

## 7.7 Environmental Management

The Company implements environmental management by establishing environmental policies and targets under the Sustainability Development Policy 2024–2026. These serve as a strategic framework to guide systematic and continuous environmental operations, focusing on controlling and minimizing environmental impacts arising from business activities, such as pollutant emissions, natural resource consumption, and waste management. The Company also places strong emphasis on strict compliance with relevant environmental laws, regulations, and standards.

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Furthermore, the Company promotes and instills environmental awareness among employees at all levels to foster a corporate culture that prioritizes environmental responsibility. This approach encourages participation in environmental care, ensuring sustainable growth alongside business success.



### Environmental Management Governance

The Company places significant emphasis on systematic and efficient environmental management, with a clear governance structure that covers both policy and operational levels to ensure sustainable operations as follows:

- **The Risk Management and Sustainability Development Committee** oversees the overall environmental management, including approving short-, medium-, and long-term climate change risk management issues and strategies. This involves considering both physical risks and transition risks, integrating them with the Company’s sustainable development direction. This ensures climate management aligns with organizational strategy and sustainable business operations.
- **The Executive Sustainability Development Committee**, chaired by the President, sets the organization’s environmental policies, goals, and operational direction. The Committee is also responsible for identifying, analyzing, and proposing climate change risk management strategies for approval by the Risk Management and Sustainability Development Committee. Furthermore, it is tasked with monitoring performance and regularly reviewing the effectiveness of climate and environmental management systems to ensure timely adjustments and responses to evolving risks.
- **The Sustainability Development Working Team**, comprising representatives from all business units, is responsible for driving the implementation of policies and strategic directions set at the executive level. The group plays a key role in evaluating approaches to achieving the organization’s environmental and sustainability goals. It also coordinates information, conducts analysis, and provides recommendations for addressing climate change-related issues, such as assessing climate risks and opportunities within each unit, and formulating adaptation and mitigation strategies at the operational level to support executive decision-making.

- **The Sustainability Development Unit** is responsible for planning, managing, and monitoring the Company's environmental management performance. The Head of Corporate Strategy and Sustainability Development oversees strategic planning and risk assessment for this unit.
- **The Environmental and Energy Unit** is responsible for implementing the environmental management system at the operational level. This includes monitoring, auditing, and reporting environmental data such as energy consumption, greenhouse gas emissions, waste management, and resource utilization to ensure compliance with laws, standards, and company policies. They also support environmental and energy projects in operational areas to foster continuous improvement and align with the organization's sustainable development goals.

In 2024, the Company successfully achieved its environmental targets as planned:

Indicators	Targets	Performance Results
Greenhouse gas (GHG) emissions (Scope 1 and Scope 2):		
• Absolute GHG emissions (tons of CO <sub>2</sub> equivalent per year): Decreased	<b>14%</b>	<b>33%</b>
• Emissions per unit of production: Decreased. (GHG intensity, in tons of CO <sub>2</sub> equivalent per ton of production)	<b>14%</b>	<b>26.5%</b>
Energy consumption per unit of production: Decreased (Gigajoules per ton of production)	<b>4.5%</b>	<b>5%</b>
Hazardous industrial waste sent to disposal: Decreased (Tons hazardous industrial waste per ton of production) <sup>1</sup>	<b>3%</b>	<b>Increased by 37%</b>
Non-hazardous industrial waste sent to disposal: Decreased (Tons non-hazardous industrial waste per ton of production) <sup>1</sup>	<b>12%</b>	<b>14%</b>
Waste to landfill: Zero within 3 years	<b>Decreased by 30%</b> from 2023	<b>16%</b> from 2023
Water consumption per unit of production: Decreased (Cubic meters per ton of production) <sup>1</sup>	<b>25%</b>	<b>20%</b>
Air pollutant emissions control: CO, NOx, SOx, and TSP emissions are controlled.	<b><u>Below legal</u></b> requirements	<b><u>Below legal</u></b> requirements

Remarks: 1. Greenhouse gas data collection and comparison cover only Scope 1 and 2 emissions within the organization.  
2. The consolidated corporate-level figures result from the integration of distinct business units, Forging and Casting, which have different emission intensities. This integration contributes to higher overall savings figures. However, the organization has adjusted the data to reflect the specific challenges at the business-unit level.

## 1. Climate Change and Energy Management

The Company is committed to effectively managing and responding to climate change challenges. The focus is on reducing carbon dioxide (CO<sub>2</sub>) and other greenhouse gas (GHG) emissions to support the achievement of organizational sustainable development goals and fulfill international climate change commitments.

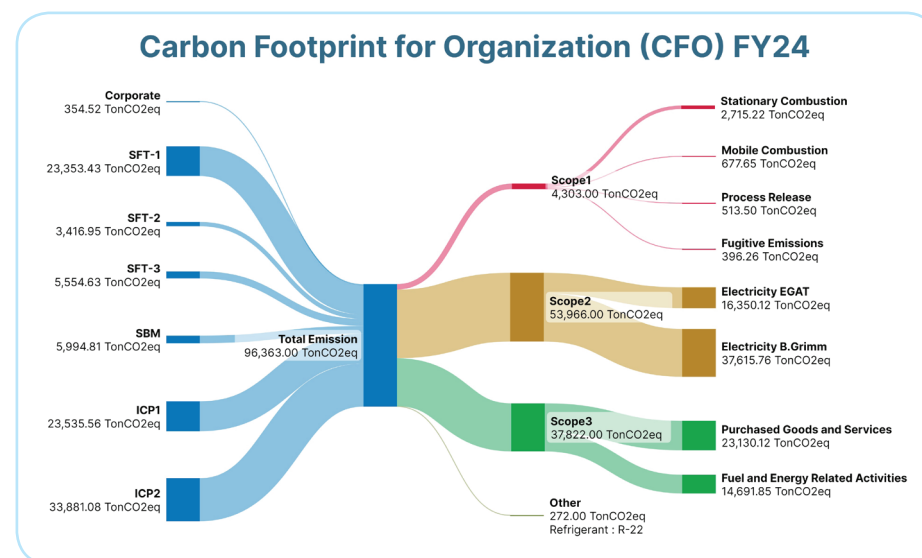
The Company assesses and analyzes the impact of climate change on all aspects of its business operations. Strategic plans have been developed to address risks arising from climate change, encompassing both physical changes and shifts driven by new policies and regulations. Appropriate adaptation and mitigation measures are being integrated across all organizational processes.

