focusing on caring for themselves and colleagues to work safely with no work injury were successful. LTIFR continued to decline in 2016, falling to 0.35 from 0.76 in 2015. In addition, efforts to improve safety in the transport of raw materials and products were also fruitful, with no violation of our self-imposed vehicle safety regulations with serious adverse effects.

Meanwhile, regarding the performance in environmental management in the past year including managing and controlling quality of air, water as well as waste management, we continued to do better than the standard required legally.

Sustainability Awards

Following the Company's management under the principles of good corporate governance, the Company has been certified as a member of the Private Sector Collective Action Against Corruption by The Thai Private Sector's Anti-Corruption Action Committee in 2016. The Company also won the sustainability awards including Outstanding Business in Safety, Occupational Health, and Work Environment for the year 2016 (for 5 consecutive years), Award of Outstanding Business in Labor Relations and Welfare under the category of 10 consecutive years award (2006 - 2016), Excellent Organization by Environment Impact Assessment Standard 2016 (EIA Monitoring Award 2016), and Outstanding Employment Support for Persons with Disabilities Award 2016.

Sustainable Development Guidelines for 2017

We realise that sustainable development is a crucial factor supporting business operation to be recognised by the society as well as reflecting the Company's good corporate image to outsiders significantly. SSI Group has promoted sustainable development as a group strategy, consisting of: 1) Group Strategy of all Business Units 2) Group Financial Strategy 3) Group Human Resources Strategy 4) Group Technology Strategy and 5) Group Sustainable Development Strategy. In addition, the Office of the Group Sustainable Development has been established, in order to drive sustainable development work and conform with the new mission "Innovate premium value steel product and service for customers, create sustainable shared value and trust for stakeholders" as well as the Company's three-year strategic plan (2017 - 2019).

In 2017, we will focus on adopting the Sustainable Development Goals (SDGs), which have been endorsed by 193 member nations of the United Nations, in combination with our organisation's sustainable development practices, in order to demonstrate that our sustainability operations are responsive and poses a positive impact on both local stakeholders, such as staff, local community, and also stakeholders in the national society-at-large.



Mr. Win Viriyaprapaikit
Group CEO and President

Corporate Information



Sahaviriya Steel Industries PLC or SSI is Southeast Asia's largest producer of hot rolled steel sheet in coils (HRC), with 4 million tons annual capacity. SSI endeavors to supply premium-grade steel sheets to cater for the region's growing demand in various sectors such as automobile, energy, transportation and construction sectors. SSI has investments in joint-venture downstream plants, namely Thai Cold Rolled Steel Sheet PLC ("TCRSS") - Thailand's first and largest cold roll mill, and Thai Coated Steel Sheet Co., Ltd., ("TCS") - Southeast Asia's first and largest electro-galvanizing line. All SSI's plants in Thailand are located on a world-class coastal industrial site in Bangsaphan, Prachuap Khirikhan Province, 400km south of Bangkok on the western peninsula of Thailand, a site efficiently integrated with a privately-owned deep-sea port (Prachuap Port Co., Ltd., or PPC), which allows import of raw materials and export of finished products on a large scale. SSI extends its engineering capabilities into its fully-owned subsidiary, West Coast Engineering Co., Ltd., or WCE,

which specializes in engineering, maintenance, spare parts production, fabrication, erection and commissioning service. Our people's passion and energy is captured in the Company's vision statement - "Leading Innovative and Reliable Steel Company", and mission "Innovate premium value steel product and service for customers, create sustainable shared value and trust for stakeholders."

For more information,
please visit
www.ssi-steel.com

SSI Group Structure

35.19%

Hot Rolled Coil Business

Downstream B



Sahaviriya Steel Industries
Public Company Limited

- Manufacturer of hot-rolled coils
- Manufacturer of hot-rolled coils pickled and oiled



Core business



Thai Cold Rolled Steel Sheet
Public Company Limited

- Manufacturer of cold-rolled steel sheet



Increase revenues
and enhance sustainable growth

3.7%

51%

99.99%

Business

Port Business

Engineering Business



Thai Coated Steel Sheet Company Limited

- Manufacturer of electro-galvanised steel sheet



Increase revenues and enhance sustainable growth



Prachuap Port Company Limited

- Provider of deep-sea port



Reduce costs and increase revenues



West Coast Engineering Company Limited

- Provider of engineering and maintenance services



Reduce costs and increase revenues

SSI Corporate Social Responsibility Management



Corporate Social Responsibility Concepts and Policies

Sahaviriya Steel Industries Public Company Limited, or SSI, implemented Corporate Social Responsibility policies based on its business philosophy and business ethics that have been molded in the way of a pushing forward, driving as well as sustainable development and growth.

Business Philosophies

1. Devotion to Excellence

SSI is determined to do all we can to continuously improve ourselves and our operations. Through study, research, development, and upgrading, we aim for the highest we can attain. This effort to develop and break new records of excellence must be perpetual in all aspects of our operations.

2. Adherence to Quality of Products and Services

SSI's products and services are all designed with the best interests and satisfaction of the customer in mind. We believe that our customers will always be willing to pay for the best, and that no improvement is of any use if it does not meet our customers' needs.

3. Belief in the Value of Our Personnel

SSI realise that good employees are the main reason for an organisation's success. For this reason, we take care to hire only the best to work with us, and provide fair and attractive remuneration packages that include constant training and education. Quality of life for our employees is paramount; their occupational health and safety are assured.

4. Commitment to Honesty and Ethics

SSI is fully resolved to conduct our business honestly and ethically. We believe that honesty and ethics in business bring good order to society and progress to the nation, and assure long-term prosperity in commercial dealings, for that reason we ethically conduct our business with all stakeholders, including shareholders, investors, customers, business partners, creditors, competitors, employees, the local community, and society in general.

5. Dedication to Our Social and Environmental Responsibilities

SSI firmly believes that we are part of society. Any change in society is certain to affect our business. We are convinced that business and society must all be developed in concert to ensure a sustainably successful enterprise. Our responsibility, therefore, is to take part in continual maintaining, developing and conserving of a good natural and social environment.

Business Ethics of the Company

In conducting the business, the Company adheres to the principles of accountability, transparency, integrity, and business competitiveness by acting in the best interest to all stakeholders in an equitable manner.

1. Shareholders

The Company realises the shareholders are the owners of the Company and the Company has the duty to generate value-added to the shareholders in a long term. The Company has, therefore, stipulated a guideline for the directors, executive, and employees to perform the followings:

- 1) Perform duties to the fullest capacity with integrity, care, prudence and fair treatment for the best interest of all shareholders.
- 2) Present the operating performance report, financial status report and other reports with accuracy and completeness and in a timely manner.
- 3) Report a trend of the Company, both on the positive and negative sides, to all shareholders in an equitable manner based upon sufficient factual basis, quantitative information and rationale.
- 4) Ensure that there is no exploitation of undisclosed information or any wrongful action for improper advantage for oneself, or others, which may cause conflict of interest for the Company.

2. Customers

The Company values the vital role and satisfaction of customers which contribute to success of the Company's businesses. Therefore, the Company has a strong intention to pursue the methods that are reliable to customers and can fulfill the needs of customers in a more efficient and effective manner. The guidelines are as follows:

- 1) Deliver quality products and services that meet or exceed the expectation of customers.
- 2) Communicate with customers with courtesy and ensure that complete, accurate and up to date information of products and services is given to the customers. The Company will not misrepresent the products and services in terms of quality, quantity or any other conditions.
- 3) Strictly follow the conditions applied to the customers. In case the conditions cannot be satisfied, the Company will inform the customers without delay to figure out a possible solution together.
- 4) Establish a system and channel that allows customers to make complaints about quality, quantity and safety of products and service, and respond to the complaints in a timely manner.
- 5) Strictly protect confidential information of customers and will not use the information for other interests in an improper respect.
- 6) Provide instructions on the use of products and services in an efficient manner to maximise benefits.

3. Suppliers

The Company realises that ethical conduct with suppliers should be based on fair benefits to both parties. Thus, the Company commits to provide facts and accurate reports, implements according to agreements, negotiates and seeks solutions based on business relationship as well as avoids the situation which will result in a conflict of interest. The guidelines are as follows:

- 1) Never request, receive or pay any fraudulent benefits from and to suppliers
- 2) With an evidence indicating a fraudulent benefit has been claimed, received or paid, disclose such relevant information to the suppliers and together figure out the solution in a timely manner
- 3) Strictly perform in accordance with the conditions under the agreements and inform the suppliers in advance in case of inability to meet any condition

4. Competitors

The Company realises the commitment to treat its competitors fairly. The guidelines are as follows:

- 1) Never seek any confidential information of the competitors by unfaithful or improper means.
- 2) Never destroy the competitors' reputation by offensive accusations.

5. Employees

The Company realises that employees are valuable resources for the success of the Company; thus the employees are treated fairly in terms of compensation, opportunity and development, and potential based on humanity practices regardless of their race, religion, gender or physical condition. The guidelines are as follows:

- 1) Treat employees with respect to individual value and dignity
- 2) Provide fair compensation to employees
- 3) Provide a safe working environment to employees considering their lives and properties at all times
- 4) Appoint, rotate, promote and demote employees with sincerity and based on knowledge, merit and suitability
- 5) Value development of knowledge and ability of all employees
- 6) Avoid any unfair action which may affect the job security of the employees or any action which may threaten or cause pressure to mental health of employees.

6. Supervisory Authorities

The Company values its duty to comply with law and business practices. The Company strictly conducts the business under laws, articles, regulations and standards imposed by supervisory authorities as well as cooperate with supervisory authorities in relevant matters.

7. Society and Community

The Company recognises accountabilities towards society and community as the core of business, with full realisation of the possible effect on natural resources and the environment. It has constantly provided support to a number of activities to improve society and community, safeguard and rejuvenate natural resources as well as to enhance the community capacities in an effort to bring about sustainable development.

The Company establishes a concept for CSR operation and communication guidance as follows:



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Corporate Social Responsibility Management System

The Company has established the Corporate Social Responsibility Management Committee, which consists of executives from each division. Their duties and responsibilities are to implement and follow up on the CSR plan ensuring it to be in line with relevant policies. In addition they allocate the resources necessary for CSR operation and promote the work of the CSR Management Sub-Committee, which the Committee proposed to the President for appointment. The objectives of the Sub-Committee and scope of their responsibility is to support the work of CSR Committee.

The Committee reports its CSR operating result to the Good Corporate Governance Committee (CG) quarterly. The duties and responsibilities of CG Committee are to provide an opinion to the management regarding CSR and to monitor them in establishing a clear action plan. Furthermore they follow up on the implementation of the management plan and then submit the results to the Board of Directors.

CSR Management System Structure



SSI CSR Framework



Economic Performance



Economic Overview

The global economic outlook for the year 2016 was volatility from the big events occurring during the year, including the withdrawal from EU of the United Kingdom, the election in USA and terrorism in several areas, which have huge impact on confidence and risk. Regarding US economy, though the US economy grew at the lowest rate in the past 5 years by 1.6%, its domestic consumption boost up the economy in the second half of the year as a result of the continuous increase in domestic employment. As a result of the economic recovery and an increase in inflation rate, the Federal Reserve (FED) raised its policy rate by 0.25% in December 2016, the second rate hike in 9 years. European economy was slightly slowdown and concerned about Brexit which its impact is expected to be obviously seen in 2017. Japanese economy remained weak from the unrecovered figure of private consumption as well as an appreciation of Yen although the recovery was found in the last quarter of the year. However, the economic growth is

forecasted to improve in 2017 from fiscal stimulus measures of the Japanese government. Chinese economy grew by 6.7%, the lowest rate in the past 26 years, with capital outflows and a decline in international capital. Nevertheless, the government has reformed its traditional economy into information technology service and retail economy to push the country's economic growth in the future. For ASEAN countries, in particular CLMV, there are good economic growth from domestic consumption and greater cooperation.

For Thailand's economy, Office of the National Economic and Department Board (NESDB) announced that in 2016, the domestic economy expanded by 3.2%, an increase from 2.9% in 2015, supported by the expansion of government stimulus measures, expansion of income from tourism, low oil price, and the improvement of agricultural production after drought ended in the second half of the year. However, risk of external factors that result from global economic volatility is still to be concerned.

Business's Strategy

As the global economic situation was uncertain while local economies in the region including Thailand are expanding as stated above, the Company was aware of the risk and risk factors that may arise from above causes. Therefore, the Company has been closely monitoring the situation and implemented strategic plans for appropriate business management as follows:

Marketing Strategy

The Company cautiously managed the procurement of raw material in order to get the reasonable and predictable prices and quantity. The Company has been focusing on the production for premium value products which has value added and lower price fluctuation as well as closely monitoring on both domestic and overseas markets in order to analyse and consider the sale of product including simultaneously seek for new sources of imported raw materials with high quality but low cost. In addition, the Company's focus on controlling a proper level of inventories to manage the production plan in cooperation with sales projection had led to shorter delivery lead time. The Company also has been closely monitoring on current dumping situation of imported products and the government's price control policy in order to able to take proper and rapid actions to protect domestic steel industry.

Production Strategy

The Company has improved the production process, reviewed the inventory management plan, and introduced new technologies to enhance the efficiency of quality control and the accuracy of production process leading to a significant reduction of inferior goods. The Company also has implemented an automated system to be used for managing product quality to accommodate the ability to meet the customers' requirements, encouraged establishing a working team for the development of the production process aiming to figure out solutions for particular problems. In furthermore, the Company has studied new projects for efficiency enhancement and cost reduction as well as quality improvement.

In addition, the Company has prepared its personnel with necessary equipment to respond to emergencies including insurances covering property damages, loss from business interruption, damages to goods and products caused by natural disasters such as floods, storms, tsunamis, lightning, earthquakes, landslides as well as loss in case of fire in all circumstances.

Financial Strategy

1. Exchange Rate Management

As the Company submitted a petition for Business Rehabilitation to the Central Bankruptcy Court (the "Court") on 1 October 2015, the Company has fallen into the limitations of an Automatic Stay, causing suspension of the Company's credit line on foreign currency forward contracts. Thereafter, the Court issued an order for the Company's Business Rehabilitation on 10 March 2015 and approved the Business Rehabilitation Plan ("the Plan") on 15 December 2016. However, the Company has opened a Foreign Currency Deposit (FCD) account to mitigate the effect of exchange rate during the suspension of credit line on foreign currency forward contract. Should the Company has the credit line as usual after the Court approved the Plan, the impact of fluctuations on foreign currency exchange rates will be reduced.

2. Trade Credit Management

The Company has emphasised on the quality of trade credit, efficient control of debt collection, a good internal control system, and a strict credit policy. The Company has also reviewed credit granted to customers and credit approval authority to establish the consistent trade credit standards and control the non-performing credit to the level that will not impact on the Company's performance in overall.

