

2023 Dongkuk Holdings 2023 Sustainability Report

STEEL *for* GREEN

About This Report

Overview

As of June 1, 2023, Dongkuk Steel was spun off into newly created firms; Dongkuk Holdings, Dongkuk Steel, a hot rolled steel company, and Dongkuk CM, a cold rolled steel company. Dongkuk Holdings, the surviving company, publishes this report. However, as the reporting period spans from January 1, 2022 through December 31, 2022, the Dongkuk Steel's efforts and progress in both its hot rolled and cold-rolled businesses towards sustainable management before the spin-off are provided herein.

Reporting Period and Boundaries

This report covers our sustainability activities and performance from January 1, 2022 through December 31, 2022. Some of salient data regarding the progress made in the first half of 2023 are also included for opportune disclosure. In case of quantitative data, this report provides recent three years (2020 – 2022) of information to allow readers to compare with the past records. The scope of this report includes domestic business sites (Head Office, Incheon Works, Dangjin Works, Busan Works, Pohang Works, and Sinpyeong Works).

Reporting Principles

This report was prepared in accordance with the Global Reporting Initiative (GRI) Standards 2021. When it comes to financial performance, it follows the Korean version of International Financial Reporting Standards (K-IFRS).

Report Assurance

This report has been verified by the Korea Management Registrar, a third-party verifier, in order to ensure the reliability and quality of the content. The results are available on page 86-87 in the section of Appendix.

Inquiries

ESG Planning Team, Dongkuk Steel esg@dongkuk.com



COVER STORY

We used the image of molten metal produced from an electric arc furnace steel making process for the cover design of this report, with the image horizontally rotated to add a touch of the characteristics of steel; dynamics and sustainability. As opposed to the report released last year whose cover was designed with metal scrap, a key raw material of our main products, this year's report features molten metal that is transformed from metal scrap through the steel making process to demonstrate that metal scrap is regenerated as a resource conducive to circulation. Additionally, we used viva magenta, the pantone color of this year, as the key color for this report to manifest our nature; always seeking for novelty and evolution.

Contents

About this Report

Overview

CEO Message	05
Transition to a Holding Company Structure for Sustainable Achievement	06
Dongkuk Steel at a Glance	10
ESG Management System and Materiality Assessment	15
Stakeholder Communication	19
SDGs Commitment	20

Steel for Green

Strengthen Safety and Health Management by Reducing Accident Rates	22
Combat Climate Change to Reach Net-Zero in the Mid- to Long-Term	27
Respect Human Rights and a Culture of Diversity	33
Sustainable Business	39

ESG Performance

Environmental	45
Social	55
Governance	65

Appendix

ESG Data	74
GRI Standards 2021	83
Independent Assurance Statement	86
Verification Statement on 2022 Greenhouse Gas Emission Report	88
Participants in publishing the report	89



Go to the cover page of the report



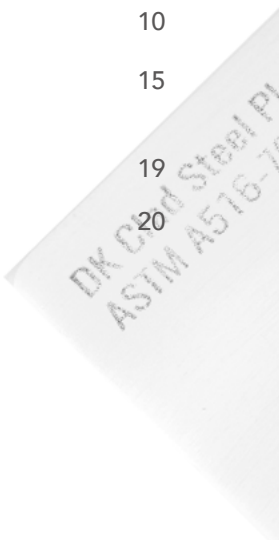
Go to the table of contents in the report



Go to the last page viewed in the report

CEO Message	05
Transition to a Holding Company Structure for Sustainable Achievement	06
Dongkuk Steel at a Glance	10
ESG Management System and Materiality Assessment	15
Stakeholder Communication	19
SDGs Commitment	20

Overview



CEO Message

Dear esteemed stakeholders,

I would like to express my sincere gratitude to the stakeholders who have consistently shown interest and support for Dongkuk Steel. Amid the fast-evolving business landscape and rising demand from stakeholders, we have made all-out efforts to unlock our sustainable value, 'Steel for Green,' in our business operations in addition to the achievement of remarkable business performance.

Dongkuk Steel stands at a critical juncture in its 69-year history.

To achieve sustainability, we have contemplated the various paths and growth engines that will put us on the course for future survival and prosperity. And we found the answer. That is the transition to a holding company structure and the restructuring of operating companies. The holding company will serve as the control tower for the group, developing growth strategies and concentrating on creating new business portfolios. Our primary objective is to augment the competitive edge of our core business, the steel business, through strategic investments in steel-related materials, components, and equipment. Furthermore, we endeavor to identify and pursue new business opportunities that can anticipate and shape future trends. The operating companies will redouble their efforts to improve the performance of the steel business by sharpening the fundamental competitiveness of the hot rolled and cold rolled businesses. Particularly in the hot-rolled business, we will pursue green growth on the basis of electric arc furnace, which has lower environmental impact. We will earnestly execute our three key tasks; energy conversion, process technology innovation, and green product portfolio development. Within the cold rolled steel business, we are committed to the 'DK Color Vision 2030' plan, which aims to pursue a super-gap strategy in pre-coated metal. To achieve our goals, we plan to sell more premium products, develop green products, and expand our market to include B2C customers.

To ensure future sustainable growth, we will consolidate our ESG management system and sharpen our execution capabilities.

Aiming to address the climate crisis and become an environmentally friendly company, we devised a mid- to long-term roadmap to achieve net-zero by 2050. By leveraging our extensive technological capabilities, we determined next step, and that is to develop 'future-oriented electric arc furnace' process technology. We also accomplished concrete results such as the installation of solar power generation facilities at Pohang Works. In the societal sphere, we have established a human rights management system, and conducted surveys to listen to our employees' voices, regarding our employees as overarching stakeholders. With a firm belief that the growth of our employees goes hand in hand with corporate competitiveness, we have refined the infrastructure of Hoo-in-won, our HRD center, and upgraded educational programs with the aim of encouraging our employees' growth mindset. Efforts are also being made to promote diversity as well as to create a work environment conducive to our employees.

We also made remarkable progress in the aspect of governance. We laid the foundation for board-driven responsible management. For example, we secured diversity in the composition of non-executive directors, and put in place systems that enables our board to seamlessly review business performance and risk management. In the years to come, Dongkuk Steel will reach out to all stakeholders, including customers, employees, partner companies, investors, and local communities, for their opinions, and go the extra mile to unlock our value, 'Steel for Green.'



Dongkuk Holdings Vice Chairman

Chang Sae-wook

Transition to a Holding Company Structure for Sustainable Achievement

Purpose of Spin-off

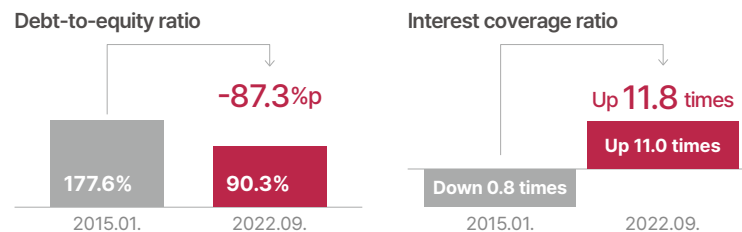
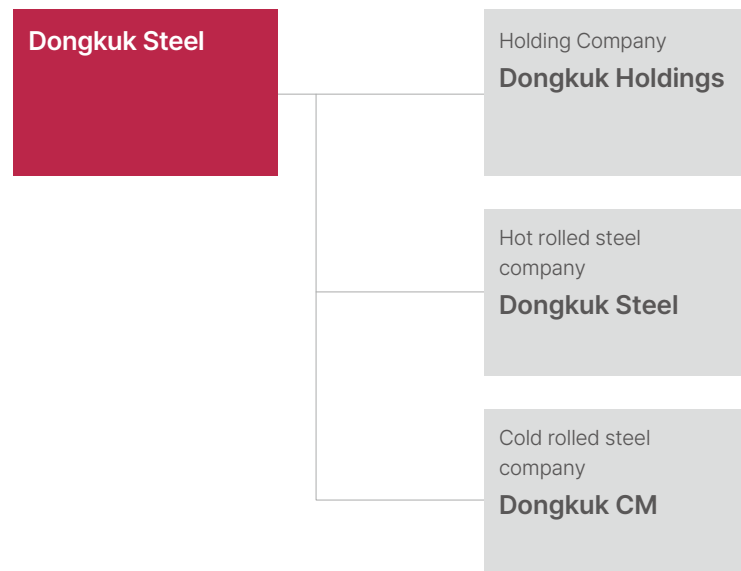
As of June 1, 2023, Dongkuk Steel was spun off into Dongkuk Holdings, Dongkuk Steel, and Dongkuk CM. And it plans to meet all requirements, such as ownership ratio, within this year to transition Dongkuk Holdings to a holding company. This transformation will enable us to establish a specialized management system that entails improved management efficiency as well as to sharpen our expertise required for the steel business and business competitiveness. In addition, we will ensure transparency in our governance so that we can achieve our ultimate goal of elevating shareholder value through market assessments.

Backgrounds of Spin-off

With the aim of overcoming the deteriorating business environment marked by the sluggish global economy and over supply following the financial crisis, Dongkuk Steel merged with Union Steel in 2015. And the reorganization of our business portfolio ensued following the acquisition. As part of the reorganization, we sold off non-core affiliates, revamped steel plates business, and restructured overseas businesses. This approach allowed us to stabilize our financial structure, and reinforce our business competitiveness. As a result, our debt-to-equity ratio decreased by approximately 87.3% while interest coverage ratio increased 11.8 times, which contributed to the stabilization of our financial structure. However, it is still required to enhance our business structure to be capable of nimbly responding to changes as well as to reinvent ourselves as a sustainable company since we are at a time when the steel industry faces daunting challenges to be resolved, such as stagnated growth and the need for carbon neutrality.

Expected Effects from Transition to Holding Company Structure

Transition to a holding company structure is projected to enable us to improve our management efficiency and strengthen the competitiveness of the steel making business, our fundamental business. This will lead to improved corporate and shareholder value. The holding company serves as a control tower that manages the entire strategies for the group while operating companies are spun off into hot-rolled and cold rolled businesses, which allows each of them to focus on their own business part to polish up their business competitiveness. This conversion will contribute to enhanced business transparency and fair assessment of our corporate value from the market, which will put us on course for accomplishing our ultimate goal of raising corporate and shareholder value.



* Based on Dongkuk Steel's separate financial statements

<p>Enhancement in management efficiency</p>	<ul style="list-style-type: none"> Separating business functions from functions of holding company enables companies to independently focus on their own businesses Ensuring risk diversification and establishing a specialized management system
<p>Sharpening the expertise and competitiveness required in the steel industry</p>	<ul style="list-style-type: none"> Strengthening the expertise and competitiveness of individual businesses, and enhancing the sustainability of our fundamental business which is steel making business
<p>Elevating shareholder value</p>	<ul style="list-style-type: none"> Ensuring transparency in our business operations to receive the fair assessments of our corporate value from the market Ultimately reaching our goal of improving corporate and shareholder value

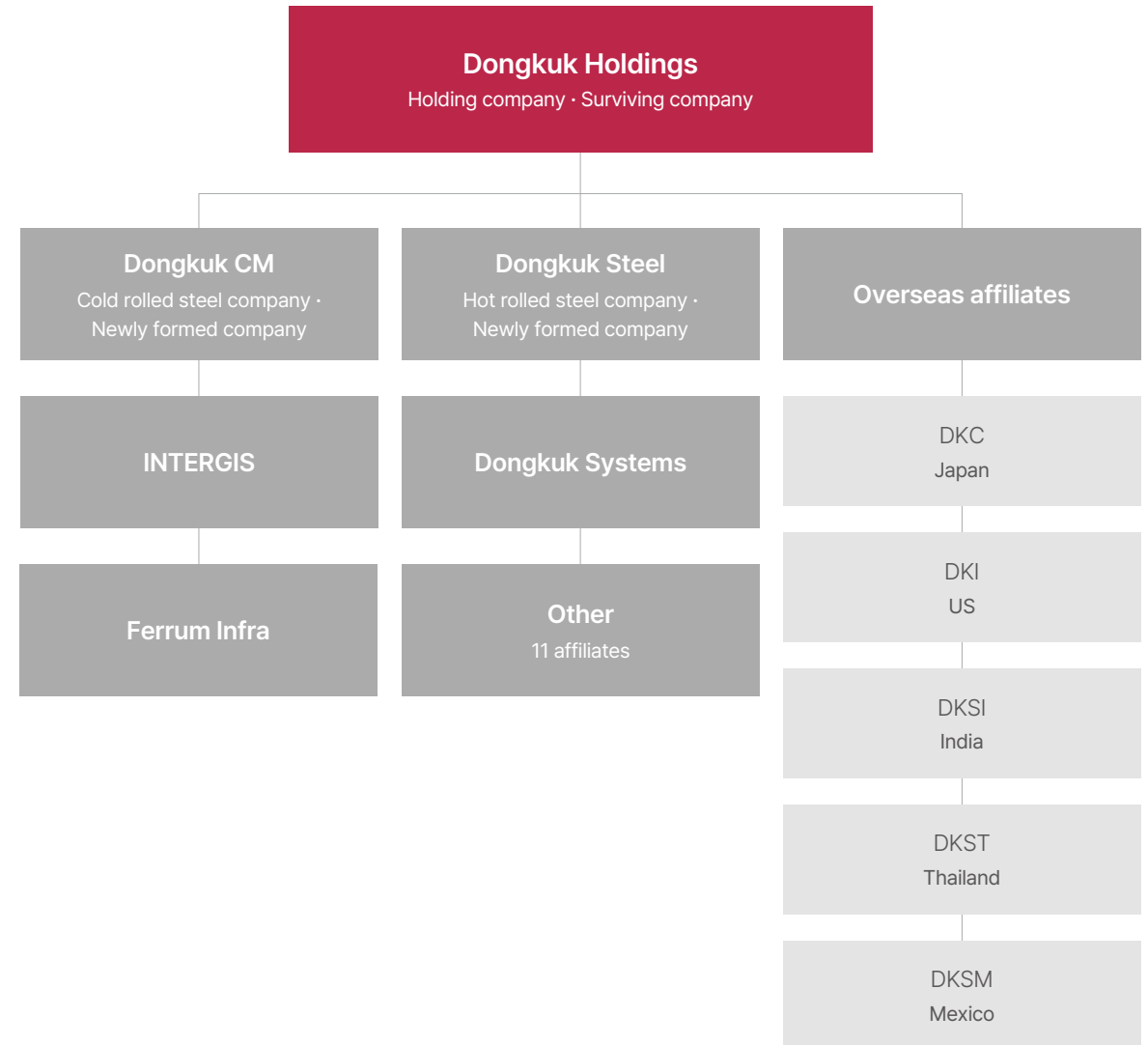
Transition to a Holding Company Structure for Sustainable Achievement

Transition to Holding Company Structure through Spin-off and Investment in Kind

Dongkuk Steel has adopted a 'spin-off' strategy that does not undermine shareholder value during the course of converting to a holding company structure comparing with 'split-off.' From the perspective of shareholders, split-off works against minority shareholders since they do not own shares in a new subsidiary and it could dilute equity worth. On the other hand, spin-off is conducive to guaranteeing shareholder rights since it distributes shares in parent and newly formed entities equally to shareholders. Minority shareholders can opt to participate in the rights offerings of Dongkuk Holdings derived from in-kind or to continue to hold a split stake in a company with certain businesses.

More Transparent Governance Structure

The holding company focuses on supporting businesses and identifying future growth engines while strictly complying with the regulations regarding the restrictions on act of holding companies stipulated in the Fair Trade Act, which will lead to greater transparency. Additionally, the operating companies are allowed to commit themselves to their own businesses as well as to separately promote their unique strategies.






Transition to a Holding Company Structure for Sustainable Achievement

Growth Strategies and Operational Policies

After the switch to the holding company structure, the newly created operating companies will independently shape and drive their future growth strategies while the holding company will play a control tower role in coordinating among its affiliates and supporting them in discovering new business opportunities. The operating companies will propel its core business-oriented business operations (hot rolled steel, cold rolled steel) to achieve growth, and establish their own business-focused operation system. In detail, the holding company will be responsible for coordinating portfolios, managing and cultivating brands, efficiently distributing resources, and evaluating business operations and managing risks while operating companies will concentrate on their distinguished growth strategies tailored to their business nature.

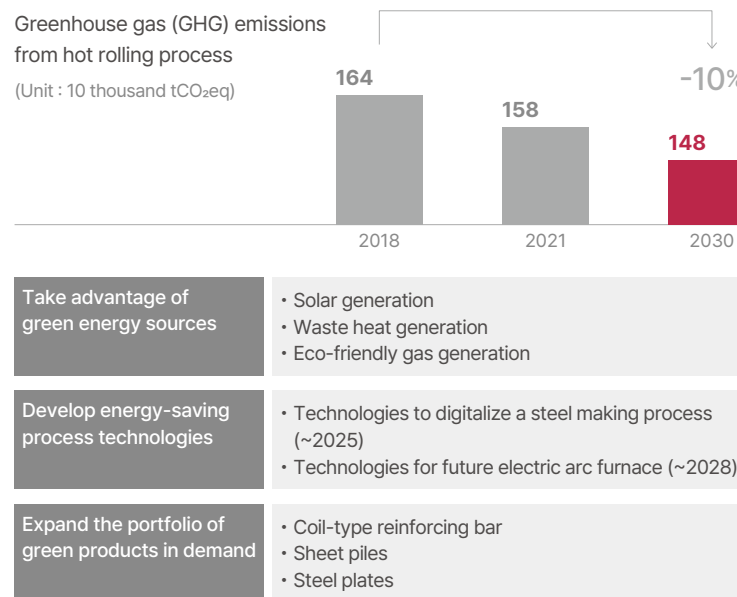
[Dongkuk Holdings]

Establish future growth strategies and develop business portfolios

		
Businesses for steel value-up	Businesses related to the group (IT / logistics, etc.)	new promising businesses that shapes trends in the future
Coordinate portfolios within the group	Optimize business portfolio by discovering new businesses or reorganizing the existing businesses	
Efficiently allocate resources within the group	Coordinate financial and human resources among the affiliates	
Manage and nurture the group's brand	Manage the brand, trademark, and CI of the group in a consistent manner through the integrated management of them	
Manage and nurture the group's brand	Manage the brand, trademark, and CI of the group in a consistent manner through the integrated management of them	

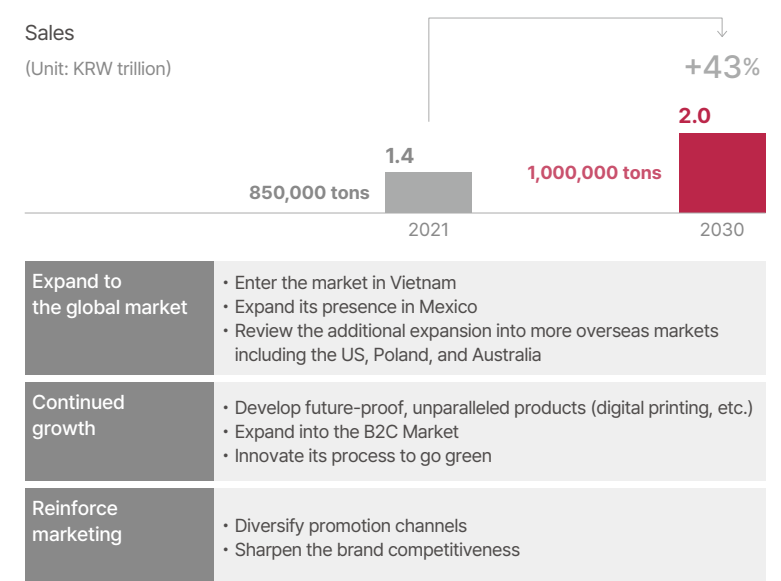
[Dongkuk Steel]

Advance its electric arc furnace-based, eco-friendly growth strategies



[Dongkuk CM]

Build a sales system capable of producing over 1,000,000 tons globally, and hitting KRW 2 trillion in pre-coated metal sales



Transition to a Holding Company Structure for Sustainable Achievement

Active Disclosure of Dividend Policy

Dongkuk Steel constantly strives to increase dividend payments to return to shareholders the profits for dividend payout and earned surplus we have made as result of business operations. We announced our dividend policy along with detailed standards for dividend payout through the fair disclosure on March 27, 2023 as part of efforts to elevate shareholder value. In the years ahead, we will actively communicate with shareholders about dividend payout, and go the extra mile to protect the rights and interests of shareholders.

Dividend Criteria Establishment

We made the criteria for the calculation of maximum dividend payout amount and the guarantee of minimum amount of dividends paid out as part of our shareholder return policy to raise shareholder value

- Criteria for minimum dividend payments: Guarantee the minimum return on investment based on the dividend yield equivalent to the bond yield as of the end of business year
- Criteria for maximum dividend payments: Define 30% of free cash flow as the maximum dividends to be paid out, considering the changes in liabilities and reflecting the calculation of free cash flow from EBITDA with interest expenses and CAPEX excluded in accordance with the free cash flow dividend model

Dividends to Be Paid Despite Losses

The parent company and newly formed companies plan to pay out dividends for the next two consecutive years even though they operate at a deficit unless they incur a net loss.

Recent Five Years' Dividend Payments

Year	2018	2019	2020	2021	2022
Dividend per share (KRW)	-	-	200	400	500
Total dividend payout amount (KRW 100 million)	-	-	187	374	457
Dividend yield (%)	-	-	2.6	2.5	4.2
(Separately) Dividend payout ratio (%)	-	-	98.0	12.7	29.7
(Separately) Net income (KRW 100 million)	-4,449	-1,300	191	3,013	1,537

* Dividends were not paid in 2018 and 2019 due to the net loss during the term

Holding Company Structure and Greater Transparency in Governance

Holding company structures, which features vertical investment structures, do not allow investments among the affiliates within the group if their businesses are not relevant, which prevents the spread of poor operations in the first place. This enables the independence in terms of law and accounting, which contributes to clearer responsibility of the management. And it means greater transparency in governance.

Board's Responsible Management and Empowered Committees

In order to strengthen its board-driven management, Dongkuk Steel Group formed the BOD for the three operating companies after the spin-off. They aim to build their BOD that is comprised of five members along with committees to ensure transparency in their governance as well as achieve the BOD-driven responsible management. Each company meets the requirements for the company whose assets stand at over KRW 2 trillion pursuant to the Commercial Act when creating the BOD. Dongkuk Steel, a newly created company, established an Audit Committee, Non-executive Director Candidate Recommendation Committee, and ESG Committee for ESG management. Dongkuk CM also plans to launch Audit Committee and Non-executive Director Candidate Recommendation Committee to underpin its BOD-driven management despite its assets at below KRW 2 trillion.

Governance Characteristics

Dongkuk Holdings Holding Company	Dongkuk Steel Hot rolled steel company	Dongkuk CM Cold rolled steel company
<ul style="list-style-type: none"> • Full-time auditors appointed 	<ul style="list-style-type: none"> • Board of Directors that consists of five members • Audit Committee formed • Non-executive Director Candidate Recommendation Committee formed • ESG Committee formed 	<ul style="list-style-type: none"> • Board of Directors that consists of five members • Audit Committee formed • Non-executive Director Candidate Recommendation Committee formed

Dongkuk Steel at a Glance

HISTORY

Dongkuk Steel

- 1954** Established Dongkuk Steel
- 1966** Put the Korea's first electric arc furnace into operation
- 1971** Manufactured steel plates for the first time in Korea
- 1993** Became the first to introduce DC arc furnace in Korea
- 1994** First permanent no-strike declared by our labor union
- 2010** Began eco-friendly arc furnace operation at Incheon Works

Union Steel

- 1972** Produced pre-coated metal for the first time in Korea
- 2007** Put PL-TCM line into operation at Busan Works
- 2011** Launched its brand, Luxteel

2015. 01
Merged with
Union Steel

2023. 06
Company
Spin-off

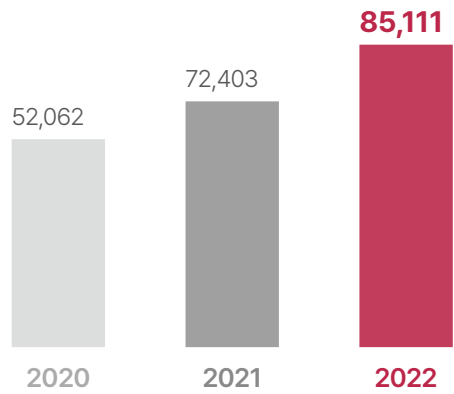
- 2016** Fired the blast furnace at CSP Steel Mill in Brazil
- 2018** Produced DK LP-plate, DK-Deck
- 2020** Became the Korea's first to develop the ultra-high strength 'Giga' rebar
- 2021** Opened its e-commercial platform, steelship.com
Build an additional production line, Special 1 CCL, at Busan Works

Dongkuk Holdings
Dongkuk Steel
Dongkuk CM

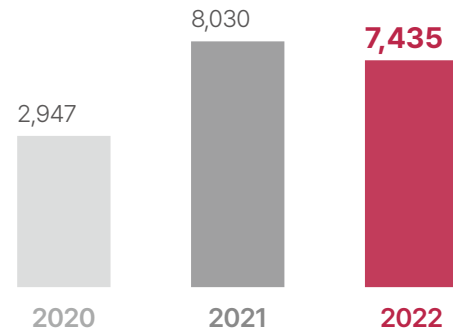
Dongkuk Steel at a Glance

Business Performance

Sales

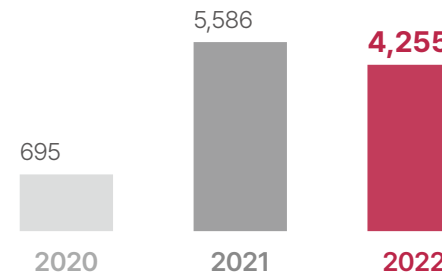


Operating Profit

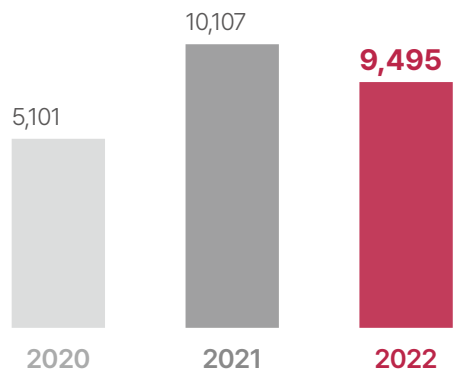


Net Profit

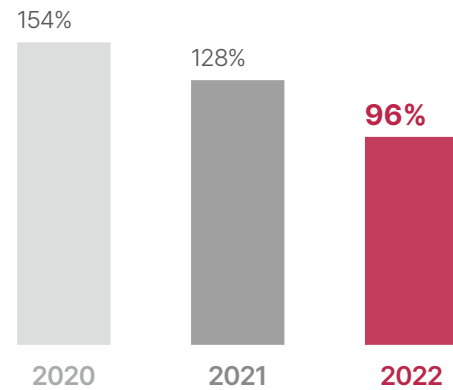
(As of 2022, consolidated, unit: KRW 100 million)



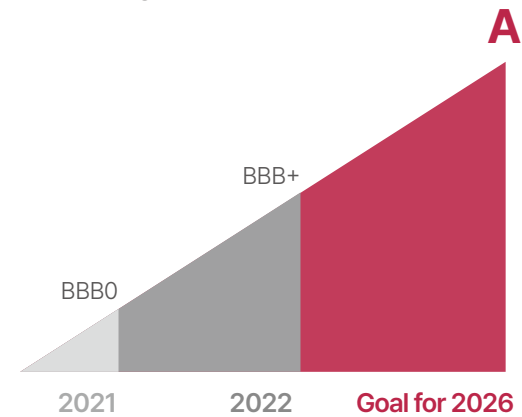
EBITDA



Debt-to-Equity Ratio



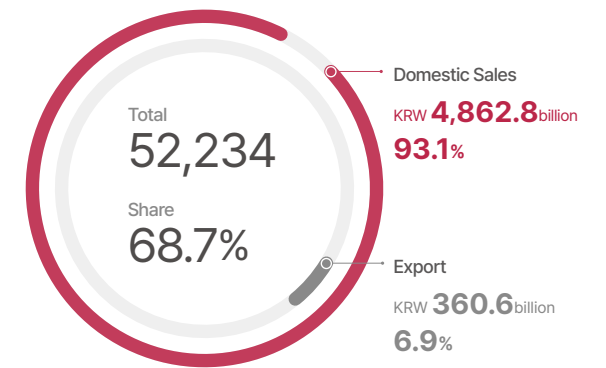
Credit Rating



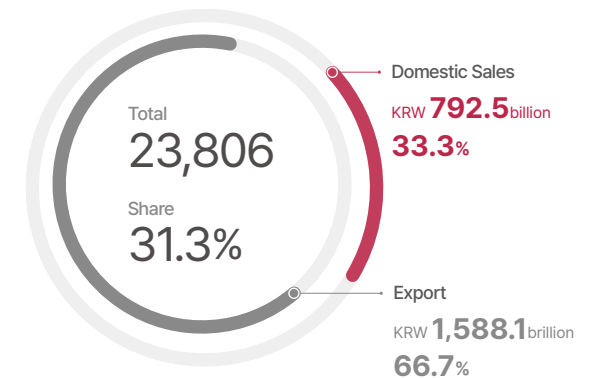
Sales Breakdown

(As of 2022, separated, unit: KRW 100 million)

Hot-Rolled Products (reinforcing bars, sections, steel plates)



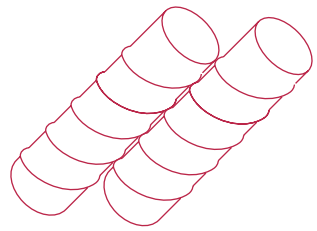
Cold-Rolled Products (cold-rolled products, pre-coated metasl)



Dongkuk Steel at a Glance

Key Products

Reinforcing Bars



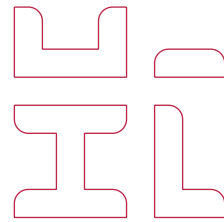
2,750,000 tons

Reinforcing bars (rebar) are steel products widely used in engineering works including apartment construction. We manufacture general, high-tension, and ultra high-tension reinforcing bars in various sizes ranging from D10 (10mm) to D57 (57mm) at Incheon and Pohang Works. And we have also succeeded in producing earthquake-proof reinforcing bars that meets the Korean Industrial Standards (KS), and supplied 'DKOIL,' processed rebars of up to 6.2km in the form of coil, which has put us on course for becoming a leading player in the market.