Recognizing global warming and climate change as major global challenges, the Company places strong emphasis on environmental and energy management. This includes proactive measures to address energy shortages and reduce dependency on imported resources, which have led to rising domestic energy costs and increased production expenses. The Company has set a target to reduce its greenhouse gas emissions by 30% (Scope 1 + 2) by 2030, compared to the 2018 baseline year. This will be achieved by maximizing energy and resource efficiency and adopting renewable energy sources. Furthermore, the Company emphasizes raising employee awareness and encouraging their participation in mitigating climate change impacts to drive the organization towards long-term sustainability.

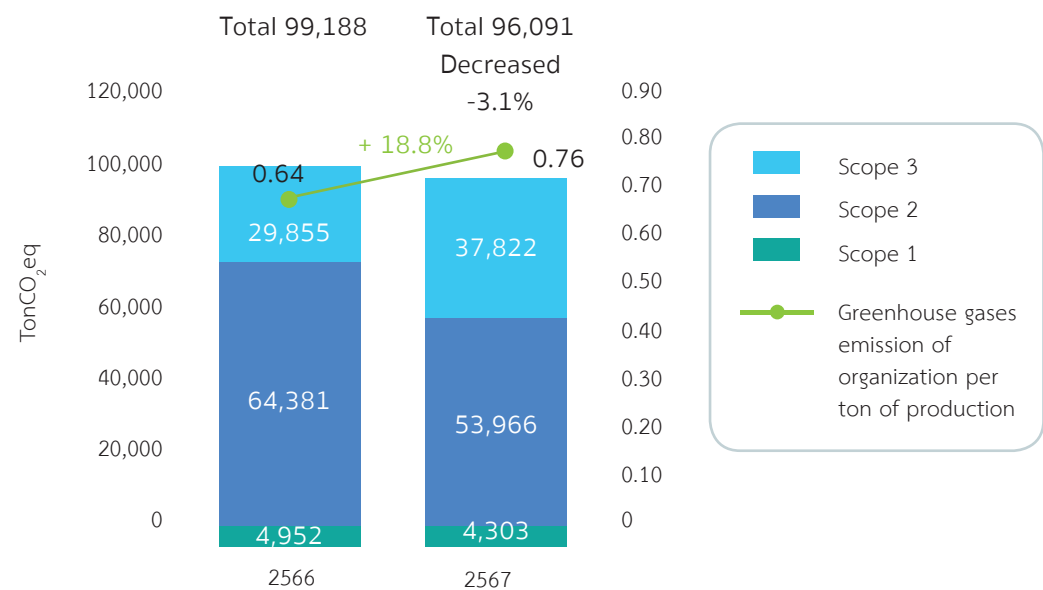
Therefore, the Company annually assesses and verifies its organizational carbon footprint, a practice maintained since 2021. This helps the Company identify significant sources of greenhouse gas (GHG) emissions within the organization, enabling the development of projects that lead to substantial GHG reductions and target achievement.

In 2024, the Company transitioned its GHG inventory and organizational carbon footprint certification from the Thailand Greenhouse Gas Management Organization (Public Organization) standard to ISO 14064-1:2018 certification. This shift aims to enhance the systematic nature, quality, and international comparability of the Company's GHG data collection. The Company's verification was conducted by BSI Group (Thailand) Co., Ltd., a globally recognized verification entity.

The verification results indicate Scope 1 emissions of 4,303 tons, Scope 2 emissions of 53,966 tons, and Scope 3 emissions of 37,822 tons of CO<sub>2</sub> equivalent.

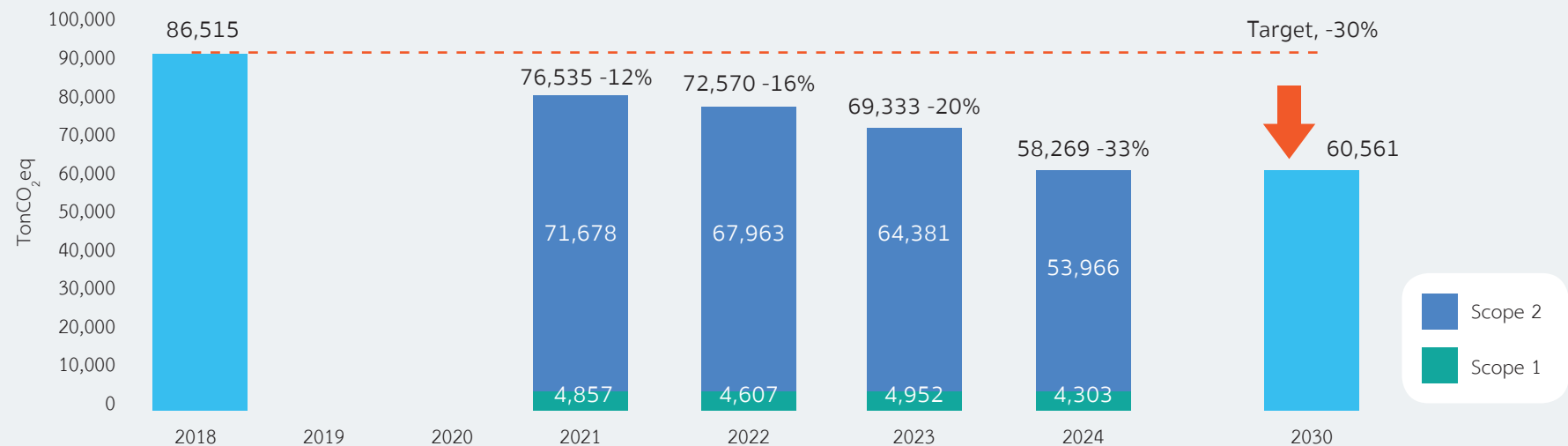


2024 GHG emissions (Scope 1, 2, and 3) compared to 2023



While total GHG emissions (Scope 1+2+3) decreased by 3.1%, the GHG intensity per ton of production increased by 18.8%. This increase is attributed to a change in the emission factor for raw materials within Scope 3.

Considering only Scope 1 and 2 emissions for 2024 compared to the 2018 baseline, the Company achieved a 33% reduction. This aligns with the Company’s goal of reducing GHG emissions by 30% (Scope 1 + 2) by 2030, demonstrating that the Company has achieved its target ahead of schedule. The Company remains committed to implementing various measures to reduce GHG emissions and continuously plans future projects to accommodate anticipated production capacity, which will impact the organization’s GHG emissions.





To effectively manage climate change, the Company prioritizes energy management, a key factor contributing to greenhouse gas emissions. The Company has integrated efficient and environmentally friendly energy practices into all levels of business operations, including production processes, facilities, and internal organizational activities.

The Company continuously monitors and evaluates its energy consumption and has established targets to reduce energy use through various measures. These include managing electricity usage in office spaces, increasing the proportion of renewable energy, particularly through the installation of solar rooftop systems at operational sites, and promoting energy conservation awareness among employees at all levels.