3. Liquidity Management

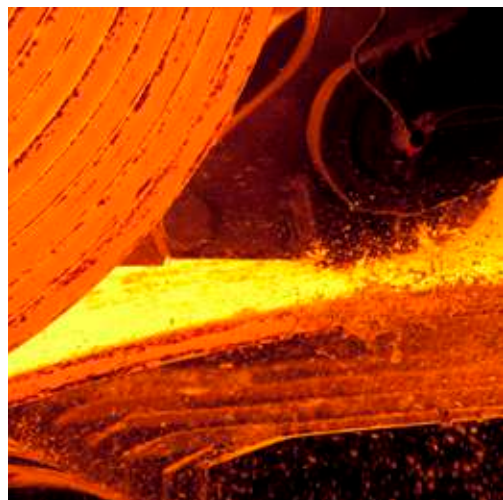
Since the Company submitted a petition for Business Rehabilitation to the Court on 1 October 2015, and from the same day on which the Court granted the petition of the rehabilitation, all creditors were forced by law to stop actions to enforce the rights that exist under civil law, or so called Automatic Stay limitation which the Company shall not dispose of, distribute, transfer, let, pay debt, create debt or do any act which create encumbrances over assets except where such act is essential so that the Company

may carry on its business as normal in accordance with Section 90/12(9) of the Bankruptcy Act. This allows the Company, during this period of time, to control its liquidity as set forth. In the meantime, the Company has closely monitored the cash flow level, focused on sale and product innovation so as to generate income and add value to products, and strictly reduced production costs as well as other costs. After the Court approved the Plan on 15 December 2016, debt repayment would be as stipulated in the Plan.

Economic Performance

Unit: Million Baht

Transactions	2015 (Restated)	2016	% Change (YOY)
Sales and Service Revenues	20,173	19,824	-2%
Group Sales Volume (MT)	1,126	1,232	+9%
EBITDA	(37,897)	2,143	+106%
Net Loss	(40,959)	(2,869)	+93%



Occupational Health, Safety and Environmental Management



Sahaviriya Steel Industries Public Company Limited (SSI) has policies and business ethics in performing business by placing importance on value of their staffs, ensuring that they will have good quality of life with safety and healthy working conditions as well as adhering to social and environmental responsibility. The Company believes that occupational health, safety and environmental management system is very crucial for its business operations. Hence, such system has been appropriated and effectively implemented and it has also been continually developed and improved.

Occupational Health and Safety Management

The Company still determines to build up awareness on social responsibility and working environmental conditions in order to protect its employees and contractors working in the SSI Bangsaphan Steelworks area from occupational diseases and injuries by complying with Occupational Health and Safety Assessment Series (OHSAS 18001) Standards. As a result, the Company received Thailand Outstanding Role Model Company Award for Safety, Occupational Health and Working Environment for 5 consecutive years.

Performance on Occupational Health and Safety

The Company has operated and developed its occupational health and working environment management, by emphasising that the employees should realise and put emphasis on taking care of themselves and their colleagues so they can work safely without having occupational accidents through various projects, such as Zero Accident Campaign, Behaviour Based Safety (BBS) Project and Safety Patrol. The Occupational Health, Safety and Environmental Committee has been established to supervise, monitor and provide guidelines to improve safety in all of the plant areas with support from the management. Consequently, the Lost Time Injury Frequency Rate (LTIFR) in 2016 has reduced to 0.35 from 0.76 in 2015.



Lost Time Injury Frequency Rate (LTIFR) per Million Hours Worked of SSI Group

Company	2014	2015	2016
SSI	1.10	0.76	0.35
TCRSS	0.00	0.52	0.00
WCE	2.32	2.12	0.77
PPC	2.94	0.00	0.00
SSI Group	2.00	1.55	0.31

LTIFR (Lost Time Injury Frequency Rate): (Number of lost time injuries in accounting period) / (Total hours worked in accounting period) x 1,000,000.

* Data as of 31 December 2016.

Occupational Health, Safety and Environmental Trainings

Occupational health, safety and environmental trainings are important key to reduce accidents and occupational diseases. SSI has continuously improved occupational health and safety training courses for all level of its staff including new employees, rotated employees and promotion employees before commencing the work so that they can learn about workplace hazard, preventive and control guidelines. On-the-Job Training has also been provided to the Company's employees, sub-contractors

and outsourcing employees. Certain trainings are compulsorily provided for some types of positions. The Company also provided experts to provide additional training courses to broaden the employees' vision and knowledge, apart from the lessons learnt inside the Company.

In addition, Training Matrix has been arranged and classified in the annual training plan which is compliance with safety and operational risks and relevant safety laws. It evaluates type of the activity/work and the working environment of the employees by their own department and information obtained has been sent to safety authorities to review various risk factors to be used as guideline on

allocation of employees who need to be trained in the certain courses and pursuant to appropriateness. In 2016, SSI arranged 34 occupational health and safety training courses, with average training hours of 4.8 hours/person/year. In addition, operating standards of all activities have also been reviewed to ensure that they are up-to-date, practical and can control risks.

Emergency Preparedness and Fire Protection

SSI prepares readiness in responding to emergencies, such as fire, chemical leaks, abnormal condition of boiler and floods, etc. Thus, the Company appointed a subcommittee on fire protection and emergency responses as the main body responsible for overseeing and setting a preparation plan for emergency in the plant. Their works included preparation readiness of staff and ensure that they are adequately by providing trainings so that they can suppress emergency incident in timely manner in order to minimise severity of incident including preparation of readiness of equipment for emergency response. Additional fire prevention equipment has been installed in fire risky areas and new technologies are also considered to be employed to improve the fire protection procedures. The Company always provides training drill and simulation in areas which are prone to have fire danger on continued basis.

SSI has an insurance policy with comprehensive coverage of natural disasters including hurricanes, floods, tsunamis, lightning, landslides, and earthquakes. The insurance covers property and stock damage as well as business interruption resulting from the incident and covers damage due to the risk of fire in all cases.

In 2016, the Company organised 18 emergency drills in all areas. At present, approximately 47% of SSI staffs have attended basic fire protection training courses in accordance with the law. Moreover, fire protection equipment and fire alarm were constantly inspected to ensure that they will completely be readiness and available for usage, consequently, there was no fire accident in 2016 at all.

Safety Management on Raw Materials and Products Transportation

SSI placed importance on safety management on raw materials and products transportation by assigning the working group on cargo transportation control of Sahaviriya Group to monitor performance through Community Leadership Steering Council and Sahaviriya Group's 24 hours Complaint Center. Feedback and complaint will be gathered for improvement. In addition, the cargo control center was set up as a hub to monitor the freight logistic trucks from point of departure to destination, and to receive complaints and suggestions from stakeholders.

It is also required to randomly inspect the compliance of traffic regulations by using CCTV cameras installed in more than 10 points in the community areas including randomly inspected by a the patrol security inspectors in the community area. In 2016, 4,620 transportation trips have been randomly inspected by safety inspectors compared with 10,907 transportation trips in year 2015. The reason for reduction of randomly inspection because work has been transferred to Sahaviriya Logistics Co., Ltd. Randomly inspection time has been reduced the transportation control measures have been increased, such as, the establishment of an Operation Control Center to inspect driving speed in Bangsaphan area through 24-hour GPS, the increase of number of drivers so that they can have more time to rest and the increase of 4 additional CCTV cameras along the route in Bangsaphan to inspect on compliance with traffic laws.

In the year 2016, the rate of severity of the offense on violation of security regulations was zero. The rate of common offenses detected is likely to reduce, and most of them were offences on 50 metre spacing while waiting for a red traffic light, at the crossroads and curves.

Random Traffic Compliance Check for Sahaviriya Group Cargo in 2016 in Bangsaphan District by the Safety Inspectors

Detail	2014	2015	2016
Number of trips	47,173	48,317	44,298
Number of trips randomly checked by a safety inspectors	21,296	10,907	4,620
The number of Type 2 offense (General Offense)	1,012	1,635	299
Number of Type 1 offense (Severe Offense)	0	0	0

Environmental Management

SSI realises that the steel industry plays a part in contributing to the national development and it requires to use natural resources for its production process, therefore the Company has continued to focus on environmental management to allow sustainable development by strictly adhering to relevant laws of the public sectors and environmental laws, for instance study and prepare environmental impact assessments, comply with preventives, corrective and reduction measures on environmental impact from steel production process including implement environmental quality inspection and monitoring measures. The Company also adopted and complied with the ISO 14001 Environmental Management System since 1999 and it has been continuously certified.

The main task lies with the Safety, Environment and Plant Integrity Management Office which works in co-operation with other production units. The environmental managers, supervisors and operators in charge of the management of pollution, water, air and waste systems have been appointed pursuant to the law. For operations outside the plant, the Company jointly cooperates with other companies in Sahaviriya Group in Bangsaphan district to promote environmental awareness and collaboration between the community and the plant via various activities throughout the year.

Raw Materials and Products Management

SSI imports steel slabs as raw materials from several sources with quality controls in place regarding appropriate standards and customer demands. In 2016, the Company produced 1.28 million tons of hot-rolled steel sheets and 0.12 million tons of hot-rolled steel pickled and oiled sheets.

Energy Management

SSI realises the importance of energy conservation as it is a main factor for steel production and it will have direct effect on global climate change. Therefore, the Company has set up efficient energy management systems to control and optimise usage of energy in the organisation. The Energy Conservation Working Group and the environmental and energy experts work together and act as a center to manage energy conservation via the Cross Functional Teams. Their works performed included implementation of constantly energy saving measures in production process and supporting systems, such as lighting system, water treatment and water supply system. In 2016, the Company has joined various projects to support the investment for modification and improvement of machines and equipment for energy conservation and it also received investment funds in energy saving measures, from changing into LED bulbs.

Apart from complying with energy saving policy, the Company set up the Energy Network Team to support and publicise internal energy saving including to encourage on participation in energy saving tasks throughout the organisation.

The Energy Consumption Rate at SSI Bangsaphan Steelworks in 2016

The Energy Consumption Rate at SSI Bangsaphan Steelworks in 2016

Process	Energy Usage	
	Target	Actual
Hot Rolled Coil Steel Sheets		
• Heat energy (kcal/kg slab)	330.70	332.97
• Electrical energy (kwh/ton)	115.00	111.83
Hot Rolled Steel Pickled and Oiled Sheets		
• Heat energy (kg LPG/ton coil)	3.00	2.95
• Electrical energy (kwh/ton)	20.00	23.78

Actual results of heat and electrical energy usage for HRC production vary only slightly from the target, mainly due to volume-based. However, heat energy of the hot rolled steel pickled and oiled sheets was in line with the target. Nonetheless, the electrical energy is a little different from the target due to the increase of stability of the production process. In terms of energy conservation measures that have been taken in the past year, it only slightly affected overall energy consumption when compared with total energy consumption of the organisation.

Water Management

In order to manage water usage, the plant uses raw water from the Bangsaphan canal, a huge surface water source which is 13.5 kilometres far from the plant. The water is pumped into 2.4 million cubic metres water reservoir. SSI will not pump water from Bangsaphan Weir during dry season when water level in the weir is below 2.2 metres. The plant is also designed to recycle water in the HRC production. The water consumption management within

the plant can make SSI be able to keep on production process without having the problem of competing for water which is a common resource shared by the community and local agricultural sector. In the past year, the Company has managed to strictly adhere to the set standard.

SSI has set up a chemical water treatment system to reduce levels of waste water which occurs in Hot Rolled Steel Pickled and Oiled Sheets production line and set up sedimentation tanks, sand filters and grease tanks in the HRC production line including set up the biological treatment system for waste water from consumption within the plant. The quality of water in all systems is constantly tested by the officials and verified by the outside authorities. The treated water is recycled and some of which is used to water plants, with zero discharge outside the plant.

In 2016, amount of water used in SSI Bangsaphan Steel works was 0.98 million cubic metres, consisting of -
 1) HRC production line rate of 0.23 million cubic metres
 2) Hot Rolled Steel Pickled and Oiled Sheet production line rate of 0.05 million cubic metres and
 3) Consumption water of 0.70 million cubic metres.

Water Usage of SSI Bangsaphan Steelworks

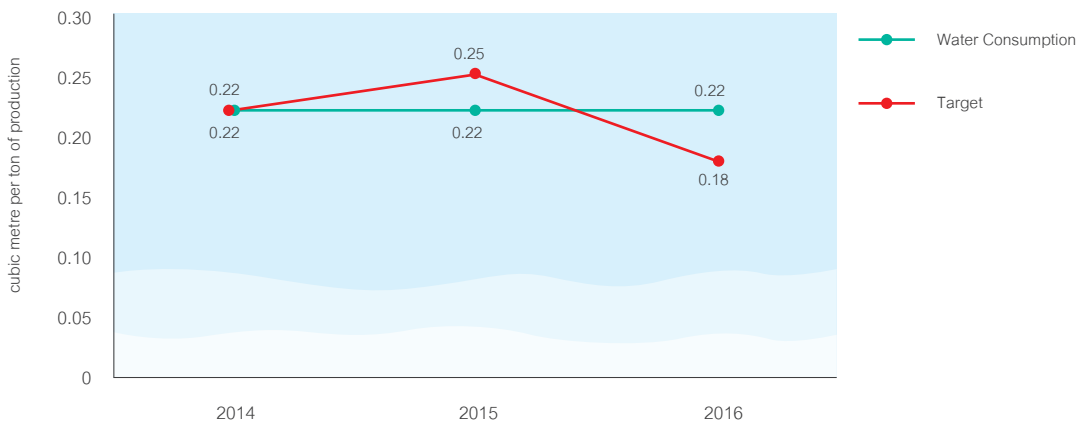
Production Line	Water Usage		
	2014	2015	2016
HRC Production Line	0.24	0.28	0.23
Hot Rolled Steel Pickled and Oiled Sheet Production Line	0.04	0.05	0.05
Consumption Water	0.96	0.84	0.70
Total	1.24	1.17	0.98

The water consumption per ton of production of SSI Bangsaphan Steelworks is as follows:

1. Water consumption for production of hot rolled coil steel sheets in 2016 was 0.18 cubic metres per ton of production, which was slightly better than the target of 0.22 cubic metres per ton of production, or decreasing by 28% when compared with consumption rate in 2015, which was 0.25 cubic metres per ton of production.

Water Usage Rate of Hot Rolled Coil Steel Sheets

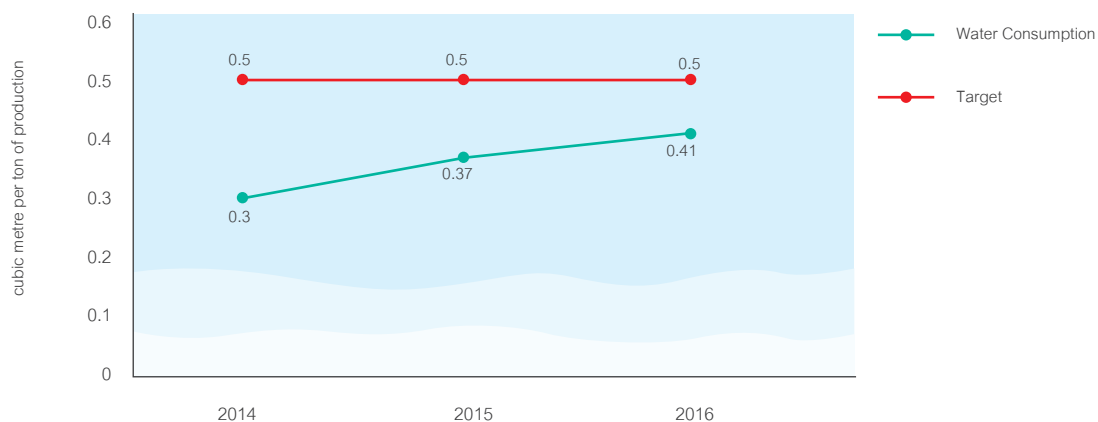
(Unit: cubic metre per ton of production)



2. Water consumption for production of Hot Rolled Steel Pickled and Oiled Sheets in 2016 was 0.41 cubic metres per ton of production, which was better than the target of 0.5 cubic metres per ton of production, or increasing by 10.8% when compared with consumption rate in 2015, which was at 0.37 cubic metres per ton of production due to the improvement of production process to increase product quality which required to change water used in production process more frequently.