[Visit our website](#)



Sections



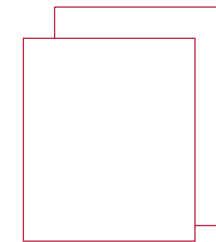
1,300,000 tons

Sections comes in various forms, such as H-beams, angles, and channels, and their application encompasses a wide range of industrial areas from construction and engineering works to machine & steel tower manufacturing. And we manufacture various types of sections, including H beams, angles, channels, flat bars, and profiles, at Pohang and Sinpyeong Works.

[Visit our website](#)



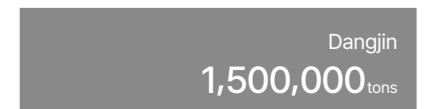
Steel Plates



1,500,000 tons

Steel plates are steel sheets with a thickness greater than 6mm. They are used across diverse industrial areas that encompass shipbuilding, construction, bridge building, and the production of pipes, boilers, and pressure vessels. And we manufacture multiple types of products with various grades, such as general, heat-treated, or TMCP products. And they come in various specifications including extra-thick, extra-thin, and wide-thick plates for shipbuilding.

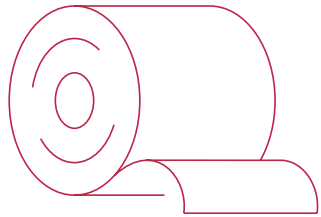
[Visit our website](#)



Dongkuk Steel at a Glance

Key Products

Cold-Rolled & Galvanized Steel



1,740,000 tons

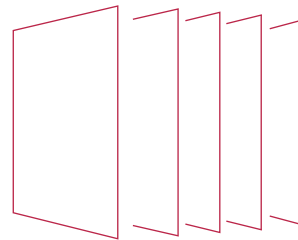
It refers to steel plates manufactured through our top-notch coating technologies. And they boast neatly finished surfaces and outstanding corrosion resistance, which makes them ideal for use as interior & exterior construction materials, auto parts, and pre-coated metals.

Galvanized Steel (GI), Electro Galvanized Steel (EGI), Galvalume Steel (G/L), Mg Alloy Galvanized Steel (GIX/GLX)

[Visit our website](#)

Busan
1,740,000 tons

Pre-Coated Metal

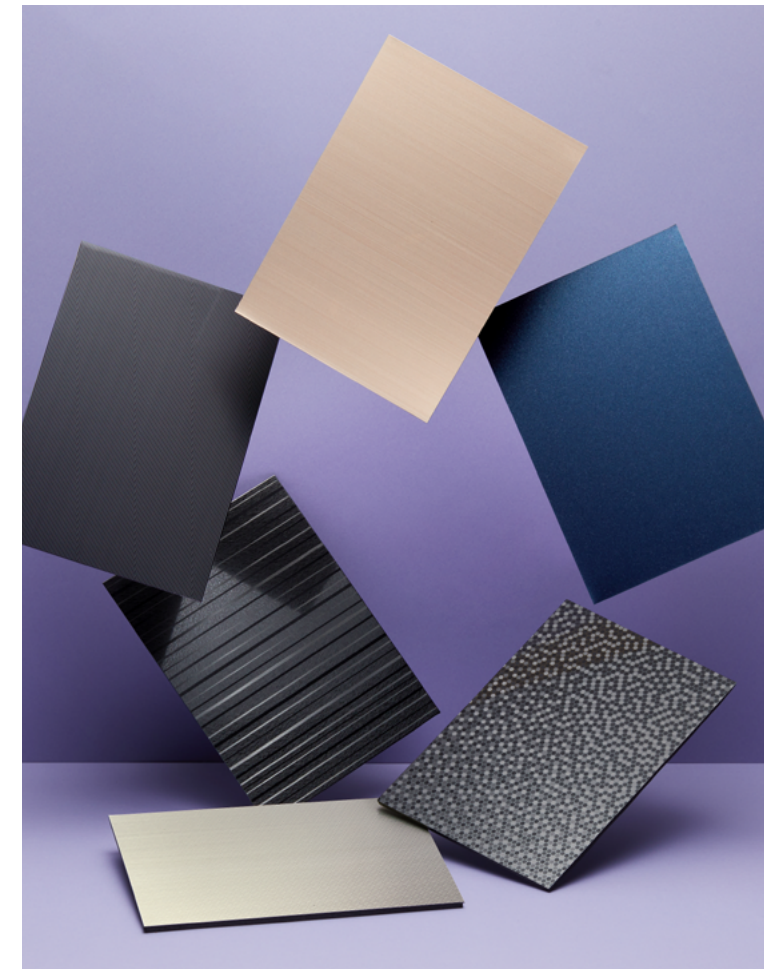


850,000 tons

Dongkuk Steel has the holder of title, the Korea's first pre-coated metal manufacturer, and now boasts the world's largest capacity of manufacturing 850,000 tons of products per year based on one factory. And the quality of products we provide are at the top-tier level in the world, featuring diverse design patterns and surface texture. And our product portfolio covers a variety of products including 'digital printing plates,' which allows for photo-like printing on their surfaces as you can see in the photos below, and 'antibacterial pre-coated metals,' which enables us to lead the global pre-coated metal market.

[Visit our website](#)

Busan
850,000 tons



Dongkuk Steel at a Glance

Network

Dongkuk Steel has its Head Office, R&D Center, steel works (Incheon, Dangjin, Pohang, Busan, and Shinpyeong), and Doseong Center, the specialized Luxteel processing center. And we boast a broad overseas network of intermediate trade subsidiaries (the US, Japan) in five countries, and coil centers (India, Thailand, Mexico). With the second coil center constructed in March 2023, we have expanded our presence into overseas markets.

- 1 Dongkuk Corporation Japan
- 2 Dongkuk Steel Thailand
- 3 Dongkuk Steel India
- 4 Domestic Network
- 5 Dongkuk International Inc. New York Office
- 6 Dongkuk International Inc. Los Angeles Branch
- 7 Dongkuk Steel Mexico (Monterrey)
- 8 Dongkuk Steel Mexico (Queretaro)

Second Dongkuk Steel Mexico (Queretaro) Construction Completed on March 30, 2023



As part of 'DK Color Vision 2030,' we completed the construction of the Second Coil Center in Querétaro, Mexico. In the years to come, additional investments will be made for the expansion into eight hubs in seven countries across the Americas, Europe, and Oceania. And we will build a capacity to manufacture 1,000,000 tons of pre-coated metal globally, thereby achieving the mid- to long-term goal of reaching KRW 2 trillion in sales.

4 Domestic Network



6

7

8

5

3

2

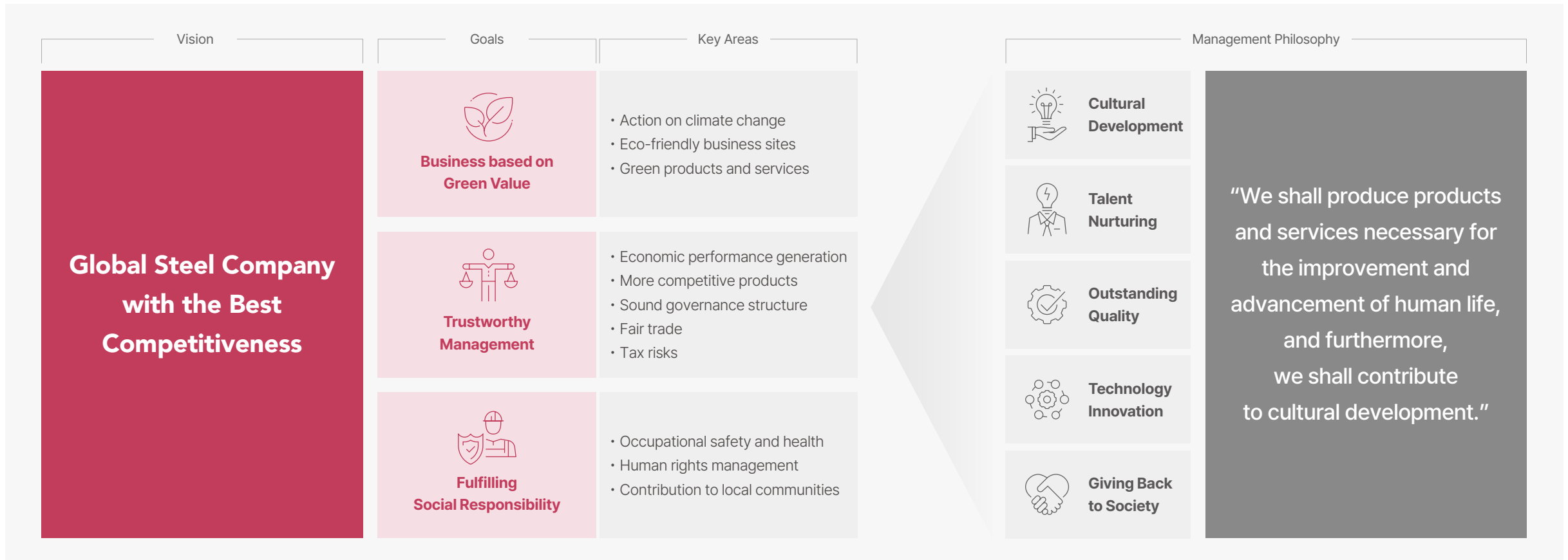
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1

ESG Management System and Materiality Assessment

Implementation System for Sustainable Management

Dongkuk Steel is committed to ESG management to unlock its vision, 'Global Steel Company with the Best Competitiveness,' based on its management philosophy. To this end, we are seeking to accomplish three goals, 'Business based on Green Value,' 'Trustworthy Management,' and 'Fulfilling Social Responsibility,' implanting tasks for key areas to ensure full-fledged sustainable management.



ESG Management System and Materiality Assessment

Introduction of Double Materiality Assessment

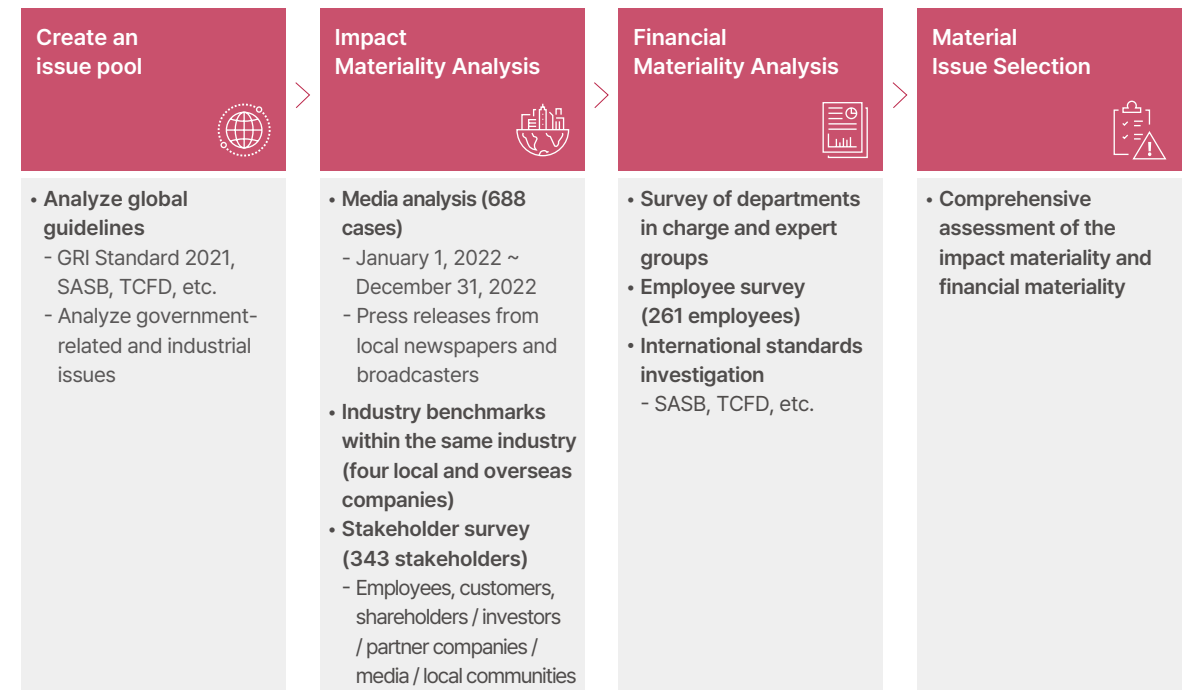
Dongkuk Steel conducts a materiality assessment every year to identify its material issues, and provides a transparent account of the results in sustainability reports to communicate with stakeholders. This year, we adopted the concept of double materiality which enabled us to evaluate our impact materiality, which refers to the impacts that our business operations have, and also the financial materiality, which presents the impacts that external elements have on our financial status, from the comprehensive perspective. And our activities regarding the top material issues selected through the double materiality assessment, and the progress are separately stated in the section titled, 'STEEL for GREEN' a key part of this report.

What is Double Materiality Assessment?

A double materiality assessment comprehensively evaluates the impact of materiality, which is the impact of a company's activities on society and the environment, and financial materiality, which presents the impacts of external factors on a company's finance.



Process and Methods of Double Materiality Assessment



ESG Management System and Materiality Assessment

Results of Double Materiality Assessment

Ranking	Issue	Financial Materiality	Impact Materiality	Stakeholder Materiality						Page
				Employees	Customers	Shareholders	Partner companies,	Government / Media	Local communities	
1	Occupational safety and health enhancement	●	●	●	●	◐	●	●	●	22~26, 79p
2	GHG emission management and mitigation	●	●	●	●	◐	◐	●	◐	27~32, 78p
3	Green energy consumption and reduction	●	●	●	●	◐	◐	●	●	29~32, 77p
4	Economic progress	●	◐	◎	◎	●	●	◐	◎	11, 39~43, 74p
5	Waste management	◐	●	●	●	●	●	◐	◐	52, 77p
6	Ethical management reinforcement and fair trade establishment	●	●	●	◐	◐	●	●	●	70~71p
7	Air pollutant emission management and mitigation	●	●	●	●	◐	●	●	◎	49, 75p
8	Development of eco-friendly products and services	◐	●	◐	●	●	◐	●	◐	53~54p
9	Establishment of a climate change response system	◐	●	●	◐	◐	◎	●	●	27~32p
10	Strengthened ESG capabilities in the supply chain	●	◐	◎	◐	●	◎	◐	◐	63~64p

● High Impact ◐ Medium Impact ◎ Low Impact

ESG Management System and Materiality Assessment

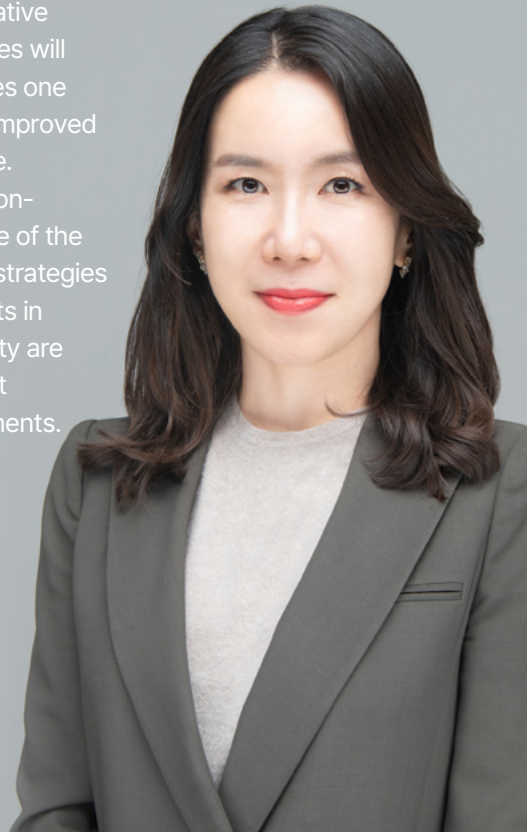
Message from ESG Expert Regarding Our ESG Management

“

Taking the initiative in small practices will bring companies one step closer to improved corporate value.

Given the carbon-intensive nature of the steel industry, strategies and investments in carbon neutrality are one of the most significant elements.

”



Lee Seon-kyeong, Head, Korea ESG Research Institute

Q1. There is a growing interest in ESG management. In this context, what is the most overarching issue?

ESG management has risen to prominence over a very short period of time. It has also entailed the growing issue of greenwashing or ESG washing. Accordingly, we are seeing more stringent regulations on the disclosure of data regarding sustainability management. Shareholders and stakeholders will pay more attention to what changes are really being made. And ESG requirements are projected to become more tightened with the introduction of carbon border tax, guidelines on supply chain due diligence, and the effectuation of taxonomy, which will have greater impact on corporate finance and business operations. And these changes require companies to have more strategic approach and practices.

Q2. Dongkuk Steel has been bringing a lot of changes to its business model, such as the development of eco-friendly products and reinforcement of its online sales channels. What do you think the most salient area we should focus on?

The steel industry is carbon-intensive, which makes investments and strategies for net-zero one of the most crucial tasks in this field. Along with this, occupational safety and supply chain management are growing in importance. With the emergence of carbon border tax, the development of hydrogen reduction steelmaking and low-carbon procedures will decide the competitiveness of steel companies. And the establishment of a system to measure scope 3 in addition to scope 1 and 2 is also required.

Q3. ESG management requires companies to actively communicate with stakeholders over the environmental, social, and governance sectors. To this end, how should we approach?

The disclosure of accurate and objective ESG data should be a prerequisite before active communication to ensure that there is no greenwashing or ESG washing. Furthermore, the explanation not only for the results but also for the backgrounds and procedures of ESG management should be provided to interact with stakeholders. I think that, although there are some weak points in terms of ESG management, identifying the areas of improvement based on objective assessments and coming up with measures are more important than just overamplifying their strengths. And this is needed for more active and sustainable communication.

Q4. Would you please give advice to our ESG management?

To put ESG management into action, it is required to set ESG management as a KPI of the BOD and the management, and also link this KPI with their performance. And Dongkuk Steel also makes its ESG Committee review actual ESG issues so that it can function properly. And its members' expertise should be verified. In addition, all its employees should be cognizant that ESG management will decide the business status of Dongkuk Steel, and take small steps towards ESG management. By doing so, I think Dongkuk Steel will take its sustainable corporate value to the next level.


Stakeholder Communication











Dongkuk Steel operates a variety of channels to actively communicate with stakeholders.

To promote communication by stakeholder group through the channels, we will strive to provide our diverse information, pay attention to stakeholders, and reflect their thoughts and opinions.

Customers

Step up our communication with customers Improve product quality and stability, and sharpen R&D capabilities Expand our services



-  Website [↗](#)
-  Youtube [↗](#)
-  Instagram [↗](#)
-  Facebook [↗](#)
-  Blog [↗](#)
-  Luxteel website [↗](#)
-  Luxteel TV [↗](#)
-  steelshop.com [↗](#)
-  Client portal system
-  Partner portal system

Suppliers


Ensure fair transaction, Seek for shared growth with partner companies



- Shared Growth Committee
- Meetings with partner
- Supplier exchange meetings
- Cyber Shinmungo [↗](#)
- Procurement Portal Dongkuk Steel [↗](#)
- Procurement Portal Dongkuk CM [↗](#)

Shareholders & Investors

Enhance shareholder value, Corporate governance, Manage risks Ensure ethical and compliance management



- General shareholders' meetings
- Public disclosure [↗](#)

Local Communities

Communicate with local communities Contribute to society Create jobs



- Nanum-Jiki, a volunteer group
- Songwon Culture Foundation

Employees

Hire and nurture talents, Ensure safety and health for employees, Improve welfare and corporate culture



- Labor-management council (each business site)
- Labor-management discussion meetings







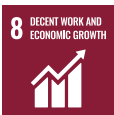








[Association Membership]

- Korean Institute of Metals and Materials
- Korea Public Health Association
- Korea Industrial Safety Association
- Fair Competition Federation
- Korea International Trade Association
- Korea Industrial Technology Association
- Korea Listed Companies Association
- Korea Fire Safety Institute
- Korea Iron & Steel Association
- Korea Standards Association
- Korea-U.S. Economic Council
- Korea-Japan Economic Association
- Zinc-Aluminum Coaters Association (ZAC)



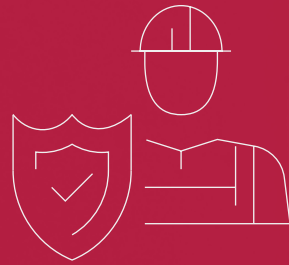
SDGs Commitment

Dongkuk Steel is committed to supporting the UN Sustainable Development Goals (UN SDGs), which are the most significant shared objective of the UN and the global community. As a responsible global citizen, we are dedicated to fulfilling our social responsibility and actively contributing to the achievement of the SDGs. To this end, we have implemented a variety of sustainable management activities.

<p>No Poverty</p>  <p>Move Together, Move Green >59p</p>	<p>Good Health and Well-being</p>  <ul style="list-style-type: none"> · Strengthen safety and health management to reduce accident rate >22p · Respect for human rights and diverse culture >23p 	<p>Quality Education</p>  <p>Talent development aiming to connect knowledge and experience >56p</p>	<p>Gender Equality</p>  <p>Respect for human rights and diversity >33p</p>	<p>Clean Water and Sanitation</p>  <ul style="list-style-type: none"> · Environmental management >46p · Environmental impact mitigation >50p
<p>Affordable and Clean Energy</p>  <ul style="list-style-type: none"> · Response to climate change to achieve mid- to long-term carbon neutrality >27p · Environmental management >46p 	<p>Decent Work and Economic Growth</p>  <p>Respect for human rights and diversity >33p</p>	<p>Industry, Innovation and Infrastructure</p>  <p>Distribution and expansion of green products >53p</p>	<p>Reduced Inequality</p>  <p>Respect for human rights and diversity >33p</p>	<p>Sustainable Cities and Communities</p>  <ul style="list-style-type: none"> · Response to climate change to achieve mid- to long-term carbon neutrality >27p · Environmental impact mitigation >49p
<p>Responsible Consumption and Production</p>  <ul style="list-style-type: none"> · Environmental impact mitigation >49p · Distribution and expansion of green products >53p · Sustainable supply chain >63p 	<p>Climate Action</p>  <ul style="list-style-type: none"> · Response to climate change to achieve mid- to long-term carbon neutrality >27p · Environmental management >46p 	<p>Life Below Water</p>  <ul style="list-style-type: none"> · Environmental management >46p · Environmental impact mitigation >50p 	<p>Life on Land</p>  <ul style="list-style-type: none"> · Environmental management >46p · Environmental impact mitigation >49p 	<p>Peace and Justice Strong Institutions</p>  <ul style="list-style-type: none"> · Compliance management >68p · Ethical management >70p

Strengthen Safety and Health Management by Reducing Accident Rates	22
Combat Climate Change to Reach Net-Zero in the Mid- to Long-Term	27
Respect Human Rights and a Culture of Diversity	33
Sustainable Business	39

Steel for Green



Strengthen Safety and Health Management by Reducing Accident Rates

We put safety at the heart of our sustainable management and keep our top priority in creating a safe workplace. We have established a safety and health management system that fosters a safety culture and encourages accident prevention activities led by the management. Our ultimate goal is to achieve our vision of 'a company that protects the safety and health of all working people,' in safety and health management, while preventing serious accidents and reducing the accident rate. Our primary objective is to safeguard the well-being of all our stakeholders by leveraging our full potential and expertise.

Safety and Health Management System

Safety and Health Management System Goals

We are committed to our safety and health management vision of ‘a company that protects the safety and health of all working people.’ To realize this vision, we set and strive for challenging goals. Our goal for 2023 is ‘zero serious accidents & 30% reduction in accident rate.’ We will achieve this goal by preventing major accidents and lowering the accident rate through proactive measures.

[Visit our website](#)

Investment in Safety and Health

In 2022, we increased our investment in the safety and health sector by 193% from the previous year, reaching KRW 48.6 billion. With this investment, we established an integrated safety monitoring system in all our workplaces to monitor the unsafe behavior and conditions of our workers at all times. We also focused on preventing potential risks from turning into disasters by upgrading our aging safety facilities. We invested in major areas such as improving and monitoring our facilities to prevent physical risks, as well as developing our own tools to assess the safety type and job stress level of our employees, who are our internal stakeholders. Instead of simply focusing on removing visible risks, we aim to create a more advanced safety and health management system that provides ‘customized safety management’ for our internal stakeholders. This system will evaluate the safety characteristics and levels of our employees and tailor our interventions accordingly.

Revised Safety and Health Management Policy

To achieve our vision of ‘a company that protects the safety and health of all working people,’ we revised our policy to reflect our CEO’s commitment to putting safety and health first in our management activities and protecting our employees. Our revised policy also aims to improve the safety of all workers by expanding the scope of our interventions.

[Visit our website](#)

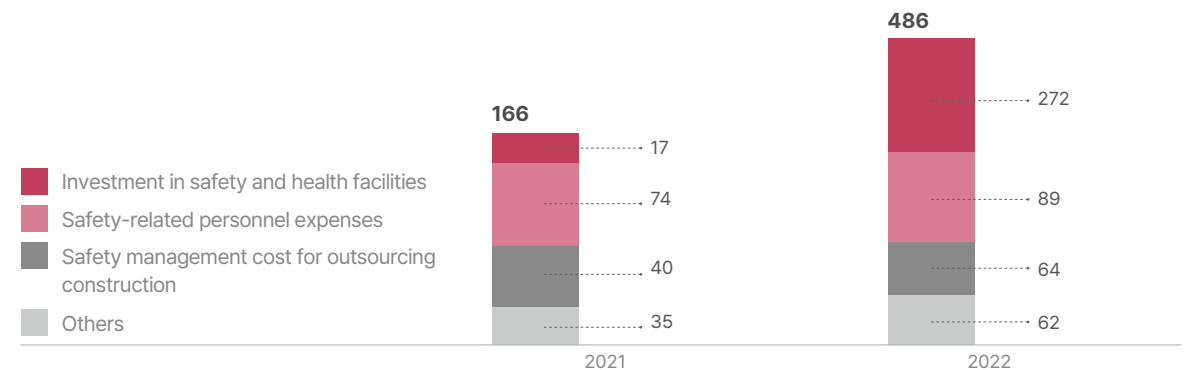
10 Rules for Safety and Health

With an aim to make safety and health activities part of our culture, we have established the ‘10 Rules for Safety and Health’ that specifies the duties and responsibilities of employers and employees. We have also posted and publicized these rules in every workplace of our workers.