In addition to internal operations, the Company demonstrates its commitment to mitigating climate change impacts by participating in industry networks. The Company is a member of environmental, energy, and sustainability associations and collaborative groups, including UNGC, TCNN, and the ESG Network. It also clearly supports government policies and regulations that promote carbon reduction and clean energy development. The Company believes this systemic participation will create a positive impact on the broader business ecosystem and environment.

Indicators	2024 Targets	2024 Performance Results
Reduction in greenhouse gas emissions per unit of production (TonCO <sub>2</sub> eq per ton of production)	14%	26.5%
Reduction in energy consumption per unit of production (Gigajoules per ton of production)	4.5%	5%
Target to achieve 10% renewable energy usage by 2030		4.31%

### 1) Renewable Energy Consumption

The Company’s current renewable energy consumption stands at 4.31% of total electricity usage for 2024, with a target to increase this to 10% by 2030. In 2024, the Company generated 19,701 GJ (5,472.65 MWh) of renewable energy from solar cells across all subsidiaries. This resulted in cost

savings of 6.99 million baht and a reduction in greenhouse gas emissions of 2,735 TonCO<sub>2</sub>eq. Furthermore, in 2024, the Company increased its proportion of renewable energy by installing 540 MWp of solar cells at SFT-2. This project is expected to reduce GHG emissions by 331.36 TonCO<sub>2</sub>eq, generate cost savings of 2.48 million baht, and raise the total solar power generation capacity across all subsidiaries from 5.03 MWp to 5.57 MWp.



### Solar Power Generation Projects

<div>SFT2</div> <div>(newly installed)</div> <div>Capacity</div> <div>0.540 MWp</div>	<div>SFT1</div> <div>Capacity</div> <div>1.5 MWp</div>	<div>SFT3</div> <div>Capacity</div> <div>0.44 MWp</div>	<div>SBM</div> <div>Capacity</div> <div>2.1 MWp</div>	<div>ICP2</div> <div>Capacity</div> <div>0.997 MWp</div>
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## 2) Efficient Energy Use in Production Processes

The Company has enhanced efficiency and minimized energy loss from electricity consumption through the implementation of various projects and initiatives, as follows:

### Energy Conservation Projects

The Company has undertaken projects to modify machinery and install equipment aimed at improving energy efficiency. As a result, by 2024, the Company successfully reduced energy consumption by 1,178.10 MWh, cost savings of 5.78 million baht and a reduction in greenhouse gas emissions of 517.73 TonCO<sub>2</sub>eq. Key related projects include:

Installation of an ECO energy device superconductor current improvement device (3,200 kVA) to reduce electrical current resistance and minimize energy loss within the transmission system.

Before



**Before improvement :** A survey of low-voltage electrical energy in the MDB1 & MDB2 sections revealed that alternating current (AC) consuming equipment, such as inductive loads (motors) and resistive loads (light bulbs), were affected by heat interference within the electrical wiring, leading to energy loss within the system.

After



**After improvement :** Installed ECO energy device at MDB1, the air compressor, the dust collector for the melting furnace system, and the melting furnace cooling water pump, with a total capacity of 3,200 kVA.

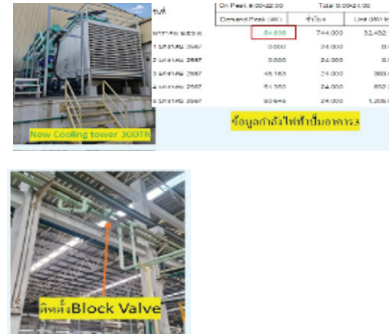
## Installation of 300-ton cooling tower to reduce operation of 55kW water pumps.

### Before



**Before improvement :** Building 3 requires two 55 kW pumps to operate continuously to adequately supply cooling water to the J-line. The installation of the A2-line further increased cooling water demand, necessitating the continuous operation of both pumps in Building 3, which resulted in higher electricity costs.

### After



**After improvement :** Installed new 300 ton cooling tower in Building 2. Additionally, piping was extended, and a block valve was installed to prevent water from Building 3 from flowing to the J-line and A2-line. The new cooling tower was then activated, allowing for the reduction of one 55 kW pump operation in Building 3.

## Inverter Installation of the L-line Fume Hood Blower

### Before



**Before improvement :** The electric motor's speed needed reduction to an optimal level. The manufacturer used a pulley to reduce the speed from 1,988 rpm to 1,590 rpm. The measured current was 18.6 A, with an approximate motor power of 11 kW.

### After



**After improvement:** Installed inverter to reduce the electric motor's speed by lowering the power supply frequency from 50 Hz to 40 Hz. Current measurements showed an average of 10.7 A, with the motor power reduced to 7 kW.

## Installation of KOOM AIR Online Air Conditioning Control System

### Before



**Before improvement :** The testing room had four air conditioning units, each with a capacity of 125,000 BTU, totaling 40 kW of electrical power. These units were controlled by remote and operated approximately 70% of the time.

### After



**After improvement :** Installed KOOM AIR devices and new operational settings were configured to alternate between Cool mode and Fan mode. This reduced compressor operating time by approximately 15%.

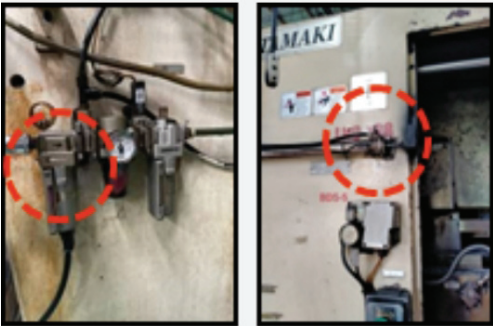


Energy Conservation Activities

The Company has promoted and raised awareness regarding energy conservation and greenhouse gas reduction through its Energy Reduction Innovation initiative. This involves identifying and improving areas of energy loss stemming from processes or operational practices. By 2024, these efforts resulted in the 1,843.11 MWh reduction in energy consumption, leading to 6.98 million baht in cost savings and a decrease of 736.57 TonCO<sub>2</sub>eq in greenhouse gas emissions. Key projects under this initiative include:









Patrol air leak: Survey and improvement of air leaks in the air compressor system

Before



**Before improvement :** Leaking equipment in machinery utilizing the pneumatic system was identified, leading to a loss of energy used for air production.