Water Usage Rate of Hot Rolled Steel Pickled and Oiled Sheets

(Unit: cubic metre per ton of production)



Water Quality Control

Apart from having design process to prevent water discharge outside of the plant (Zero Discharge), SSI also has other water quality control measures within and outside of the plant as follows:

1. Monthly inspection of quality of recycled water at 4 stations carried out by the outside authorised agency approved by the Department of Industrial Works. The outcome proved to be above the waste water standard specified in the Notification of the Ministry of Industry, No. 2 B.E. 2539 (1996).

2. Semiyearly inspection of quality of underground water at 9 stations carried out by the outside authorised agency approved by the Department of Industrial Works. Although Thailand has not yet set the required standard on quality of underground water, SSI maintains vigilance on possible changes and during the past few years and no significant changes have occurred.

3. Semiyearly inspection of quality of surface water in public water resources at 3 stations by the outside authorised agency approved by the Department of Industrial Works in order to ensure that the Company's activities do not affect the environment as detailed in the following chart:



Environmental Performance Index of Surface Water Quality

Index	Unit	Analysis Result						Standard
		Tha Kham Canal		Upper Mae Ramphueng		Lower Mae Ramphueng		
		Apr 2016	Sept 2016	Apr 2016	Sept 2016	Apr 2016	Sept 2016	
pH	-	7.21	7.37	7.37	7.47	7.24	7.05	5.0 - 9.0 ^{1/}
Suspended Solid	mg/l	18.0	17.3	31	40.8	18.7	10.7	-
Total Dissolved Solid	mg/l	26,812	17,750	19,730	20,854	29,330	7,110	-
Acidity	mg/l as CaCO ₃	37	50	39	68	36	25	-
Alkalinity	mg/l CaCO ₃	120	151	132	176	127	114	-
COD	mg/l as O ₂	108	121	86	135	99	92	-
Grease & Oil	mg/l	<2	<2	<2	2	<2	<2	-
Total Coli form Bacteria	MPN/100 ml	<1.8	<1.8	<1.8	780	330	600	No more than 20,000 ^{1/}
Iron	mg/l	0.94	0.55	1.3	1.2	0.43	0.43	-
Manganese	mg/l	0.189	0.186	0.160	0.218	0.135	0.067	No more than 1.0 ^{1/}

Note:

Standard^{1/} : Surface water quality standard (3rd Category), Notification of the National Environment Board, No. 8, B.E. 2537

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Usage of Chemicals

Water production systems for HRC production and Hot-Rolled Coils Pickled and Oiled production require several types of chemicals. In the past year, SSI did not introduce new types of chemicals or increase the rate of chemical usage in production. Moreover, according to ISO 14001 and TIS/OHSAS 18001 evaluation, chemical usage management in the plant is in accordance with the set standard. Suggestions for improvement received have already been included in the implementation plan.

Eco-Friendly Supply

In 2016, SSI procured supplies from the 15 eco-friendly product groups, certified by the Thailand Environment Institute (TEI). SSI also supported 3 service providers in heat energy saving projects and 6 service providers in electrical energy saving projects. The goal is to purchase supplies from 17 eco-friendly product groups listed by the Thailand Environmental Institute (TEI).

Eco-friendly Purchasing of SSI Group

Purchasing Year / Type of Product	2014	2015	2016
Products certified by Thailand Environment Institute and are used in SSI Bangsaphan Steelworks	10	11	15
Products in Energy Saving Project	-	-	9

Biodiversity

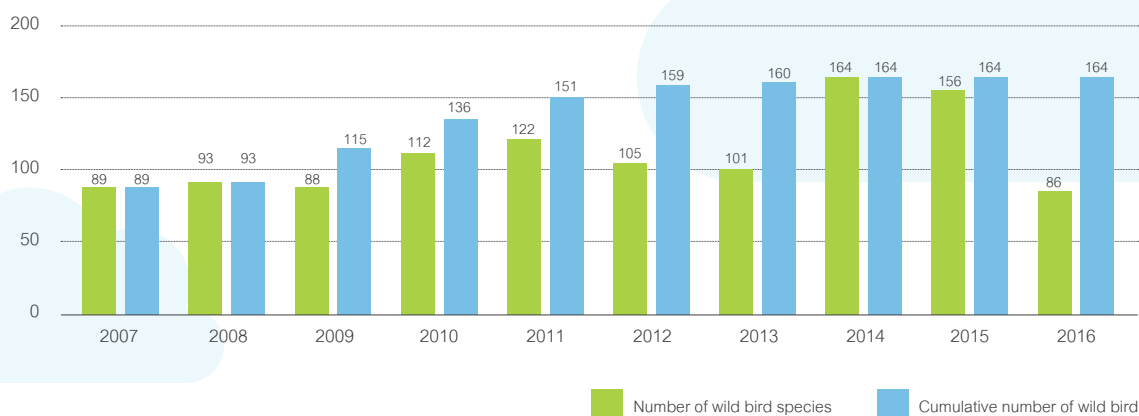
SSI joined hands with the Environmental Management and Promotion Centre of Sahaviriya Group to conduct biodiversity safeguarding projects which is the major indication on the abundance of the eco-system in areas around our plant in Bangsaphan as follows:

Biotic Natural Resources Impact Monitoring Project

With our determination in performing the business while protecting the environment, SSI by the zoology experts from Kasetsart University conducted surveys of wildlife resources in natural areas near the plant, namely, Mae Ramphueng Wetland, Pa Klang Aow Natural Park and Mae Ramphueng Natural Park continually every year. The survey result on the impact on wildlife resources and environment quality in the areas surrounding the SSI plant during

4 - 6 November 2016 showed that there are several types of wildlife animals (especially birds) in the area around the SSI plant. The total of 125 species of wildlife animals were found, where 123 specified were found from direct sighting, from clues or from their voices and 2 species were from information obtained from inquiries. They could be classified into 15 species of amphibians, 19 species of reptiles, 86 species of birds and 5 species of mammals. This information showed that the forests around Sahaviriya Group's plants are abundant and are home to a wide variety of wildlife. Therefore, the SSI's steel industry is considered to be environmentally friendly. In addition, SSI also constantly comply with the pollution management standards of its own and of the Sahaviriya Steel Group and it is found that its operation does not affect the livelihoods of wildlife living in natural areas around the plant. It also protects the natural environment and restores biodiversity of the local communities on sustainable basis.

Species of wild birds found in Bangsaphan district



Climate Change Management

SSI is committed to manage greenhouse gases emitted by the Company's activities by setting up strategy, policy and goal to decrease the greenhouse gas emitted and SSI also continually participated in campaigns and activities with the public and governmental sectors in reducing the increase of global warming. The following activities have been undertaken:

1. Increase the efficiency of energy usage to reduce the greenhouse gas emitted into the atmosphere.
2. Improve the greenhouse gas inventory of its organisation to ensure that they reach standardisation, which include collecting and documenting data, as well as reviewing the greenhouse gas inventory by the outside bodies.
3. Support 3R activities which aim to reduce waste from production process. In 2016, 99.24% of waste could be recycled and reused.
4. Support the natural resources and environmental conservation activities of the local community.
5. Attend seminars on reducing greenhouse gas, organised by the government agencies with aim to achieve low-carbon society.
6. Study about carbon dioxide retention and its usage afterwards.

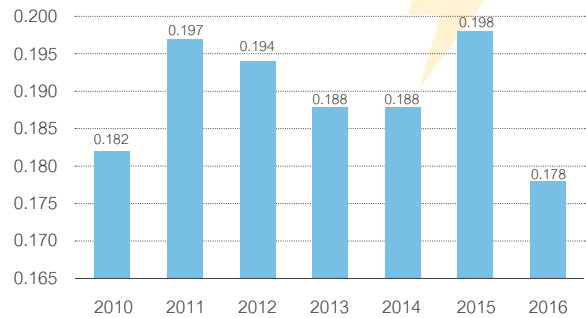
One of its outstanding works is that SSI has prepared a report on the plant's greenhouse gas emission which was in line with the ISO 14064-1 standard. This report focused on Operational Control, in accordance to its performance, by collecting data on each type of fuel used and on activities causing greenhouse gas. In 2016, the report showed the results of greenhouse gas emission as follows:

1. The greenhouse gas emitted from HRC production in 2016 was 228,582 tons carbon dioxide per HRC ton, increased by 7.3% compared to 212,921 tons carbon dioxide in 2015 which was due to the 19.5% increase in production. However when considering from the greenhouse gas emission rate per unit of output, it was found that in 2016, it equaled to 0.178 tons of carbon dioxide per HRC ton, decreased by 10.10% compared to 2015, which equaled to 0.198 tons of carbon dioxide per HRC ton.

2. The greenhouse gas emission from Hot-Rolled Coils Pickled and Oiled production process in 2016 was 1,972 tons carbon dioxide, while in 2015, the number was 2,140 tons carbon dioxide, or 0.017 tons carbon dioxide per PO Coils ton, an increase by 1.54% from 0.016 tons carbon dioxide per PO Coils ton in 2015 due to the lower production in 2016.

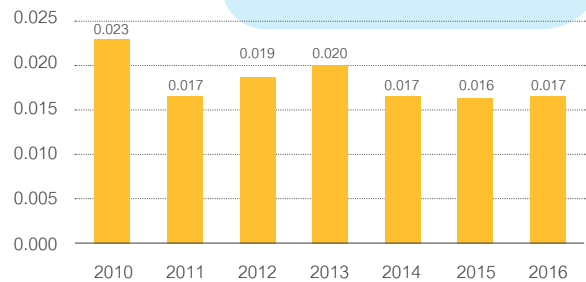
CO₂ Emission from HRC Production

Ton CO₂/Ton HRC



CO₂ Emission from Hot-Rolled Coils Pickled and Oiled (PO Coils)

Ton CO₂/Ton PO Coil



SSI's carbon dioxide emission is used as an indicator for GHGs, in order to plan and implement a future project to reduce greenhouse gas emission as well as to study the guideline on its removals. Target from average carbon intensity in the past has been considered to improve and specify short-term and long-term plans, so that it can reflect real results of the greenhouse gas management. Moreover, appropriate indicators have been analysed and evaluated to specify target value of carbon intensity which are in line with the development plan of the country which determine to become the low-carbon society.

Air Quality Control

SSI Bangsaphan Steelworks was designed for efficient consumption of fuel with the computer-run combustion system controlling the sulphur level in the fuel to not exceeding 2%. All these factors made level of air emission outside the plant better than standard levels and requirements specified in the plant's environmental impact assessment report.

With regards to the Hot-Rolled Coils Pickled and Oiled production line, acid gas detection systems have been installed both in the production line and the acid treatment plant for recycling purpose. As a result, level of air emission

outside the plant is also better than standard levels and requirements specified in the plant's environmental impact assessment report.

Air quality in the atmosphere around the plant is monitored in various parameters throughout the year. In 2015, 5 stations, namely, Ban Tha Kham, Ban Tha Manoa, Ban Klang Aow, Ban Tubmon and Ban Bor Thonglang were monitored. The air qualities by parameters measured are as follows:

1. Hourly average level of density of sulfur dioxide in the atmosphere
2. Hourly average level of density of nitrogen dioxide in the atmosphere
3. Hourly average level of total suspended particulate (TSP) in the atmosphere
4. Hourly average level of density of hydrogen chloride in the atmosphere
5. Hourly average level of particulate matter less than 10 microns (PM10)

Inspection results of air quality assessments pursuant to the above parameters of all stations were much better than the set standard. In addition results from the previous inspections of all stations and all parameters measured show similar outcome.



Ambient air quality measured from 5 stations around the plant

Index	Average of minimal-maximal quantity of air found		Standard
	22 - 23 Feb 2016	10 - 17 Sept 2016	
Total suspended particulate (mg/m ³)	0.025 - 0.125	0.030 - 0.062	No more than 0.330 ^{1/}
Sulfur dioxide (mg/m ³)	0.013 - 0.019	0.008 - 0.0014	No more than 0.300 ^{1/}
Nitrogen dioxide (mg/m ³)	0.027 - 0.044	0.032 - 0.047	No more than 0.320 ^{2/}
Particulate matter less than 10 microns (mg/m ³)	0.012 - 0.053	0.013 - 0.031	No more than 0.120 ^{1/}
Hydrogen chloride (mg/m ³)	<0.001	<0.001	-

Standard^{1/} : Ambient Air Standards, Notification of the National Environment Board, No. 24, B.E. 2547

Standard^{2/} : Nitrogen Oxide in the Ambient Air Standards, Notification of the National Environment Board, No. 33, B.E. 2552

Remark : <0.001 is the Detection Limit of HCl.

HCl does not have specific standard.

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Air emission from the Furnace I and II

Index	Result				Standard
	23 Feb 2016	2 Jun 2016	14 Sept 2016	19 Dec 2016	
Particulate matter (mg/m ³)	112	94	101	107	No more than 240 ^{1/}
Sulfur dioxide (SO ₂)(ppm)	618	425	283	458	No more than 800 ^{1/}
Oxide of nitrogen (NO _x)(ppm)	84	99	97	107	No more than 200 ^{1/}
Carbon monoxide (CO)(ppm)	7.1	1.7	6.4	2.7	No more than 690 ^{2/}

Standard^{1/} : Emission standards for steel factory (existing source), Notification of the Ministry of Science, Technology and Environment B.E. 2544 (excess air of 50% and at oxygen of 7%)

Standard^{2/} : Standard of contaminants in air released by the factory, Notification of the Ministry of Industry B.E. 2549

(For production process with fuel combustion)

Industrial emission standard, Notification of the Ministry of Natural Resources and Environment B.E. 2549

Measured/analysed/controlled by	S.P.S. Consulting Service Co., Ltd.
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Air emission from the Furnace III

Index	Result		Standard
	15 Sept 2016	15 Dec 2016	
Particulate matter (mg/m ³)	117	114	No more than 120 ^{1/}
Sulfur dioxide (SO ₂)(ppm)	210	563	No more than 800 ^{1/}
Oxide of nitrogen (NO _x)(ppm)	84	114	No more than 180 ^{1/}
Carbon monoxide (CO)(ppm)	5.4	2.7	No more than 690 ^{2/}

Standard^{1/} : Emission standards for steel factory (new source), Notification of the Ministry of Science, Technology and Environment B.E. 2544 (excess air of 50% and at oxygen of 7%)

Standard^{2/} : Standard of contaminants in air released by the factory, Notification of the Ministry of Industry B.E. 2549 (For production process with fuel combustion)
Industrial emission standard, Notification of the Ministry of Natural Resources and Environment B.E. 2549

Measured/analysed/controlled by	S.P.S. Consulting Service Co., Ltd.
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Air emission from the Scrubber PPPL (from the pickling and oiling process)

Index	Result		Standard
	26 Feb 2016	12 Sept 2016	
Hydrogen chloride (HCl) (mg/m ³)	0.73	0.09	No more than 200 ^{1/}

Standard^{1/} : Standard of contaminants in air released by the factory, Notification of the Ministry of Industry B.E. 2549 (For production process without fuel combustion, calculated at actual oxygen concentration in emission when measured)
Industrial emission standard, Notification of the Ministry of Natural Resources and Environment B.E. 2549

Measured/analysed/controlled by	S.P.S. Consulting Service Co., Ltd.
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Air emission quality from Boiler

Index	Result		Standard
	26 Feb 2016	12 Sept 2016	
Particulate matter (mg/m ³)	5.8	3.5	No more than 120 ^{1/}
Sulfur dioxide (SO ₂)(ppm)	0.3	2	No more than 800 ^{1/}
Oxide of nitrogen (NO _x)(ppm)	61	58	No more than 180 ^{1/}
Carbon monoxide (CO)(ppm)	1.7	1.7	No more than 690 ^{2/}