Status of Investment in Safety and Health

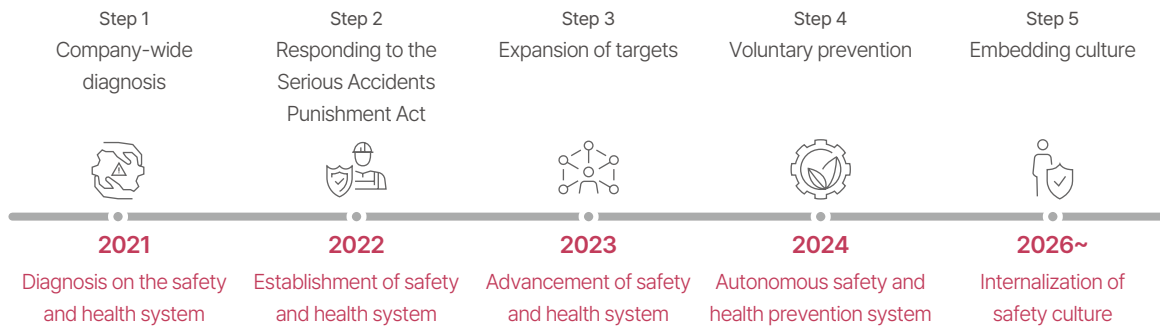
(Unit: KRW 100 million)



Safety and Health Innovation Activities (3S)

We divided our activities for safety and health innovation into 3S; smart safety management, safe work environment, and strong safety culture. We established an integrated safety monitoring room for 'smart safety management' and added smart safety devices to enhance the safe operation of heavy equipment. We also created a safety and health budget investment review process for a 'safe work environment' to ensure transparent and prompt execution. Finally, for a 'strong safety culture,' we improved our safety and health management policies and expanded the company-wide safety and health system certification (KOSHA MS) to cover all suppliers at our workplace.

Mid- to Long-term Roadmap for 3S Activities



Smart Safety Management

- ⚙️
• Smart Safety
 Building an integrated safety monitoring room and installing smart safety device for heavy equipment, mobile surveillance cameras, etc.
- 📊
• Safety and health audits (May-June, September-November)
 Application of safety and health KPI evaluation (jointly with external professional organizations)
- 🔒
• Expansion and improvement of Isolation Locking System (ILS)
 6 business sites including the Busan Works

Audit on Safety and Health

Once we have established the safety and health system, we aim to prevent accidents by checking the implementation status of the safety and health sector at the workplace and conducting a company-wide safety and health level evaluation and improvement. We also introduced a quantitative evaluation method using a check-list to ensure fairness in the safety and health level evaluation. We conducted a joint performance inspection with a specialized institution to align with external compliance. We conducted audits twice a year on our sites, including Incheon Works, Dangjin Works, Busan Works, Pohang Works, and Sinpyeong Works and Doseong Center. During these audits, we reviewed the safety and health management system and checked for compliance with safety and health-related laws and regulations. Additionally, we strengthened on-site inspections to conduct practical and diverse safety and health implementation inspections. This allowed us to review the legitimacy of the safety and health management system and inspect compliance with safety and health-related laws and regulations.

Safety and Health Evaluation Indicators

We have established company-wide safety goals to evaluate autonomous safety and health practices and set out safety and health KPI indicators (system index, safety prevention index, disaster index, safety management index) to highlight the implementation of the safety and health management system and the accident prevention activities. We evaluate and manage our safety and health managers through safety and health performance inspections twice a year to check if they are fulfilling their duties. We reward the excellent workplaces based on the evaluation results to foster a better safety and health culture.



Best Workplace in Safety and Health in 2022 Award Ceremony



Integrated safety monitoring room

Safety and Health Innovation Activities (3S)

Safe Work Environment

- 
• Inspection of implementation status regarding risk assessment and corrective orders conducted horizontally throughout the company
- 
• Improvement of the process of prevent measures against major occupational accidents
 - Budget for safety and health (investment review and operation guidelines prepared)
 - Reinforced safety in outsourcing companies (safety hurdle system, evaluation of safety and health level)

Improvement in Risk Assessment

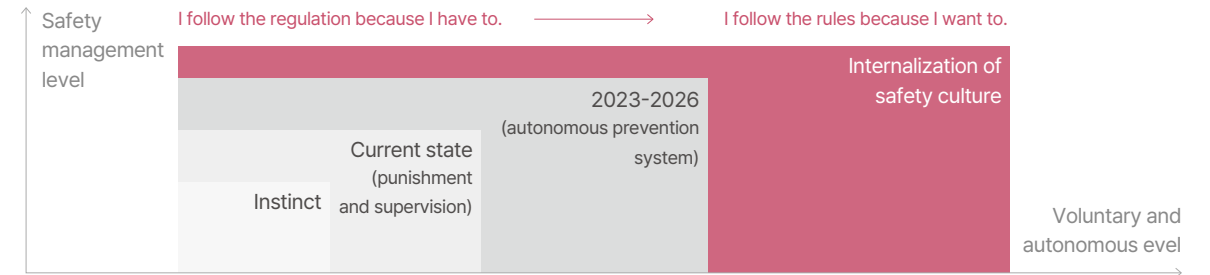
In 2023, we set up a task force team (TFT) for risk assessment in order to improve risk assessment, construct a preventive system against the recurrence of occupational accidents, and create an autonomous system for occupational accident prevention. We seek to establish a risk assessment connection process with direct operators, partner firms inside our business locations, and outsourcing construction companies in an effort to strengthen the win-win cooperation with contract and subcontract companies. Furthermore, we examine the risk assessment site's capability to share win-win cooperative items with site managers monthly and risk factors weekly. Additionally, we daily reinforce our commitment to worker safety, thereby improving site safety and health.

Safety and Health Budget Deliberation Process

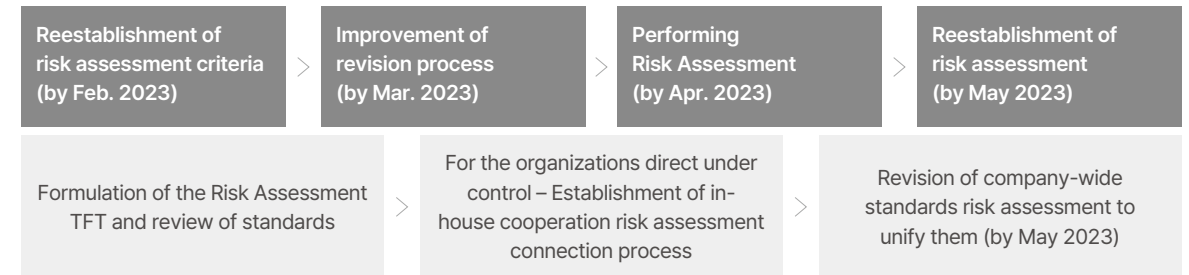
We established safety and environment investment deliberation procedures by organizing safety and environment investment deliberation members, including the ones from the planning and execution departments, for safety and health budget execution. The deliberation members evaluate consideration of the suitability and urgency of the investment and strive for transparent and prompt implementation of safe environment investment.



Risk Assessment TFT for Autonomous Prevention System



Risk Assessment TFT and Operation Plan





Elevation of On-site Execution Capacity for Risk Assessment (dissemination of 3-step sharing system on a monthly-weekly-daily basis)



*TBM: Tool Box Meeting (a security inspection meeting before initiating work)

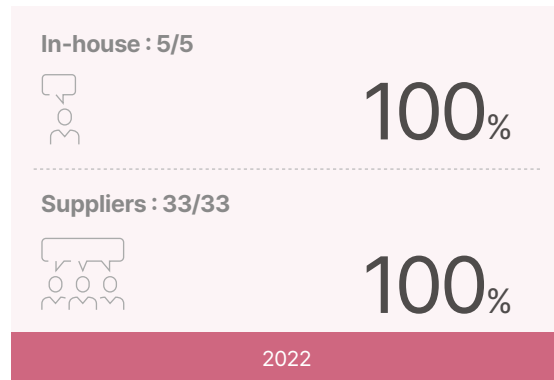
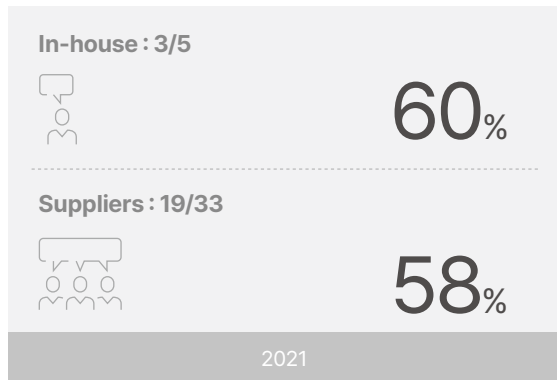
Safety and Health Innovation Activities (3S)

Strong Safety Culture

- 
 - Revision of safety and health management policy, enactment of the DK 10 Rules for Safety and Health
- 
 - Expanded application of the safety and health system (KOSHA MS) certification not only throughout the company but also all partner companies
- 
 - Application of safety and health KPI standards, setting DK accident-free water withdrawal, holding labor-management safety discussion meetings
- 
 - Evaluation of emergency response capability, application of safety MBO, safety and health leader meeting

Certification and Policy for Safety and Health

We provided human and material resources for all in-house companies and all our suppliers to acquire KOSHA MS certification in order to imbed safety culture beyond general safety and health management. As a result, all 33 suppliers within our business sites have obtained KOSHA MS certification. In 2023, we plan to support outsourcing companies (6 companies) operating within our site to acquire KOSHA MS certification beyond in-house and suppliers.



Development of Worker Safety Evaluation by Type and Analysis of Job Stress

We make strenuous efforts to establish an electric system for safety and health. We developed a program for worker safety evaluation and analysis by type to design tailored safety management for each worker and customized training. We also developed our own online program on the basis of the job stress analysis provided by the Korea Occupational Safety and Health Agency for a convenient evaluation. Additionally, we laid the foundation for our preventive activities against industrial disasters capitalizing on the scientific big data of our business sites.

Establishment of Safety and Health Leader Meeting

With an aim to preemptively respond to the safety and health laws and regulations and to continuously improve the area in our business, we newly established the Safety and Health Leader Meeting hosted directly by the person responsible for the management and joined by the person in charge of safety and health (director of the site). Through the monthly meeting, we discuss the areas to improve and share the status of implementation of the site as well as the company-wide safety and health policy.

Safety and Health Suggestion System

Our goal is to make our workplace safer by listening to valuable suggestions on how to improve safety and health for everyone. This includes not only our employees, but also our partners, contractors, and visitors. We have a safety and health suggestion system that lets them share their opinions through various channels, such as the in-house suggestion system and the visitor safety suggestion box.

Opinion Listening from Partner Companies Regarding Safety and Health (2022)

(Unit: cases, %)

Business site	No. of opinions received	No. of opinions handled	Ratio of opinions handled
Incheon	45	45	100
Dangjin	81	78	96
Busan	120	120	100
Pohang	65	65	100
Sinpyeong	12	12	100
Total	323	320	99

Mid- to Long-term Implementation Plan for GHG Reduction

The Intergovernmental Panel on Climate Change (IPCC) unanimously approved the 6th Assessment Report at its 58th General Assembly in March 2023. The report underscored the need for immediate and coordinated climate action. Previous efforts such as the Convention on Climate Change, the Kyoto Protocol, and the Paris Agreement have reduced some climate risks, but greenhouse gas emissions remain too high. We have little time left to secure a sustainable future, and we need to transform all sectors and systems quickly. Against this backdrop, we established an implementation plan to achieve the mid- to long-term GHG reduction goal established in 2021. Through this, we plan to accelerate climate action and join the efforts of the international community against climate change.



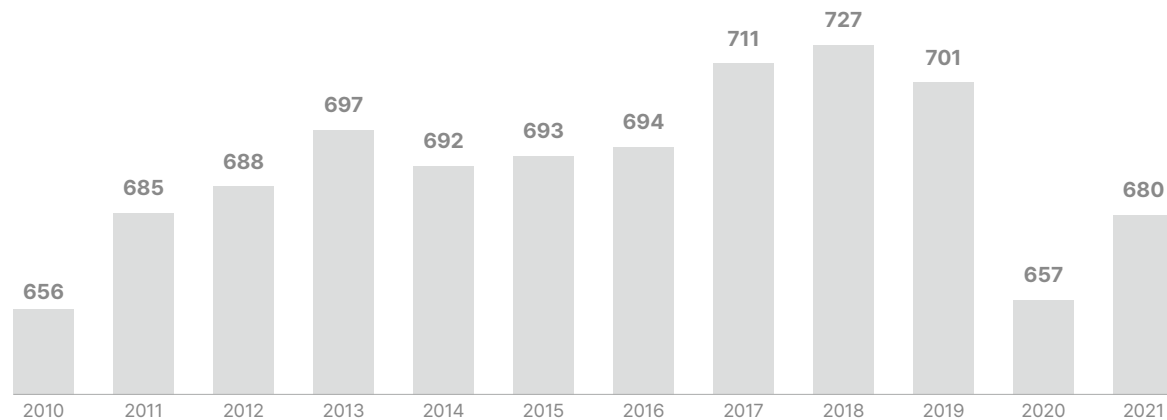
Mid- to Long-term GHG Reduction Plan

Background of the Plan

In June 2022, the Greenhouse Gas Inventory and Research Center under the Ministry of Environment disclosed the estimated national GHG emissions for 2021. The estimated GHG emissions in 2021 amounted to 679.6 million tons, which represents a 3.5% increase from the previous year and a 6.5% decrease from 2018, the year with the highest emissions. The rise in GHG emissions in 2021 was attributed to the recovery of industrial production activity and the increased demand for travel after COVID-19. Nevertheless, reducing GHG emissions is a crucial matter for the global community. To achieve the national GHG reduction target by 2030 and carbon neutrality by 2050, it's essential to take active reduction measures with a sense of urgency. We acknowledge that external specialized organizations may raise new challenges related to greenhouse gases. Therefore, we aim to implement practical greenhouse gas reduction through a comprehensive system that includes governance structure, strategy, risk management, indicators, and reduction targets.

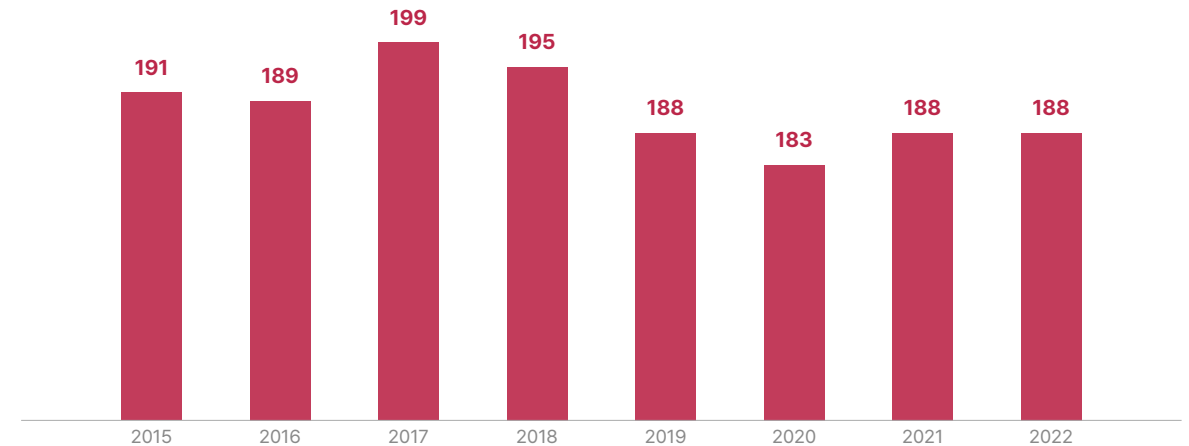
Trends in national GHG emissions since 2010

(Unit: million tCO₂eq)



Trends in Dongkuk Steel's GHG emissions since 2015

(Unit: 10 thousand tCO₂eq)



* Source: Greenhouse Gas Inventory and Research Center (estimated value for 2021)

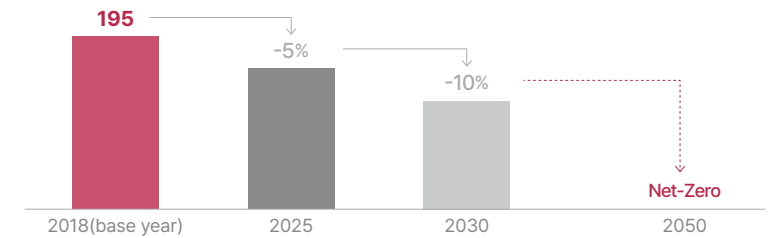
Mid- to Long-term GHG Reduction Plan

Implementation Plan and Short-term Execution Tasks

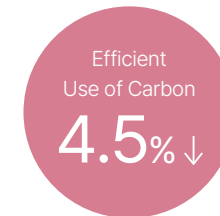
As part of our efforts to address climate change, we have established an intermediate target of reducing our GHG emissions by 5% in 2025 and 10% in 2030 compared to the 2018 level, with the ultimate goal of achieving carbon neutrality by 2050. Our main sources of GHG emissions are recarburizer, LNG, and electricity, which account for 99% of our total emissions. The steelmaking process is responsible for more than 60% of our GHG emissions. In the short term, we plan to meet our 2030 reduction target, raising our carbon and energy efficiency, considering the major sources of emissions and the need for urgent climate action. In the mid- to long-term, we aim to develop technologies that reduce carbon emissions from electricity and increase the use of renewable energy.

Mid- to Long-term GHG Reduction Target

(Unit: 10 thousand tCO₂eq)



Short-term Implementation Plan for 10% Reduction by 2030

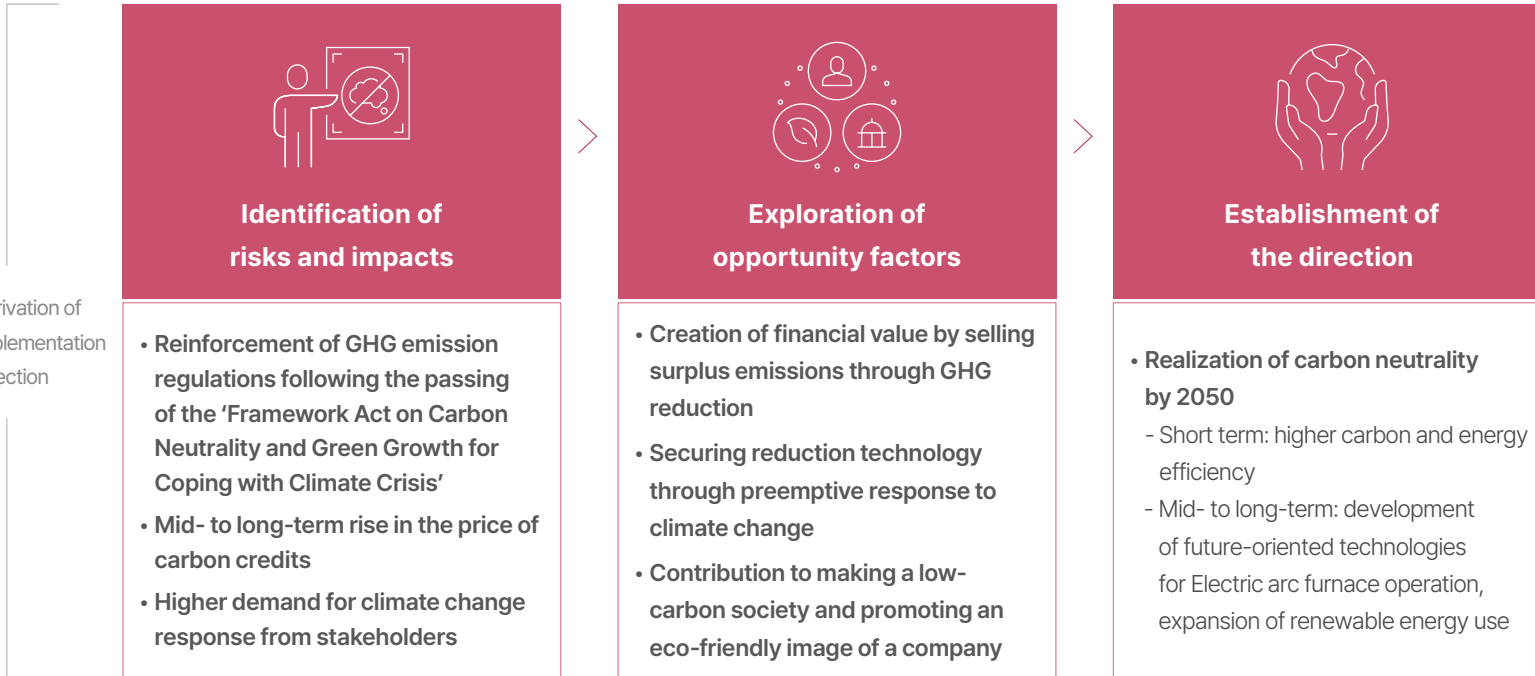


Optimized Use of Recarburizer

- Optimization of the Injection-C usage pattern.
- Development of the substitutes for non-carbon-based deoxidizer
- Polymer injection
- Securing of proper level of preheating by improving dust collection facilities, etc.

Optimized Use of Electricity and LNG

- Optimization of the electric arc furnace burner flow
- Adjustment of chemical composition in line with the increase in rolling QTB capacity
- Introduction of optimization packages such as Smart-Arc
- Set a limit for peak and increasing the capacity of electric arc furnace GCB

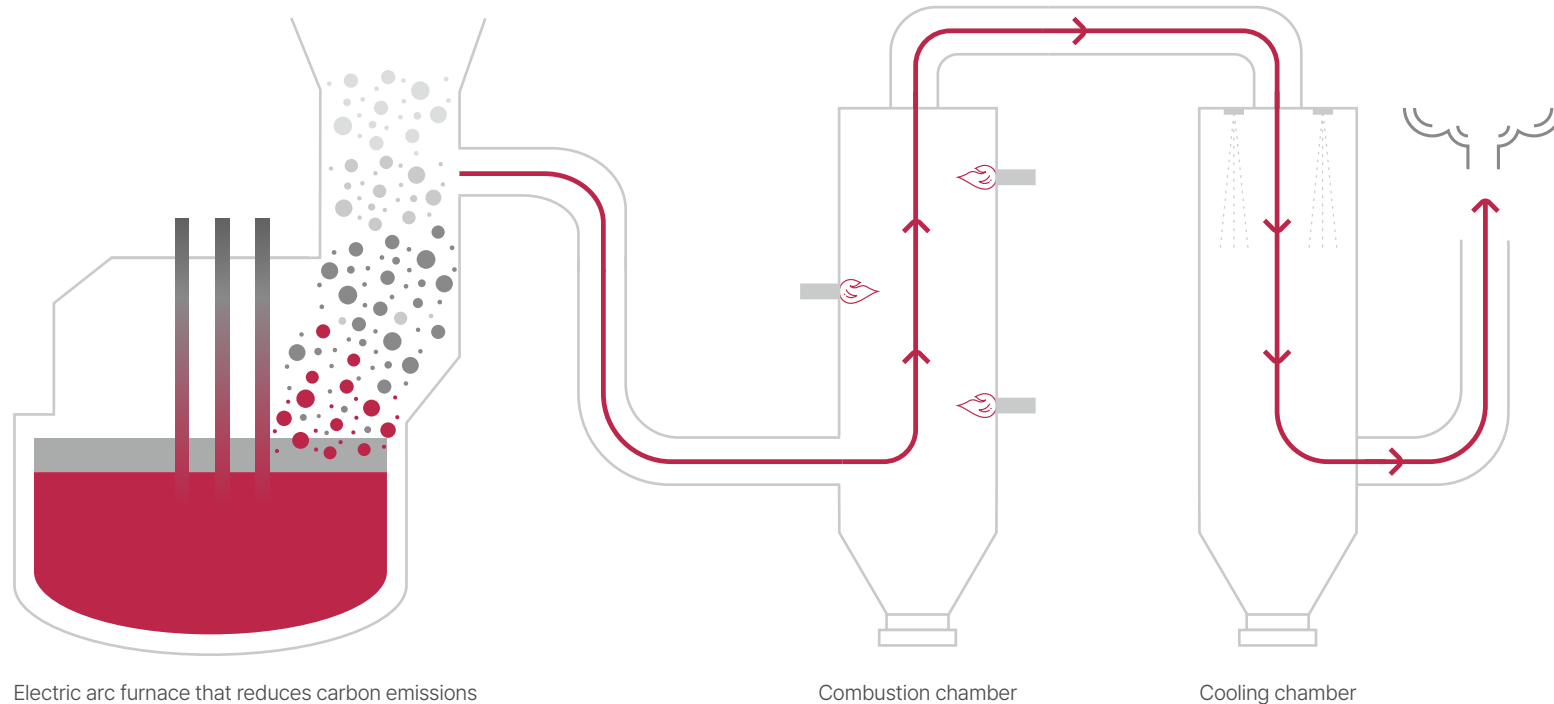


Derivation of Implementation Direction

Mid- to Long-term GHG Reduction Plan

Development of Future Technologies for Electric Arc Furnaces

Electric arc furnace steelmaking produces only a quarter of the GHG emissions that blast furnace steelmaking does. Therefore, electric arc furnace production is regarded as one of the sustainable and eco-friendly processes for achieving carbon neutrality in the steel industry. Accordingly, as part of our medium to long term eco-friendly strategy, 'Steel for Green - Research on Future Technologies for Electric Arc Furnace,' we are developing key technologies that will lower carbon emissions from electric arc furnaces. A carbon-reducing electric arc furnace is an electric furnace that can process eco-friendly flue gas and reduce the process time, energy consumption, and carbon material usage compared to conventional electric furnaces.



Electric arc furnace that reduces carbon emissions

Combustion chamber

Cooling chamber

Technology that Improves Energy Efficiency

The main technology for lowering carbon emissions in the electric arc furnace process is reducing the process time and increasing the energy efficiency. This is because faster processing leads to lower power consumption, which in turn reduces carbon emissions. We use electricity based on preheated steel scrap charging, which improves the design and enhances the energy efficiency. This is how we achieve the electric arc furnace technology for cutting down carbon emissions.

Alternative Technology Using Low-carbon Raw Materials

Coal-based carbon materials used as heat sources in the steel production process are one of the main sources of GHG emissions. Therefore, we are conducting basic research on alternative raw materials that can lower carbon emissions instead of using coal-based carbon materials. We are also developing electric arc furnace technologies to reduce carbon emissions.

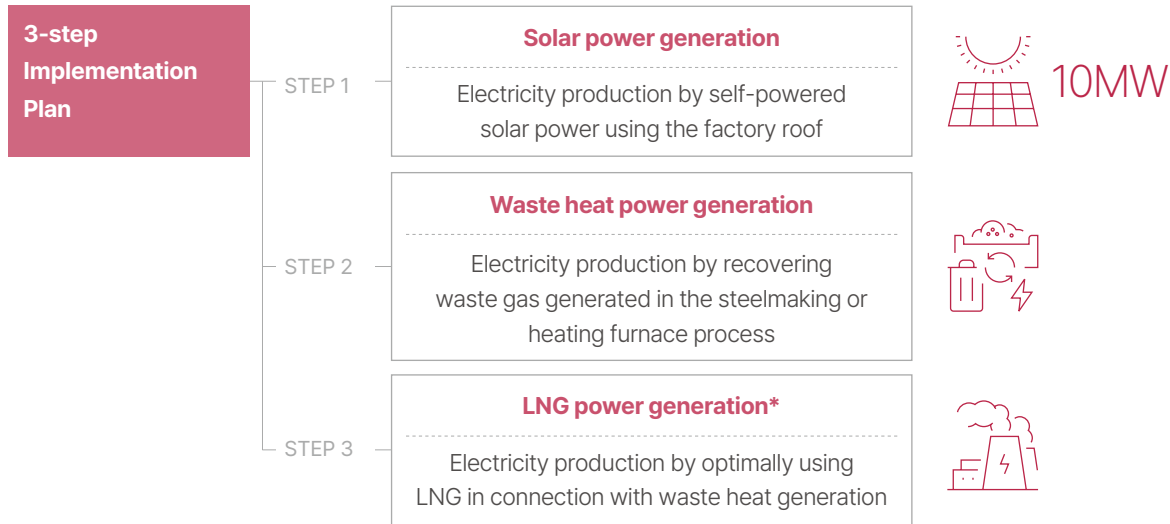
Eco-friendly Flue Gas Treatment Technology

Flue gas from the electric furnace process can cause environmental issues such as air pollution, so it requires effective management and treatment to protect the environment. We plan to conduct research on optimal combustion conditions and developing new technologies and facilities that can be applied to flue gas analysis and control, along with improving energy efficiency. We are committed to solving environmental challenges in the future steel industry and pursuing sustainable management.