After

No.	Item	Location	Photo	Findings	Remarks	Energy Loss (kWh)	Cost (Baht)	Energy Saving (kWh)	Cost Saving (Baht)	Remarks	Photo	Result
1	Patrol	407-10-20-1		Leaking pneumatic fitting	Leaking pneumatic fitting	1,480.25	1,480.25	1,480.25	1,480.25	Leaking pneumatic fitting		●
2	Patrol	407-10-20-2		Leaking air line connection	Leaking air line connection	1,480.25	1,480.25	1,480.25	1,480.25	Leaking air line connection		●
3	Patrol	407-10-20-3		Leaking pneumatic fitting	Leaking pneumatic fitting	1,480.25	1,480.25	1,480.25	1,480.25	Leaking pneumatic fitting		●
4	Patrol	407-10-20-4		Leaking air line connection	Leaking air line connection	1,480.25	1,480.25	1,480.25	1,480.25	Leaking air line connection		●

**After improvement :** The maintenance department now conducts monthly patrols to survey for air leaks. The results are analyzed to calculate savings and plan for the frequent modification of identified leakage points.

Energy Consumption Reduction: Blower for PAT-2 Paint Drying Oven

Before



**Before improvement :** A blower was used for dust extraction and ventilation at the part cleaning station.

After

kW	Working Hours	Working Days	kWh/Day	kWh/Month	kWh/Year	Baht/Day (4.58 Baht/Unit)	Baht/Month	Baht/Year
1.5	19.5	26	29.25	760.5	9,126	133.965	3,483.09	41,797.08
0	19.5	26	0	0	0	0	0	0
Saving			29.25	760.5	9,126	133.965	3,483.09	41,797.08

**After improvement :** The production department eliminated this cleaning step prior to the painting process, allowing for the discontinuation of the blower's operation at that location.

## Increased Capacity of PAT-2 Paint Curing Process

Before



**Before improvement:** The Painting Line (PAT-2) had only one support pillar for workpiece loading, accommodating one part per cycle.

After



**After improvement:** Installed additional support pillar, enabling two parts to be painted per cycle. This increased production capacity, reducing both operational time and energy consumption.

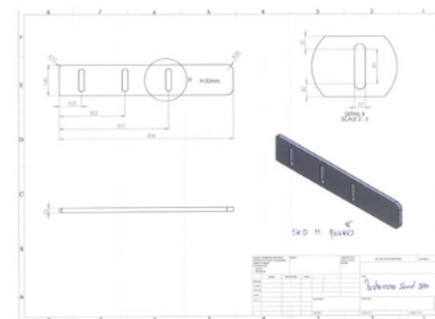
## Reduced Sand Retrieval Time for Molding AMF

Before



**Before improvement :** Retrieving sand from the Stock Sand Bin for mixing and production took 5.44 minutes per retrieval. With 260 retrievals per day, the motor feeding the conveyor consumed 3.7 kW.

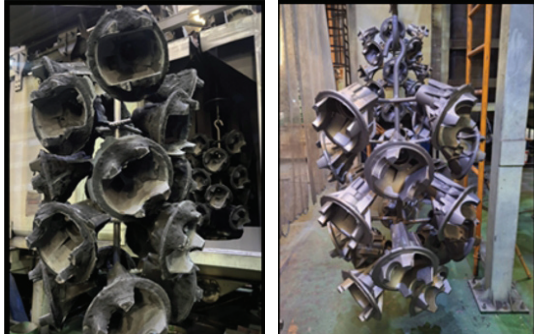
After



**After improvement :** Change new the Stock Sand Bin conveyor from 700 mm to 800 mm. This modification reduced friction during sand transfer to the 4 BC conveyor. Additionally, the conveyor's position was adjusted. These changes reduced the sand retrieval time to 2.40 minutes per retrieval, a significant improvement from the previous 5.44 minutes.

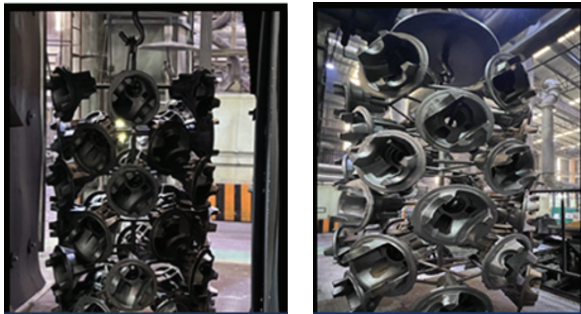
## Capacity Enhancement: Shot Blasting for Carrier Differentials R6, R7, R7.3, and R7.5

### Before



**Before improvement:** The jig used for shot blasting Carrier Differential parts could accommodate 12 pieces per cycle.

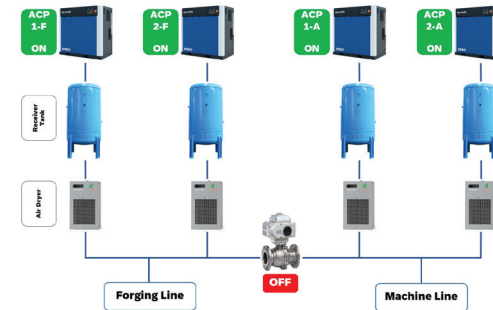
### After



**After improvement:** The jig was redesigned to allow 36 pieces per cycle. This improvement significantly increases production capacity, leading to reduced processing time and energy consumption.

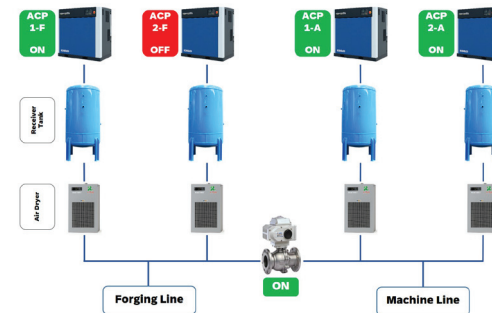
## Optimized Air Compressor Operation for Production

### Before



**Before improvement :** Four air compressors were operated simultaneously, each consuming 60 kW of electricity.

### After






**After improvement :** Shut down one air compressor leaving three operational. The ACP1-F, a Variable Speed Drive (VSD) type compressor, will operates continuously to adjust the compressed air supply according to production line demands. This eliminates the production of unnecessary compressed air and reduces standby power consumption.






Through the implementation of these energy conservation projects and activities, the Company achieved cost savings of 12.76 million baht. Moreover, the Company fosters employee awareness and engagement in energy conservation by encouraging employees to continuously propose energy-saving projects or innovations.