Standard^{1/} : Emission standards for steel factory (new source), Notification of the Ministry of Science, Technology and Environment B.E. 2544 (excess air of 50% and at oxygen of 7%)

Standard^{2/} : Standard of contaminants in air released by the factory, Notification of the Ministry of Industry B.E. 2549 (For production process with fuel combustion)
Industrial emission standard, Notification of the Ministry of Natural Resources and Environment B.E. 2549

Remark : <0.1 is Detention Limit of SO₂

Measured/analysed/controlled by : S.P.S. Consulting Service Co., Ltd.
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Air emission quality from Dust Collector

Index	Result		Standard
	26 Feb 2016	12 Sept 2016	
Particulate matter (mg/m ³)	5.6	7	No more than 120 ^{1/} , 300 ^{2/}

Standard^{1/} : Emission standards for steel factory (new source), Notification of the Ministry of Science, Technology and Environment B.E. 2544 (excess air of 50% and at oxygen of 7%)

Standard^{2/} : Standard of contaminants in air released by the factory, Notification of the Ministry of Industry B.E. 2549 (For production process without fuel combustion, calculated at actual oxygen concentration in emission when measured)
Industrial emission standard, Notification of the Ministry of Natural Resources and Environment B.E. 2549

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Waste Management

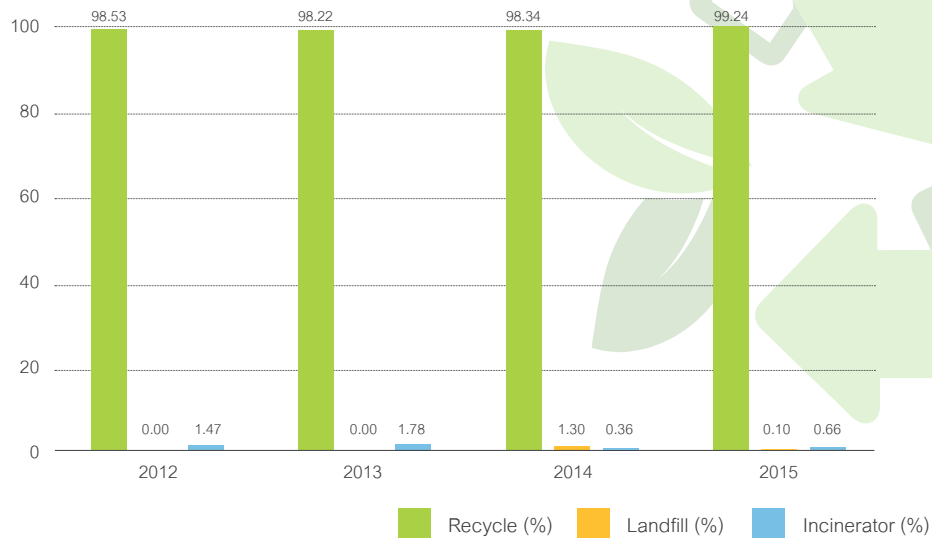
The Company is committed to reduce quantity of waste at source by applying the 3R's – Reduce, Reuse and Recycle.

- **Reduce:** Reducing waste at source and encourage efficient use of resources such as general waste, waste grease and waste oil, etc.
- **Reuse/Recycle:** Reusing the waste or re-processing through recycling to minimise waste or maximise its usage, such as reducing contamination of existing oil and recycling waste, change waste disposal method from landfill to recycling for maximum usage and wasted food was used to make fermented bio-extract then distributed to staff.

Moreover, apart from applying 3R's to reduce waste at the original source, SSI also disposes of waste with minimal environmental impact as follows:

- **Disposal:** Disposal or pretreatment of waste. SSI uses services of well-known waste processor with expertise and certification by the authorised government agency.
- **Industrial waste management:** SSI employs industrial waste pollution controller, to ensure that the operation has been performed correctly and in compliance with the laws.

SSI's Disposal of Waste in 2012 - 2015



In 2016, the total waste amounted to 26,286.87 tons, waste management cost was Baht 1.4 million and sale of 22,727.77 tons of waste amounted to Baht 33 million. The processes used to dispose waste are by

Recycle
99.24%

Incinerator
0.66%

Landfill
0.10%



Cooperation with External Organisations

The Company intends and voluntarily participates in climate change mitigation projects and activities in partnership with government agencies and key external organisations in 2016 as follows:

1. Two greenhouse gas emission reductions projects (T-VER and Thailand V-ETS).

In collaboration with Thailand Greenhouse Gas Management Organization (TGO), SSI was involved in the following emission improvement projects:

1.1) Thailand Voluntary Emission Reduction Program (T-VER)

SSI can reduce greenhouse gas emissions by installing High Efficiency Recuperator for Reheating Furnaces No. 1 & 2. The carbon credits obtained from this program amounts to 4,828 tons of carbon dioxide equivalent (tCO₂e) and have been certified by TGO, which can be traded in domestic voluntary carbon market. SSI could gain the additional revenue from selling these credits at about Baht 965,600.

1.2) Thailand Voluntary Emission Trading Scheme (Thailand V-ETS)

As a result of participation in this project, SSI has been able to determine company's greenhouse

gas emissions for the base year in 2014 and 2015 which was 0.2028 tCO₂/t_{HRC} and 0.2156 tCO₂/t_{HRC}, respectively. It can be seen that 2015 greenhouse gas emissions (in tCO₂/t_{HRC}) increased compared to 2014 levels due to decrease in production capacity in 2015. In addition, we also became more conversant with the pattern for the issuance of greenhouse gas emission permits from government which is carbon dioxide intensity (tCO₂/t product) based, and the criteria for setting up targets for greenhouse gas emissions in Iron and Steel Industry in Thailand. The steel group in Thailand has greenhouse gases reduction target by 2% from the base year of 2014, which is important information that can be used for setting up company's greenhouse gas reduction plan in accordance with the country's target.

2. Life Cycle Assessment (LCA) Project for Steel Industries

Collaborating with World Steel Association (Worldsteel), SSI collected data base on the scope of "Gate-to-Gate" calculation. By consideration of the production process, excluding the impacts on the acquisition of raw materials, transportation of raw materials to the factory, usage and destruction when expire. The company sent all information through Worldsteel's database, and it was reviewed by Worldsteel. Currently, LCA is being evaluated and the final report is developed through

Worldsteel. The report can be applied to develop the production processes and to make the company's products more environmental friendly.

3. Benchmarking of Energy Data

The benchmarking study project for energy aspect of our steel company group was carried out in cooperation with World Steel Association for the analysis and comparison of various energy data of our company with reference data. The reference data is the average energy data from more than 60 countries. This project studied four energy sources including fuel, electricity, energy from other sources, and the energy attached to flat bars. By joining this project, it was found that the company's total energy consumption ratio was better than the reference value at 1.31%.

4. Cooperation development project with South East Asia Iron and Steel Institute (SEAISI) through Environment and Safety Committee (ESCO)

By joining as the chairman of ESCO, there was exchange of information or technologies in aspect of environment, energy and safety among members. Our participation also helped in driving the group study projects. In 2016, there was a project proposal titled: "A Comparative Study on Environmental Laws and Regulations Related to Industrial Sector in ASEAN Countries". The initial budget for supporting research was approved, and it is under discussion on project implementation guideline with member countries again. This research can be used as database for strategic planning, development of ASEAN steel industries, and investment planning in the future corresponding to more strict legal development trends.

5. SSI took part in the efficiency measurement project of reheating furnace and feasibility study of using alternative energy in cooperation with Iron and Steel Institute of Thailand (ISIT). The results shows that percentage of heat lost due to various factors, the reheating furnace efficiency of SSI's hot rolling mill is 61.1% considered in the range of normal criteria. In addition, the study also informs the potentiality of biomass in each type, which would probably substitute fossil fuels in future.



6. Energy efficiency mandatory project in industrial sector has been performed in liaison with Energy Policy and Planning Office (EPPO). The objectives are to, firstly, study the manipulation of appropriate criteria for regulating and controlling the specific energy consumption (SEC) in industrial sector and, secondly, study the appropriate additional fees for low-SEC plants. The appropriate SEC for hot rolling mill is therefore defined at 4,089 MJ/t, which SSI can take information from participation in this project to plan and manage energy consumption efficiently when compared with national energy consumption criteria.

7. Investment support program to modify, improve machinery or equipment for energy conservation (80 : 20) campaigned by Department of Alternative Energy Development and Efficiency, DEDE. SSI received subsidy from DEDE Baht 368,000, accounted for 20% of total investment in modification, improvement of energy conservation equipment for lighting system. Old lamps were replaced by LED that can reduce energy consumption at 165,478 kWh, in other words, electricity cost of Baht 546,077.4 has been saved. In addition, CO₂ emission has been reduced to 120.2 tCO_{2e} resulting from this energy conservation project.



Furthermore, SSI still joins many projects in energy aspect and reduction of greenhouse gas emissions with government agencies in 2017 e.g. study project of technical and investment support from Japanese government (The Joint Crediting Mechanism, JCM) and cooperation development project with South East Asia Iron and Steel Institute (SEAISI) through Environment and Safety Committee (ESCO) that there is study project proposal of technologies list to reduce CO₂ Emission, Air and Water Pollution and Industrial Waste. Implementation of the various projects is to demonstrate commitment and intention to reduce greenhouse gas emissions of organisation and, according to country reduction plan of energy consumption and greenhouse gas emissions.

Green Industry

SSI signed the memorandum of co-operation to develop a Green Industry with the Ministry of Industry as it recognises the importance of co-existence between the industrial community and the social and environmental factors. Under this umbrella, SSI has been certified in the Third Level Green Industry (Green System), due to our systematic environmental management and monitoring for continuous development, since 2011 to 2016. SSI expects that the year 2017 will be certified the Fourth Level Green Industry (Green Culture).

Surveying Local Attitudes and Local Participation on Environment

A survey on attitudes of the community is conducted annually among the communities around the plant. The communities are important stakeholders for SSI because the operation of the plant affects them economically, socially and environmentally in both positive and negative ways. Thus, an attitude survey enabled the Company to understand their perception through community leaders and household leaders on various effects from the operation of the plant throughout the year. It also paves the way to joint decisions through participatory meetings, for example, community leader council meetings and village meeting. SSI has used suggestions from these meetings as a basis to arrange programmes that directly respond to the need of the community and lead to sustainable local satisfaction.

Surveys made in 2016 show that most locals accepted and appreciated that the Company has played a part in improving income generation, better commerce and infrastructure. Such activities included donations for educational purposes, aquatic animal conservation, career development, community-banking and mangrove forest conservation. The top priority was tree-planting, followed by Mae Ramphueng mangrove conservation, aquatic animal conservation, donations for educational purposes, beach-cleaning, monetary/educational equipment donations for community education, local environment safeguarding, youth camp and other activities.

There are 3 concerns, resulting from the survey in 2016, including traffic congestion 5.8%, accidents from traffic 4.1% and defective transportation routes 2.2%. Top 3 concerns in 2015 were traffic congestion problems (10.3%), problem on dust and accidents (9.8%) and waste water problem (3.0%). Therefore, it could be seen that their major concern was still traffic problem. To alleviate community concerns about traffic issues, the company has partnered with transportation companies by specifying additional measures to monitor and supervise more effectively as follows:

1) Cooperation with the Transportation Bureau, Bangsaphan Industrial and Community Education College and other government agencies involved in order to educate the drivers in maintaining their vehicles, safely driving and 100% compliance with traffic rules.

2) Program to support and train the community personnel to become professional drivers. At the end of the course, they will be offered the opportunity to become employees of the transportation company, which can encourage the local people to have a job and help regulate traffic safety.

3) Provide a rest area for the driver to take a break and be checked for readiness on their health.

4) Increase the capability of the Operation Control Center to inspect the traffic and speed in Bangsaphan area via GPS system 24 hours a day.

5) Support and provide traffic safety equipment to Village security guard/group in Bangsaphan District to help oversee the traffic of general cars and cargo trucks of the Sahaviriya Group.

6) Training the village security guard/group on rescue and assistance skills in case of emergency on traffic or basic fire.

7) Increase traffic monitoring point on compliance with traffic rules of bus transportation by installing 4 additional CCTV cameras along the route in Bangsaphan.

8) Increase the number of drivers so they can drive alternately to get more leisure time under the "TAG TEAM".

These measures are supplemental parts from the routine works, such as time management to release freight car, avoid heavy traffic durations, control not to overload exceed than specified by the law, installation of CCTV, car patrol arrangement, establishment of the Sahaviriya Bus Transportation Fund and Seminar for transport operators.

Social Performance



Creating customer value and fair operating practices

SSI recognises the importance of customer satisfaction and its effect on successful business, therefore specific focus is placed on ensuring best practice is achieved to effectively and efficiently respond to customer's needs. Furthermore, fair operating practices with business partners are always carried out in order to create appropriate benefits for both parties. The Company ensures that correct reports and facts are provided to customers and performs in line with contracts and the Company is committed to negotiating appropriate solutions based on business relationships, avoids business conflict situations and adheres to fair treatment.

Innovated Value Products

In 2016, the Company has set up activities to strengthen relationships with customers, particularly in relation to resolving problems, handling customer complaints, and receiving feedback and suggestions. The data from the activities is used to develop product services and quality to meet the needs of the customers. Activities undertaken included customer visits, meetings with key customers on a monthly basis, annual customer satisfaction surveys, training and providing further knowledge of the company's products. SSI also provided advice and assistance to clients to support them in resolving any problems associated with the Company's products.

Our Innovated Value Products Working Team has carried out these activities to analyse customer needs, by working with the Production Team to drive the development of products and services quality. Improvements made include, controlling product dimensions to reduce customers' loss, specially designing product properties according to customers' requirements and enhancing transportation efficiency to achieve on-time delivery for urgent orders. These will support customers to broaden their performance

and expand marketing opportunity. Further important developments are as follows:

1. Developing prototypes of High Yield Strength Steel for general structure.
2. Developing prototypes of Welded beam using special steel of SSI
3. Developing IVP, creating value added to customers (You+) for automotive industry and special use customers.

In 2016, SSI had delivered 479,359 tons of Premium Value Products (PVP) which represent 39% of the total sales.

Create Shared Value with Business Partner

Annual seminars with suppliers and service providers were conducted to clarify company regulations, procurement purposes and procurement practices for Sahaviriya affiliated companies. Moreover, the Company has been supporting additional jobs for local suppliers in Bangsaphan district, by purchasing local products from various groups. The Company established Local Market @ SSI Project to support good quality OTOP from the housewife groups in various subdistricts in Bangsaphan district to be sold in the Company. This will help local product to be well-known and increase income for local vendors.

In 2016, the Company purchased products from general vendors at approximately Baht 1,320 million which can be classified as follows: Baht 540 million for energy product group, Baht 127 million for spare parts, Baht 103 million for factory supplies, Baht 101 million for consumable parts, Baht 384 million for services, Baht 65 million for others, and Baht 173 million for local purchases in the Bangsaphan community. For 2017, it is expected that procurement costs will be raised up to Baht 1,800 million from general vendors and Baht 185 million from the local community.

Fair Trade Practices

The Company undertakes the business by treating our competitors fairly and not obtaining their confidential information by dishonest or inappropriate ways or performing any activity that will damage their reputation by malicious accusation. Meetings are normally held between the SSI management and their competitors to strengthen relationships and share experiences. We also promote fair trade policies and practices through concerned government sectors.