Mid- to Long-term GHG Reduction Plan

Expansion of Renewable Energy Use

We recognize that indirect emissions account for over 60% of GHG emissions. To address this, we will increase our reliance on renewable energy and develop technologies to reduce emissions. Our plan includes the installation of solar power generation in-house, as well as the introduction of waste heat and LNG power generation in the mid to long term. Our goal is to minimize carbon emissions through eco-friendly power generation and establish a high-quality, low-cost power supply network. This will enable us to address both of our significant goals: achieving low carbon emissions and ensuring a stable power supply.



*LNG power generation is regarded as an eco-friendly option because it emits relatively low levels of sulfur oxides (SOx) and nitrogen oxides (NOx) compared to conventional thermal power generation. LNG fuel is also recognized as a potential fuel source that can act as gray hydrogen for a certain period of time in the shift to the hydrogen economy. However, since it is still a fossil fuel that generates greenhouse gases, it has limitations as a completely eco-friendly energy source. Therefore, we aim to increase its value as a distributed power source in the future, along with the already established ESS, solar power generation, and waste heat generation that are under review.

DK Story

10MW-class Solar Power Generation Facilities Installed at Pohang Works



Solar Power Generation Facilities in Pohang Works

We invested a total of KRW 12.5 billion to construct self-contained solar power generation facilities on the roofs of three buildings in Pohang Works, covering an area of 165,289m². The construction started in August 2022, the installation was completed in March 2023, and the full-scale operation has recently begun. The new facility is a 10MW-class self-generation facility and generates about 13Gwh of electricity annually. This amount of electricity can meet the annual demand of 6,500 households of four family members. We expect to save about KRW 1.5 billion in electricity bills and reduce carbon emissions by 6,000 tons per year. Our Pohang Works used GIX, a highly corrosion-resistant steel sheet coated with magnesium alloy produced from the Busan Works, for the solar power generation structure. GIX is an eco-friendly steel product that we developed for the construction of new and renewable energy facilities. It has up to 7 times higher corrosion resistance than existing galvanized steel products in terms of withstanding rain, snow and sea wind. We have installed and operated 13 MW-class solar power generation followed by an 'MOU for solar power generation business' signed between our Dangjin Works and Korea Hydro & Nuclear Power in 2020. On the foundation of our operational expertise, we also installed a new self-generation facility in Pohang.

Mid- to Long-term GHG Reduction Plan

GHG and Energy Management

Our GHG emissions in 2022 amounted to 1.88 million tCO₂eq, which achieved 98.5% of our 2025 mid- to long-term GHG reduction target. We kept our emissions below the government quota for the second year (2022) of the 3rd planning period (2021-2025) of the Emissions Trading Scheme by continuously identifying and implementing improvement areas. In 2022, we obtained the energy management system (ISO 50001) certification for the Pohang Works and Busan Works. This enhances the reliability and transparency of the monitoring, reporting and verification (MRV) process of the GHG emissions and raises the energy efficiency at all business sites.

Implementation of the Emissions Trading Scheme

We estimate the exact amount of emissions every year, and manage the supply and demand of emission credits as well as profits and costs through this. We aggregate GHG emissions by process and facility at each business site in the ERP system, and monitor and manage them continuously. Since we became eligible for the emissions trading scheme in accordance with the relevant laws and regulations, we have complied with the GHG emission quota until the second year (2022) of the 3rd planning period.

Current GHG Emission Status

Our GHG emissions in 2022 amounted to 1.88 million tCO₂eq, a 4% decrease from the 2018 level. We achieved 98.5% of our mid- to long-term GHG reduction target for 2025. We expect to see the results of our company-wide reduction activity, which is carbon efficiency improvement, in 2023. Through this, we aim to reach our 2025 mid- to long-term GHG reduction target ahead of time.

GHG emissions

(Unit: 10 thousand tCO₂eq)



Improvement in Energy Efficiency

We aim to improve energy efficiency by enhancing the efficiency of process facilities and investing in high-efficiency facilities. In 2022, we reduced our power consumption by 10,000 Mwh through activities such as improving the steelmaking compressed air system, replacing the main compressor, and remodeling the steering wheel with a high-voltage motor.

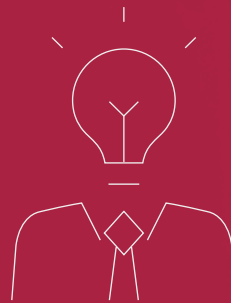
DK Story

Dongkuk Steel Acquiring ISO 50001 Certification for All Its Business Sites



ISO 50001 certification obtaining ceremony

Dongkuk Steel's Pohang Works and Busan Works achieved ISO 50001 certification from the British Standards Institute (BSI) in September 2022. This means that Dongkuk Steel has obtained the certification for all its business sites, showing its energy management capabilities. ISO 50001 is an international standard certification for energy management. Pohang Works and Busan Works are the latest business sites to get the certification, following Dangjin Works and Incheon Works, which got ISO 50001 certification in 2016 and 2020, respectively. With this additional certification, all business sites are now certified by the standard. This certification is part of Dongkuk Steel's mid- to long-term ESG strategy 'Steel for Green.' Since the beginning of this year, the company has formed the ISO 50001 TFT under the Shared Growth & Cooperation Office and held regular meetings. For this purpose, the company has newly created an energy management manual and system that connects all business sites. Dongkuk Steel received high recognition in the first document review and second main review of ISO 50001 review process. The company was praised for its energy usage of LNG, electricity, gasoline, and diesel, its energy reduction goals and achievements, its energy saving performance management, its energy saving investment, and its employee awareness of energy reduction as energy evaluation items.



Respect Human Rights and a Culture of Diversity

Dongkuk Steel safeguards and respects all employees of its domestic and overseas offices as well as stakeholders. Acknowledging that stakeholders' human rights protection is our corporate responsibility, we strive to establish governance for strengthening human rights management and to expand our human rights impact assessments. Also, we will continue to enhance our systems for securing talented female workers, eliminating any gender discrimination, and guaranteeing a friendly working environment for both male and female employees. We are committed to building a high level of human rights culture and protecting the human rights of all stakeholders by addressing potential negative issues.

Respect Human Rights and a Culture of Diversity

Improving Human Rights and Diversity

With the growing gravity of respecting and protecting human rights, we prioritize human rights protection. In June 2021, we launched an organization dedicated to ESG management to discuss human rights issues and established a human rights management system, which was followed by the establishment of human rights management policies in 2022. In 2023, we will redouble our efforts to prevent human rights risks and improve the rights by conducting human rights impact assessments for all of our domestic and overseas workplaces.

Human Rights Management Policies

We endorse the Universal Declaration of Human Rights of the United Nations Commission and UN Guiding Principles on Business and Human Rights. As part of our efforts to implement the principles, we formulated our human rights management policies after the approval of the BOD in October 2022, and have posted them on our website. [Visit our website](#)

Human Rights Risk Management

Every year, all employees pledge to faithfully comply with ethical practices, which includes the content of human rights. In 2022 we introduced a human rights risk management system and human rights impact assessment system. In February 2023, we conducted a human rights impact assessment and based on the results, we will monitor human rights risks and take appropriate measures.

Grievance Handling System

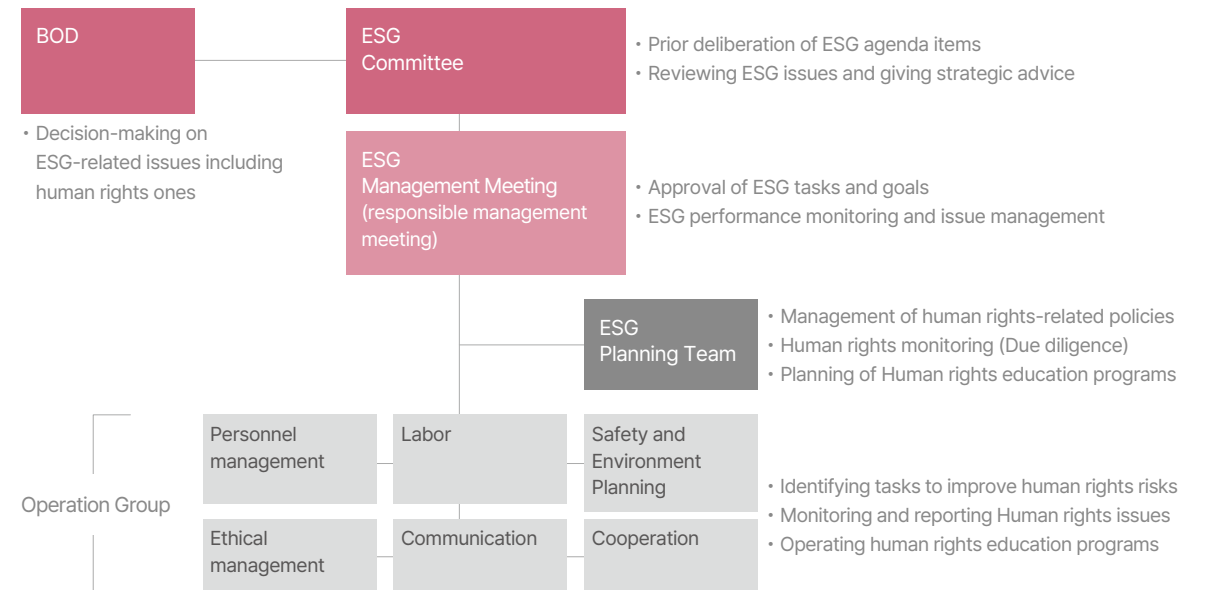
We strive to remedy human rights violations and improve regarding matters through various communication channels. Through our workplace bullying reporting procedure, we immediately and promptly investigate and address human rights issues, such as sexual harassment and bullying that may arise. In addition, we operate an online Ethical Management Reporting Center that receives external stakeholders' concerns and any unethical behaviors at all times. [Ethical Management Reporting Center](#)

Cases of Workplace Bully and Sexual Harassment Reported and Handled

Category	2020	2021	2022
No. of reporting cases	4	4	2
No. of cases addressed (a letter of apology or stricter disciplinary action)	2	3	2

Structure of Human Rights Organization and Its Functions

For systematic management of human rights risks, we have established an organization to promote human rights in line with the ESG management organization. In particular, our ESG Planning Team is responsible for conducting human rights impact assessments and due diligences for efficient and systematic human rights management.



Respect Human Rights and a Culture of Diversity

Human Rights Impact Assessment

Dongkuk Steel is working hard to enhance its management capabilities in accordance with the roadmap for human rights management promotion to respect and protect the human rights of its employees and stakeholders. In that regard, in June 2021, we declared our commitment to ESG management, putting human rights management first. In 2022, we established the human rights policies and related systems, followed by operating the human rights management system in full swing in 2023. Going forward, we will continue to promote the internalization of human rights management by expanding the scope of human rights impact assessment, conducting human rights due diligences, and further developing human rights educational programs.

Development of Human Rights Impact Assessment Indicators in 2022

We selected 8 major human rights issues to focus on the issues prone to the most grave and adverse impact across the entire business. We worked with internal groups in charge of the matter to derive the issues based on key domestic and international human rights norms and guidelines in 2022. Built on this, we have developed indicators to evaluate the human rights impacts of our domestic business sites. The human rights impact assessment consists of 9 areas including 8 major human rights issues.

Implementation of Human Rights Impact Assessment in 2023

In February of 2023, the human rights impact assessments that we developed in 2022, was conducted at all domestic business sites. Despite it being our first human rights impact assessment, 71.3% of people voluntarily participated, demonstrating their high level of interest. The assessment results showed that our domestic business sites generally were at a good level in terms of their human rights management. However, we identified some issues that need improvement in the areas of human rights system establishment, prohibition of employment discrimination, prohibition of forced labor, and prevention of harassment (including sexual harassment). To deal with the issues, we plan to derive improvement tasks for each issue and will check the implementation level of each task every quarter, and disclose the results through the ESG Committee and in the sustainability report for the following year.

Human Rights Issues and Definition



Establishment of a Human Rights System

The governance for human rights management shall be constantly implemented to identify and improve human rights-related issues and policies that support international human rights norms and remedy human rights-related concerns.



Prevention of Harassment (Sexual Harassment)

Harassment that undermines a corporate culture that respects human rights shall be prohibited. This includes the use of coercive power, reprimands, verbal abuse, and behavior or language that causes sexual humiliation.



Prohibition of Discrimination in Employment

Everyone shall be guaranteed the right to work freely without being unfairly discriminated on account of race, religion, disability, gender, or political affiliation.



Association and Collective Bargaining

Employees have the freedom of association and the right to collective bargaining. The company should transparently and fairly participate in negotiations with labor unions to determine working and employment conditions.



Prohibition of Forced Labor

No worker should be subjected to forced labor against their will in employment.



Prohibition of Child Labor

The company shall not use child labor. In case of legally hiring minors, the company shall provide proper educational opportunities and ensure their safety.



Protection of the Human Rights of Local Residents

The company shall protect the human rights of its local residents so that their rights to adequate housing and a healthy environment shall not be violated.



Protection of the Human Rights of Our Customers

The safety and health of customers (consumers) shall not be threatened when products and services are provided. And customers shall not be misled by exaggerated information. Their personal information shall be protected and respected.



Protection of the Right to a Healthy Environment

Measures shall be taken to prevent and mitigate environmental damage in advance so that human life and health are not harmed by environmental pollution.

Respect Human Rights and a Culture of Diversity

Promoting Diversity

Certified as family-friendly company [🔗](#)

Dongkuk Steel is making concrete efforts to promote diversity. As part of the efforts, we are continuously working on managing female talents for gender diversity in our workplace. We operate an elaborate family-friendly system to create a working environment in favor of women, and as a result, we acquired family-friendly company certification in December 2020.

Securing Female Talents

We are aware of the problems we face in securing female talents. And we are working to improve them. In particular, we have addressed the issues, such as the lack of women in managerial positions and the low number of female employees compared to our counterparts, through the continuous recruitment of female talents. We are also changing internal and external perceptions of a hostile environment towards women in the steel industry by consistently recruiting female field engineers, even though the engineering profession is one of the most male-dominated. The proportion of female leaders is being managed according to government standards, and we expect to see fruitful results within a few years.

*Affirmative Action Assurance (AAA): The manager refers to someone who has the authority of personnel management, decision-making, or budget allocation. We have currently reported zero number of female managers.

Efforts to Tackle Discrimination

To solve the problem of a high ratio of female employees among non-regular workers, in 2018, we have established the policy of 'no dispatched workers and minimizing contractors,' which has been implemented until now. Even before 2018, we operated a system that converted dispatched and contract workers into regular employees, resulting in more than 50% of the workers being converted to regular positions. However, for more proactive improvement, we conducted a regular employee conversion review for about 90 dispatched and contract workers in 2018, and turned more than 50% of them into the regular positions. We have maintained zero male and female dispatched workers and about 1.5% of the total employees as contract workers as of the end of 2022.

Female Talent Status

(Unit: persons)

Classification	2020	2021	2022*
No. of employees	113	118	120
Recruitment	9	9	12
Voluntary resignation	2	1	9

*Due to the recent job-hopping phenomenon, voluntary resignations of both male and female workers increased in 2022, and we will pay more attention to improve the retention.

Status of Female Non-regular Workers

(Unit: persons)

Classification	2020	2021	2022
Dispatched workers	0	0	0
Contract workers	3	0	0

Human Rights Implementation Roadmap

1 st Stage (2021 ~ 2022)	2 nd Stage (2023 ~ 2024)	3 rd Stage (2025 ~)
Establishment and Introduction of human rights management system • Mapping out basic human rights management plans • Enacting and proclaiming human rights policies • Building a human rights management implementation system	Establishment and Consolidation of Human Rights Management • Implementing, evaluating, and managing the human rights management system • Disclosing the entire process of the internal human rights management • Establishing a human rights system for the external stakeholders	Internalization and Continuation of Human Rights Management • Restructuring the human rights management organization and system • Implementing the human rights management system for external stakeholders • Continuously identifying human rights blind spots and embedding a human rights culture into

Respect Human Rights and a Culture of Diversity

Talk with Non-executive Director

“

For sustainable management, it has become an essential for companies to contribute to creating social value through the diversity of their human resources, and to have a sense of mission as a member of the community.

”



Non-executive director, Nam Tae-yeon

Q1. Could you briefly introduce yourself? How did you become a non-executive director at Dongkuk Steel?

I am Nam Tae-yeon, a certified public accountant. I have been working at Kim & Chang Law Firm for 27 years. Dongkuk Steel recommends non-executive directors who have expertise in various fields according to its BOD-driven management principle. It seems that I was recommended because they needed an expert in finance and accounting at this time. I accepted the position because I thought it would be valuable to directly help corporate management with my expertise.

Q2. Could you tell me about your opinion on Dongkuk Steel?

I was appointed as a non-executive director at the shareholders' meeting held in the end of March this year. I am still in the process of understanding the company. The employees I met through the board meetings have shown very human and family-like aspects, and a strong sense of camaraderie was palpable throughout the company. I had the opportunity to tour Incheon Works on May 4th after the regular board meeting. During the tour, I could feel the heat from the production line and the passion of the employees including the head of the works. In addition, when explaining that Dongkuk Steel produces 25% of reinforcing bars used in Korea, I noticed that all employees showed great pride in their company. They understood that if there were no companies like Dongkuk Steel which transformed scrap into fusible reinforcing bars, global environmental

problems would be much more serious than now. Also, I felt that all employees deeply understood and shared Dongkuk Steel's vision of being a Global Steel Company and its sustainable value, Steel for Green.

Q3. Recently, human rights and diversity have become more significant in ESG management than ever, and Korea especially focuses on gender diversity. How should Dongkuk Steel prepare for the trends?

For sustainable management, it has become a critical requirement that companies contribute to creating social values through the diversity of human resources of their members, and have a sense of mission as members of community. However, from an economic perspective, I think the diversity in human resources is also an essential element for creating creative and innovative economic results. An organization composed only of homogeneous members with similar backgrounds may be efficient in work but may not have advantages in terms of creative activities that break new ground and think out of the box. Furthermore, it may have limitations in achieving innovative results. Of course, there may be exceptional areas where certain age groups or genders are required among individual industries or organizations. However, in most organizations, it is possible to expand externally by sharing various perspectives based on diverse experiences, which is vital to producing innovative results.

Respect Human Rights and a Culture of Diversity

DK Story

Promoting Work-Family Balance for Men and Women

Dongkuk Steel is operating various family-friendly policies in line with the life cycle of our employees. These policies go above and beyond what is required by related laws and regulations. Particularly, to address many female employees' difficulty caring for their children after they enter elementary school, we have been providing support for children's items such as backpacks and stationery and providing childcare leave since 2020. As the number of dual-income households increases, this is one of the most satisfying systems for not only women but also male employees. We will continue our efforts to identify and improve problems that our employees are facing according to their life cycles.

[Welfare programs](#)

Efforts to Create a Member-Friendly Environment



Park Bo-jung, Manager of Appsteel Sales Team

Parental Leave Considering Employees on Leave

I returned in February this year after a one-year parental leave. When I said goodbye before going on parental leave, I still remember the warm words that came with a congratulatory gift saying "Wish you a safe delivery. We'll be waiting, come back soon!" It is still a great strength for me as a parent who is caring for children while working. Despite the long period of about 1 year and 3 months including pre-and post-natal leave, I was able to return with peace of mind because I trust in my company.



Lim Jong-hoon, Steel Scrap Procurement Team for Rebar and Section

Childcare Leave for Children Entering Elementary School

This year, my second daughter entered elementary school and I took 5 days of childcare leave. Since my workplace changed last year and I could only spend time with my family on weekends, I was sorry for my children. So, this opportunity was even more precious. During that time, I made many memories with my family by accompanying my two daughters to and from school, going family camping, and making a study room and bedroom for my children. In particular, when I saw them having fun, I was impressed as a father. In the future, I hope that more employees can benefit from it. In addition, I would like to express my gratitude to the colleagues and company for helping me be fully committed to my family during the leave.



Workplace daycare center



Fitness center to boost employee physical health

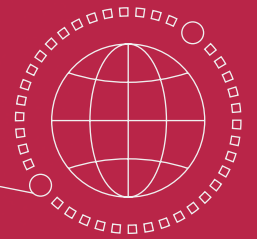


Nutrition support program with Algocare

Sustainable Business

Striving to sharpen our competitiveness in the steel industry, we bear in mind that sustainable management lies in solidifying our 'intrinsic value.' The introduction of Smart Factory to enhance production efficiency has entered the stage of internalization and has developed into a data-based factory operation system, while the Luxteel solution business is satisfying actual customers by being applied to various sites. In addition, we are taking the initiative in the development of a customer-friendly platform by launching a mobile version of steelshop to provide customers with better accessibility and convenience. We will not spare investment so as to overcome the traditional limitations of the steel industry and will continue to innovate to reinvent ourselves as a sustainable business.

Smart Factory 2.0	40
Solution Business	41
Steel Platform 'steelshop'	43



Smart Factory 2.0

We are concentrating our capacity and efforts on the digital transformation of our entire process through the Smart Factory. To this end, all of our steel works went through Smart Factory 1.0 (Phase I, 2018 - 2020) to build human and physical infrastructure such as the formation of a Smart Factory organization, equipment automation, and establishment of a big data platform. Since 2021, based on Phase I, we have been promoting Smart Factory 2.0 (Phase II, 2021 - 2023) to realize intelligent steel works that connect their AI- and big data-based processes and put real-time integrated monitoring systems into operation.

Smart Factory Roadmap

Smart Factory 1.0 (2018 - 2020)	<p>Realizing Equipment Automation</p> <ul style="list-style-type: none"> • Minimization of manual operation • Establishment of a big data-based platform
Smart Factory 2.0 (2021 - 2023)	<p>Pursuing AI-based Process</p> <ul style="list-style-type: none"> • Stable operation of invested facilities • Big data analysis • Creation of DK's distinguished value • Data-based process operating system

Smart Factory 2.0 (Phase II) Promotion Status

Since 2021, Smart Factory 2.0 (Phase II, 2021-2023) has been advanced for three years, aiming to establish real-time integrated monitoring systems and transform our steel works into intelligent factories whose processes are connected with AI and big data based on the smart infrastructure built through Phase I. In addition, under our management philosophy, nurturing talent is our top priority, we are actively utilizing AI graduate schools and external education programs to cultivate SF expert-level talents. We estimate that the total investment for Phase 2.0 is around KRW 117.7 billion, with 76 tasks performed. This is expected to result in annual savings of KRW 19 billion.

Major achievements of Smart Factory 2.0 (Phase II)

In order to secure the soundness of equipment, D-ARMS was developed in 2021 and its application has expanded throughout all of our steel works. And we plan to develop and advance the smart safety management system, D-Blu, to respond to emergencies in advance by detecting and tracking the health and location of the workers through the integration of IoT and communication technologies, smart band and D-Blu Scanner. In cooperation with the Korea Metal Material Research Association and domestic electric arc furnace manufacturers, we have led and participated in projects developing the technologies of scrap image classification using machine learning, optimizing energy efficiency based on the data of the electric arc furnace process, and improving energy efficiency and product quality using big data in manufacturing processes of sections and rolled steel products. Our utmost efforts have been made over the past four years from 2022 to 2025, aiming for the development of high-efficiency operation technologies through the digitalization of steelmaking and rolling processes. In addition, Busan Works has implemented smart logistics systems including the introduction of unmanned cranes and Automated Guided Vehicles (AGV) as well as automated yard management and packaging systems in order to secure cost competitiveness and worker safety through the smart logistics systems, which have been in its second phase from 2022.



(Logistics) Smart Logistics System of Yard Automation



(Equipment) D-ARMS Real-time Integrated Monitoring System

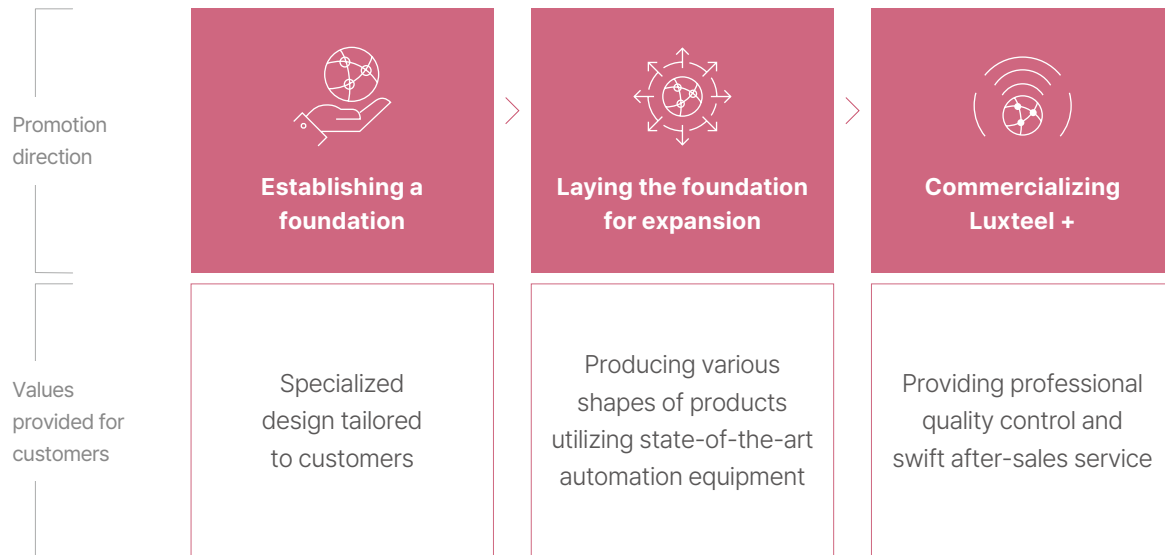
Solution Business

We are witnessing a seismic change in the value standards and lifestyles of customers. The steel industry is no exception. Competition within the steel market is unpredictably intensifying, which means that manufacturing and selling products are not enough. In this context, we are expanding our business portfolio to cover a solution business targeting actual customers such as designers and architects beyond B2B sales centered on existing distribution channels. The solution business is an activity that takes customer value to the next level by providing comprehensive solutions ranging from existing sales to processing to construction.

The Future of Solution Business

Luxteel + products manufactured at Doseong Center have been applied not only to commercial buildings and residential buildings but also to large coffee franchise stores such as Starbucks and Twosome Place, and recently to high-end hotels and apartments. We aim to boost sales more than three times by 2025 through commercializing Luxteel +.

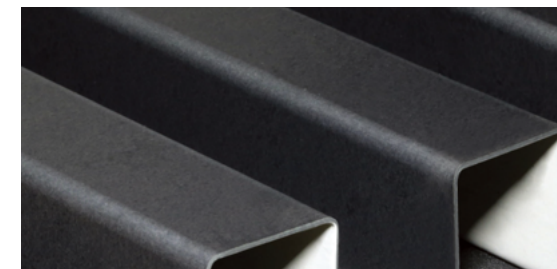
Business Solution Milestone



Introduction of Luxteel +

Luxteel + (Luxteel Plus) refers to products with processing and construction solutions applied to existing Luxteel, which can be applied in various construction sites depending on the shapes of building exteriors.