Energy Conservation Measures

	GHG Reduction : <b>517.73</b> TonCO <sub>2</sub> eq /Year
	Energy Reduction : <b>1,178.10</b> MWh/Year
	Cost Reduction : <b>5.78</b> MB/Year

Energy Conservation Activities

	GHG Reduction : <b>736.57</b> TonCO <sub>2</sub> eq /Year
	Energy Reduction : <b>1,843.11</b> MWh/Year
	Cost Reduction : <b>6.98</b> MB/Year

3) Promoting Increased Use of Recycled Materials Among Suppliers

To ensure the efficient utilization of available resources, the Company incorporates recycled materials as raw inputs in production processes. In the Casting business group, 100% of the steel used is derived from recycled materials. The Company’s efficient smelting processes enable high volumes of recycled material utilization, complemented by a robust quality control process that adheres to established standards. Similarly, the Forging business group also uses steel bars sourced from recycled materials in its production. Currently, the average recycled content used by the Company’s suppliers stands at 66%. Therefore, encouraging suppliers to further increase the proportion of recycled materials, while maintaining customer-defined quality and specifications, remains a key commitment the Company will continue to pursue moving forward.





2.Sustainable Water Resource Management

The Company places strong emphasis on the responsible and sustainable use of water resources, recognizing the risks associated with water scarcity and the environmental impacts of water usage in production processes. Consequently, the Company has established ongoing targets to reduce internal water consumption and promotes employee engagement at all levels to ensure water is used efficiently.

Management Approach

The Company emphasizes responsible and efficient water management within its production processes, particularly in high water-consuming business units such as Casting, Machining, and Forging. A comprehensive analysis has been conducted to identify processes with significant water usage, serving as the basis for ongoing improvements. In addition, the Company has established preventive measures and operational-level water risk management strategies to address potential uncertainties in future water resource availability.

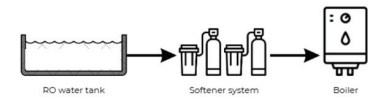
The Company has implemented various water-saving measures through technological and process enhancements. For example, soft water has been introduced to replace reverse osmosis (RO) water in the hot forging process. The Company achieves water reduction through technological and process improvements. Examples include using soft water instead of Reverse Osmosis (RO) water in hot forming processes. The Company also reuses water by collecting rainwater in excavated ponds for plant irrigation. Furthermore, water from the auto-drain system of air compressors is beneficially utilized for 5S cleaning activities, such as washing oil-contaminated equipment, or mixed with coolant oil to further reduce overall water consumption. Moreover, efforts to raise awareness on efficient water use have been promoted. These strategies not only reduce dependence on tap water usage but also contribute to resource conservation and tangible environmental impact reduction.



## Water Reduction Projects or Initiatives

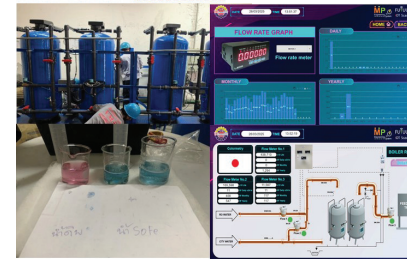
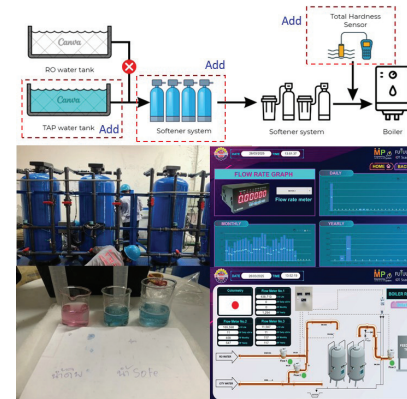
### Project: Reducing RO Water Usage by Utilizing Softened Water in Boiler System SFT-1

#### Before



**Before improvement** The factory consumed 667 cubic meters of tap water per month to produce Reverse Osmosis (RO) water for steam generation in the Forging process. However, only 400 cubic meters per month of RO water were effectively utilized, with the remainder being wastewater from the filtration process, leading to unnecessary resource wastage and costs.

#### After



**After improvement** Installed softener system, allowing city water to be fed directly into the boiler system, replacing RO water. This reduced load on the RO production system, leading to an annual reduction of 3,204 cubic meters of tap water and cost savings of approximately 0.33 million baht per year.

### Project: Rainwater Harvesting for Green Area Maintenance at ICP-2 Factory

#### Before



**Before improvement** Tap water was extensively used across various operations, including production processes, offices, the canteen, and maintaining all green areas within the factory.

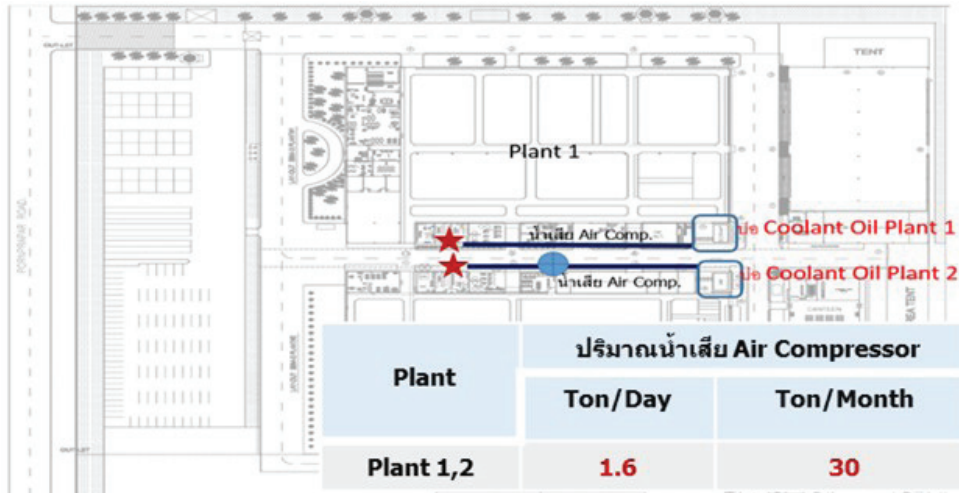
#### After



**After improvement** The Company excavated a pond on the factory premises to collect rainwater. This harvested rainwater now replaces tap water for internal operational activities, leading to an approximate reduction in tap water consumption of 49 cubic meters per year and an annual cost saving of approximately 0.002 million baht.

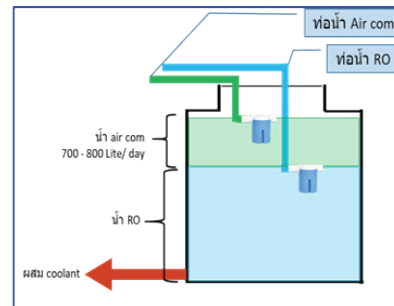
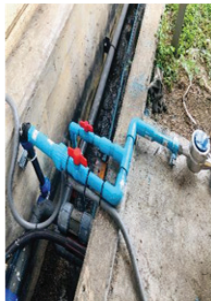
## โครงการนำน้ำจากระบบ Auto Drain ของ Air Compressor กลับมาใช้ซ้ำในโรงงาน SBM

### Before



**Before improvement** Wastewater from the air compressor system, due to moisture, was discharged into the coolant oil wastewater pond. This resulted in an average of 30 tons of coolant oil wastewater requiring external disposal monthly, incurring significant disposal costs and losing water that could have been repurposed.