Innovation, Research and Development

The Company recognises the need to focus on capability development in the steel industry. This is shown by the increase in number of research projects that the Company has created and applied for certification. Since 2006, the R&D expense related to 90 certified research projects was approximately Baht 64.2 million. However, in 2015, the National Science and Technology Development Agency (NSTDA) has changed its certification procedure and the Company faced financial difficulty, therefore, the number of our certified research project was not increase from 2014.

However, the Company continues to encourage R&D department to develop its research for creating knowledge in organisation and enhancing competitiveness by supporting PhD Scholarship Programme. In 2016, the research of scholarship recipient on "EFFECT OF STRIP THICKNESS ON MECHANICAL ADHESION OF THERMAL OXIDE SCALE OF HOT ROLLED LOW CARBON STEEL STRIP" was honored to present in the 9th International Symposium on High-Temperature Corrosion Protection of Materials (HTCPM 2016). Moreover, the recipient's research on "Effects of carbon and coiling temperature on the adhesion of thermal oxide scales to hot-rolled carbon steels" is published in an International Journal for research in material science.

Anti-Corruption

The Board of Director places a strong emphasis on conducting business under the principles of good corporate governance and social responsibility which is intended for sustainable development. The Company deems that corruption is harmful and causes great damage to organisations and the nation. The Company therefore fully supports the implementation of the anti-corruption policy. As a result, on 22 January 2016, the Company was certified by Thailand's Private Sector Collective Action Coalition Against Corruption Project (CAC) and became a member of CAC. In 2016, the Company carried out several anti-corruption initiatives as follows:

The Company established supervision and control practices to prevent and monitor fraud and corruption risks, which were summarised as follows:

1. Policies and Guidelines on Anti-corruption

The Company promulgated the policy and guidelines regarding anti-corruption in 2013 and continuously abided by them to confirm its intent and expectations to fight against corruption.

The anti-corruption policy states that Directors, Executives, and all employees are prohibited from accepting or being involved in any type of corruption either directly or indirectly. The Company shall act strictly in enforcing compliance with Thai anti-corruption laws and regulations, and those of each country in which the company conducts its business. The Board also determined that the company's subsidiaries and its jointly controlled companies shall adopt this anti-corruption policy including any guidelines issued by virtue of such a policy.

The anti-corruption guidelines provide guidance on offering or receiving gifts or entertainment or hospitality activities, granting contributions or donations to charities or common wealth, and political contributions. Guidance on reporting of suspected fraud or corruption is also provided. This policy and guidelines were developed in addition to the

“SSI WAY” including the Company's commitment to ethics which is mentioned in business philosophy, integrity which is mentioned in business ethics, employee ethics and values, as well as the ethical conduct for employees on conflicts of interest which is mentioned in the Company's guidelines regarding conflicts of interest.

2. Communication of Policies and Guidelines on Anti-corruption

The Company recognised the importance of communicating policy and guidelines on anti-corruption. They were communicated by an e-mail and internal newspaper. All employees were able to access to this policy and guidelines which were posted on the company Intranet and also available on the Company's website.

3. Training

The Company has continually provided training to encourage executives and employees to be aware of anti-corruption and to ensure that employees truly understand and can comply with the anti-corruption policy and guidelines. Moreover, a topic on the anti-corruption policy was included in the orientation program for new employees. In 2016, the orientation program was held four times.

4. Putting Policies into Practice

The Anti-corruption working committee has been appointed since 20 July 2015, to put the anti-corruption policy into practice and to enable the Company to maintain what it has been doing as a certified company of Thailand's Private Sector Collective Action Coalition Against Corruption. This is to express the Board's commitment and intent on Anti-corruption and to ensure that the Company has an anti-corruption measures monitoring, a delegation of power and a clear responsibility to implement the anti-corruption policy. In 2016, The Anti-corruption working committee studied the draft Guidelines for Internal Control Measures in Preventing Bribery, issued by the National Anti-Corruption Commission, and prepared the Company to get ready for the official launched.

5. Fraud and Corruption Risk Assessment

The Company assessed risk of fraud and corruption by the risk owner of each division who identified events where fraud and corruption risk might occur in his/her area, assessed the likelihood and impact, reviewed and designed appropriate measures to combat fraud and corruption. The Group Risk Management Office then collected their results and proposed them to the Risk Management Working Committee for consideration before submission to the Risk Management Committee for acknowledgement. This will be done annually.

The Company determined guidelines on monitoring and evaluating compliance with the anti-corruption policy as follows:

1. Whistle-Blowing System

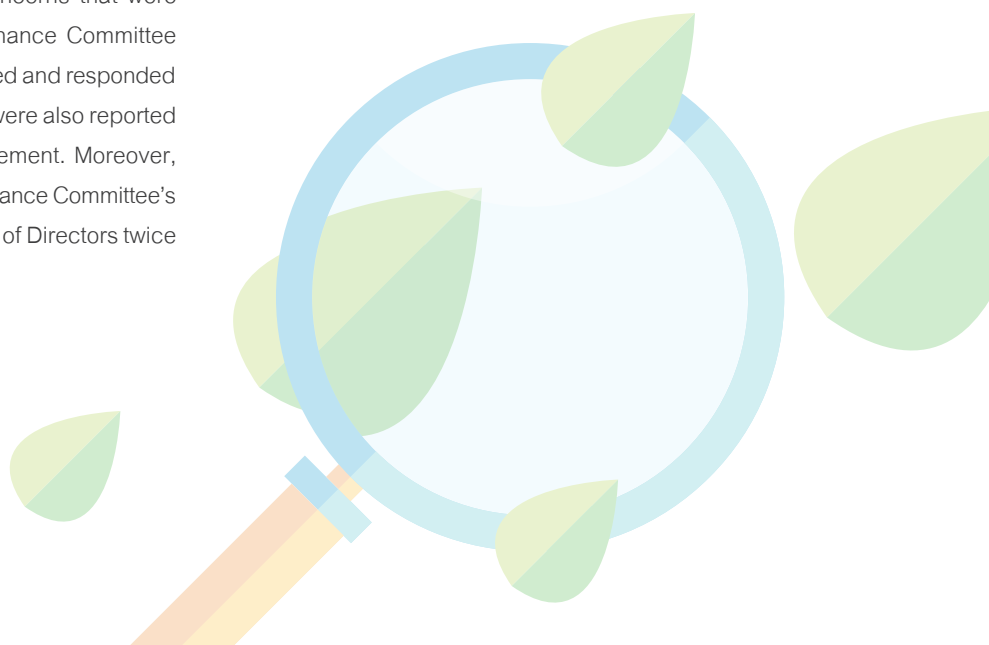
The Company provided Whistle-Blowing channels for stakeholders to raise concerns about offenses against the law, unethical practices, poor or unacceptable practices, abuse of authority, irregularities, corruption, fraud or misconduct, violations of the company's conflict of interest policy, abuse and disregard of company policy, guidelines, instructions or procedures, fraudulent financial reporting, deficiencies in internal control systems or any action that may cause damage to the informants or the company, without fear of retribution by having measures to protect the informants or whistleblowers. The Company also provided measures to review or investigate the whistleblower's concerns and the imposition of punishment of offenders. All the whistleblower's concerns that were raised with the Good Corporate Governance Committee were to be tracked and examined, resolved and responded to informers as soon as possible. These were also reported to the Audit Committee for acknowledgement. Moreover, a summary of the Good Corporate Governance Committee's activities were also reported to the Board of Directors twice a year.

2. Internal Audit

The Group Internal Audit Office participated in an assessment to assure and advise on good corporate governance, risk management and internal control. The Company's internal control was assessed by the Group Internal Audit Office together with the management every six months especially the assessment of risk factors relating to misstatements arising from fraudulent financial reporting or misappropriation of assets. The Group Internal Audit Office also developed an audit coverage plan and an annual audit plan using a risk based approach including fraud and corruption risk. The audit engagements were conducted following the annual audit plan that has been approved by the Audit Committee and the audit results were reported to the Audit Committee.

3. The self-assessment and monitoring for compliance with Business ethics and Employee ethics

In December 2016, the Company surveyed its employees about their perceptions and compliance with the Company's Code of Conducts including Business ethics and Employee ethics by using the self-assessment questionnaire as a tool. Not only the perceptions and compliance with the Company's code of conduct but also the anti-corruption policy was also surveyed. The objectives of the survey are to improve the effectiveness of internal communications to ensure employees understand the Company's Code of Conduct and anti-corruption policy and to monitor and assess employees' compliance with them.



Human Resources and Right

The Company recognises the importance of human resources that they are essential to the organisation's business success. We have determined the appropriate structure of employment, compensation and benefits, personnel development and the Company has continued the Care Organization Project to promote activities related to employees and their families, creating efficient collaboration and working relationships between employers and employees. The project supports employees to achieve an appropriate work life balance by considering their personal life and family. In addition it encourages employees to demonstrate good values and act as role models.

Employee Structures

In 2016, SSI employed 1,151 people; 138 at the Bangkok office and 1,013 at the Bangsaphan Steelworks. The employee structure recognises levels of employee as follows:

- Executive 47 people
- Managerial 228 people
- Supervisory 435 people
- Operational 441 people

SSI Group Employee

SSI Group employee level	SSI	TCRSS	WCE	PPC	Total
Executive level	47	9	2	0	58
Managerial level	228	63	30	3	324
Supervisory level	435	198	132	27	792
Operational level	441	560	153	53	1,207
Total	1,151	830	317	83	2,381
Outsourcing	324	139	164	0	627

(Number of Employees of SSI Group: as at 31 December 2016)



Employment

The Company has a policy to encourage employees to consider promotion and rotation of roles. The policy looks to appoint internal employees into roles who have the appropriate knowledge and qualifications. If there are no suitable current employees for a required role, the Company will recruit potential external candidates. Recruitment policies are open to all genders, races, religions, ages of 18 years and over, providing the person is appropriately qualified and competent. The Company conducts interviews with fairness and effectiveness in recruitment and selection. In 2016 the Company had 64 job vacancies with 128 potential candidates and 52 people were successfully

recruited into these roles; 18 newcomers and 34 transferring employees within organisation. As for the underprivileged, there are limited positions because of job characteristic. The Company also has contributed to the Empowerment of Person with Disabilities Fund through the improving quality of life of people with disabilities.

Employee Development

The Company has developed competency based guidelines to recognise talented staff and support the development of staff according to the SSI Way. In 2016 SSI has arranged training courses as follows:

Training and Development of SSI Staff in 2016

Guideline	Method	Outcome in 2016
On-the-Job Training (OJT)	Set standards of necessary knowledge and skills to different tasks and assigned supervisors to coach and train staff to enable them to perform in accordance with the knowledge and skill levels required. The supervisors will regularly monitor the outcomes and performance.	909 people
In-house Classroom Training	Core Competency Training Course Managerial Competency Training Course Functional Competency Training Course Productivity Training Course Occupational Health and Safety Course Effective Teams Management Training Course Anti-Drugs Courses	116 courses 1,019 participants Average training period 26.24 hours/person/year
Employee Development - talented and good staff through the SSI Way	Company Value (iFacts) Knowledge and Awareness	12 activities 975 participants
Domestic and Overseas Training	Appoint staff to undertake training courses held by external organisations, both domestic or based overseas	93 courses 183 participants Average training period 11.50 hours/person/year
Acknowledge the Annual Division Goal Program 2016	Managerial level executives and upwards were informed about policy and strategies through Goal Program Presentation, by each division.	180 participants (Managerial and above level)

Welfare and Benefits

SSI places a focus on the welfare and benefits of employees and complies with the relevant legislation on employment such as leave days and holiday leave. Moreover, the Company provides the following welfare and benefits appropriate to the relevant working conditions:

- Annually 2 uniforms
- 5-route transportations for staff in Bangsaphan to travel into the office
- Monetary support for staff who live outside of the Bangsaphan district area
- Free rice and inexpensive food for staff
- Upcountry allowance for staff who work at Bangsaphan Steelworks
- Travelling allowance support for employees who work in other locations and overseas
- Shift allowance for shift workers
- Provident fund for employees on retirement
- Internal sport, Sport Day and Anti-Drugs Sports
- Organises “Staff Health Week” campaign to support staff to learn to take care of their health
- Organises Drug Free Workplace Project to protecting and solving drug problems in organisations
- Organises lectures on HIV/AIDs
- Health and life insurance and travel insurance for overseas business trip



Employee Relations

The Company recognises the importance of building relationships between employees and management to create an effective work environment and to provide employees with a balance between work life and family life (Work Life Balance). The Company has therefore maintained the “Care Organization” project which has included the following activities:

- Meet Management: The following activities have been put in place to establish a relationship between employees and management:
 - Annual policy statement: President informed managerial level staff about the strategic plan and company policies.
 - Goal Program Presentation: Managers and above reported their annual plans twice a year to support the company strategy and business plan. This allowed other managerial staff to share their plans and received comments and suggestions for improvement from the Management Committee.
 - Announce Division Annual Strategic Plan: Each management division presented to their staff the division strategy to create awareness and improve all employees understanding.
 - Executive meeting and participate in activities together: Management have visited the plants to participate in company activities such as sport, voluntary work, blood donations and merit in the New Year. These activities supported the Company’s agenda to promote talented and good staff through the SSI Way.
 - Increasing the well-being of employees and their families: Project activities have been set up such as Happy Family Project for 100 families, Family Day and Volunteer Project for on fire and flood disaster.
 - HR Clinic: The Company arranged HR consulting staff to advise employees on any HR queries, for example company rules & regulations, salary, personal tax etc.

Creative Internal Communication

In order to build good relationships and encourage understanding between the organisation and all staff levels, SSI focuses on creative internal communication via many channels as follows:

Communication Channel	Objective	Outcome 2016
Message from Group CEO and President and Management (interviews with executives and publish on the intranet and internal TV)	To inform and make all staff aware of policies, operation directions and major performances of the Company directly from Group CEO and President and the Management	9 times
Goal Program Presentation	To allow all staff of managerial level and upwards to acknowledge and share their opinions on the direction and business operation. This is performed for the Company in overview and for different departments to allow clear communication between teams.	2 times
Voice on the Line	To provide information to staff directly from the management team to help them understand the business vision or related operation.	5 days/week
Morning Talk (monthly/weekly)	To allow managers and staff to have a two way communication system to update on news related to the company and to solve any work issues.	1 day/week
Face to Face Workforce Visit	To visit staff at their operational locations to provide information and news about activities being held in the Company as well as asking them for their opinions and suggestions.	4 times
Employee Relations staff visit shift staff at their workplace	To visit night shift workers at their workplace and gain their opinion and provide them suggestion.	12 times
Welfare Committee	To communicate employees' requirements to the management team and strengthen the relationship between executives and staff.	4 times
Electronic News letters	To publicise updated information and activities of the Company. The newsletter includes completed and future projects to provide useful information related to daily life and health.	10 times
SSI Way Understanding Activities	To help employees learn and understand the "SSI Way" which are the values that the Company encourages staff to demonstrate - "good person", "talented person" and "qualified person" who will help develop both the organisation and the society.	4 activities
Internal TV	To distribute major information to all staff quickly	4,090 times
Communication via Social Media (Facebook, Page-SSI Employee Relations and Welfare)	Social media is used as a two way communication tool to inform staff about updated information regarding the organisation. The communication can be made via both the internet and smart phone.	272 messages
Steel Man Steel Mind Project	To support the relationship between employees' families and the Company by choosing from employees who cooperate will with the Company's activities.	32 times

Social Capital and Community Development

SSI has continuously focused on social and community development on sustainable basis in order to strengthen its stakeholders by adhering to three fundamentals: creativity, stakeholder engagement and operation efficiency. In 2016, the Company operated 39 social and community development projects (inclusive of 15 SSI Arsa projects), which benefit 17,220 stakeholders. These projects are divided into two parts: 1) Social capital development to strengthen the underprivileged and 2) Community development which emphasizes on 4 aspects: education, environment, occupation and income, good quality of life as well as religion and local culture support.