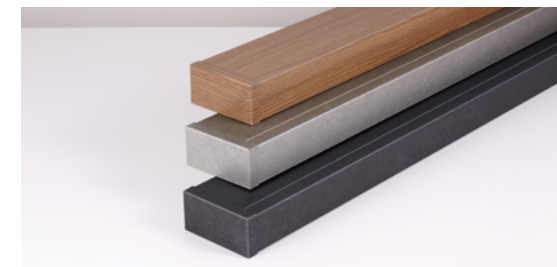
Introduction of Luxteel + Production Line



Line panel



Open joint panel



Metal Louver



Fire Door

Solution Business

Doseong Center, a Specialized Metal Processing Plant Located in Dangjin

Doseong Center is a specialized Luxteel processing center established in Sinpyeong-myeon, Dangjin, Chungcheongnam-do in 2018 in order to expand our business areas from selling to processing products. With BIM (Building Information Modeling) design through 3D Inventor by a design expert in metal processing, it has high processing accuracy and constructability, and can produce various shapes of products with the minimum error probability through state-of-the-art automation equipment.

Construction Sites Capitalizing on Doseong Center's Processing Technology

Commercial buildings and houses



Munjeong-dong Pierre de (Caulking-type panels)

Franchise brands



Starbucks in Bukhansan (line panels)

High-end hotels and apartments



DMC Xi in Sangam-dong (Metal louvers)

DK Story

Luxteel and Luxteel Line Panels Recognized as Excellent Materials by KIRA

Luxteel and Luxteel Line panels were recognized as excellent building materials at the 13th KIRA Architectural Material Recommendation Certificate Award Ceremony held at the Korea Institute of Registered Architects (KIRA) located in Seocho-gu, Seoul on May 4, 2023, with the certificate awarded by the president of KIRA. The institute was established in 1965 to promote understanding of architecture, develop a culture of architecture, and improve technology and research. Through the building material recommendation system, it discovers and recommends excellent building materials and provides their information for architects. The KIRA has been implementing the system since 2011 to contribute to the qualitative improvement in buildings and industrial development. The 30 selected excellent materials are finishing materials used in buildings such as floor materials, doors, and loess bricks. However, the excellences of our Luxteel and Luxteel Line panels lie in their characteristics that can be utilized as steel materials and finishing materials for products and construction. With the certification as excellent building materials, it is expected that the possibility of architects and designers using pre-coated metals as building finishing materials will expand.



Luxteel Line Panels



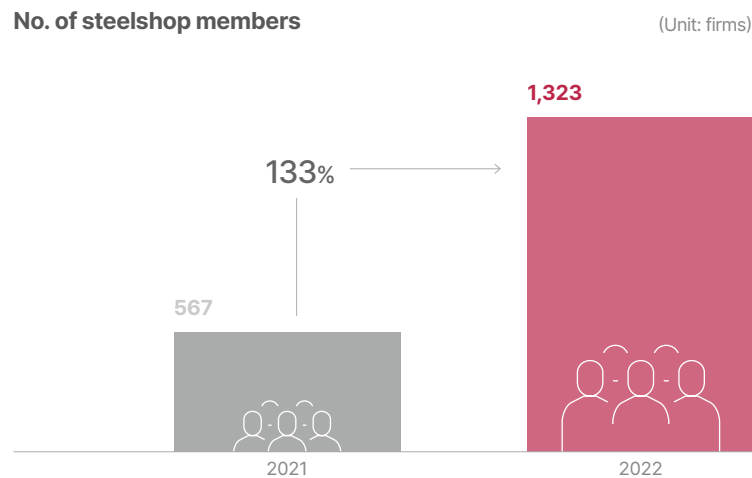
The Korea Institute of Registered Architects (KIRA)

Steel Platform, steelshop

steelshop went through a two-track strategy consisting of system development and operation in 2022. In December 2021, an e-commerce platform was created for selling reinforcing bars and sections, steel plates, and cold-rolled steel products. The scope of steelshop's products and services has been continuously broadened. This has been achieved by expanding the specifications of reinforcing bars and grades of steel plates for shipbuilding, and diversifying order delivery date options. Furthermore, differentiated marketing and sales policies were implemented to enhance the brand awareness of steelshop and attract new customers, which helped Dongkuk Steel lay the foundation in the online steel materials market.

Users and Sales on the Rise

As of the end of 2022, the number of steelshop members exceeded 1,300 companies, and the ratio of new customers (the company's first registered company) to all members accounted for 73%. Thanks to the increase in members, steelshop's product sales soared by about 346% compared to that of 2021.



Launching a Mobile App

In December 2022, a mobile application was launched to make it more convenient for users to order. Both Android (AOS) and iOS versions were released, and a simplified order process increases the convenience of regular purchases. Moreover, through customer needs and satisfaction surveys, improvements have been made including the addition of advance payment (advance payment) sales, delivery address change, and payment cancellation systems.

For the design of the icon of the app, we used the two colors of our CI and the shape of a shopping bag to clearly demonstrate that it is an online shopping mall dedicated to steel materials.



Icon of steelshop app.



Mobile page of steelshop

Expansion of Products and Services

In order to attract more users to steelshop, we have expanded the grades and specifications of steel plates, reinforcing bars, and sections to improve our services such as an increase in the scope of certificates and addition of more delivery date options.

<p>Product Expansion</p>	<ul style="list-style-type: none"> Expansion of grades of steel plates for shipbuilding Launch of coil reinforcing bar sales (DKOIL) Expansion of reinforcing bar specifications for sales (earthquake-resistant rebar, diversified lengths in addition to 8m rebar) Direct sales of H-beams
<p>Service Expansion</p>	<ul style="list-style-type: none"> Expansion of scope of certificates for pressure boilers Diversification of delivery date options (1 week → 1 to 4 weeks)

Environmental	45
Social	55
Governance	65

ESG Performance

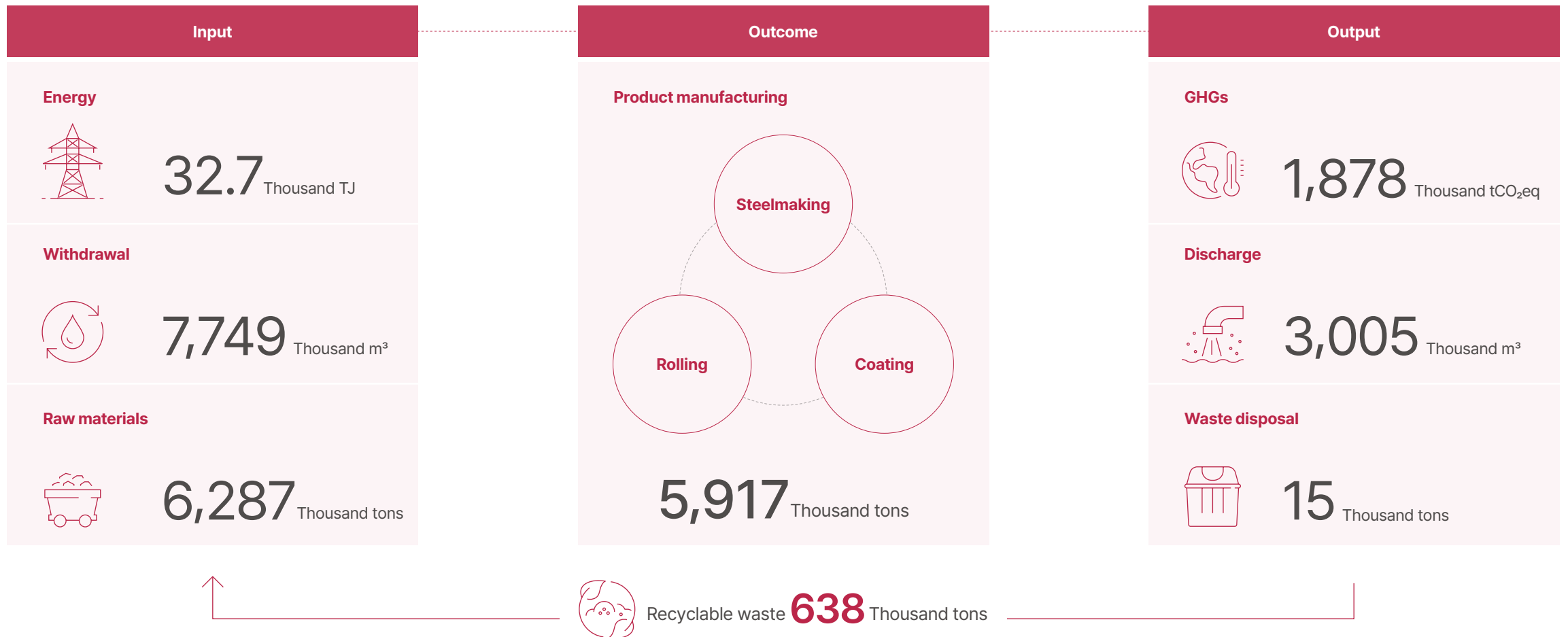


Environmental



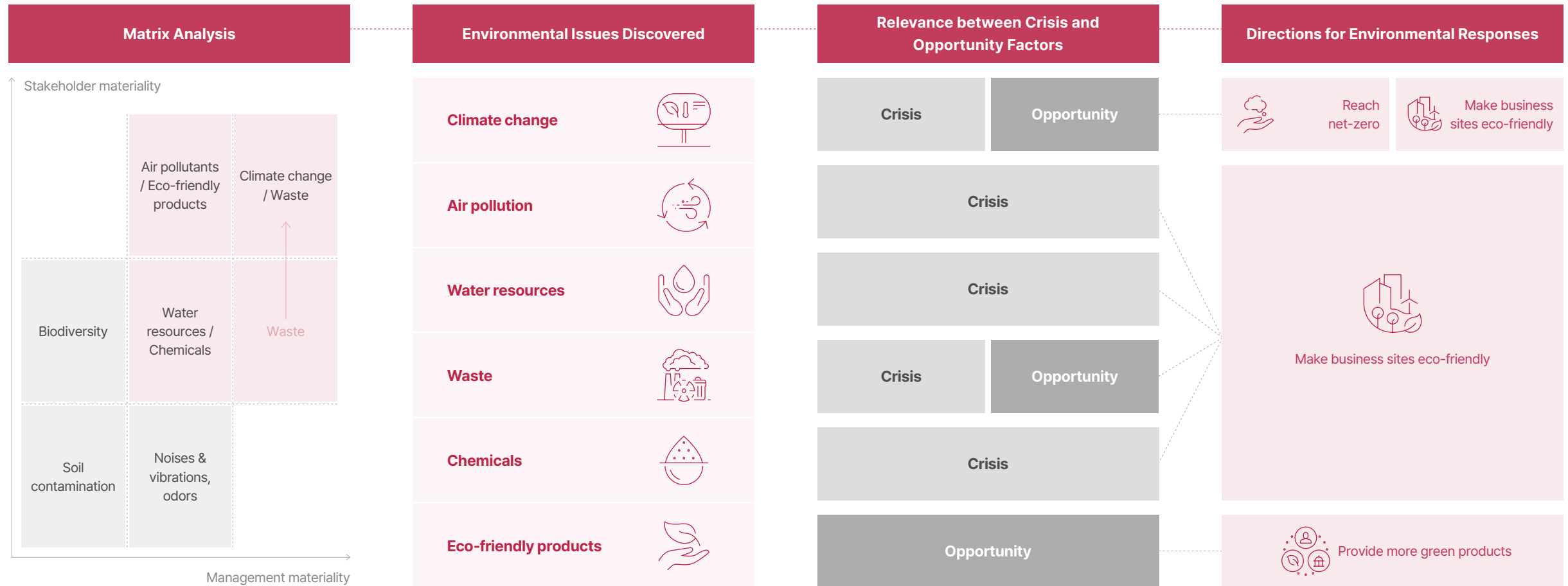
2022 Environmental Performance

Being well aware of the gravity of environmental issues confronting humanity, Dongkuk Steel strives to minimize its environmental impact that its manufacturing process have on the environment.



Matrix Analysis and Environmental Tasks Discovered

In order to discover significant environmental tasks, Dongkuk Steel has annually analyzed a matrix from two perspectives; stakeholder interest and business impact, which has allowed us to identify crisis and opportunity factors. Based on the results, we have defined our directions in terms of how to respond to them. As we are being faced with growing demand for the realization of a resource circulation society, it is required to recycle by-products generated during the course of product manufacturing as well as to minimize waste generation.



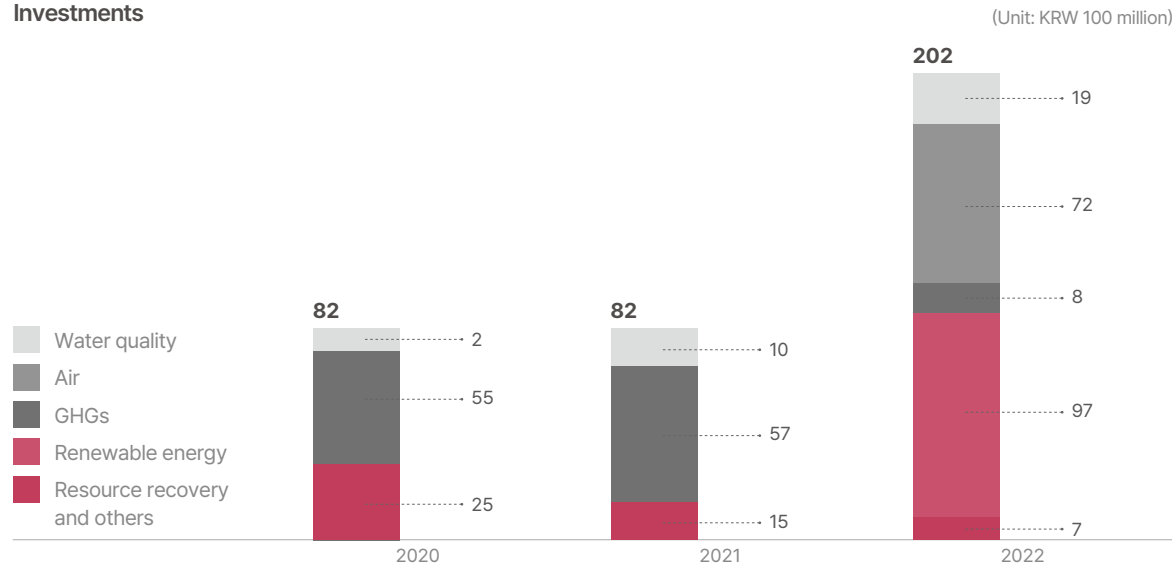
Environmental Management

For the advancement of its environmental management, we have drawn up our environmental policy, and established an implementation system, thereby putting the environment at the heart of everything we do from environmental investment to environmental protection. Currently, all our business sites put in place their own environmental system based on the ISO 14001 certification (environmental management system). To live up to our reputation as the largest electric arc furnace company, we are straining every nerve not to waste any resources and also recycle them 100%.

Environmental Investment

Dongkuk Steel annually maps out its investment plans to prevent environmental pollution and respond to risks posed by climate change. Based on our classification system, we have categorized investment areas by type and allocated budgets for each. In 2022, we spent KRW 9.7 billion on renewable energy to promote eco-friendly development. The total amount of investments last year increased by 150% to KRW 20 billion compared to the previous year.

Investments



Environmental Management System

Aiming to deliver well-organized eco-friendly management, Dongkuk Steel has maintained the ISO 14001 (environmental management system), an international standard. In particular, our Pohang Works and Busan Works obtained the ISO 50001 certification (energy management system) in 2022, which made all our business sites certified in terms of environmental and energy management.

	Incheon	Pohang	Dangjin	Busan
Environmental Management System (ISO 14001) Certification Status	~2023.09.23	~2024.04.02	~2025.09.13	~2024.03.14
Energy Management System (ISO 50001) Certification Status	~2023.09.23	~2025.08.30	~2025.09.11	~2025.09.12
Integrated Environmental License (issued by the Ministry of Environment) Status	Expired in April 2021	Expired in January 2021	Expired in April 2019	Expired in July 2021

Environmental Impact Mitigation

Management of Air Pollutants

Air Quality Management

Air pollution management refers to activities to prevent air pollutants from damaging the environment, and manage air quality in a proper and sustainable manner. Dongkuk Steel has been carrying out a variety of activities to reduce the emission of air pollutants, such as NOx, SOx, or dust, as well as to improve the air environment. The activities include our voluntary agreement on air pollutant emission reduction with local governments and public organizations, the installation of SCR (Selective Catalytic Reduction), the improvement of manufacturing processes, and the installation of TMS (Tele Monitoring system) to monitor pollutant concentration levels in real time. Furthermore, we have set up our own standards within the legal criteria to mitigate the emissions. In addition, activities are being delivered to prevent scattering dust to improve air quality to a degree that local residents can notice.

Scattering Dust Management

'Dust' refers to a particle material hung in the air, and in the case of dust emitted into the air without a specific vent, it is referred to as 'scattering dust or drifting-blowing dust.' And this scattering dust accounts for 50.3% of the total fine dust generated in Korea. The main steelmaking procedures that emit scattering dust include stacking in the open air, loading and unloading, cutting in the open air, transfer, and transportation. In order to minimize scattering

dust emission, we have installed sprinkler systems at our open-air storage yards and docks for stocking scrap metal. Additionally, we have adopted enclosed transport, and run road cleaning vehicles to minimize scattering dust. On top of that, we have joined the government-driven seasonal management system, and installed dustproof equipment.

Steelmaking Procedures that Generate Scattering Dust

Category	Details
Stacking	Generated from stacking slag and raw materials, such as iron ore, coal for coke making (coal), and scrap metal
Loading and unloading	Generated from loading and unloading raw materials, such as iron ore, coal for coke making (coal), and scrap metal
Open-air cutting	Generated from open-air cutting iron ore
Transfer	Enclosed transfer facilities, emitted from transfer lines when cleaning raw materials off soil
Transportation	Emitted from product transportation on the roads of transportation sites

* Source: Scattering Dust Management Manual (the Ministry of Environment, 2021)



Environmental Impact Mitigation

Water Resources Management

Maximizing Efficiency of Water Resources Usage

Dongkuk Steel is committed to maximizing the efficiency of water resources usage, minimizing its water consumption, and also raising the recycling of used water to the maximum. Especially, with the purpose of increasing water reuse rate, Pohang and Incheon Works are equipped with non-discharge wastewater systems to reuse used water 100%. Dangjin Works discharges after the final treatment at an external sewage disposal plant while Busan Works runs its own wastewater treatment plant to meet the required standards regarding the prevention of environmental contamination.

Water Quality Management

Dongkuk Steel has added more facilities to lesson non-point pollutant sources so that it can minimize the impact that outflow water generated from non-point pollutant sources has on steams or oceans. In 2022, Busan and Incheon Works conducted environmental assessments by their own, which revealed the additional areas that needed the facilities. Based on the results, they installed the facilities, and have carried out systematic management to contribute to the prevention of water contamination. Furthermore, they quarterly measure the levels of ecotoxicity to monitor. Ecotoxicity is the degree to which a toxic chemical substance can damage a water flea, evaluating the radical toxicity within the water using a water flea.

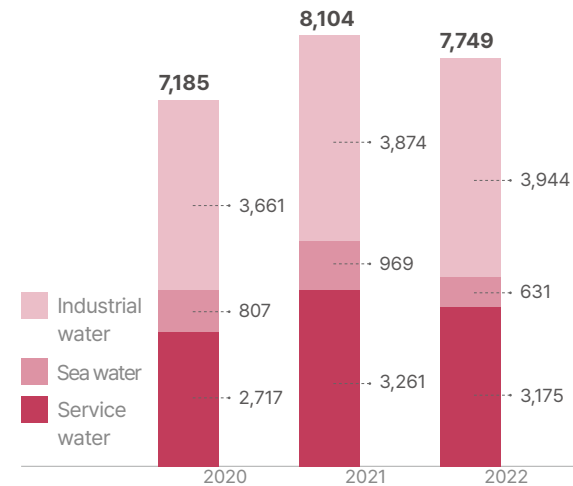
Water pollutants discharged

(tons)

Category	2020	2021	2022
Total water pollutants discharged	83	30	40
BOD (Biochemical Oxygen Demand)	22	6	12
COD (Chemical Oxygen Demand)	44	16	17
SS (Suspended Solid)	17	8	11

Total withdrawal

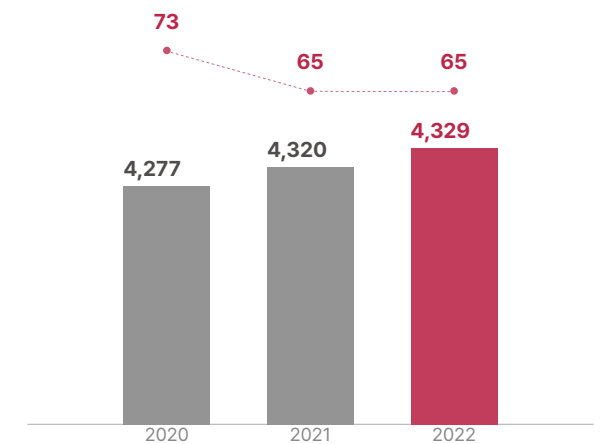
(Unit: thousand t/m³)



Amount and rate of process water reused

(Unit: thousand t/m³,%)

*Industrial water used as process water (service water used by Busan Works)



Environmental Impact Mitigation

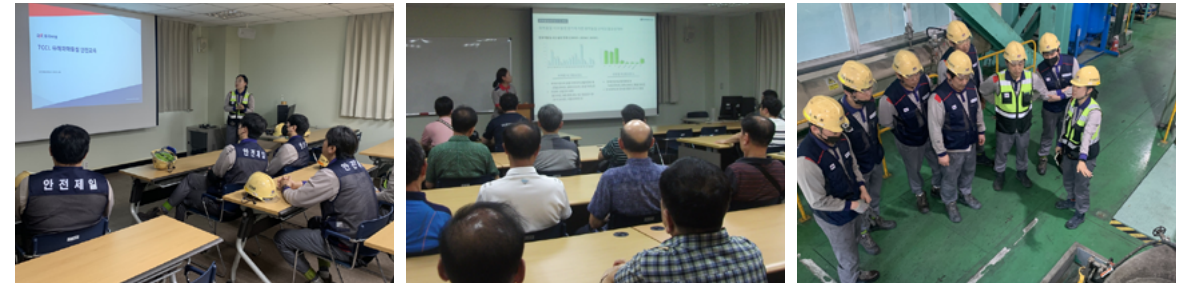
Chemical Substance Management

Safety Training on Chemical Substances and Responses to Emergency Situations

Dongkuk Steel trained 388 toxic chemical handlers on how to handle the substances. Annually, we educate all our employees (suppliers' employees included) on safe chemical handling to help them sharpen their capabilities to prevent chemical accidents and respond to them. Furthermore, we launched a non-face-to-face training center for chemical management this year so that all our employees can receive online education at any time in the workplace. In addition, we amended our plan for chemical accident prevention and management in January 2023, which allowed us to reexamine the external area that can be affected when an accident occur. And we made the chemical-related emergency response policy more relevant, and notified local residents of the policy. Also, we annually conduct an emergency response drill targeting all hazardous chemical handlers to prepare them for any possible accidents.

Investment in Chemical Handling Facilities

We have continuously invested in handling facilities for rigorous management and leakage prevention of chemicals used in the product manufacturing process. We have installed leakage detectors, spill walls, barriers, and local exhaust facilities for new chemical handling facilities to enhance safety facilities against chemical leakage. We have also conducted regular inspections (once a year) of handling facilities by external permitting organizations. We manage our facilities to ensure safe handling of chemicals. On top of that, through self-inspection of hazardous chemical handling facilities (once a week), we regularly verify that emergency safety gear is placed in the appropriate area. We also apply luminescent tapes to enhance the visibility and accessibility of safety facilities, such as face washing and washing facilities.



Safety Training on Hazardous Chemicals

Chemical Substance Discharged to the Environment*

(Unit: ton)

Category	2020	2021	2022
Amount of chemical discharge	10	8	10
Air	9	8	10
Water	1	-	-
Soil	-	-	-

*It refers to the amount of chemical substance discharged to the environment (air, water, or soil), based on the Ministry of Environment's chemical substance discharge survey guidelines

Environmental Impact Mitigation

Resource Circulation Management

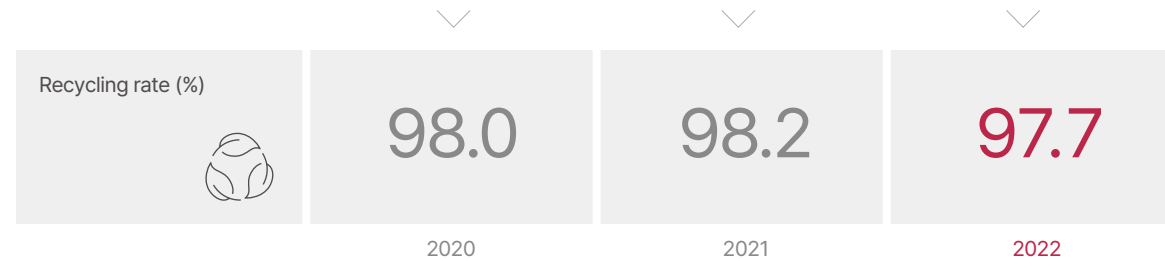
Efficient Use of Resources

As part of resource recycling practice, we put all of the scrap iron generated in the rolling process into the electric arc furnace operation process and reuse it as raw material. The steel slag, the predominant by-product in steelmaking process, is also employed as a resource for the construction of roads and a material for filling or covering soil in the construction. In addition, mill scale and steel dust in the form of iron powder are also recycled.

Disposal Amount by Waste Treatment Method

(Unit: thousand ton)

Category	2020	2021	2022
Recycling	566	744	638
Landfill	9	11	11
Incineration	2	3	4
Total	578	758	653



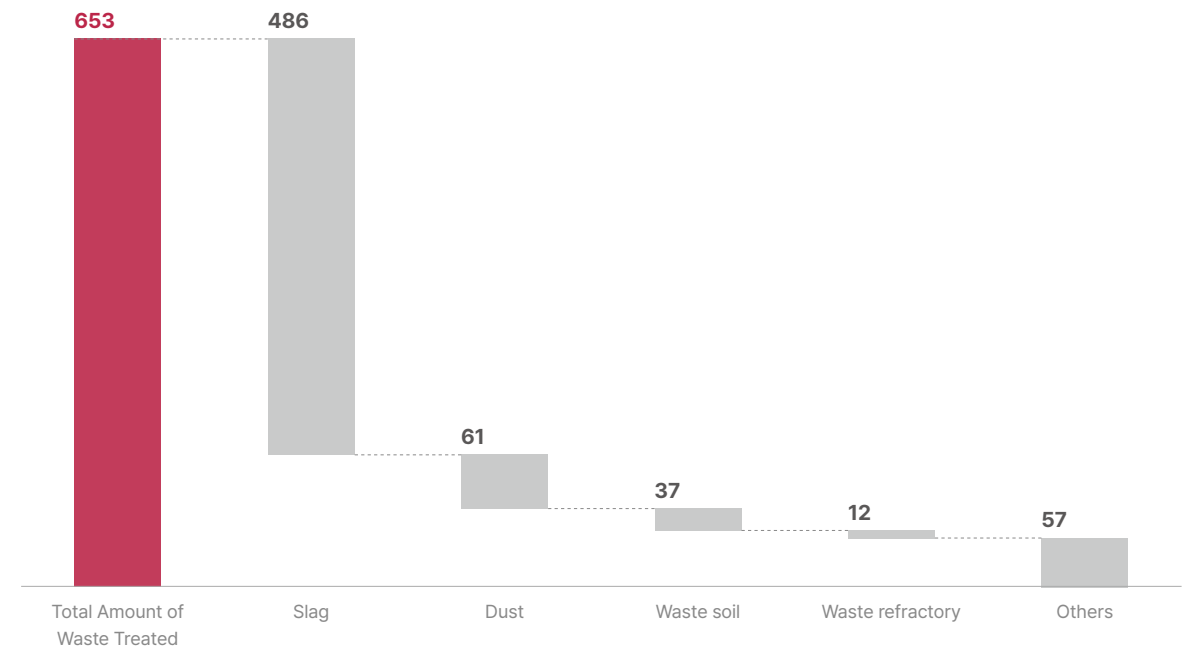
*Rate of waste recycled: (Amount of waste recycled / amount of waste disposed) × 100%

Amount of Waste Treated

In 2022, we disposed of 653 thousand tons of waste in total. Steel slag made up the biggest portion at 75% (486 thousand tons), followed by dust at 9% (61 thousand tons). Since we recycled all of the steel slag and dust, the actual amount of them we disposed was only 15 thousand tons, which was a mere 2% of the total waste amount.