### After



**After improvement** Installed a piping system to reclaim auto-drain water from air compressor system. This water is being repurposed for various activities, including cleaning oil-contaminated equipment during 5S initiatives and mixing with coolant oil in our production process. This initiative is projected to reduce our tap water consumption by 24 cubic meters per year, leading to an annual cost saving of approximately 0.0006 million Baht.

### Key Project Outcomes

The Company successfully reduced water consumption by 3,277 cubic meters in 2024, resulting in total cost savings of 332,600 baht.



3. Waste Management and Promotion of Circular Economy

The Company is committed to maximizing the value of existing resources by effectively managing and leveraging waste generated from its processes. Targets have been established for reducing production waste, guided by the 3R principles (Reduce, Reuse, Recycle). Additionally, the Company promotes the use of scrap metal, a by-product from the Somboon Group’s production processes, as a raw material in the melting process. This initiative not only supports the development of a domestic circular economy, but also contributes to waste reduction, cost efficiency, energy conservation, and lower greenhouse gas emissions.

In 2024, the Company reviewed its waste management targets, defining three key performance indicators: reduction in hazardous waste, reduction in non-hazardous waste, and reduction in waste sent to landfills. These indicators are designed to enhance resource management efficiency and minimize environmental impact.

Management Approach

The Company manages waste in alignment with the 3Rs principle, Reduce, Reuse, and Recycle, to minimize waste from production processes. Under the strategy, the Company reintroduces unused materials such as steel scrap into the melting process and implements sand reclaiming to reuse resin sand. Additionally, black sand, which has been analyzed and confirmed as non-hazardous, is repurposed to produce interlocking pavers (block bricks) for internal use, equivalent to 97 tons of recycled sand per year. The Company also improves the efficiency of in-house oily wastewater treatment to reduce the need for

external disposal and promotes the reuse of fabric gloves and oil wipes. For industrial waste that cannot be reused, the Company ensures disposal through licensed waste management operators in compliance with legal requirements. Furthermore, the Company has adopted a forward-looking “Zero to Landfill” strategy, prioritizing alternative disposal methods over landfilling.

Indicators	2024 Targets	2024 Performance Results
Reduction in Hazardous Industrial Waste Disposed per Ton of Production (Tons hazardous waste / ton of production)	3%	Increased by 32%
Reduction in Non-Hazardous Industrial Waste Disposed per Ton of Production (Tons non-hazardous waste / ton of production)	12%	14%
Achieve Zero Waste to Landfill within 3 years.	Reduced by 30% from 2023	16% from 2023



## Project: Production of Interlocking Blocks from Black Sand at ICP-2 Factory

### Before



**Before improvement** The black sand discharged from the production process did not meet the required physical specifications for reuse in manufacturing and was therefore sent for external disposal.

### After



**After improvement** The Company repurposed the black sand by converting it into a raw material for producing “interlocking paving blocks”, mixing it with cement at an optimal ratio. These paving blocks are now used for internal roads and walkways within the plant premises. This initiative significantly reduces the volume of waste requiring external disposal and supports the promotion of a circular economy.

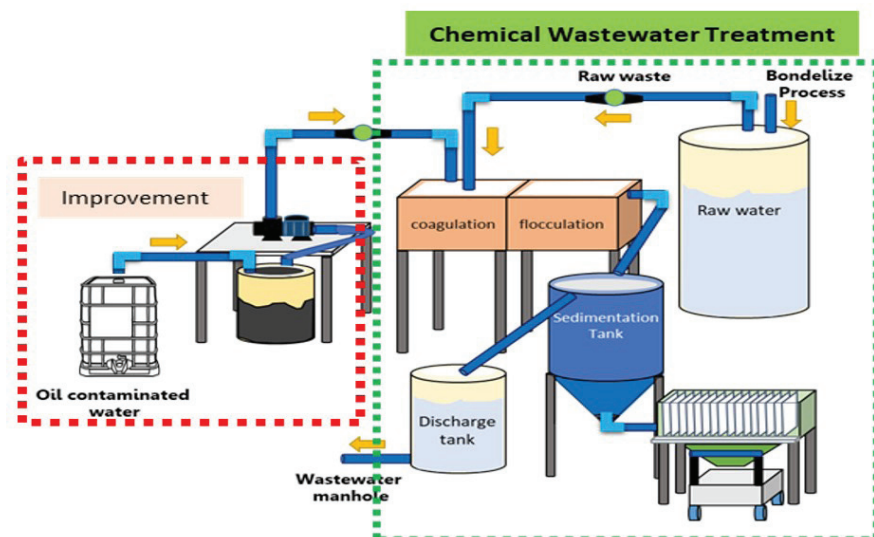
Cement to black sand ratio: (0.8 : 1.5)

Black sand used for block production = 97 tons/year

Interlocking blocks produced = 66,495 units/year

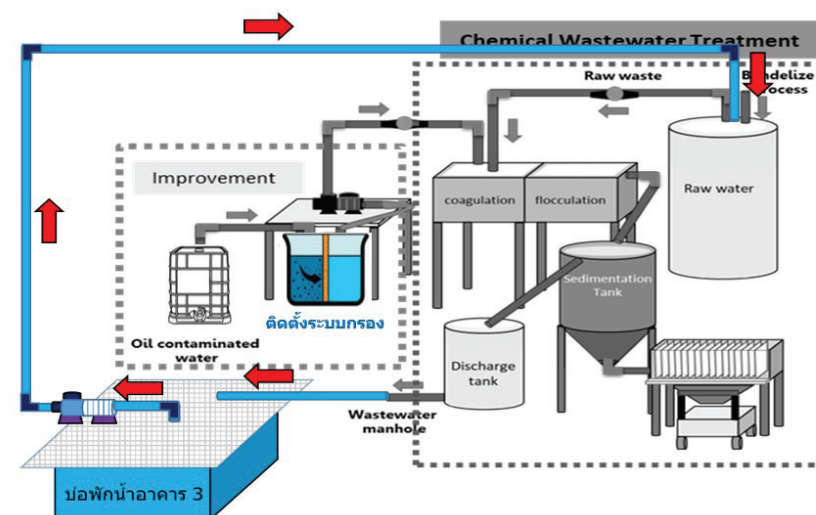
Waste disposal cost reduced = 0.024 million baht/year

Before



**Before improvement** The treatment of oil-contaminated wastewater required dilution with wastewater from the Bondelize process, which averaged only 24 cubic meters per day. With a required dilution ratio of 9.5:0.5, the treatment capacity was limited, averaging only 1.1 cubic meters of oil-contaminated water treated per day.