Social Capital Development

Thailand Iron Man Mini Marathon 2016

The Company, with co-operation with steel industry partners, namely, Thai Cold Rolled Steel Sheet Public Company Limited (TCRSS), NS-Siam United Steel Co., Ltd. (NS-SUS), NS Blue Scope (Thailand) Limited (NS Blue Scope) and JFE Steel Galvanizing (Thailand) Co., Ltd. (JSGT) arranged "Thailand Iron Man Mini Marathon 2016" at Lumpini Park, on 26 November 2016. There were more than 1,200 participants for this year event which could raise fund of Baht 2 million to support organisations for the underprivileged. This event which arranged for 9 consecutive years could raise fund more than Baht 20 million in total.



Chakri Day Run

SSI supported the Rajcha Pracha Samasai Foundation under royal patronage in arranging the Chakri Day Run. It was aimed to honor the monarchs of the Chakri Dynasty as well as to raise public awareness on benefits of exercises and esprit de corps. The fund raised from this activity went towards the foundation for the vulnerable people who suffered from leprosy and for educational funds for orphans of aids-related deceased parents under the royal-guided supervision of the Rajcha Pracha Samasai Foundation.

Community Development

In 2016, SSI has carried out 37 projects which reflect our commitment to be the good citizenship and to earn trust from Bangsaphan locals and stakeholders with ultimate objectives are to build up strength to the community and the society. The community development of SSI focuses on engagement from everyone, including SSI staff, locals and related organisations in the following aspects: education, environment, occupation and income, good quality of life, religion and cultural support and "SSI Arsa," public mind project development among SSI Staff.

Jointly Developing the Quality of the Community Education

Sahaviriya Funds for Bangsaphan Educational Developments

Sahaviriya Funds for Bangsaphan Educational Developments Project emphasized 3 dimensions (school, teacher and student) and has continued for 3 consecutive years, with co-operation from the Office of the Basic Education Commission (OBEC) and from the Office of Prachuap Khiri Khan Primary Educational Service Area Zone 1. In 2015, this project has expanded target schools to 36 schools in 7 Sub-districts in Bangsaphan District under "The 4th Sahaviriya Funds for Bangsaphan Educational Developments Project. This project is a 3-year continuous project and 6 schools have received the scholarships. In 2016, this activity was held during February to November 2016. Details of the works performed are as follows:

- The 1st batch which was commenced in 2011, where 2 medium-sized schools, Ban Don Sa-nga School in Kamnoet Nopphakhun Sub-district and Ban Suan Luang School in Phongprasat Sub-district were selected (Project completed).

- The 2nd batch which was commenced in 2013, where 1 large-sized school, Bangsaphan Kindergarten School in Kamnoet Nopphakhun Sub-district, was selected (Project completed).

- The 3rd batch which was commenced in 2014, where 1 large-sized school - Bangsaphan School in Mae Ramphueng Sub-district, was selected. In 2016, the Project followed up operations after the second year scholarship has been granted and performed the 2nd assessment pursuant to the 3-year-educational-quality development plan (before the third year scholarship will be granted).

- The 4th batch which was commenced in 2015, where 2 small-sized school, Ban Nong Chan School in Chai Kasem Sub-district and Ban Wangyao School in Thong Mongkhon Sub-district, were selected. In 2016, the Project followed up operations after the first year scholarship has been granted and performed the 1st assessment pursuant to the 3 year educational quality development plan (before the second year scholarship will be granted).

- The 5th batch which was commenced in 2016, where 1 large-sized school, Ban Thong Mongkhon School in Thong Mongkhon Sub-district was selected from total 10 schools submitting their 3-year education plans to the Project.

In 2016, there are 4 local schools (the 3rd - 5th batch) under the Project. Three schools, Bangsaphan School, Ban Nong Chan School, Ban Wangyao School, have demonstrated impressive results, as their average results for the Ordinary National Educational Testing (O-NET) were 59.20% and 54.90% and 46.82% which were higher than the average national result of 44.98%. Another school – Ban Thong Mongkhon has just received the fund and began to follow the plan for the first year.

Workforce Development for Steel Industries

The Company joined forces with Bangsaphan Industrial and Community Education College to support metallurgy knowledge for educational institutes and local youth and open more opportunity to recruit staff. As of 2016, there were 553 students from 9 academic years graduated from this project. Out of this number, 142 people are now working with SSI and companies in Sahaviriya Group.

SVG Annual Scholarships

The Company and Sahaviriya Group provided SVG Annual Scholarships 2016 totaled 256 scholarships, worth Baht 590,000 for local youth who have determination to study but have economic difficulty in 22 schools in Bangsaphan District. The scholarship details are as follows:

- 254 scholarships for primary school - high school students, Baht 275,000 worth,
- 1 continuous scholarship for bachelor's degree student, Baht 35,000 worth,
- 8 SVG's Scholarships for Excellent Education Development (SVG SEED) for local youth who will continue their study in becoming teachers and come back to develop their community, Baht 280,000 worth.

Moreover, SSI staff also provided 97 additional scholarships, "Tun Nee Phue Nong", Baht 123,000 worth, for the youths in Bangsaphan.





Local Curriculum Development Project

SSI has joined with the local schools and local people in setting up the Local Curriculum Development Committee to apply learning process which are in line with social context in the locality for sustainable development of quality of life and environment as well as to create actual participation through the study courses taught by 9 SSI volunteer teachers who have keen expertise in this field. The topics which are taught to 199 students in Pratom 4 to 6, totally 26 hours in a year, are “Steel in daily life” and “Steel industry and community development”.

Moreover, in 2016, this project was expanded to one additional school, Ban Don Sa-nga School and teaching activities are organised continuously in participating schools: Wat Na Phak Khung School, Ban Chamuang School, Ban Don Samran School and Ban Tha Kham School. The project has been run since 2012 and to date, there are 5 schools participating in the project.

The Annual Drawing Contest Project

“The Creative Arts, Wide Imagination Project,” a drawing contest, provided an opportunity for students from Kindergarten to Mathayom Suksa 3 in Bangsaphan District to compete for scholarships. Selected drawings have been submitted to compete in an international drawing contest in Tokyo, Japan.

This year, Korndanai Duangthong, a Pathom Suksa 4 student of Ban Don Thong School, Kamnoet Noppakhun Sub-district, received Bronze Award from the 46th International Children’s Art Exhibition in Japan. The award-granting ceremony took place on 6 August 2016 at Funarium, Sukhumvit 26, Bangkok.

The 11th To Be Engineer Project

SSI joined with schools in the Bangsaphan District to arrange a study camp for 353 Mattayom Suksa 3 students to learn about steel industry, under “the 11th To Be Engineer Project.” The project consisted of providing knowledge of steel production, safety, environment management, community activities, steel in daily life and plant tour. There are also many recreational activities and guidelines on further study in engineering and related fields, as well as personality and career tests so that students will have information before making their decision for further study.

Sufficiency Economy School for Sustainability Project

SSI recognises the importance of His Majesty the King Rama IX’s idea of Sufficiency Economy, therefore, Sufficiency Economy School for Sustainability Project was launched in Ban Nong Chan School, Ban Don Samran School, Wat Na Phak Khung School and Bangsaphan Non-Formal and Informal Education (NFE) since 2012. The project has been run continuously to date.

In 2016, the project was expanded to include Ban Dong Mai Ngam School, Moo 3, Chai Kasem Sub-district, Bangsaphan District, Prachuap Khiri Khan Province. There were various operations for sustainability: a model school visit; meeting with executives, educational personnel and school committees and village meetings to create involvement, resulting in shared value between the Company, the schools and the communities through the schools’ activities of sufficiency economy.

Young Agriculturist Project for School

This project has been built on Young Agriculturist on Hydroponics System Project which was launched in 2012 by SSI whereas 1 plot of land for setting up a pilot project of Hydroponics System has been provided at Ban Tha Kham School in Moo 4, Mae Ramphueng Sub-district, Bangsaphan District, Prachuap Khiri Khan Province and it could benefit 150 students. This project is still viable in this school up to date. In 2013, the project was expanded to Ban Morasuab School, Moo 3, Chai Kasem Sub-district in the form of collaboration between the school and the Company. During this project, students can learn to practice business skills by growing hydroponic vegetables and selling them in the school's cooperative. There were 354 students who received benefits from the project as the vegetables they planted were used to cook lunch and the rest were sold to the community to generate additional income for students and this project has also been integrated to school curriculum. In 2014, SSI expanded Young Agriculturist Project to Ban Huaysai Khao School and Ban Suan Luang School, where there were 214 students and 141 students benefited from the project, respectively. These students could practice business skills, including production process, management and marketing skill. Moreover, the vegetables grown from the project will be cooked for school lunch, sold to parents and the community to add more income for students.

In 2016, Ban Thong Mongkhon School, Moo 6, Thong Mongkhon Sub-district joined this project and it is expected that 611 students be benefited from the project. The Company strictly monitored and supervised 4 participating schools, by focusing on efficient project management, increasing of business skill for students and creating new generation of young agriculturist. Moreover, older generations will teach younger generations to ensure that the projects will be continually taken care and on sustainable basis.

Organic Farming for Sustainable Community Enterprises

The Company expanded the Young Agriculturist Project from school level to community level. The participated community must be located in strategic areas around our factory which have potential and could accept the project conditions. The Company surveyed requirements of local communities and held meetings with many communities' leaders, village committees and locals to evaluate their potential to lead the project to success. Finally, Ban Thong Chai Community, Moo 3, Thong Chai Sub-district has been selected to run the project and "Ban Krut Community Enterprise" was established with 33 members. After that, its committee was selected and fund was raised for the project operation. The members cooperated with the company's voluntary staff to adjust the area to build a greenhouse. There was also a study visit and training on a new model of organic farming from experts. The project has been run with management from the enterprise committee since 2015.

In 2016, the committee was selected from the members to run the project. There was fundraising, where a member could not hold more than 5 shares, worth of Baht 200 per share. Currently, there are a total of 45 shares, worth of Baht 9,000 and this sum of money will be used to run the project. Management structure of Ban Krut Community Enterprise is divided into various departments – production, marketing, accounting/finance, and secretary – each with clear roles and responsibility. From the past operation, 6 batches of vegetables had been grown with a total sale of Baht 9,655. Furthermore, it has a plan for product processing to add more value. The potential of the enterprise has been strengthened by setting up clear enterprise regulations and in the future, it will be developed into a learning center, so that other communities can visit.

Youth Council Project

This project focused on life skill development management for the youths, by the Youth Council. The youths will be prepared and learnt in various aspects, such as potential development and cultivation of public awareness of their own communities in order to develop their communities and make them better places to live in.

From project operations in 2016 operation, important achievements are as follows:

- Election for Ban Don Sa-nga youth councilors to replace the retired committee (2-year term each). There were 9 new committee members and 5 consultants.
- Public-consciousness building activity: improve landscape for villages' anti-drug sports ground, such as marking lines for futsal fields, mowing grass around sports fields and growing decorative flowers around the fields and nearby areas.
- Present their plan and receive financial support of Baht 20,000 from the Prachuap Khiri Khan Welfare Fund to arrange anti-drug activities in the community. The trainings for youths in the schools and in the villages were organised to create leaders of voluntary youths who will educate about drugs in the schools and the communities.

Job Development to Strengthen Household Economy

SSI has been supporting the agriculture development to help generate more income for local agriculturalists and housewife groups as follows:

Sahaviriya Ruam Pattana Project

Sahaviriya Ruam Pattana Project was launched by Sahaviriya Group, by establishing community banks in 4 sub-districts around the plant. At present, there are 18 community banks, with total fund of Baht 28,495,366 and 3,114 members.

Increase Locals Hiring from the Community

In compliance with the policy of promoting the local workforce and discouraging people from Bangsaphan District and surrounding areas to move away in search of income, as of 31 December 2016, SSI Bangsaphan Plant employed 2,088 employees of which 1,623 of them or 77.73% have domicile in Prachuap Khiri Khan Province. In addition, 627 outsourcing employees were also employed.

Purchase of Products and Services from the Community

SSI purchased local products from various career groups in Bangsaphan District, with total value of approximately Baht 173 million and in 2017, the number is expected to reach Baht 185 million.

Safeguarding and Upgrading the Environmental Quality

SSI strongly places importance on responsibility to the environment and natural resources. The Company controls the industrial processes to ensure that pollution emitted is minimised and it will not have impacts to quality of life and health of staff and local people. SSI, together with related offices, arranged campaigns to improve quality of the environment on continued basis with 1,342 people participating in the activities.

SSI Beach Clean-Up

SSI executives, staff, together with students, hotel and business sectors and people in Bangsaphan District participated in "SSI Beach Clean-Up Project" as a part of the World Environment Day, on 5 June of every year, to support the United Nations Environment Programme (UNEP) (this year topic: "GO WILD for LIFE"). This project has been arranged for 8 consecutive years to collect garbage on Mae Ramphueng Beach in Mae Ramphueng Sub-district, Bangsaphan District, Prachuap Khiri Khan Province. There were 527 participants and the distance covered was 3 kilometres.

Bangsaphan Car Free Day

SSI joined forces with Sahaviriya Group to arrange a bicycle ride trip on "Bangsaphan Car Free Day 2016" on 18 September 2016. This project has been arranged for 6th consecutive years with aim to raise awareness of global warming among people in Bangsaphan, reduce energy usage and support bicycle riding for good health. The 12-km bicycle ride trip attracted 467 people to cycle from Bangsaphan District Office to Mae Ramphueng Sub-district Administration Office. At the same time, Bangsaphan people were encouraged to stop using motorised vehicles

for 30 minutes from 8.00 - 8.30 a.m. This activity helped reduce 2,129.52 kgs of carbon dioxide equivalent. Moreover, the amount of carbon dioxide emission reduction resulted from this activity since 2011 is 16,982.80 kgs of carbon dioxide equivalent.

Moreover, SSI and Sahaviriya Group also arranged Ride for Smile Project, a project under Two Wheels Preserve Bangsaphan Project, to encourage people in Bangsaphan District to join bicycle trips for good health, reduce energy usage and create social contribution. In 2016, Ride for Smile Project has been held twice as follows:

- Ride for Smile #1/2016 was arranged on 24 April 2016, with 73 participants. The activity included a 12-km bicycle ride trip from Bangsaphan District Office to Khao Kaji Temple, Kamnoet Noppakhun Sub-district to collect garbage. The event could reduce approx 332.88 kgs of carbon dioxide equivalent.

- Ride for Smile #2/2016 was arranged on 18 September 2016, with 121 participants. The activity included 26-km bicycle ride trip from Bangsaphan District Office to Ban Chamuang's public area, Moo 3, Phongprasa Sub-district to plant 300 trees. The event could reduce approximately 1,195.48 kgs of carbon dioxide equivalent.

In conclusion, the 2 events in 2016 could help reduce approximately 1,528.36 kgs. of carbon dioxide equivalent.

Cycling Trip to Plant Trees to Honour the King

The Company collaborated with local people in Bangsaphan District to arrange a cycling trip to plant trees to honour His Majesty the King. This will help increase green space and also helps raise awareness among local people to realise the importance of tree planting and energy reduction usage.