Total Amount of Waste Treated

(Unit: thousand ton)



Spread and Expansion of Green Products

Article 66 of the Framework Act on Carbon Neutrality and Green Growth for Coping With Climate Crisis defines green products as products that reduce the use of energy and resources and the emission of greenhouse gases and pollutants. Article 2 of the Act on the Promotion of Purchase of Green Products states that businesses should strive to produce and improve green products, and use green products as raw materials or parts for other green products, while citizens should consume green products to protect the environment. Achieving a carbon-neutral society and fostering a green production and consumption culture for green growth are becoming our grand tasks in this era.

Green Products in Our Definition

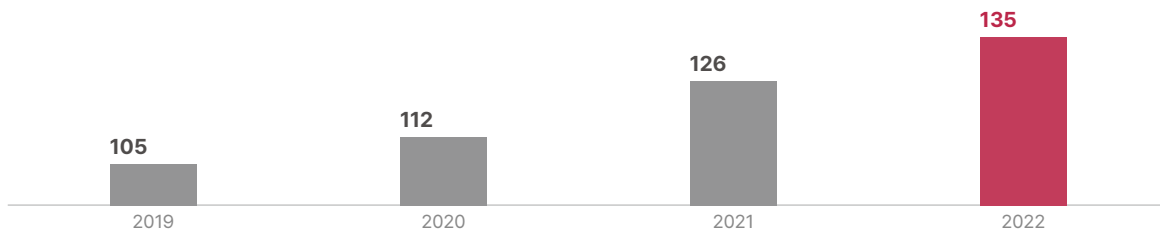
For Dongkuk Steel, green products refer to the products that use less resources and emit less greenhouse gases and pollutants in the production process than other items, and the products that enhance the efficiency of energy and resource use in social and economic activities by prolonging product life. Accordingly, green products of Dongkuk Steel satisfy the above two definitions at the same time, and we currently have 32 green products.

Distribution and Expansion Efforts for Green Products

We have enhanced our product knowledge through monthly eco-friendly product introductions and 3-minute steel YouTube videos, and we have also pursued specialized technology marketing by joining the Eco-friendly Energy Steel Committee of the Korea Iron & Steel Organization and the Offshore Wind Power Revitalization Working Group of Korea Electric Power.

Green Product Sales Performance

(Unit: 10 thousand tons)

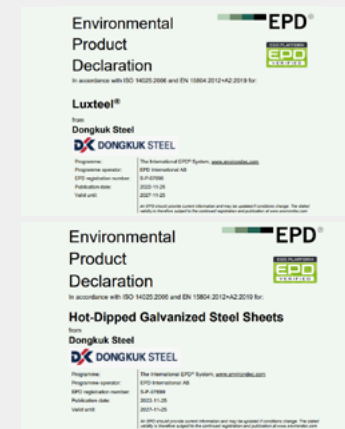


* Source: Internal data, excluding the data of high-strength steel

DK Story

Dongkuk Steel Acquiring International Certification for Environmental Product Declaration for All Products

Dongkuk Steel obtained the European International Environmental Product Declaration (EPD) for its Luxteel and galvanized steel products (GI, GL) in November 2022, and the US UL EPD for the same products in March 2023. The Environmental Product Declaration (EPD) certification is a certification that measures and discloses the environmental impact of the whole process, from raw material extraction to production, distribution, and disposal, of a product. It aims to provide reliable environmental information and to enhance eco-friendliness. Dongkuk Steel obtained the certification to respond to global demand for eco-friendly pre-coated metal and galvanized steel products. The EPD certification is a strict certification that involves direct site inspection by an assessment agency and evaluation by a committee of experts. It has high public credibility compared to document certification. Luxteel and galvanized steel product that have obtained Environmental Product Declaration certification account for more than half of Dongkuk Steel's cold-rolled steel export. Therefore, the acquisition of this certification is expected to help elevate the product competitiveness amid export regulations such as the Carbon Border Adjustment Mechanism (CBAM). In November of last year, the company acquired GR certification (certification for the use of domestically produced recycled raw materials) from the Korean Agency for Technology and Standards under the Ministry of Trade, Industry and Energy for reinforcing bar and section steel products at Incheon and Pohang Works. Dongkuk Steel plans to acquire EPD certification for all of its products from all sites in the future.



European International EPD

Our Green Products

Rebar for Nuclear Power Plant Construction

- It contributes to mitigating CO₂ emissions by substituting thermal power generation with nuclear power generation.
- Our rebar for nuclear plant helps to ensure the stability of nuclear power buildings by preventing cracks from forming in buildings due to natural vibrations such as earthquakes and tidal waves. It also helps to protect the internal materials from being exposed to the outside in case of an internal explosion.
- ASTM A615, a global standard is applied in nuclear power special fields, and only the producers approved by the Korea Hydro & Nuclear Power can supply it under the strict quality control.
- Dongkuk Steel earned reliability of the product through the participation in the nuclear power plant construction projects of Shin-Kori 3 and 4 in 2008, Hanul-1 and 2 in 2011, and Shin-Kori 5 and 6 in 2016.



Rebar for nuclear power plant construction

Sheet Pile

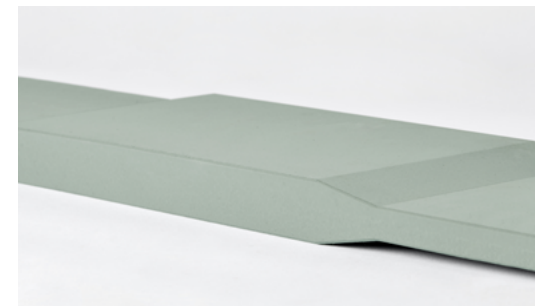
- It has high recycling rate. It is reused three or four times after recovery from the site, leading to high efficiency in resource use.
- Sheet pile is a pile-type steel product used for water blocking and earth retaining in civil engineering works. The shape of the cross-section is ribbed, which makes the construction fast and simple, and has the effect of saving construction costs compared to other methods.
- It is applicable to various grounds, especially in the sites where water resistance is required.
- It is expected to have higher recycling rates than other materials even when it is landfilled instead of collected according to the construction purpose in demolishing the building based on the lifecycle.



Sheet pile

DK-LP Plate

- It has higher recovery rate and energy saving effect by producing a piece of steel plate with desired size
- LP refers to a longitudinally profiled steel plate having two or more different widths along its length. As it is produced as a single steel plate with varying widths, no welding process is required. It also does not need any processing or inspection before welding, and it does not emit any harmful gases to the human body either since there is no welding step.
- We have the unparalleled capability to produce DK-LP Plates in a broader range of sizes and more diverse types than the largest steelmaker in Korea based on ceaseless technological development.



DK-LP Plate

GIX

- GIX reduces resource consumption by raising corrosion resistance by five to seven times compared to existing GI products.
- GIX products are ultra-high corrosion resistance products galvanized by zinc, aluminum, and magnesium on steel plates, and can be used safely even in harsh environments.
- It is utilized as a mounting structure, which is one of main components with modules and inverters in solar power generation.



GIX mounting structure for solar power generation used in Pohang Works



Social



Nurturing Talent Connecting Knowledge and Experience

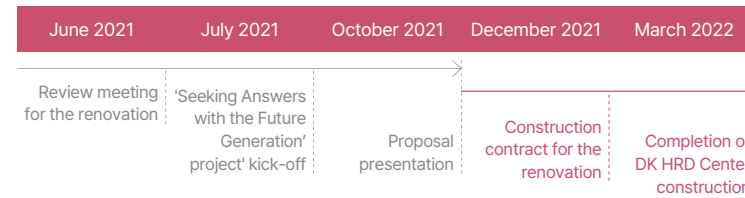
Renovating online and offline infrastructure for talent cultivation

Dongkuk Steel provides various experiences and learning opportunities with our employees through external institutions as well as our HRD center, Hoo-in-won, and online training center, DKHRD.com. In 2022, we renovated Hoo-in-won to increase the utilization of educational space and improve employee welfare, as well as upgrading the online education platform, DK HRD, to blur the distinction between online and offline education and strengthen infrastructure to support employee learning and growth.

DK HRD Center, Seeking Answers with the Future Generation

The project to remodel the old HRD center, called 'Seeking Answers with the Future Generation,' is an idea proposal project where our young talent designs the future of DK HRD Center. It shows our strong will to create a space built on participation and communication. A total of our 12 young talented employees were selected by recommendation from each organization and divided into two groups to obtain various ideas. The 12 participants of the 'Seeking Answers with the Future Generation' project went through intensive training programs from a professional interior company on the latest interior trends, the meaning of space, and concept derivation for two nights and three days. Each group conducted a benchmarking process by directly investigating and visiting other companies' training centers and held several idea meetings and discussions to implement the best ideas for our DK HRD Center. The final remodeling concept, 'space where people meet each other' was selected in consideration of novelty and feasibility among the ideas and concepts from each group. In March 2022, the newly renovated center opened a new era of 'DK HRD Center

2.0' as a space to help talent grow. From the first floor to the eighth floor, different concepts were applied according to their meanings and purposes. Various Luxteel products were physically applied throughout the center to provide pride to our members while promoting our products to external customers.



DK Story

History of the DK Group HRD Center

Dongkuk Steel Group's HRD center has a long history. The first HRD center was located in Namcheon-dong, Nam-gu, Busan in 1981. After that, in 2002, we moved to the building of Kukje Machinery Co., LTD, one of the affiliates at that time, located in Okcheon-gun, Chungcheongbuk-do. In the late 2000s, the Group's HRD center settled in Daejeon. Back then, Dongkuk Steel, which was expanding its business, planned to relocate the training center to improve human resources development. Since our affiliates and business sites were located nationwide, Daejeon was selected as the optimal location with excellent access from all regions. Therefore, on September 9, 2009, the Group's new HRD center, called 'Hoo-in-won' opened in Bongmyeong-dong, Yuseong-gu, Daejeon-si. It was named through an internal contest in early 2008. This means an HRD center that contributes to building strong bonds between people and trust between the company and employees while nurturing the most competitive talents.



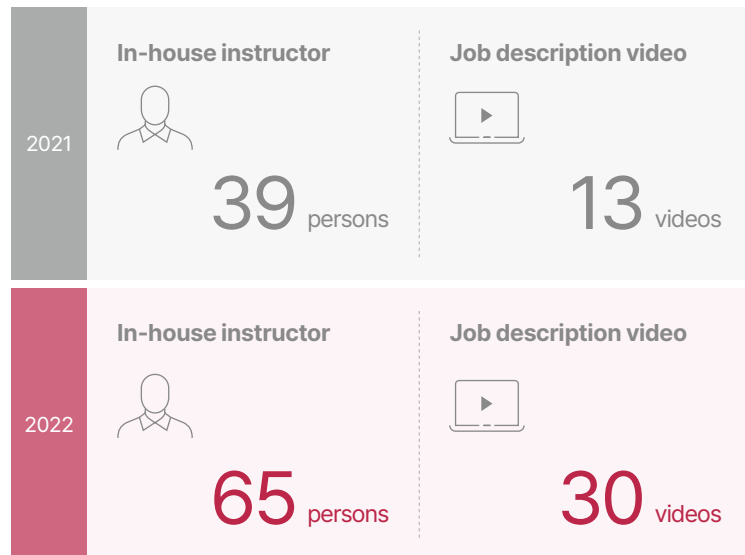
Dongkuk Steel's Group HRD Center in Busan

Nurturing Talent Connecting Knowledge and Experience

Renovation of Online Education Platform (DKHRD.com)

We completely renovated our online learning platform in 2022. COVID-19 served as a catalyst for making our employees feel the need for an environment where they can learn anytime and anywhere and a space to share knowledge and experience. The new 'DKHRD.com' has been improved by enhancing the employee learning experience and sharing knowledge. The integrated learning platform enables our employees to check all education courses and establish their annual learning plans, facilitating self-directed competency development. By expanding micro-learning content and allowing unlimited access to the courses, it is possible to timely learn the latest trends and key information. In order for DKHRD.com to serve as a place for sharing knowledge, a video production studio has been set up at Hoo-in-won to create an environment where necessary knowledge and experience can be converted into content without time limits. In addition, we have expanded in-house instructor development programs and structured common job knowledge of each team (course design-activity design-textbook development) to support the production of DK job description videos. Currently, a total of 30 videos have been produced and uploaded on the online learning platform, 'DK Knowledge Channel' and have been utilized for various education programs such as onboarding for employees who are newly hired and change their positions.

Utilization of DKHRD.com



* On a cumulative basis

Job description video



Nurturing System Based on Employee Life Cycle

Onboarding

- Entry-level training for new hires
- Coaching, mentoring



Development

- In-house instructor program
- Support for study clubs
- Support for qualification acquisition
- Tailored training programs (job, position, online)
- R&D capability development program
- Overseas language course



Rotation

- In-house FA system
- Expatriates in overseas offices



Leadership

- Training for executives and team leaders
- Leadership conference
- SERI / Monnaissance



Labor-management Culture Based on Participation, Communication, and Cooperation

Rational Bargaining Practices Leading the Steel Industry

The labor and management relations in Dongkuk Steel have been maintaining peaceful for 28 years since the declaration of permanent no-strike in 1994 and have been creating rational negotiation practices that takes the lead in the steel industry. In 2008, we reached a wage and collective agreement without disputes and revised our wage system related to ordinary wages followed by signing a wage freeze agreement in 2014, the year marking the 20th anniversary of the declaration of permanent no-strike. In addition, we introduced the peak wage system in 2016 and adopted a flexible working hour system according to the implementation of the '52-hour work per week' system in 2018. The titles of 'first in the steel industry, leading company in the industry' demonstrate our efforts to build a sound labor-management culture that has been maintained through active communication and trust for a long time. In 2022, we were the first among major domestic steel companies to reach an early collective bargaining agreement on extending the retirement age to 61 and the peak wage system, improving the welfare system for employee health promotion, increasing loan amounts for supporting employee housing stability, and raising wages. Despite the uncertain management environment due to the COVID-19 pandemic, we are able to focus on securing global competitiveness through the development of high-value-added products and new markets.

Labor-Management Council Based on Participation and Cooperation

We operate Seoul head office and steelworks in Incheon, Pohang, Dangjin, and Busan, and has established labor-management councils at each business site to hold regular labor-management council meetings every quarter. We are working to resolve various labor-management issues through communication and dialogue and to promote the common interests of labor and management.

Category	No. of issues discussed	No. of cases to be reflected	No. of cases reflected
Head Office in Seoul	6	4	2
Incheon Works	11	1	10
Pohang Works	18	16	2
Dangjin Works	15	13	2
Busan Works	19	1	18

Field-oriented Labor-Management Cooperation Programs

The labor and management bodies of Dongkuk Steel operate field-oriented cooperation programs in which all employees from our domestic business sites participate in the first and second half of each year to build a cooperative and productive labor-management culture. In addition, we operate a labor-management overseas training program that selects 100 excellent employees every year and provides them with an opportunity to experience overseas advanced cultures for 4 nights and 5 days, conducting activities to promote communication within the same organizations such as futsal tournaments, foot volleyball tournaments, and climbing tournaments through labor-management consultation.

* Not operated due to the COVID-19 from 2020 to 2022

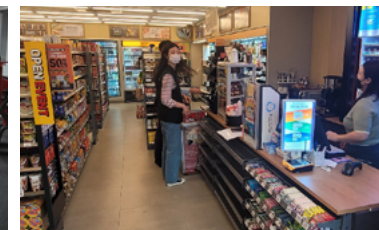
Diverse Labor-Management Communication Channels

In addition to the labor-management council and labor-management cooperation programs, we hold regular labor-management workshops and labor-management meetings in the first and second half of each year to share management issues and reflect the opinions of labor unions in major management decisions. Various labor-management communication channels contribute to minimizing negotiation costs and establishing industrial democracy by preventing unnecessary conflicts in advance by adjusting differences on labor-management issues and forming a sense of solidarity between labor and management on major issues.

Cases of improvement of working environments through Labor-Management council



Investment in in-house fitness center



Expansion of convenience facilities



Improvement of working conditions for employees in technical services

Move Together, Move Green

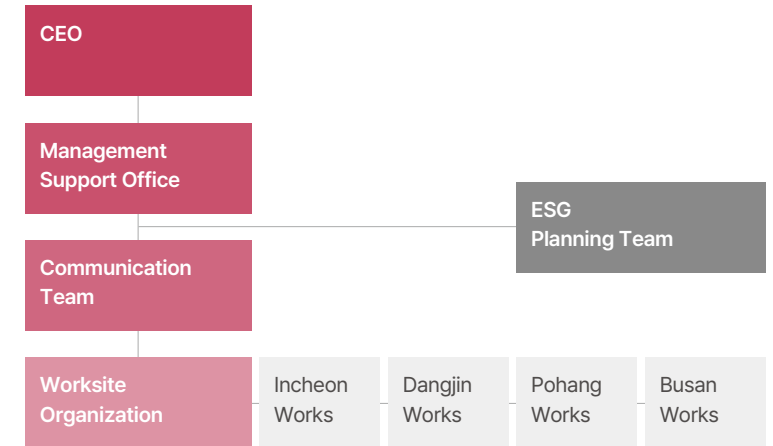
Social Contribution Strategy

We have reorganized our promotion system and the organization for ESG management under the slogan 'Move Together, Move Green,' according to its ESG management strategies to reflect the demands of various stakeholders and realize its management philosophy. The direction of a 'better society' and 'sustainable environment' is in line with our management philosophy that we provide products and services necessary for the advancement and improvement of human life and contribute to the development of culture. We will continue to promote the development of local communities and implement eco-friendly social contribution activities for environmental conservation, resulting in building trust with local communities.

Social Contribution Promotion System



Organizational Structure for Social Contribution



Major Partner Organizations and NGOs for Social Contribution Activities

Partner organizations of the head office	Major Social Contribution Activities
Beautiful Store Foundation	Beautiful Sharing Bags, Donation event
Save the Children Fund	'Good Step' Campaign
Korea Green Foundation	DK Green Campaign 1, 2
Sindang Dream Local Children's Welfare Center	Nanum-Jiki Voluntary Work, Sharing Kimchi with Love
2nd Quick Response Division	1 Company, 1 Barracks Sisterhood Relationship
Korea Fire Officials Credit Union	Korea Fire Officials Credit Union Scholarship Program
One Body One Spirit Movement	Sponsorship of Myeongdong Babjip

Move Together, Move Green

Creating a Better Society

Nanum-Jiki Voluntary Work

We have a volunteer group for local communities at each of our business sites to promote sharing and volunteering. 'Nanum-Jiki,' our integrated volunteer group, means a person who keeps sharing, representing Dongkuk Steel. Every year, our volunteers visit local children's welfare centers near our business sites in Seoul, Incheon, Pohang, Dangjin, and Busan. They bring gifts and do voluntary activities for the local residents. In 2022, our volunteers also supported a field trip to an amusement park, sponsored daily necessities at welfare centers, and gave DK Happy Boxes to 207 vulnerable people in partnership with the local children's welfare center.

Beautiful Sharing Bags

In 2022, we carried on our voluntary practice of 'Beautiful Sharing Bags' with the funds of KRW 6.6 million from the Beautiful Day, a donation event we held in 2021. We used the funds to donate Beautiful Sharing Bags, which we have been doing since 2018, to energy-vulnerable households in Seoul (Yongsan-gu, Jongno-gu). The bags contained warm bedclothes, groceries, and daily necessities for those who needed them most, such as grandparents raising grandchildren and elderly people living alone. The winter was colder than usual due to the climate crisis. A total of 37 employees and their families, divided into 11 groups, took part in the donations.

Sharing Kimchi in Partnership with Local Children's Welfare Center

We have been supporting winter food for vulnerable households every year since 2007. In 2022, our 'Nanum-Jiki' volunteers went to local cabbage farms and made 500kg of Kimchi with the children from the Shindang Dream Children's Welfare Center, our sisterhood partner since 2012. We distributed the Kimchi to 35 households in need.

Korea Fire Officials Credit Union Scholarship Program

We have been sponsoring a scholarship of KRW 200 million every year in partnership with the Korea Fire Officials Credit Union since 2018. By 2022, a total of KRW 986 million was delivered to more than 1,700 people, which was used to support the future of the children of firefighters who contribute to making our society safe.

'1 Company, 1 Military Base' Sponsorship

Our 1 Company, 1 Military Base Sisterhood is a military support program that began in 1984 when Yonhap Steel became a sisterhood with the 2nd Quick Response Division in Yanggu-gun, Gangwon-do. Since then, we have maintained our relationship and have worked to enhance the military culture and welfare through various cooperation activities. These include barracks experience of the division, tracking at the Garden of Achimgari in Bangtasan Mountain, Inje-gun, Gangwon-do, donation of money and goods and the recruitment of ROTC officers.



Beautiful Sharing Bags



Sharing Kimchi



1 Company 1 Military Base Sisterhood

Move Together, Move Green

Sustainable Environment

Good Step Campaign

Since 2019, we have been running The 'Good Step Campaign,' a program that links our employees' physical activity with our social responsibility. For every step taken by our participating employees during a certain period, we sponsor vulnerable children through a matching grant system. In 2022, we expanded the program to include our partner companies' employees, and we had 987 participants in total. Together, we raised more than KRW 71 million, which was twice as much as the previous year. We donated the money to NGO organizations that help underprivileged children in typhoon-affected areas with their education and housing needs. By walking more and driving less, we also reduced our GHG emissions by about 9,904kg.

Beautiful Day

For 16 years, we have been running Beautiful Day, a donation program with a long heritage that embodies our values of sharing, volunteering, and resource recycling. Our employees donate goods that are sold at the stores of the Beautiful Store Foundation in Seoul, Incheon, Pohang, and Busan. They also join the buying and selling activities as volunteers. Every year, we use the proceeds to support children with rare incurable diseases for their treatment.

DK Green Campaign

'DK Green Campaign' is one of our representative environmental protection activities. In 2022, we continued our Green Campaign that we started in 2021 when we donated more than 1,500 trees. We recycled our used mobile phones and unnecessary IT equipment at our headquarters, local business sites, and affiliates. We worked with Mintit, a specialized ICT recycling company, to sell used mobile phones and add our matching grant donation. We raised KRW 11.24 million from this. We also recycled 1,834 unnecessary IT equipment from the company and earned KRW 22.06 million. We used the proceeds from the Green Campaign for post-wildfire recovery projects of the Korea Green Foundation to achieve our goal of resource recycling.

1 Company 1 River Cleaning Campaign

We keep holding a 1 Company, 1 River Clean Campaign twice a year to remove plants that disturb the ecosystem and clean Gulpocheon River in Bupyeong-gu, Incheon-si.

Donation Status of 'Good Step' Campaign

(Unit: persons, KRW thousand)

Category	2020	2021	2022
No. of participants	318	583	987
Amount of donation	25,082	33,979	70,743
No. of beneficiaries	1,163	73	57

Donation Status of the Beautiful Day

(Unit: persons, KRW thousand)

Category	2020	2021	2022
No. of participants	-	383	578
Amount of donation	6,696	8,081	5,852
No. of beneficiaries	2	5	2



DK Green Campaign



Beautiful Day

DK Story

Interview with the Employee in Charge of Social Contribution



Baek Jo,
Senior Manager of
Social Contribution
Communication
Team

What is the background for newly reorganizing the social contribution system?

We will fulfill our sustainable social responsibility as a member (corporate citizen) of the social community. As ESG management has become a significant issue not only in the international community but also in industry and business circles, it has become a necessity rather than a choice for domestic companies. We believe that we have to respond strategically to the social expectations and demands that arise from this issue, rather than seeing it as an optional choice. That's why we reviewed our existing social contribution activities and surveyed our members' awareness of social contribution to identify the most relevant and impactful issues for us. With this process, we want to renew our social contribution system based on our founding principle of 'giving back to society' that we have upheld since 1954 and communicate our policies to our internal and external stakeholders.

What was the main focus when reorganizing the social contribution system?

We would like to promote sustainable, participatory, and systematic social contribution under the slogan 'Move Together, Move Green.' Dongkuk Steel pursues balanced mutual growth with various stakeholders. We have presented the slogan 'Move Together, Move Green' that can represent our social contribution strategy and concretized the directions and fields of our social contribution. Due to the nature of the steel industry, we have selected 'shared growth with local communities' and 'ecosystem conservation activities' as our main promotion areas and aim to increase our social impact by quantitatively measuring and managing social value.

As a person in charge, how do you want to lead social contribution activities?

"We will focus on social contribution activities for a better society and a sustainable environment in a long-term perspective." Dongkuk Steel has carried out various social contribution activities in cooperation with local communities and various institutions, and in the future, we will promote balanced development through the strengthening of social contribution programs related to the characteristics of our industry. In addition, we will consider communication strategies to internalize through continuously promoting policies and faithfully implement social contribution activities for the proliferation of better ESG values. We aim to increase the corporate value of Dongkuk Steel by providing social and environmental benefits to local communities.



Kim Hyo-min,
Manager of External
Cooperation Team,
Beautiful Store

How did you make a relationship with Dongkuk Steel?

The Beautiful Store Foundation has been in partnership with Dongkuk Steel since the Beautiful Saturday event held in 2006 and they have been together for 17 years. Could you briefly explain the social contribution activities you are doing with Dongkuk Steel? Currently, we are carrying out various social contribution activities with Dongkuk Steel. The most representative activity is the 'Beautiful Day' event. Through this event, goods collected through employee donation campaigns are sold and the proceeds are used to solve various social problems. And through the 'Beautiful Nanum-Bottari,' a donation program of daily necessities, the employees of Dongkuk Steel and their families become delivery angels and deliver sharing bundles along with New Year's greetings to elderly people living alone and the vulnerable affected by climate crises every year. Finally, precious items donated by Dongkuk Steel executives are auctioned off through DK Auction to support projects for children with rare incurable diseases.

Is there an episode or something good that you remember while working with Dongkuk Steel?

Vice Chairman Chang Sae-wook participates in the Beautiful Day event with Dongkuk Steel employees every year. His skillful handling of the POS machine when selling goods at the counter shows his sincere participation in the event. In addition, it was very impressive that instead of encouraging employees to participate in volunteer activities, he exemplified himself.

What activities do you want to do with Dongkuk Steel in the future or what do you expect from the company?

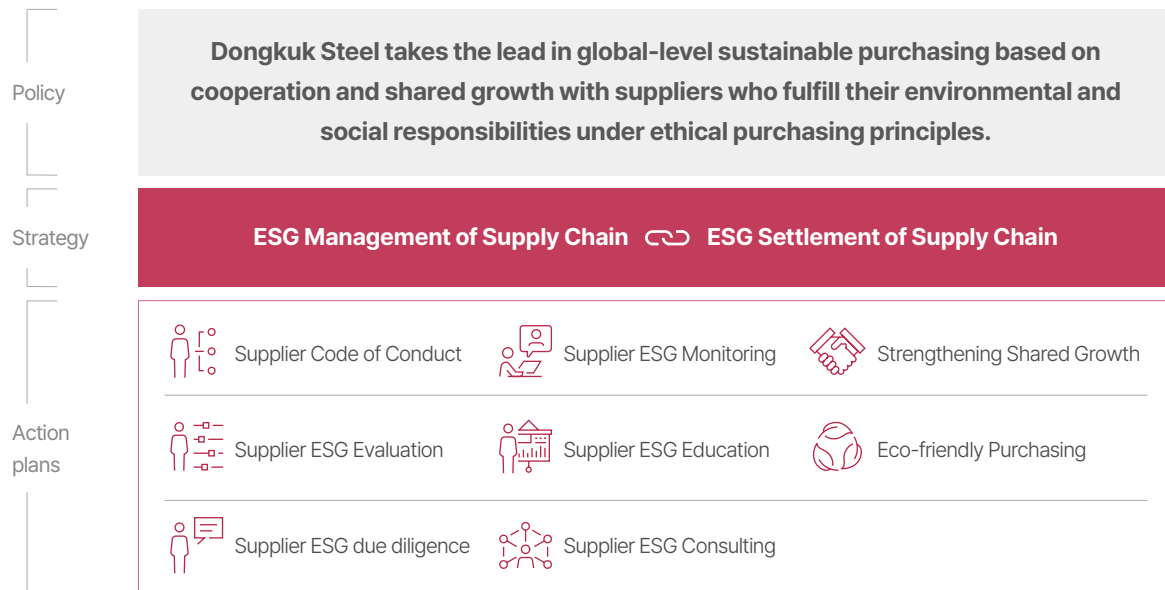
For art education support projects, I would like to hold a 'Donation Item Auction' where citizens can participate through an online site by auctioning off special valuables from Dongkuk Steel executives or artworks exhibited by the company. Through this, we can raise funds needed for art education and at the same time provide donors with a good opportunity to participate in donations.