After



**After improvement** A filtration system was installed to pre-treat oil-contaminated water before entering the main treatment system. Additionally, a pipeline was installed to transfer water from the discharge tank to the storage tank at Building 3, which contains other process wastewater awaiting discharge to the central industrial estate wastewater treatment system. Another pipeline was installed to pump water from the Building 3 tank back into the raw water tank of the wastewater treatment system to mix with the oil-contaminated water at a new ratio of 9:1. This improvement significantly increased the dilution rate and eliminated reliance solely on wastewater from the Bondelize process, raising the average treatment rate to 7 cubic meters per day. As a result, the volume of oil-contaminated water sent for external disposal was reduced by 160 tons per year, and costs were reduced by approximately 0.045 million baht annually.





The SFT2, ICP1, ICP2, and SBM facilities were honored with the Environmental Governance Flag (Green Star White Flag) under the theme “Green Gold Growth for Sustainability: Governance towards Sustainability.” This recognition, presented by the Industrial Estate Authority of Thailand (IEAT), recognizes industrial estate factories that uphold strong governance principles in environmental management across five dimensions: physical, economic, environmental, social, and management standards. The Company has received this recognition for three consecutive years.

In addition, the Company received the AMATA Best Waste Management Award 2024 from Amata City Industrial Estate. This award honors facilities that demonstrate outstanding

performance in managing industrial waste and general waste in compliance with legal standards and based on the 3Rs principles (Reduce, Reuse, Recycle). This marks the fifth consecutive year the Company has received the award.

#### 4. Air Quality Management

The Company recognizes the environmental and public health impacts associated with air pollution and, therefore, places strong emphasis on controlling air emissions generated from its operations, particularly those arising within its industrial facilities.

##### Management Approach

In 2024, the Company established its first air quality management targets, with an aim to maintain factory air quality at levels superior to the legal standards and the requirements outlined in our Environmental Impact Assessment (EIA) report. To ensure that emissions remain at safe levels and do not negatively affect the environment or nearby communities, authorized third-party evaluators regularly conduct random monitoring every six months

The Company is committed to operating with high efficiency to minimize air pollution and mitigate environmental impacts. In addition, continuous emission monitoring data is reported to the Department of Industrial Works to promote operational transparency and foster trust with the surrounding community.



Indicators	2024 Targets	2024 Performance Results
Air Pollutant Emission Control (TSP, SOx, NOx, CO)	<b><u>Below</u></b> legal requirements	<b><u>Below</u></b> legal requirements
External authorized parties conduct air quality monitoring	<b>2 Times</b>	<b>2 Times</b>

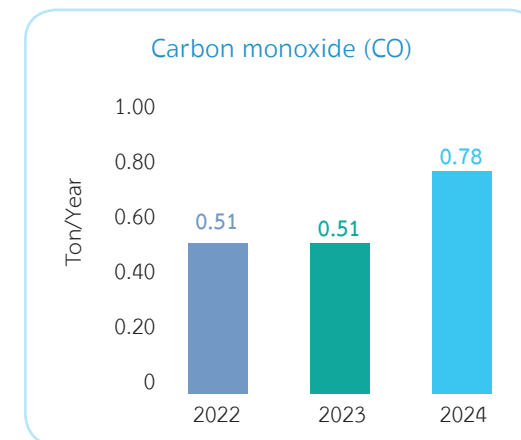
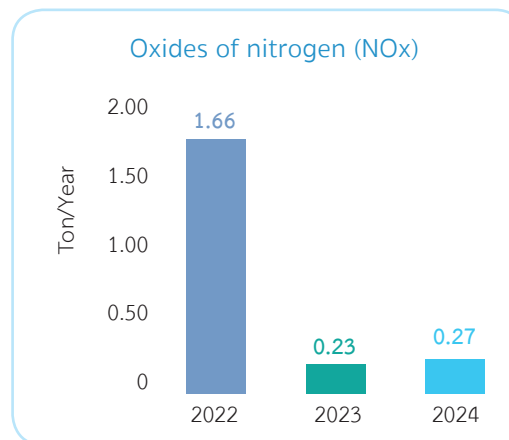
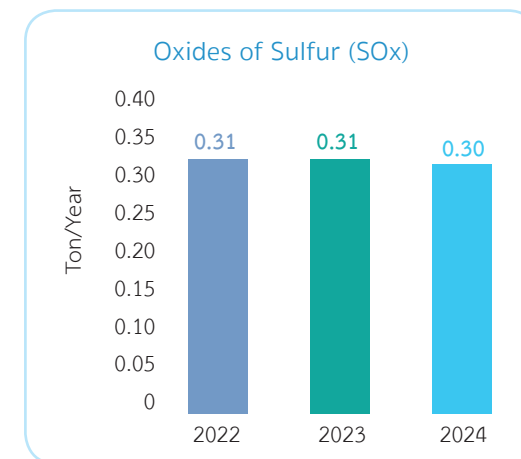
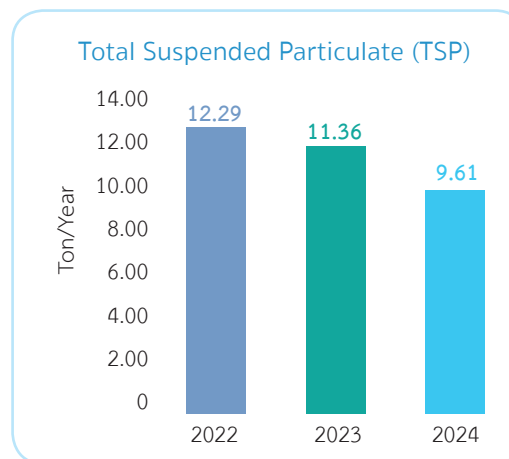


Indicators	Legal Standards	Analysis Results
Total suspended particulate, TSP (mg/m <sup>3</sup> )	5 <sup>/1</sup> , 7 <sup>/1</sup> , 8 <sup>/1</sup> , 10 <sup>/1</sup> , 12 <sup>/1</sup> 120 <sup>/2</sup> 320 <sup>/3</sup> 400 <sup>/3</sup>	<b>1.55</b>
Sulfur dioxide, SOx (mg/l)	2 <sup>/1</sup> 60 <sup>/3</sup> 500 <sup>/3</sup>	<b>0.72</b>
Nitrogen dioxide, NOx (mg/l)	40 <sup>/1</sup> 200 <sup>/3</sup>	<b>1.67</b>
Carbon monoxide, CO (mg/l)	690 <sup>/3</sup> 870 <sup>/3</sup>	<b>3.44</b>

Sources: <sup>/1</sup> Emission limits as specified in the project's Environmental Impact Assessment (EIA) report.