Five cycling trips to plant trees have been arranged: The 30-km cycling trip from Bangsaphan District Office to Tham Khiriwong Temple in Thong Chai Sub-district; The 12-km cycling trip from Bangsaphan District Office to Thung Khi Tai in Phongprasad Sub-district; The 16-km cycling trip from Bangsaphan District Office Khaowong Mountain in Ban Don Sa-nga, Moo 8 in Kamnoet Noppakhun Sub-district; The 9-km cycling trip from Bangsaphan District Office to Tung Tub Tong Abbey, Moo 12, Ronthong Sub-district and the 13-km cycling trip from Bangsaphan District to Ban Chamuang's public area, Moo 3, Phongprasad Sub-district.

SSI Waste Bank Project

The Company has been arranging SSI Waste Bank Project since 2008. There were 8 schools in Bangsaphan District participated in this project, including Ban Suan Luang School, Bangsaphan Kindergarten School, Ban Nai Lock School, Ban Nong Yahphlong School, Ban Morasuab School, Women Secretaries 1 School, Ban Klongloy School and Ban Nong Chan School. SSI arranged seminars for 8 schools and waste invention competition. The aims were to support the youth to manage and solve environmental problems, allow them to express their imagination and expand SSI's environmental projects among them.

Moreover, SSI Community Relations Team joined forces with the Office of Prachuap Khiri Khan Primary Educational Service Area Zone 1 to supervise and assess the project. Results found that the project brought significant change to the project areas. Each of the participating school will receive the fund of Baht 3,000 from the Office of Prachuap Khiri Khan Primary Educational Service Area Zone 1 to support Zero Waste School project, focusing on building consciousness of waste management in schools.





Youth Conservation Camp

SSI, in cooperation with the Prachuap Khiri Khan Primary Educational Service Area 1, organised Youth Conservation Camp for primary school students (Pratom 5) from educational institutes in Bangsaphan District annually. The project aims at instilling green heart among local youths, by arranging various activities. This project has been held for 10 consecutive years, with 1,027 junior conservationists, in total.

In 2016, SSI organised the 11th Youth Conservation Camp on 5 - 7 October 2016 at Environmentalist Camp, Ban Tha Kham School, Moo 4, Mae Ramphueng Sub-district, Bangsaphan District, Prachuap Khiri Khan Province. There are 109 students from 21 schools who joined this camp. Students participated in 6 learning stations in Pa Klang Aow Forest Park, Mae Ramphueng Beach and at Ban Tha Kham School. Moreover, activities to cultivate volunteer spirit to conservationists have also been organised by making a pond for animal at Pa Klang-aow Forest Park together with company employees.

In addition upon completion of the event, the SSI's Community Relations Team monitored, followed-up and assessed results of this Youth Conservation Camp activity from the participating schools and it was found that from the previous periods, they have satisfactorily results. For instance, the Conservationists applied and transferred knowledge gained to other students. They also established the environmental conservation club in the schools with environment action plans in place and conducted environmental conservation activities in the schools on continued basis with the support from the school management and the teachers responsible for this project.

Culture and Religion Activities

Activities on Elders Day

The Company joined activities on Elder's Day 2016 in Mae Ramphueng Sub-district. The event aims at preserving cultural traditions and expressing gratitude to the elderly. The activities included sprinkled water onto a Buddha image, poured water onto the elders' hand, arranged recreation and exercise activities for the elderly, with 349 elderly people joining the event at Mae Ramphueng Sub-district Administration Office, Bangsaphan, Prachuap Khiri Khan.

National Children's Day 2016 in Bangsaphan

SSI supported activities on National Children's Day together with Kamnoet Noppakhun Sub-district Administration Organization, Thong Mongkhon Sub-district Administration Organization, Kindergarten Bangsaphan School, Ban Suanluang School, Wat Napukkuang School.

SSI Arsa Project

"SSI Arsa Project" is a volunteering project, launched by SSI staff and executives to arrange activities to help the society and community in Bangsaphan District.

Instilling Corporate Volunteering Culture

In 2016, SSI Arsa Volunteers have arranged 15 volunteering activities under "25th Anniversary of SSI, 250 Virtues" Project.

25th Anniversary of SSI, 250 Virtues: 15 Virtues

- The 136th Virtue: Repair vegetable greenhouse at Ban Morasuab School
- The 137th Virtue: Collect garbage and Clean-up around Kao-Kaji Temple
- The 138th Virtue: Mark line in the yard and garage at Bangsaphan School
- The 139th Virtue: Repair a burned hydroponics greenhouse for Ban Krud Community
- The 140th Virtue: Clean-up around temple area and entrance to Kao Ma Rong Cave
- The 141st Virtue: Build bulletin board for Ban Tha Kham School
- The 142nd Virtue: Improve water resource for wildlife at Ao Siam Forest Park
- The 143rd Virtue: Paint traffic police booth at Bangsaphan Market
- The 144th Virtue: Improve landscape and paint Luang Poo Chuang Building at Hin-Kong Temple
- The 145th Virtue: Set up a hydroponics greenhouse for Ban Thong Mongkhon School
- The 146th Virtue: Clean-up the factory's garage which damaged by flood
- The 147th Virtue: Trim trees and improve scenery at Bangsaphan School which damaged by flood
- The 148th Virtue: Improve scenery and clean-up staff home which damaged by flood
- The 149th Virtue: Improve scenery at Bangsaphan Kindergarten School
- The 150th Virtue: Install picture of His Majesty King Bhumibol Adulyadej at Bangsaphan School

The number of SSI Arsa Volunteers involved totaled 254 or 2,032 working hours, and the number of volunteers from the community totaled 201 or 1,608 working hours.

Expanding Arsa Network to Stakeholders

Tam Kan Pan Nong Project

SSI supported “the 14th Tam Kan Pan Nong Project,” by providing school stationery and necessities for Wat Mhai Phumcharoen School in Kanchanaburi Province on 30 January 2016. The Company also helped repair school buildings and arranged recreation activities with students. This project was initiated by the media from the Energy for the Society Club.

Youth Volunteering Project for Society

The Company established local youth volunteering network named “Arsa Bangsaphan Youth Group.” The initial fund has been provided for their management and fundraising to help vulnerable people. In 2016, Arsa Bangsaphan Youth Group arranged charity football match to help underprivileged disadvantaged people and social victims. They were also making ribbons to mourn the passing of His Majesty King Bhumibol Adulyadej.



CSR Performance

1. Economic Performance Table

GRI	Required Data	Unit	2014	2015	2016	Remark
Economics						
G4-EC1	Economic performance					
	Sales and service revenues	Million Baht	65,276.00	20,173.00	19,824.00	
	HRC Sales Volume (ktons)	Million Baht	3,318.00	1,126.00	1,232.00	Restated 2015
	EBITDA	Million Baht	808.00	(37,907.00)	2,203.00	Restated 2015
	Net profit (loss)	Million Baht	(4,903.00)	(40,840.00)	(2,869.00)	Restated 2015
	Economic value distributed					
	Suppliers*	Million Baht	3,099.00	1,502.00	1,320.00	
	Employees**	Million Baht	620.24	546.71	658.12	
	Financial Institutions (Interest Expense)	Million Baht	1,669.89	2,345.44	2,607.13	
	Community, Society and Environment***	Million Baht	17.81	13.91	5.20	
	Government (Tax)****	Million Baht	124.01	100.57	110.98	

* Consist of value of general trading transactions in goods

** Consist of salary, wages, welfare, provident fund, social security and other expenses for HR development

*** Consist of expenses in community and environment development

**** Consist of corporate income tax, local maintenance tax, property tax, signboard tax and withholding tax

GRI	Required Data	Unit	2014	2015	2016	Remark
Customer satisfaction						
G4-PR5	Target	%	75	75	75	
	Customer satisfaction					
	• Domestic market group A1	%	76	79	79	
	• Domestic market group A2	%	74	70	70	
	• Domestic market group A3	%	-	86	89	
	• Domestic market group B2	%	77	77	77	

2. Environment Performance Table

GRI	Required Data	Unit	2014	2015	2016	Remark
Energy						
G4-EN3	Total energy consumption	Megajoule (MJ)	3,015,980,591.43	2,379,108,513.62	2,457,873,035.26	
	Direct energy consumption	Megajoule (MJ)	2,265,435,128.01	1,768,090,287.55	1,785,019,175.26	
	• Benzene consumption	Liter	53,902,830.00	41,860,117.86	43,962,085.57	
	• Diesel consumption	Liter	657,318.00	536,149.00	559,965.00	
	• LPG consumption	Liter	326,235.00	409,677.00	345,003.332	
	Indirect energy consumption	Megajoule (MJ)	750,545,463.42	611,018,226.07	672,853,860.00	
	• Electricity consumption	MegawattHour (MWh)	208,484.85	169,727.29	186,903.85	
G4-EN6	Total amount of saved energy	Megajoule (MJ)	20,604,613.00	35,135,428.00	37,896,892.00	

GRI	Required Data	Unit	2014	2015	2016	Remark
CO ₂ Emission						
G4-EN15	CO ₂ Emission	Tons CO ₂	270,767.00	214,704.00	228,582.00	
Water						
G4-EN8	Water consumption from production process	million cubic metres	1.37	1.17	0.98	
Wastes						
G4-EN2	Percentage of materials used that are recycled input materials	%	98.22	98.34	99.24	
G4-EN23	Percentage of waste by waste incineration	%	1.78	0.36	0.66	
	Percentage of waste by landfill	%	0.00	1.30	0.10	
Transport						
G4-EN30	Number of company's vehicles or leased vehicles for product transportation					
	• Short distance truck	Cars	56	73	57	
	• Long distance truck	Cars	700	878	838	
	Number of transportation					
	• Short distance truck	Trips	1,189	6,404	9,441	
	• Long distance truck	Trips	2,010	26,281	24,663	

3. Total Workforce Table

GRI	Required Data	Unit	2014	2015	2016	Remark
Hiring						
G4-LA1	Number of employees					
	• Number of permanent employees	Person(s)	1,059	1,020	1,151	
	• Number of contracted employees	Person(s)	492	429	324	
	By gender					
	• Male	Person(s)	865	882	934	
	• Female	Person(s)	194	138	217	
	By age					
	• Over 50 years old	Person(s)	61	77	88	
	• 30 - 50 years old	Person(s)	765	728	823	
	• Below 30 years old	Person(s)	233	215	240	
	By employee structure					
	• Executive	Person(s)	40	26	47	
	• Managerial	Person(s)	142	152	228	
	• Supervisory	Person(s)	420	405	435	
	• Operational	Person(s)	457	437	441	
	Employee turnover					
	Total turnover	Person(s)	63	118	93	
	Total turnover rate	% of total employee turnover	5.94	11.56	8.08	
	By gender					
	• Male	Person(s)	43	84	60	
	• Female	Person(s)	20	34	33	
	By age					
	• Over 50 years old	Person(s)	-	7	5	
	• 30 - 50 years old	Person(s)	45	62	64	
	• Below 30 years old	Person(s)	18	49	24	

GRI	Required Data	Unit	2014	2015	2016	Remark
Newly hired employees						
	Total number of new employee	Person(s)	110	96	80	In 2015, 71 people from external parties and 16 people from SSI were recruited.
	Total new employee rate	% of total employee	10.38	9.41	6.95	
By gender						
	• Male	Person(s)	60	73	55	
	• Female	Person(s)	50	23	25	
By age						
	• Over 50 years old	Person(s)	-	0	0	
	• 30 - 50 years old	Person(s)	54	25	16	
	• Below 30 years old	Person(s)	56	71	64	
Maternity and parental leave						
G4-LA3	Number of employee who take maternity leave	Person(s)	9	5	8	
	Number of employees returning to work after leave	Person(s)	9	5	8	
Training and education						
G4-LA9	Average training hour					
By branch						
	• Bangkok office	Hours/ Person/ Year	24.32	15.12	20.67	
	• SSI Bangsaphan Plant	Hours/ Person/ Year	29.19	25.48	26.30	
By employee structure						
	• Managerial - Executive level	Hours/ Person/ Year	34.83	18.43	19.05	
	• Operational - Supervisory level	Hours/ Person/ Year	26.74	22.17	27.07	
Anti-Corruption						
G4-SO4	Number of employees who have completed ethics training	Person(s)	296	189	22	

GRI	Required Data	Unit	2014	2015	2016	Remark
Code of conduct						
	Violation of Business Ethics	Cases	-	-	-	
Talent attraction and retention						
	Percentage of employees who passed formal performance reviews	%	100.00	100.00	100.00	
	Employee satisfaction	%		N/A	N/A	
	Goal	%	65.00	-	-	
	Percentage of employees who take engagement survey					
	• Bangkok Office	%	9.40	-	-	
	• SSI Bangsaphan Plant	%	90.60	-	-	
	Score					
	• Total score of employee engagement with the Company	%	54.00	-	-	
	• Score of employee engagement with Bangkok Office	%	39.00	-	-	
	• Score of employee engagement with SSI Bangsaphan Plant	%	56.00	-	-	

4. Occupational Health and Safety Performance Table

GRI	Required Data	Unit	2014	2015	2016	Remark
Occupational health and safety						
G4-LA6	Injury Frequency Rate (IFR)					
	• Employees and contractors	case/ a million working hours	2.92	2.67	1.38	
	Lost Time Injury Frequency Rate (LTIFR)					
	• Employees and contractors	case/ a million working hours	1.10	0.76	0.35	

LTIFR = (Number of Lost Time injury x 1,000,000) / Total working hours

IFR: (Number of injury x 1,000,000) / Total working hours

Awards and Recognitions



Collective Action Coalition Against Corruption Certificate (CAC certificate)

Private Sector Collective Action
Coalition Against Corruption (CAC)
29 February 2016



National Outstanding Industrial Establishment Award in Labour Welfare/ Relations Category in 10 consecutive years type (2006 - 2016)

Ministry of Labour
17 August 2016



Excellent Organization by Environment Impact Assessment Standard 2016 (EIA Monitoring Award 2016)

Office of Natural Resources and
Environmental Policy and Planning,
Minister of Natural Resources and
Environment
6 March 2017



Thailand Outstanding Role Model Company Award for Safety, Occupational Health and Working Environment 2016 (5th consecutive year)

Ministry of Labour
30 June 2016



Outstanding Employment Support for Persons with Disabilities Award 2016

Ministry of Social Development
and Human Security
2 December 2016

About This Report



Scope of Report

The 2016 Corporate Social Responsibility Report of Sahaviriya Steel Industries Public Company Limited (SSI) is the eighth issue that the Company has published to inform shareholders, stakeholders, investors and the public. This issue has added information about stakeholder engagement and their expectation which will be applied to set up a clear CSR framework with economic, social and environmental consideration.

This issue has covered all business strategy, policies, guideline, and business performance in economic, social and environmental aspect, mainly about SSI and some parts connected to its subsidiaries, during 1 January 2016 to 31 December 2016, to ensure that the CSR guidelines are delivered consistently throughout the Group.

Moreover, SSI determines to expand the report to cover more areas in the future.

This report has been generated in accordance with Global Reporting Initiative (GRI) G4 which is an international initiative. The report is disseminated in written reports and online at www.ssi-steel.com to allow everyone easy access to the information.

For more information, please contact:

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Stakeholder Engagement and Sustainability

SSI has channels for appealing against illegal action, including actions which will damage whistle-blowers and the Company. Moreover, the Company has policies to protect the whistle-blowers and the appeal will be monitored and the facts assessed. These issues will be fixed, while the whistle-blowers and the Audit Committee will be informed

about its progress. In addition, the results of the Good Corporate Governance Committee's tasks will be reported to the Board of Directors for acknowledgement twice a year.