Sustainable Supply Chain

Policy and System of Supply Chain Management

Dongkuk Steel is implementing supply chain management policies to manage the supply chain and potential ESG risks from an ESG perspective. At the end of 2021, we launched an organization dedicated to sustainable supply chain management under the purchasing organization to establish internal policies and controls for sustainable supply chains and disclose supply chain management systems. Centered on the sustainable supply chain management organization, we are strengthening our ability to implement ESG in our supply chain. On top of that, we have disclosed our sustainable supply chain management system and the Supplier Code of Conduct on the procurement portal of our website in 2022. The Supplier Code of Conduct covers six areas; human rights, safety and health, environment, ethical and fair trade, quality management, shared growth and, social contribution. After consulting with our suppliers, we may require the CEO of the supplier to sign a pledge to comply with the code of conduct or to include compliance with the code of conduct in the supply contract.

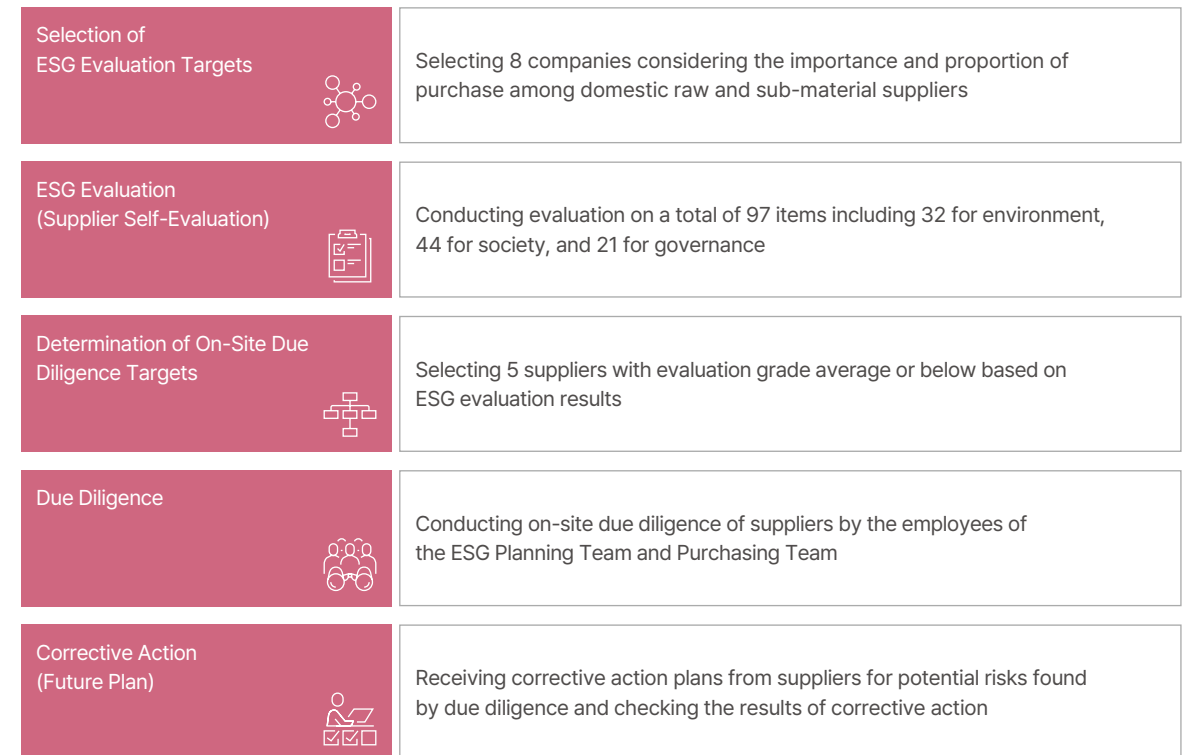
[Sustainable supply chain management system and Code of Conduct for Suppliers](#)



Review of Supply Chain Risks

To manage our supply chain sustainably, Dongkuk Steel has been conducting ESG evaluation and on-site due diligence for our suppliers since 2022. We assessed 8 suppliers in 2022 on 97 criteria in 3 areas: environment (32), society (44), and governance (21). We also visited 5 suppliers who scored average or lower on the ESG evaluation and checked their performance on the ground. We will keep expanding the number of suppliers we evaluate and monitor for ESG risks and opportunities in our supply chain.

Supply Chain Risk Management Process in 2022



Sustainable Supply Chain

Four Practices for Shared Growth

We are adhering to our four practices for shared growth, 'Desirable Contract Conclusion,' 'Fair Selection and Registration of Partner Companies,' 'Establishment and Operation of Internal Review Committee,' and 'Issuance and Preservation of Written Documents' to maintain and develop transparent and sound trading relationships.

Organization for Shared Growth

We operate a Shared Growth Promotion Committee, chaired by the head of the Management Support Office, to check compliance with our four practices for shared growth and to identify shared cooperation tasks. The Shared Growth Promotion Committee is composed of executives from each department who have the Shared Growth Promotion Council, composed of practitioners, as a subordinate organization with the responsibility of the management of shared growth support performance and decision-making on the improvement of the main systems. The Chairman of the Shared Growth Promotion Committee has established a Shared Growth Promotion Bureau to set the direction of company-wide shared growth initiatives and actively support the activities of the Shared Growth Promotion Committee. In 2022, we developed 25 new SME partners and contributed to the growth of the SMEs by expanding their sales.

Major Performance in Shared Growth

Introduction of Standard Subcontracting Contract

We use the standard subcontracting contract established and distributed by the Korea Fair Trade Commission to enter into fair and desirable contracts with our partners, and we are making efforts to improve the rights of our partners by immediately reflecting revised subcontracting contracts when they are announced.

Voluntary Increase in Subcontracting Amount for Partners

In 2022, Dongkuk Steel voluntarily increased subcontracting amount and paid approximately KRW 2.3 billion when it was determined that an adjustment of the subcontracting amount was necessary due to various factors such as changes in market conditions and personnel, even without a separate adjustment request from the partners.

Adjustment of Payment Reflecting Unit Price

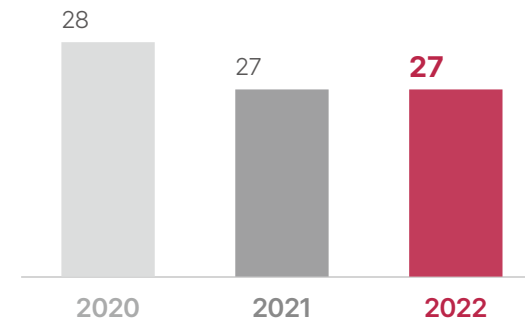
We have used a standard subcontracting contract with our partners and adjust the payment when there are changes in design or supply cost. In 2022, due to price changes in raw materials caused by international situations such as the prolonged COVID-19 and the Russia-Ukraine war, we adjusted the prices at a reasonable level reflecting market conditions.

Support for Domestication of Equipment

We supported partner companies with the development of technologies for the domestication of plant equipment and parts in 2022.

Major Performance in Shared Growth

No. of Suppliers Who Signed Shared Growth Agreement (Unit: firms)



Shared Growth Index Evaluation Rating



* The 2022 evaluation results will be released in the second half of 2023.

Major Performance in Shared Growth in 2022

Financial Support

(Subsides for shared growth)

KRW 6.2 billion

Educational Support

(Professional training courses for suppliers' workforce)

206 persons

Sales of New Suppliers

(Identification and registration of 25 small- and medium-sized suppliers)

KRW 1.2 billion

Governance



Board of Directors and Shareholders

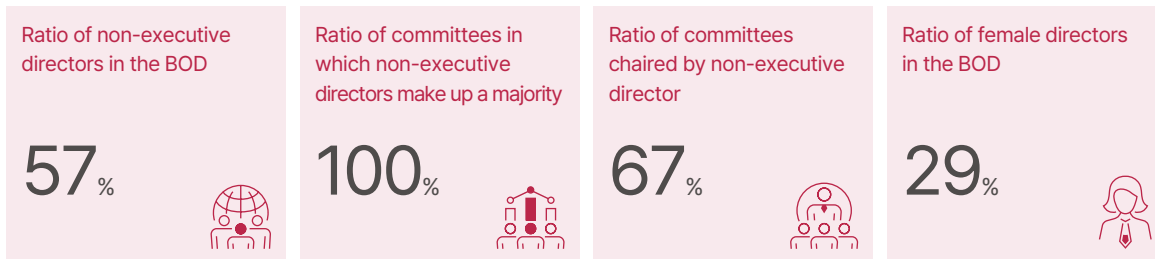
The Board of Directors (BOD) serves as a supervisor over management and strives to make long-term management decisions by voicing diverse opinions. All matters related to the BOD, including the appointment of directors, resolution, and committees, are addressed in accordance with the Articles of Association and the BOD regulations, and are transparently disclosed through the corporate governance reports.

Board Composition

Our BOD, as the top decision-making body, determines and supervises our management goals and major strategies. As of March 2023, the BOD consists of 3 executive directors and 4 non-executive directors. Chang Sae-wook, Vice Chairman & CEO, serves as the Chairman of the BOD. Non-executive directors are recommended through the Non-executive Director Candidate Recommendation Committee among those with expertise and rich experience in various fields, and their appointment is approved at the general meetings of shareholders. The board has a sufficient number of non-executive directors to ensure that it can independently work with 4 non-executive directors out of 7 members.

Board Composition

(As of March 2023)



Board Operation

The BOD consists of 7 experts in various fields and management to exchange opinions on management issues and make the right decisions from a medium to long-term perspective. In principle, we hold a board meeting once a month and additional meetings take place when urgent issues arise. In 2022, a total of 31 board meetings were held to deliberate on and resolve matters including shareholders' meetings, management, appointment and dismissal of compliance officers, finance, and directors in accordance with the Articles of

Association and the BOD regulations. Additional education is provided for non-executive directors to increase their understanding of the steel industry and our business, and enhance their performance. If needed, consultation from external experts can be received at the company's expense by resolution of the board.

(● : Chairman, As of March 2023)

Director	Gender	Position & Duty	Career	BOD	Audit Committee	ESG Committee	Non-executive Director Candidate Recommendation Committee
Executive Directors (3)	Chang Sae-wook (male)	CEO	Vice Chairman & CEO, Dongkuk Steel	●			
	Choi Sam-young (male)	CEO	Head of Incheon Works, Dongkuk Steel	○		○	●
	Kwag Jin-soo (male)	Head of Strategy Office	Head of Incheon Works, Dongkuk Steel	○			
Non-executive Directors (4)	Min Dong-jun (male)	Technical advice	Vice President, Yonsei University	○	○	●	○
	Nam Dong-kuk (male)	Management advice	Director, Daegu Regional Tax Office	○	○	○	
	Park Jin-woo (female)	Management advice	Vice President, Engineering Research Institute, Yonsei University	○	○		○
	Nam Tae-yeon (female)	Financial accounting advice	certified public accountant, Kim & Chang Law Firm	○	● ¹⁾		○

1) Appointed as the chairman of the Audit Committee on May 7, 2023

Category	No. of BOD meetings held			Average attendance rate of directors (%)		
	Regular meeting	Ad hoc meeting	Total	Executive directors	Non-executive directors	Total
2022	7	24	31	78	93	87
2021	4	24	28	88	93	91
2020	9	19	28	95	96	96

Board of Directors and Shareholders

Board Independence and Diversity

The Non-executive Director Candidate Recommendation Committee is comprised of one executive and two non-executive directors. The independence of non-executive directors is secured by comprehensively checking the qualification restrictions in accordance with related regulations. The qualified directors are limited to those with abundant knowledge and experience in related fields, and those responsible for undermining corporate value or infringing on shareholder rights are not eligible for the position. We have promoted the diversity of the BOD by appointing Nam Tae-yeon as a non-executive director at the 69th General Meeting of Shareholders. She is a certified public accountant at Kim & Chang Law Firm and will serve as an expert in finance and accounting.

Reinforcement of the Board's Supervisory Functions

We examined various measures and laid a systematic foundation to empower our BOD to play its supervisory role in 2022. First of all, in order to enhance the deliberation and control of the BOD on internal transactions with specially related persons, we have established a two-step decision-making process. The process works in a way that firstly, ESG Committee reviews related agenda items, and the board makes final decisions. We determined to provide more management status and related information for the BOD and build a system that effectively performs internal control and implements risk management to achieve board-driven management. To this end, we have built a process to regularly report 'quarterly business performance and outlook' and 'semi-annual risk management activities' to the board.

[Regulations on the Board of Directors](#)

Committee Operation within the Board

We operate three committees within the BOD (Audit Committee, Non-executive Director Candidate Recommendation Committee, and ESG Committee) to ensure our strategic operation with securing expertise and objectivity. Each committee is composed mainly of non-executive directors, clearly defining their roles and responsibilities to raise efficiency in board operation.

[Committees within the Board of directors](#)

Audit Committee

The Audit Committee consists entirely of four non-executive directors with expertise in management, finance, and technology to ensure its independence and expertise. The Audit Committee regularly

performs audit activities on our business and accounting. We have assigned the Ethical Management Team to the support for audit affairs to boost efficiency in auditing.

[Regulations on Audit Committee](#)

Non-executive Director Candidate Recommendation Committee

We operate the Non-executive Director Candidate Recommendation Committee to transparently and fairly secure non-executive directors who are in the interests of the company and shareholders considering their expertise and independence. In March 2022, we appointed Park Jin-woo as a female member of the committee to boost its diversity.

ESG Committee

The ESG Committee aims to draw up the directions and deliberate on the implementation processes for ESG management. The ESG Committee is compounded of two non-executive directors and one executive director as of March 2023, with Min Dong-jun serving as the chairman. The meetings of the committee are convened once per quarter in principle. A total of 8 issues were reviewed in 2022.

[Regulations on ESG Committee](#)

Enhancement of Shareholders' Rights

Dongkuk Steel introduced the electronic voting system at the 67th general shareholders' meeting. Now we are implementing the system in full swing in its third year. The proxy voting system was limited to shareholders holding more than 1,000 shares until 2021. However, it has been expanded to all shareholders in 2022. Through the system betterment, even minority shareholders can exercise their rights without having to attend the general shareholders' meeting in person.

Shareholders' Meeting for Better Communication

The chairman has given IR (Investor Relations) reports by himself in the presentation format since the shareholders' meeting in 2016. At the 69th general shareholders' meeting, Vice Chairman & CEO Chang Sae-wook directly announced major business performance in 2022, actively communicating with the shareholders. Also, he gave a lecture under the theme of 'sustainable growth through a transition to a holding company' at the extraordinary general shareholders meeting on May 12, 2023, and obtained shareholders' consent for the spin-off.

Compliance Management

Dongkuk Steel has operated the 'DK Compliance Program (CP)' since 2011 to build a fair trade order and prevent violations of fair trade-related laws and regulations. The purpose of DK Compliance Program is to prevent potential costs (fines, damages, litigation costs, and opportunity costs incurred by regulatory investigations) incurred by law violation risks, and to safeguard employees. Despite the growing social demand for compliance management, the steel industry has committed violations against laws and regulations of fair trade such as collusion. In this regard, we are stepping up our DK Compliance Program by continuously educating employees, strengthening our monitoring system, and protecting the company from such illegal activities while creating a transparent and fair competition culture.

DK Compliance Program

We operate DK Compliance Program aimed at raising awareness among our employees of fair competition, and sharpening their compliance capabilities.

[DK Compliance Program](#)

Organization for DK Compliance Program

We have appointed a compliance officer to efficiently operate the DK Compliance Program and established a Compliance Secretariat to help them do their job properly. In addition, we have designated departments related to the Fair Trade Act and Subcontracting Act such as the Sales, Purchasing, and Management Teams as compliance management organizations under the secretariat, to promote the compliance manager system and compliance activities.

Organizational Structure for DK Compliance Program



Eight Core Elements of DK Compliance Program

Dongkuk Steel has designated eight requirements for CP introduction defined in the Fair Trade Commission's 'Rules on Operation of Fair Trade Compliance Programs, offering of incentives, etc.' as core elements of the DK Compliance Program. We also selected the requirements as our operating principles of the DK Compliance Program by publishing compliance guidebooks.

[Compliance Guidebook](#)

1. Declaration of CEO's intention	- Proclaiming the CEO's intention through CEO messages - All employees voluntarily pledge their compliance every year
2. Appointment of Compliance Officers	- Compliance Officer appointed serving as a compliance manager according to the Commercial Act
3. Establishment and revision of the compliance guidebook	- Proclaiming the CEO's intention through CEO messages - All employees voluntarily pledge their compliance every year
4. Education system – each team	- Coming up with advanced compliance education for each risk - Providing collusion prevention education programs for the Sales Team
5. Supervision and control system	- Monitoring conducted by compliance managers - Conducting random monitoring
6. Sanctions on violations	- Operation of the guidelines on sanctions for violators
7. Establishment of a document management system	- Building a document management system for materials and documents produced during the implementation of compliance management
8. Evaluation of the effects and improvements	- Reporting the results of the compliance program operation and striving to make improvements

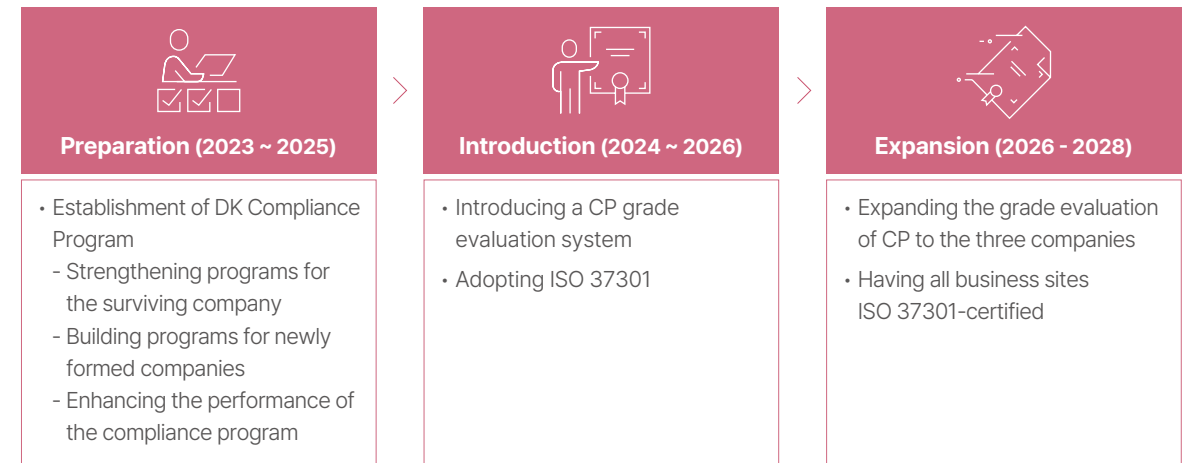
Compliance Management

Activities to Deliver DK Compliance Program

<p>Operation of Compliance Manager System and Compliance Activities</p> 	<p>Each department involved in the compliance management organization has its own designated compliance manager and trains the manager as a fair trade expert. And the compliance managers are conducting various compliance activities such as self-monitoring, compliance education, and 'compliance Talk' for their respective departments. In 2022, 25 compliance managers were selected and trained as in-house compliance experts through 21 hours of collective education and 30 external expert lectures. As part of their compliance activities, the compliance managers conducted 31 compliance education sessions and compliance Talks within their departments, striving to foster compliance awareness and eliminate risks within their departments.</p>
<p>Compliance Education</p> 	<p>In 2022, we offered 11 hours of intensive training for 32 relevant department members on topics such as the meaning and issues of ESG management, the details on the Serious Accidents Punishment Act, which took effect in 2022, and precautions for the Occupational Safety and Health Act. To go further, we also furnished education to reduce various risks in other areas in addition to fair trade-related laws, and strived to raise awareness and knowledge concerning ESG management among our employees in rapidly changing domestic and international situations.</p>
<p>Compliance Monitoring</p> 	<p>We thoroughly conducted monitoring on departments with frequent contact with external stakeholders to identify any violation of laws. And we provided compliance education to prevent our employees from engaging in activities that could be misunderstood by internal or external parties.</p>

Future Operation Plan for DK Compliance Program

The steel industry has a higher need for compliance management and internal compliance control systems than any other industry due to ongoing issues with illegal cartel conduct (collusion). Dongkuk Steel is committed to effectively establishing and spreading its compliance culture. On June 1, 2023, Dongkuk Steel was spun off into the existing company, Dongkuk Holdings, and the newly formed operating companies, Dongkuk Steel and Dongkuk CM. The three companies will build systems tailored to the characteristics of each company so that a stronger DK Compliance Program will be mapped out. We plan to obtain recognition from reputable organizations through the grade evaluation of CP and ISO 37301 over the next five years, and expand the program to every corner of the company.



Dongkuk Steel has lived up to its management philosophy, 'we contribute to cultural development through steel.' Going forward, we will continue to put sustainable management, including corporate social responsibility, at the heart of our business operations, and practice compliance management to contribute to the economic and industrial development of the country. We promise to make company-wide efforts to practice global-level compliance management in the interest of the country and people, society and shareholders, and the company and our employees.

Information Security

We have implemented Chief Information Security Officer (CISO)-driven information security management. We convene Information Security Committee's meetings driven by executives three times a year and working-level meetings to manage overall information security matters. We provide online and offline information security education programs for our managers and employees in technical services, and efforts are being made to raise employees' awareness of data security through cyber crisis response drills organized by the Korea Internet & Security Agency once each semester.

Improvement of the Security Management System

Dongkuk Steel operates an information security management system (ISMS) and has hired employees dedicated to data security to strengthen its information security management. In order to proactively respond to compliance with information security-related laws and regulations, we are promoting the acquisition of the ISMS certification. In 2022, we consulted external experts on ISMS certification to check the legal, managerial, physical, and technical security systems, and we are continuously managing the deficiencies found through our efforts. With the purpose of reinforcing our technical security system for data protection, multifaceted efforts are being made. The efforts include updating virtual private network (VPN) solutions, the installation of server and DB access control to ensure safe authentication, access control, authority control of information systems, and the strict conformity to IT compliance standards.

Personal Information Protection

We have designated the executive of the Strategy Office as a Chief Privacy Officer (CPO) and defined the role, responsibility, and obligation of the personal information protection officer in our internal regulation. We disclose our personal information processing policy on our website to inform our website users of the details of the personal information we collect, such as the types, purposes, retention periods, third-party service providers, disposal procedures and methods, chief privacy officer, and responsible person. Website users have the right and authority to access, correct, and delete the personal information they have provided to us, and they can exercise these rights through the personal information processing policy. Starting from 2022, we provide annual training sessions for our personal information handlers, conducted by personal information protection experts.

Ethical Management

Based on the management policy, which is the highest value of our management, we have established and operated the Code of Ethics, which serves as the standard for the behavior and values of all employees since 2002. We have a department dedicated to ethical management to fulfill our economic, legal, social, and ethical responsibilities and obligations to the stakeholders including customers, shareholders, partners, and local communities. In addition, we carry out various activities to combat corruption and promote ethical awareness, such as conducting regular internal and external audits, investigating reports of misconduct, implementing ethical management practices, and providing ethical education.

Organizations for Ethical Management and their Roles

We have two organizations that are responsible for ethical management; the Audit Committee under the Board of Directors (BOD) and the Ethical Management Team. The Audit Committee consists entirely of non-executive directors and oversees our business and accounting independently. In 2022, the Audit Committee enhanced its role and authority by pre-reviewing and approving matters (such as the internal audit unit's audit plan, outcome report, and prior notification of non-audit service contracts with external auditors) that were previously only reported beforehand. The Ethical Management Team, dedicated to the committee, supports the efficient and effective performance of the Audit Committee and oversees Dongkuk Group's general ethical management including policy planning and operation management, ethical management education and campaigns, regular audits, and whistleblower investigations.

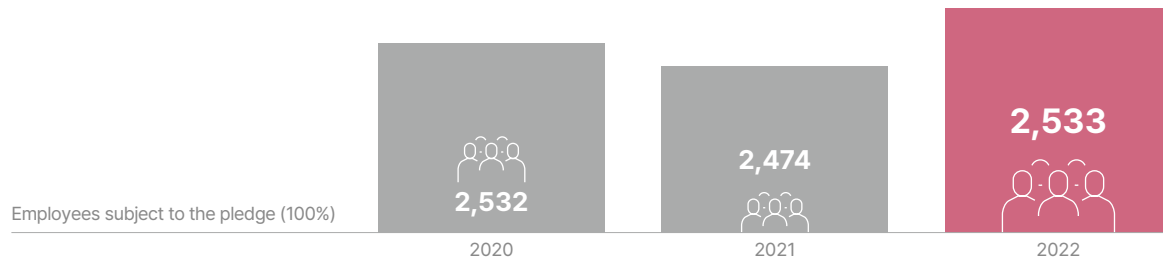


Ethical Management Practice Program

We run various ethical management programs annually, such as ethical training and campaigns, to enhance the consciousness of our employees. In 2022, in addition to existing ethical pledges and ethical education, we expanded our activities for the dissemination of ethical culture and prevention of ethical issues by conducting company-wide training for the prevention of five major internal and external ethical issues.

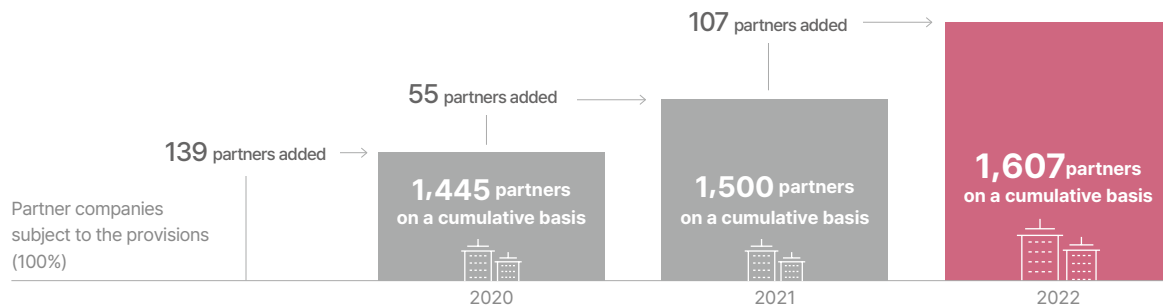
Pledge on Ethics

All employees of Dongkuk Steel pledge to comply with the Code of Ethics online at the beginning of each year. In the past three years, all of our eligible employees (excluding those on leave or resigned) have participated in the ethical pledge.



Special Ethical Provisions

Dongkuk Steel is concluding special ethical practice provisions with all purchasing partners to create a fair and transparent business culture. In the last three years, all of our partner companies have concluded the provisions.



Employee Ethics Education

We conduct online ethics education programs for all employees at least once a year. Newly hired employees are required to complete ethics education to enhance their ethical awareness. In 2022, we broadened the target of our ethics management education from managers to all employees, including employees with technical services, to solidify the foundation of ethical culture.

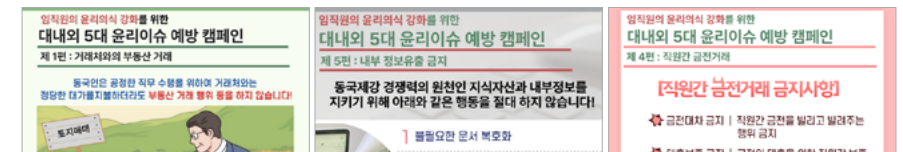
Company-wide Ethics Education (Online / Unit: persons)				Ethics Education for New Employees (Offline / unit: persons)			
Category	2020	2021	2022	Category	2020	2021	2022
Employees	737 (Manager)	737 (Manager)	2,568 (All employees)	신입사원	10	40	23

Education to Prevent Five Major Internal and External Ethical Issues

In 2022, we conducted prevention education for five major internal and external ethical issues, in addition to the existing ethical management practice program. We analyzed the reports submitted to our ethical management reporting center over the past seven years and external ethical issues to identify the five keywords with high significance and risk. We then created and delivered the content and company-wide education to prevent the five major ethical issues.