<sup>/2</sup> Ministry of Science, Technology and Environment Notification on Air Emission Standards for Steel Plants, B.E. 2544 (2001).

<sup>/3</sup> Ministry of Industry Notification on Permissible Emission Levels of Air Contaminants from Industrial Facilities, B.E. 2549 (2006).



According to air pollutant concentration test results in 2024, all measured parameters remained within the legal limits. However, a review of pollutant quantities (tons per year) reveals an increasing trend in Carbon Monoxide (CO) emissions (0.51 tons per year in 2023 vs. 0.78 tons per year in 2024). This may suggest a need to assess the efficiency of machinery or combustion processes, as well as associated air pollution control systems. The Company will investigate these processes and machinery to identify corrective measures and ensure that pollutant levels do not continue to rise.

### Projects and Initiatives to Reduce Business-Related Air Pollution

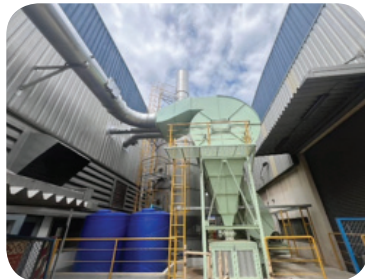
Installation of a dust collector system with a capacity of 200 CMM at SBM for BDS 12 & 4 production lines.



Installation of an additional dust collector system with a capacity of 1,000 CMM (increased from the original 570 CMM) at ICP2 for the Finishing & Grinding process, aimed at improving air pollution control efficiency.



Installation of a wet scrubber system at ICP2 for the Shell Core process to enhance air treatment efficiency and improve workplace conditions by reducing chemical vapor and odor emissions.



### Internal Environmental Projects and Activities

#### 1) Environmental and Resource Conservation Knowledge and Awareness Program

The Company has continuously implemented initiatives aimed at enhancing employees' knowledge and understanding of environmental standards. The program focuses on developing competencies related to environmental management systems and greenhouse gas management, strengthening the necessary skills for operating in line with international standards. Activities under this program include both internal and external training sessions.

ISO 14001:2015 Environmental Management System Curriculum	Greenhouse Gas Management Curriculum	Awareness Promotion Curriculum
<ul style="list-style-type: none"> <li>OJT: ISO 14001:2015 Environmental Management System</li> <li>Internal Auditor ISO 14001:2015 and NC-CAR Response Techniques</li> <li>Internal Auditor ISO 14001:2015 and NC-CAR Response Techniques</li> <li>Assessment of Significant Environmental Aspects</li> <li>Environmental Risk and Opportunity Assessment</li> <li>Environmental Law Training</li> </ul>	<ul style="list-style-type: none"> <li>Managing Greenhouse Gas Emissions (ISO 14064)</li> <li>ISO 14064-1:2018 Requirements</li> </ul>	<ul style="list-style-type: none"> <li>Environmental and Innovation Study Tour Program</li> <li>Energy Conservation in Factories</li> </ul>

ISO 14064-1:2018 Requirements Course

This course aims to ensure employees accurately understand the requirements for measuring, reporting, and verifying organizational greenhouse gas emissions data. This knowledge enables them to accurately prepare carbon footprint data, systematically supporting the Company’s greenhouse gas emission targets. A total of 43 employees participated.



- **Internal Auditor ISO 14001:2015 and NC-CAR Response Techniques**  
2015 system and teaches techniques for responding to non-conformities (NCs) identified during audits. These skills are crucial for effectively developing and maintaining an efficient environmental management system. A total of 28 employees participated.
- **Assessment of Significant Environmental Aspects**  
This course is designed to enable employees to systematically identify, analyze, and assess environmental issues that pose high risks or have significant influence on the organization. This forms a crucial foundation within the ISO 14001 system for establishing measures to control environmental impacts. A total of 48 employees participated.

2) Natural Resource and Environmental Conservation Program

The Company consistently encourages employee participation in internal environmental management through activities that promote awareness and responsible use of resources.

- **Waste Segregation Promotion Program** The Company recognizes waste segregation as a key activity in promoting sustainability and minimizing environmental impacts. A systematic waste management system has been implemented, including installing segregated waste bins across various areas within the organization. Clear communication efforts have been made to ensure employees understand correct waste separation procedures. This initiative aims to reduce the volume of waste sent to final disposal and enhance the effectiveness of waste recovery and recycling. Furthermore, recyclable waste such as plastic bottles, paper, and certain types of scrap materials is sorted and sold to certified recycling companies. This generates added value from waste and forms an integral part of the Company’s long-term, valuable resource management strategy



Recycled Waste Volume	Reduced CO <sub>2</sub> Emissions	Equivalent to Tree Planting
2,576 kg	3,143.23 kgCO <sub>2</sub> eq	199



- Efficient Resource Utilization Program** Efficient resource utilization remains a continuous and critical focus for the Company this year, supporting sustainable business operations. This not only reduces operational costs but also minimizes environmental impact and fosters a better working environment for employees. The Company has implemented several projects demonstrating effective resource use, including:
  - Encouraging online meetings to reduce the need for travel.
  - Adopting digital systems to decrease paper consumption for documentation.
  - Campaigning to switch off lights and air conditioners when not in use.
  - Installing sensor-activated water faucets to control water usage.
  - Utilizing electric tricycles for employee transportation from parking areas to office buildings.
  - Collecting used paper within offices for handover to recycling companies.
  - Implementing an authentication system for document printing to reduce redundant or unused printouts.
  - Installing LED lighting and automatic on/off systems in common areas to enhance electricity usage efficiency.
- Green Space Expansion Program within the Company** The Company places emphasis on fostering an optimal working environment by implementing projects that encourage employee participation in developing pleasant and conducive green spaces around offices and factories. This initiative not only enhances air quality within the workplace but also demonstrably reduces work-related stress and strengthens workplace happiness and engagement. Examples of implemented projects include creating landscape gardens and relaxation areas in common spaces, encouraging each department to maintain its own vegetable garden, organizing

“Big Cleaning Day” events where employees collectively develop surrounding areas. Additionally, the Company has applied environmental innovations such as transforming black sand dust, a by-product from production processes, into interlocking bricks. These bricks are then used for paving walkways within the factory and garden areas, effectively reducing waste while creating economic value and enhancing the Company’s image as a resource-conscious and environmentally responsible organization.