There are communication channels that the Company has applied to communicate with the main 7 groups of stakeholders to create understanding and allow them to be part of the operation. Their opinion will be assessed to appropriately respond to all stakeholders and continuously enhance for sustainable development.

Stakeholders Engagement and Expectation

Group of Stakeholder	Expectations	Engagement Method	No. of Time Engaged
Shareholders and Investors	<ul style="list-style-type: none"> • Good corporate governance • Risk management • Good performance and return • Business Rehabilitation Plan Progress • Anti-corruption policy 	Annual general meeting	N/A
		Annual report	Annual
		Investor relations activities	As needed
		SET's website	Continuous
		Analysis and explanation from the management	Quarter
		SSI's website	Continuous
		Strategic Partner Meeting	Quarter
		Twitter	Continuous
Customers	<ul style="list-style-type: none"> • Product quality • Technical supports • On time delivery • Service quality • Appropriate access to product • Correct product information • Products that promote the society and environment 	Meeting	Continuous
		Meeting	Continuous
		Development of good relationship via corporate tools; website, products manual, and activities	Continuous
		System of complaint	Continuous
		Plant visit	Continuous
		Website	Continuous
		Website	As needed

Group of Stakeholder	Expectations	Engagement Method	No. of Time Engaged
Business Partners and Suppliers	<ul style="list-style-type: none"> Quality promotion Technical support Co-management of occupational health, safety and environment 	Annual seminar	Continuous
		Meeting	Continuous
		Recruitment and selection process	Continuous
		Advisory system	Continuous
Competitors	<ul style="list-style-type: none"> Fair competition Avoiding dishonest or inappropriate access confidential information of competitors Not discrediting competitors 	Conference	Continuous
		Association membership	Continuous
		Association and sharing of experiences	Continuous
Employees	<ul style="list-style-type: none"> Environment, health and safety management in workplace Human resource development Fair evaluation and appropriate remuneration Communications Equal employment opportunity and anti-discrimination in the workplace Welfare 	Meeting	Continuous
		Internal program development	Continuous
		Employee relations activities	Continuous
		Workplace visit	Continuous
		Internal radio broadcasting	Continuous
		Intranet	Continuous
		E-mail	Continuous
		System of complaint	Continuous
Government	<ul style="list-style-type: none"> Job creation Fair competition Safety at work Additional investment National economic promotion 	Meeting and sharing information	Continuous
		Membership and participation in activities	As needed
Communities	<ul style="list-style-type: none"> Community development Environmental, occupational health and safety management Additional investment Knowledge transferring Community activity support Product transportation 	Community visit	Continuous
		Monthly meeting	Continuous
		Opinion leader meeting	Continuous
		Activity support	Continuous
		Sponsorships	Continuous
		Communication activities	Continuous
		Opinion survey	As needed
		System of complaint	Continuous

Sustainability Evaluation

SSI has conducted this report, by considering important issues which cover risk assessment, current and future business opportunities, in accordance with Global Reporting Initiative (GRI) and information from its stakeholders. This report was assessed according to GRI (G4) and was grouped in "Core" level, by revealing Material Aspect, which is shown in GRI G4 Content Index. Details of the assessment are as follows:

1. **Identification:** Identified significant sustainability related issues, by taking into account GRI indicators, industry standards, and market trends. The Company chose the issues influence business strategies, business risks and sustainability strategies of the Company, stakeholder expectations and creating shared values.

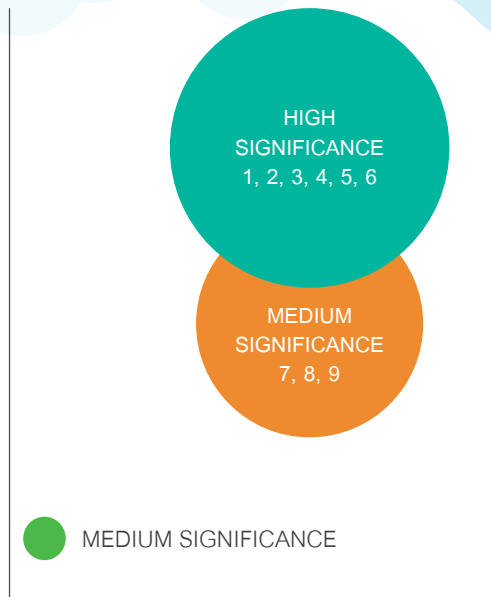
2. **Materiality Assessment:** Collected, assessed and introduced issues significant to business operations and in line with stakeholder's interest regarding level of high and medium significance. Other issues are presented through communication channels i.e. Annual Report, 56-1 Report, website etc.

3. **Issue Verification:** Interviewed external stakeholders and incorporate their perspectives and viewpoints during the content development. Corporate Social Responsibility Management Committee verifies assessment of significant issues to the organisation, selection of report content for publishing, as well as report formatting in order to ensure that the report covers significant issues relating to SSI and stakeholders' expectations.

Results of Significant Issue Assessment 2014 Table

1. Creating customer value
2. Good corporate governance and fair operating practices
3. Anti-corruption
4. Environmental management
5. Occupational health and safety
6. Water management
7. Human resource development and human right
8. Innovation for sustainable future
9. Local community development

Influence on Stakeholder Assessments and Decisions on the Company



Significant of Economic, Environmental and Social Impact on the Company's business

GRI Content Index

General Standard Disclosures

● Fully Reported ● Partially Reported ○ Not Reported

GRI Aspect	Indicator	Level of Reporting	Page		Note
			CSR Report	Annual Report	
Strategy and Analysis	G4-1	●	2 - 4	-	-
	G4-2	●	2 - 4, 12 - 14	4 - 5, 18 - 19, 23 - 28	-
Organisational Profile	G4-3	●	2, 57	-	-
	G4-4	●	5	-	-
	G4-5	●	57	-	-
	G4-6	●	-	6 - 7	-
	G4-7	●	5	6 - 7, 10 - 11, 13 - 17	-
	G4-8	●	5, 12 - 14	13 - 17	-
	G4-9	●	5, 57	-	-
	G4-10	●	38, 53 - 54	-	-
	G4-11	●	-	-	Not applicable
	G4-12	●	8 - 10	13 - 17	-
	G4-13	●	-	4 - 5, 8 - 9	-
	G4-14	●	12 - 33	24 - 28	-
	G4-15	●	2 - 4, 14, 50 - 51	-	-

GRI Aspect	Indicator	Level of Reporting	Page		Note
			CSR Report	Annual Report	
	G4-16	●	36 - 37	-	<ul style="list-style-type: none"> Thailand's Private Sector Collective Action Coalition against Corruption (CAC) The Association of Thai Hot Rolled Flat Steel (ATHF) The Association of Thai Cold Rolled Flat Steel (ATCF) Thailand Structural Steel Society (TSSS) South East Asia Iron & Steel Institute (SEASI) The Federation of Thai Industries Thailand Business Council for Sustainable Development (TBCSD)
Identified Material Aspects and Boundaries	G4-17	●	-	17	-
	G4-18	●	57 - 60	-	-
	G4-19	●	60	-	Results of Significant Issue Assessment 2016
	G4-20	●	57 - 60	-	The Aspect is material within the organization, refer to "About this Report" and "Assessment of SSI's Key Sustainability Issues"
	G4-21	●	33, 57 - 60	-	page 33 "Result of Stakeholder Survey" and page 57 - 60 "About this Report"
	G4-22	●	14, 50	-	-
	G4-23	●	2 - 4	4 - 5, 8 - 9	-
Stakeholder Engagement	G4-24	●	8 - 10, 58 - 60	-	Stakeholder Engagement
	G4-25	●	8 - 10, 58 - 60	-	Stakeholder Engagement
	G4-26	●	8 - 10, 58 - 60	-	Stakeholder Communication Process
	G4-27	●	33, 58 - 60	-	Stakeholder Communication Process
Report Profile	G4-28	●	57	-	-
	G4-29	●	57	-	-
	G4-30	●	57	-	-
	G4-31	●	57	-	-
	G4-32	●	61 - 68	-	-
	G4-33	●	-	144 - 147	Our financial data are audited by Independent Auditor

GRI Aspect	Indicator	Level of Reporting	Page		Note
			CSR Report	Annual Report	
Governance	G4-34	●	8 - 10	86 - 91, 97	-
	G4-35	●	11	97	-
	G4-36	●	11	97	-
	G4-37	●	-	34 - 47, 97	-
	G4-38	●	-	97	-
	G4-39	●	-	34 - 59	-
	G4-40	●	-	99 - 101	-
	G4-41	●	-	89	-
	G4-42	●	11	5, 70 - 85	-
	G4-43	●	-	93 - 94	-
	G4-44	●	11	92	-
	G4-45	●	-	24 - 28, 70 - 71	-
	G4-46	●	-	24 - 28, 70 - 71	-
	G4-47	●	11	70 - 71	-
	G4-48	●	60	-	-
	G4-49	●	11	70 - 71	-
	G4-50	●	-	-	In 2016, there was zero case.
	G4-51	●	-	61 - 67	-
	G4-52	●	-	61 - 67	-
	G4-53	○	-	92 - 93	-
G4-54	○	-	-	Not applicable	
G4-55	●	-	-	Not applicable: Proprietary informaton	
Ethics and Integrity	G4-56	●	8 - 10	-	-
	G4-57	●	36 - 37	83 - 84	-
	G4-58	●	36 - 37	83 - 84	-

Specific Standard Disclosures Overview

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				CSR Report	Annual Report
General	SSI	Disclosures on Management Approach	●	4 - 5	-

Economic

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				CSR Report	Annual Report
Economic Performance	SSI	G4-EC1	●	2 - 4, 12 - 14, 50 - 51	135 - 142
	Partner	G4-EC2	●	24 - 32	
	Customer	G4-EC3	○	Not applicable	
	Community	G4-EC4	○		
Market Presence	SSI	G4-EC5	○		
		G4-EC6	○		
Indirect Economic Impacts	SSI	G4-EC7	○		
	Community	G4-EC8	●	2 - 4, 14, 50 - 51	
Procurement Practices		G4-EC9	●	2 - 4, 14, 46, 50	

Environmental

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				CSR Report	Annual Report
Materials	SSI	G4-EN1	●	18	-
		G4-EN2	●	29, 52	-
Energy	SSI	G4-EN3	●	18 - 19, 51	-
		G4-EN4	○	Not applicable	
		G4-EN5	●	24	-
		G4-EN6	●	18 - 19	-
		G4-EN7	●	18 - 19	-
Water	SSI	G4-EN8	●	19 - 20, 52	-
		G4-EN9	●	19 - 20, 52	-
		G4-EN10	●	19 - 20	-
Biodiversity	SSI	G4-EN11	○	-	-
	Community	G4-EN12	○	-	-
		G4-EN13	●	23	-
		G4-EN14	●	23	-
Emission	SSI	G4-EN15	●	24 - 25, 52	-
		G4-EN16	●	24 - 25, 52	-
		G4-EN17	○	-	-
		G4-EN18	●	26 - 28	-
		G4-EN19	●	24 - 32	-
		G4-EN20	○	-	-
		G4-EN21	●	24 - 29	-
Influents and Waste	SSI	G4-EN22	●	19 - 22	-
		G4-EN23	●	29 - 52	-
		G4-EN24	○	-	-
		G4-EN25	○	-	-
		G4-EN26	○	-	-
Product and Services	SSI	G4-EN27	●	17 - 18	-
		G4-EN28	○	2, 35	135
Compliance	SSI	G4-EN29	○	-	-

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				CSR Report	Annual Report
Transport	SSI	G4-EN30	●	17, 52	-
Overall		G4-EN31	○	-	-
Supplier Environmental Assessment	SSI	G4-EN32	●	22 - 23	-
		G4-EN33	●	17	-
Environmental Grievance Mechanisms	SSI	G4-EN34	●	33, 58 - 59	-

Social

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				CSR Report	Annual Report
Employment	SSI	G4-LA1	●	38 - 39, 53 - 54	-
	SSI Group	G4-LA2	●	40, 50	-
		G4-LA3	●	54	-
Labor/Management Relations	SSI	G4-LA4	○	-	-
Occupational Health and Safety	SSI	G4-LA5	●	16 - 17	-
		G4-LA6	●	2 - 4, 16, 55	-
		G4-LA7	○	-	-
		G4-LA8	○	-	-
Training and Education	SSI	G4-LA9	●	16 - 17, 39, 54	-
		G4-LA10	●	-	-
		G4-LA11	●	55	-
Diversity and Equal Opportunity		G4-LA12	●	39	-
Equal remuneration for women and men	SSI	G4-LA13	○	39	-
Labor Practices and Decent Work					
Supplier Assessment for labor practices	SSI Supplier	G4-LA14	●	SSI found no illegal actions from performing supplier assessments, auditing and evaluation.	
		G4-LA15	○	-	-
Labor practices grievance mechanisms	SSI	G4-LA16	●	SSI has received no significant complaints, affecting the business.	

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				CSR Report	Annual Report
Human Rights Center					
Investment	SSI	G4-HR1	○	-	-
		G4-HR2	●	39, 54	-
Non-discrimination	SSI	G4-HR3	○	54	-
Freedom of association and collective bargaining	SSI	G4-HR4	●	8 - 10	-
Child Labor	SSI	G4-HR5	●	39, 54 No case of child labor in our operations.	
Forced or compulsory labor	SSI	G4-HR6	●	39, 54 No case of forced labor in our operations.	
Security practices	SSI	G4-HR7	○	-	-
Indigenous rights	SSI	G4-HR8	○	-	-
Assessment	SSI	G4-HR9	○	-	-
Supplier human rights assessment	SSI Supplier	G4-HR10	●	SSI found no illegal actions from performing supplier assessment, auditing and evaluation.	
		G4-HR11	○	-	-
Human rights grievance mechanisms	SSI	G4-HR12	○	-	-

Society

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				CSR Report	Annual Report
Local Communities	SSI	G4-DMA	●	34	-
		G4-SO1	●	2 - 3, 42 - 50	-
		G4-SO2	○	33	-
Anti-corruption	SSI	G4-SO3	○	36 - 37	-
		G4-SO4	●	36 - 37, 54	-
		G4-SO5	○	36 - 37 In 2016, there was no corruption case.	
Public policy	SSI	G4-SO6	○	-	-
Anti-competitive behavior	SSI	G4-SO7	○	-	19
		G4-SO8	○	-	-
Supplier assessment for impacts on society	SSI	G4-SO9	○	SSI found no illegal actions from performing supplier assessments, auditing and evaluation.	
		G4-SO10	○	-	-
Grievance Mechanisms for Impacts on Society	SSI	G4-SO11	○	-	-

Product Responsibility

GRI Aspect	Location of Disclosure	Indicator	Level of Reporting	Page	
				CSR Report	Annual Report
Customer Health and Safety	SSI	G4-PR1	○	-	-
		G4-PR2	○	-	-
Products and service labeling	SSI	G4-PR3	○	-	-
		G4-PR4	○	-	-
		G4-PR5	●	51	-
Marketing Communications	SSI	G4-PR6	○	-	-
		G4-PR7	○	-	-
Customer Privacy	SSI, Partner, Customer	G4-PR8	●	SSI strictly protects confidential information of customers (as promagated in the Business Ethics of the Company), In 2016, there was no substantiated complaint regrading breaches of customer privacy and losses of customer data, page 9, 34.	
Compliance	SSI, Partner, Customer	G4-PR9	●	In 2016, there was no fines for non-compliance with laws and regulations concerning the provision and use of products and services. Annuall report page 83.	



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