- Goal of the education: Eradication and prevention of recurrence of the five major internal and external ethical issues
- Participants of the education: 670 out of 688 office workers (97%) completed education (small-sized face-to-face group education conducted).

Examples of campaign materials on the five internal and external ethical issues



Risk Management

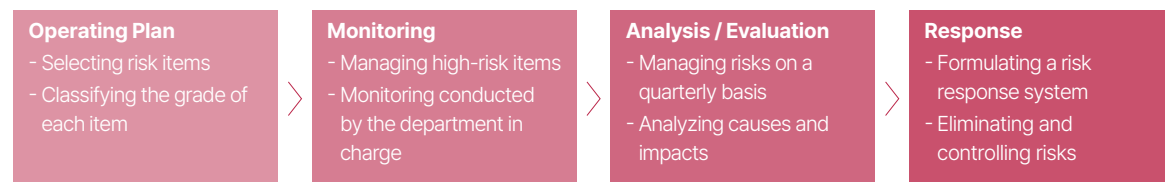
Dongkuk Steel formulated a company-wide risk management system in 2019. And we have improved the risk management system to share the performance of the entire company and take countermeasures by transforming the existing steel works-centered risk management. Accordingly, all our members endeavor to preemptively address potential risks and establish post-management measures through systematic responses that are interlinked to determine and analyze root causes.

Risk Management Organization and Management Areas



Risk Management Process




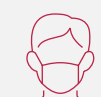
We identify each risk item through continuous monitoring and report our performance on a quarterly basis. And we separately manage key items with high levels of risk to establish priorities and implement effective response measures.



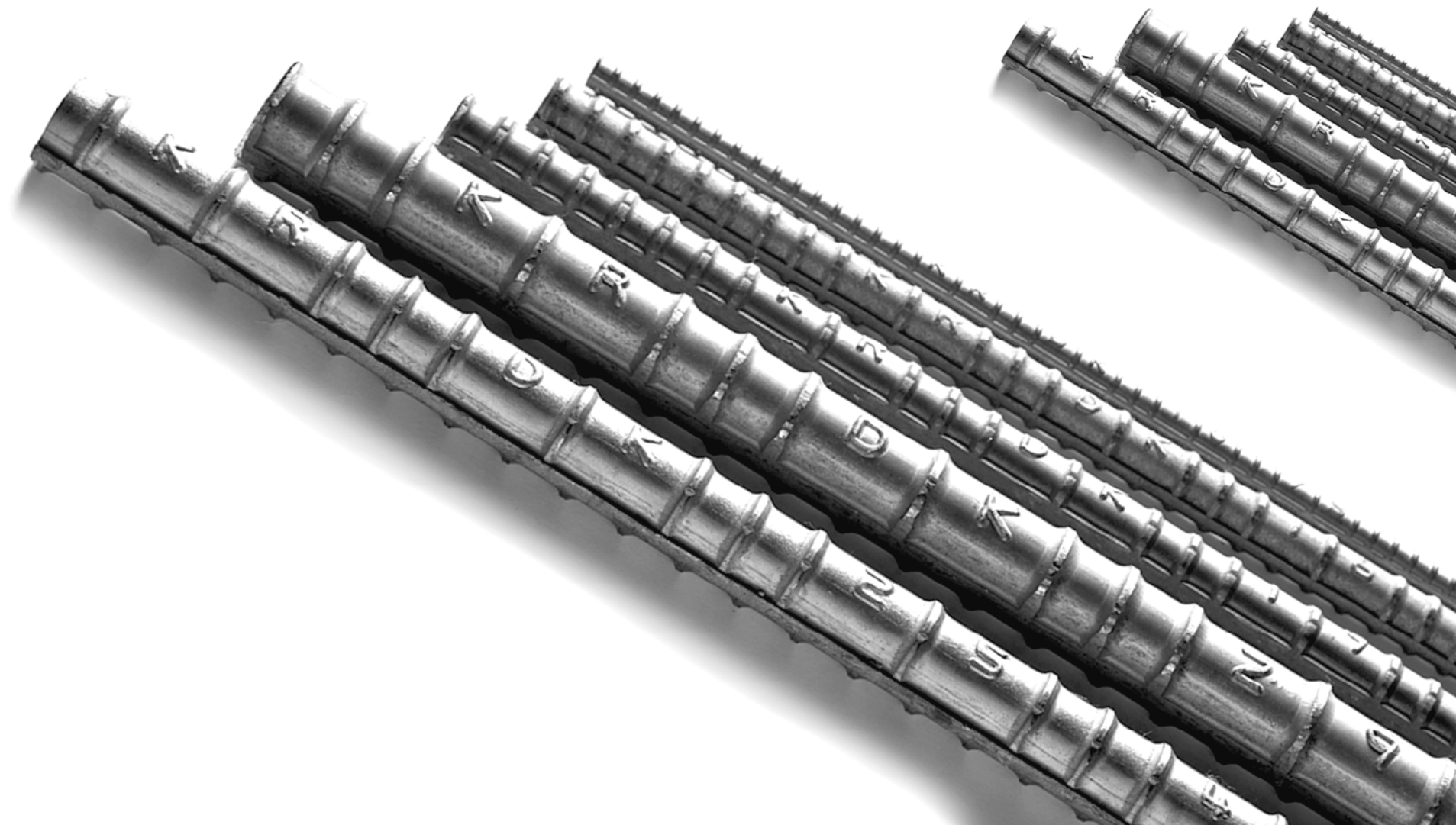
Key Risk Items and Response in 2022

In 2022, an average of 15 risks occurred per quarter out of 131 risk management items. The major risks that occurred were foreign currency risks, such as exchange rate fluctuations and the inflow and outflow of pollutants. To address the risks, we have convened the Foreign Exchange Risk Management Committee and executed a hedging strategy as a preemptive response measure. Furthermore, we have made practical efforts, such as enhancing slag treatment facilities and replacing dust-proof nets to address the environmental risks.

Key Risk Items (extreme impact + extreme frequency)

<p>Safety-related accidents</p> <ul style="list-style-type: none"> Strengthening a company-wide 'occupational safety and health system' and expanding activities for safety Increasing safety-related investment and strengthening the capabilities of safety managers 	<p>Environmental pollution</p> <ul style="list-style-type: none"> Expanding company-wide environmental investment Establishing a mid- to long-term roadmap for carbon neutrality 
<p>Liquidity management</p> <ul style="list-style-type: none"> Drawing out strategies to maximize profitability for each product Convening the Foreign Exchange Risk Management Committee 	<p>COVID-19</p> <ul style="list-style-type: none"> Proactively responding to health-related issues through operating the task force team (TFT) handling COVID-19 issues 

ESG Data	74
GRI Standards 2021	83
Independent Assurance Statement	86
GHG Emissions Assurance Statement	88
Participants in publishing the report	89



Appendix

ESG Data

Financial Status

Consolidated Financial Position

Category	Unit	2019	2020	2021	2022
Current assets		19,408	17,815	26,828	27,743
Non-current assets		34,982	36,371	36,513	36,770
Total assets		54,390	54,186	63,341	64,512
Current liabilities		28,493	28,058	31,192	28,241
Non-current liabilities	KRW	6,447	4,766	4,325	3,405
Total liabilities	100 million	34,940	32,824	35,517	31,646
total Equity attributable to owners		18,497	20,332	26,697	31,442
Non-controlling interest		954	1,030	1,127	1,424
Total equity		19,451	21,362	27,824	32,866

Separate Financial Position

Category	Unit	2019	2020	2021	2022
Current assets		15,257	13,704	23,135	22,955
Non-current assets		38,086	38,791	36,393	34,218
Total assets		53,343	52,495	59,528	57,173
Current liabilities		25,380	25,202	28,250	25,245
Non-current liabilities		5,432	3,664	4,020	2,926
Total liabilities	KRW	30,812	28,865	32,271	28,171
Capital stock	100 million	6,910	6,910	6,910	6,910
Capital surplus		5,764	5,757	8,563	9,971
Accumulated other comprehensive income)		2,097	3,200	4,021	4,701
Other components of equity		7,760	7,763	7,763	7,420
Total equity		22,531	23,630	27,257	29,001

Income Status

Consolidated Income Statements

Category	Unit	2019	2020	2021	2022
Sales		56,584	52,062	72,403	85,111
Cost of sales	KRW 100 million	51,503	46,098	60,792	73,421
Operating profit		1,646	2,947	8,030	7,435
	%	2.9	5.7	11.1	8.7
EBITDA	KRW 100 million	3,790	5,101	10,107	9,495
	%	6.7	9.8	14.0	11.2
Net profit	KRW 100 million	- 817	695	5,586	4,255
	%	- 1.4	1.3	7.7	5.0
Net Income Attributable to Controlling Interests	KRW 100 million	- 685	651	5,505	4,130
Basic earnings per share	KRW	- 725	700	5,888	4,474
Total dividends		-	187	374	458
Dividend payout ratio	KRW 100 million	-	28.7	6.8	11.1

Consolidated Financial Statements and Key Indicators

Category	Unit	2019	2020	2021	2022
Sales		50,554	46,137	68,617	77,633
Cost of sales	KRW 100 million	46,402	41,201	57,851	67,793
Operating profit		1,337	2,487	7,851	6,330
	%	2.7	5.4	11.4	8.2
EBITDA	KRW 100 million	3,271	4,423	9,743	8,069
	%	6.5	9.6	14.2	10.4
Net profit	KRW 100 million	- 1,300	191	3,013	1,538
	%	- 2.6	0.4	4.4	2.0

Environmental

Basic Information

Category	Unit	2020	2021	2022
Production volume		5,837	6,027	5,917
Hot rolled steel	1,000 tons	4,329	4,462	4,548
Cold rolled steel		1,508	1,565	1,369

Raw and Subsidiary Materials

Category	Unit	2020	2021	2022
Company-wide	Total consumption of raw and subsidiary materials	6,659 ¹⁾	6,867 ¹⁾	6,663
	Raw materials	6,275 ¹⁾	6,460 ¹⁾	6,287
	Subsidiary materials	384	406	376
	Consumption of recycled raw and subsidiary materials	3,764	3,941	3,915
	Ratio of raw and subsidiary materials	%	57	57
Hot rolled steel company	Total consumption of raw and subsidiary materials	5,011	5,138	5,162
	Raw materials	4,738	4,856	4,888
	Subsidiary materials	274	282	274
	Consumption of recycled raw and subsidiary materials	3,764	3,941	3,915
	Ratio of raw and subsidiary materials	%	75	77
Cold rolled steel company	Total consumption of raw and subsidiary materials	1,647	1,729	1,501
	Raw materials	1,537	1,605	1,399
	Subsidiary materials	110	124	103
	Consumption of recycled raw and subsidiary materials	0	0	0
	Ratio of raw and subsidiary materials	%	0	0

1) Changes in the calculation method of raw materials: By-products included.

Air

Category	Unit	2020	2021	2022	
Company-wide	Dust emissions	Kg	68,522	69,447	83,139
	Dust emission intensity	Kg/t	0.012	0.012	0.014
	NOx emissions	Kg	655,379	1,019,973	1,049,157
	NOx emission intensity	Kg/t	0.112	0.169	0.177
	SOx emissions	Kg	275,155	300,257	435,904
	SOx emission intensity	Kg/t	0.047	0.050	0.074
Hot rolled steel company	Dust emissions	Kg	66,293	63,287	68,741
	Dust emission intensity	Kg/t	0.015	0.014	0.015
	NOx emissions	Kg	653,064	846,730	948,527
	NOx emission intensity	Kg/t	0.151	0.190	0.209
	SOx emissions	Kg	274,388	290,883	400,566
	SOx emission intensity	Kg/t	0.063	0.065	0.088
Cold rolled steel company	Dust emissions	Kg	2,229	6,160	14,397
	Dust emission intensity	Kg/t	0.001	0.004	0.011
	NOx emissions	Kg	2,315	173,243	100,630
	NOx emission intensity	Kg/t	0.002	0.111	0.073
	SOx emissions	Kg	768	9,374	35,339
	SOx emission intensity	Kg/t	0.001	0.006	0.026

*The emission calculation method of data before 2021 has changed according to the Special Act on the Improvement of Air Quality in Air Control Zones.

*From 2021, the emissions are the data from the website of CleanSYS.

*Emission intensity is calculated based on production volume.

Water Resource

Category	Unit	2020	2021	2022	
Company-wide	Total water intake	7,185	8,104	7,749	
	Industrial water	3,661	3,874	3,944	
	Seawater	807	969	631	
	Tap water	1,000 m ³	2,717	3,261	3,175
	Others	0	0	0	
	Process water consumption ¹⁾	5,896	6,630	6,665	
	Water resource intensity	m ³ /t	1.010	1.100	1.126
	Reuse of process water	1,000 m ³	4,277	4,320	4,329
	Process water reuse rate ²⁾	%	73	65	65
	Wastewater discharge ³⁾	1,000 m ³	2,629	3,292	3,005
Hot rolled steel company	Total water intake	4,950	5,348	5,028	
	Industrial water	3,661	3,874	3,944	
	Seawater	807	969	631	
	Tap water	1,000 m ³	482	505	453
	Others	0	0	0	
	Process water consumption ¹⁾	3,661	3,874	3,944	
	Water resource intensity	m ³ /t	1	1	1
	Reuse of process water	1,000 m ³	3,491	3,705	3,749
	Process water reuse rate ²⁾	%	95	96	95
	Wastewater discharge ³⁾	1,000 m ³	775	912	755
Cold rolled steel company	Total water intake	2,235	2,756	2,722	
	Industrial water	0	0	0	
	Seawater	0	0	0	
	Tap water	1,000 m ³	2,235	2,756	2,722
	Others	0	0	0	
	Process water consumption ¹⁾	2,235	2,756	2,722	
	Water resource intensity	m ³ /t	1	2	2
	Reuse of process water	1,000 m ³	786	615	580
	Process water reuse rate ²⁾	%	35	22	21
	Wastewater discharge ³⁾	1,000 m ³	1,854	2,380	2,251

1) Process water consumption refers to the amount of water used in the manufacturing process except for utility water.

2) Process water reuse rate: (Process water reuse/process water consumption) × 100%

3) Comprehensive wastewater discharged into the sea after the final treatment at the business sites during the reporting period

Water pollutant emissions

Category	Unit	2020	2021	2022
Company-wide	Water pollutant emissions	82.85	29.82	40.42
	BOD (Biological Oxygen Demand)	21.96	5.84	12.42
	COD (Chemical Oxygen Demand)	43.50	16.03	17.33
	SS (Suspended Solids)	17.39	7.94	10.67
Hot rolled steel company	BOD (Biological Oxygen Demand)	25.74	9.13	17.99
	COD (Chemical Oxygen Demand)	11.52	2.22	6.47
	SS (Suspended Solids)	9.84	2.55	7.14
	SS (Suspended Solids)	4.39	4.35	4.38
Cold rolled steel company	Water pollutant emissions	57.11	20.69	22.43
	BOD (Biological Oxygen Demand)	10.45	3.62	5.95
	COD (Chemical Oxygen Demand)	33.66	13.48	10.19
	SS (Suspended Solids)	13.00	3.59	6.29

Chemicals Emissions by Environmental Medium

Category	Unit	2020	2021	2022
Company-wide	Chemicals emissions ¹⁾	10	8	10
	Air	9	8	10
	Water system	1	0	0
Hot rolled steel company	Chemicals emissions ¹⁾	0	1	1
	Air	0	1	1
	Water system	0	0	0
Cold rolled steel company	Chemicals emissions ¹⁾	10	7	8
	Air	9	7	8
	Water system	1	0	0
Cold rolled steel company	Chemicals emissions ¹⁾	10	7	8
	Air	9	7	8
	Water system	1	0	0
Cold rolled steel company	Chemicals emissions ¹⁾	10	7	8
	Air	9	7	8
	Water system	1	0	0
Cold rolled steel company	Chemicals emissions ¹⁾	10	7	8
	Air	9	7	8
	Water system	1	0	0
Cold rolled steel company	Chemicals emissions ¹⁾	10	7	8
	Air	9	7	8
	Water system	1	0	0
Cold rolled steel company	Chemicals emissions ¹⁾	10	7	8
	Air	9	7	8
	Water system	1	0	0
Cold rolled steel company	Chemicals emissions ¹⁾	10	7	8
	Air	9	7	8
	Water system	1	0	0
Cold rolled steel company	Chemicals emissions ¹⁾	10	7	8
	Air	9	7	8
	Water system	1	0	0
Cold rolled steel company	Chemicals emissions ¹⁾	10	7	8
	Air	9	7	8
	Water system	1	0	0

1) Chemicals emissions are prepared based on the performance reporting standards of the Comprehensive Chemicals Information System

Waste

Category	Unit	2020	2021	2022	
Company-wide	Total waste generation	634	712	664	
	Dust	59	61	61	
	Slag	1,000	447	528	498
	Waste refractory	tons	12	12	12
	Waste soil	30	31	37	
	Others	86	79	57	
	Ratio of designated waste to total waste generated ¹⁾	%	9.9	9.2	9.9
	Total waste disposed	578	758	653	
	Recycled	1,000	566	744	638
	Landfill	tons	9	11	11
	Incineration	2	3	4	
Recycling rate ²⁾	%	98.0	98.2	97.7	
Hot rolled steel company	Total waste generation	625	703	657	
	Dust	59	61	61	
	Slag	1,000	447	528	498
	Waste refractory	tons	12	12	11
	Waste soil	30	31	37	
	Others	77	70	49	
	Ratio of designated waste to total waste generated ¹⁾	%	9.5	8.8	9.5
	Total waste disposed	569	749	645	
	Recycled	1,000	559	737	632
	Landfill	tons	9	11	11
	Incineration	1	1	3	
Recycling rate ²⁾	%	98.3	98.4	97.9	
Cold rolled steel company	Total waste generation	8	9	8	
	Dust	0	0	0	
	Slag	1,000	0	0	0
	Waste refractory	tons	0	0	0
	Waste soil	0	0	0	
	Others	8	9	8	
	Ratio of designated waste to total waste generated ¹⁾	%	40.0	41.2	45.5
	Total waste disposed	8	9	8	
	Recycled	1,000	7	7	6
	Landfill	tons	0	0	0
	Incineration	2	2	2	
Recycling rate ²⁾	%	82.0	81.6	77.9	

1) Ratio of designated waste: Designated waste / waste generated × 100%

2) Waste recycling rate: (Amount of waste recycled / amount of waste disposed) × 100%

* Discrepancy caused due to the gap between waste generation and disposal

Energy

Category	Unit	2020	2021	2022	
Company-wide	Total energy consumption	31,358,859	32,415,736	32,700,070	
	Direct energy	LNG	7,151,016	7,387,210	7,648,884
		LPG	377	427	1,266
		Diesel	103,475	110,732	107,856
		Gasoline	4,249	3,545	5,242
		Others	206	231	414
	Indirect energy	Electricity	23,964,754	24,913,589	24,813,816
		Others	134,781	0	122,592
	Energy intensity	GJ/t	5.37	5.38	5.53
	Natural gas share of energy consumption	%	23	23	23
	Electricity share of energy consumption	%	76	77	76
Hot rolled steel company	Total energy consumption	25,250,272	26,090,244	26,774,853	
	Direct energy	LNG	4,654,923	4,722,781	5,287,171
		LPG	104	130	931
		Diesel	90,812	96,216	94,102
		Gasoline	4,005	3,276	4,862
		Others	191	159	306
	Indirect energy	Electricity	20,500,236	21,267,682	21,387,481
		Others	0	0	0
	Energy intensity	GJ/t	6	6	6
	Natural gas share of energy consumption	%	18	18	20
	Electricity share of energy consumption	%	81	82	80
Cold rolled steel company	Total energy consumption	6,108,587	6,325,492	5,925,217	
	Direct energy	LNG	2,496,093	2,664,429	2,361,713
		LPG	273	279	335
		Diesel	12,664	14,516	13,754
		Gasoline	244	269	380
		Others	15	75	108
	Indirect energy	Electricity	3,464,518	3,645,908	3,426,335
		Others	134,781	0	122,592
	Energy intensity	GJ/t	4	4	4
	Natural gas share of energy consumption	%	41	42	40
	Electricity share of energy consumption	%	57	58	58

*Emission intensity is calculated based on production volume.

* Discrepancy caused in energy consumption due to the difference in the unit (TJ→GJ) used from the GHG Assurance Statement

* Data before the confirmation of the GHG Assurance statement used in the previous sustainability report

GHG

Category	Unit	2020	2021	2022
Company-wide	Total emissions	1,831	1,877	1,878
	Direct emissions (Scope1)	655	686	691
	Indirect emissions (Scope 2)	1,166	1,191	1,187
	GHG intensity	0.31	0.31	0.32
Hot rolled steel company	Total emissions	1,533	1,567	1,592
	Direct emissions (Scope1)	536	549	568
	Indirect emissions (Scope 2)	997	1,018	1,024
	GHG intensity	0.35	0.35	0.35
Cold rolled steel company	Total emissions	297	310	287
	Direct emissions (Scope1)	129	137	123
	Indirect emissions (Scope 2)	168	173	164
	GHG intensity	0.20	0.20	0.21

* Emission intensity is calculated based on production volume.

Environmental Investment

Category	Unit	2020	2021	2022
Company-wide	Total amount of environmental investments	82	82	202
	Water quality	2	10	19
	Air	55	57	72
	GHG	0	0	8
	Renewable energy	0	0	97
	Resource recovery and others	25	15	7
Hot rolled steel company	Total amount of environmental investments	40	47	138
	Water quality	KRW 2	6	10
	Air	100 24	28	21
	GHG	million 0	0	7
	Renewable energy	0	0	97
	Resource recovery and others	14	13	4
Cold rolled steel company	Total amount of environmental investments	42	35	64
	Water quality	0	4	9
	Air	31	29	51
	GHG	0	0	1
	Renewable energy	0	0	0
	Resource recovery and others	11	2	3

System Operation

Category	Unit	2020	2021	2022	
Company-wide	Energy management system certification (ISO 50001) introduction rate	%	50	50	100
	No. of workplaces with the certification	Number	2	2	4
	No. of workplaces subject to the certification	Number	4	4	4
	Environmental management system certification (ISO14001) introduction rate	%	100	100	100
	No. of workplaces with the certification	Number	4	4	4
	No. of workplaces subject to the certification	Number	4	4	4
Violation of environmental laws and regulations	Times	1	1	0	
Hot rolled steel company	Energy management system certification (ISO 50001) introduction rate	%	67	67	100
	No. of workplaces with the certification	Number	2	2	3
	No. of workplaces subject to the certification	Number	3	3	3
	Environmental management system certification (ISO14001) introduction rate	%	100	100	100
	No. of workplaces with the certification	Number	3	3	3
	No. of workplaces subject to the certification	Number	3	3	3
Violation of environmental laws and regulations	Times	1	1	0	
Cold rolled steel company	Energy management system certification (ISO 50001) introduction rate	%	0	0	100
	No. of workplaces with the certification	Number	0	0	1
	No. of workplaces subject to the certification	Number	1	1	1
	Environmental management system certification (ISO14001) introduction rate	%	100	100	100
	No. of workplaces with the certification	Number	1	1	1
	No. of workplaces subject to the certification	Number	1	1	1
Violation of environmental laws and regulations	Times	0	0	0	

1) Number of violations of environmental laws and regulations disclosed in the business report

Safety

Category	Unit	2020	2021	2022
Company-wide	No. of injuries ¹⁾	16 ³⁾	25	19
	In-house	11	21	15
	Suppliers	5 ³⁾	4	4
Hot rolled steel company	No. of injuries ¹⁾	15	18	16
	In-house	10	14	12
	Suppliers	5	4	4
Cold rolled steel company	No. of injuries ¹⁾	1	7	3
	In-house	1	7	3
	Suppliers	0	0	0
Company-wide	Accident rate ²⁾	0.44 ³⁾	0.63	0.47
	In-house	0.46	0.84	0.58
	Suppliers	0.41	0.27	0.28
Hot rolled steel company	Accident rate ²⁾	0.58	0.97	0.62
	In-house	0.65	0.88	0.73
	Suppliers	0.62	0.41	0.43
Cold rolled steel company	Accident rate ²⁾	0.08	0.49	0.21
	In-house	0.11	0.77	0.32
	Suppliers	0.00	0.00	0.00
Company-wide	No. of fatalities	0	1	0
	In-house	0	1	0
	Suppliers	0	0	0
Hot rolled steel company	No. of fatalities	0	0	0
	In-house	0	0	0
	Suppliers	0	0	0
Cold rolled steel company	No. of fatalities	0	1	0
	In-house	0	1	0
	Suppliers	0	0	0

1) The number of injured persons refers to injuries that need treatment for more than 3 days, and all supplier indicators shown are based on in-house suppliers.

2) Accident rate = [(n=No. of fatalities + No. of injured) / No. of full-time workers] × 100

3) Correction made due to an error in calculation

Category	Unit	2020	2021	2022
Company-wide	Fatalities rate	0.00	2.50	0.00
	In-house	0.00	3.99	0.00
	Suppliers	0.00	0.00	0.00
Hot rolled steel company	Fatalities rate	0.00	0.00	0.00
	In-house	0.00	0.00	0.00
	Suppliers	0.00	0.00	0.00
Cold rolled steel company	Fatalities rate	0.00	6.98	0.00
	In-house	0.00	10.94	0.00
	Suppliers	0.00	0.00	0.00
Company-wide	Number of occupational diseases ⁴⁾	6 ⁵⁾	3 ⁵⁾	1
	In-house	6 ⁵⁾	3 ⁵⁾	1
	Suppliers	0	0	0
Hot rolled steel company	Number of occupational diseases ⁴⁾	5	2	1
	In-house	5	2	1
	Suppliers	0	0	0
Cold rolled steel company	Number of occupational diseases ⁴⁾	1	1	0
	In-house	1	1	0
	Suppliers	0	0	0
Closed days due to disaster ⁶⁾		2,636 ⁵⁾	10,117 ⁵⁾	1,590
Hot rolled steel company		2,056	1,699	1,487
Cold rolled steel company		580	8,418	103
Severity rate ⁷⁾		0.30 ⁵⁾	1.05 ⁵⁾	0.15
Hot rolled steel company		0.37	0.28	0.24
Cold rolled steel company		0.18	2.45	0.03
Rate of workplaces certified for occupational health and safety management system (KOSHA-MS)		16	58	100
Hot rolled steel company		26	81	100
Cold rolled steel company		0	0	100

4) The number of occupational diseases refers to the number of those who have passed the deliberation of the Korea Labor Welfare Service and personal diseases are excluded.

5) Data changed due to the change in the criteria for data calculation

6) Holidays due to disaster are calculated excluding those who have not returned to work as of December 31, 2022, and data may vary depending on the time of reinstatement

7) Severity rate calculation formula: Total number of days worked for nursing care / Number of hours worked per year × 1000

*Yearly working hours: (No. of in-house employees + No. of supplier employees) × 8 hours × 300 days / year

Social

Employment

Category		Unit	2020	2021	2022	
No. of employees	Total		2,513	2,567	2,538	
	Executive	Male	23	30	30	
		Female	0	0	0	
	Regular employee	Male	Persons	2,346	2,308	2,349
		Female		110	118	120
	Non-regular employee	Male	31	111	39	
Female		3	0	0		
No. of new employees (employment type & gender)	Total		84	179	129	
	Regular employee	Male	46	66	66	
		Female	Persons	6	9	12
	Non-regular employee	Male		29	104	51
		Female	3	0	0	

1) Data changed due to the change in the criteria for data calculation

Retention and Retirement

Category		Unit	2020	2021	2022
Average retention period	Total		15.5	15.0	15.2
	Male	Years	15.8	15.3	15.4
	Female		8.8	9.3	9.8
Voluntary turnover rate ¹⁾ (by gender)	Total		1.46	1.39	3.06
	Male	%	1.45	1.42	2.84
	Female		1.75	0.84	7.44
No. of retiree	Persons		84	76	65

1) The voluntary turnover rate excludes dismissal and regular retirement.

Training and Growth

Category		Unit	2020	2021	2022	
Employee training	Training costs	Annual costs	100 million KRW	8.4	10.2	15.1
		Per capita	KRW	330,803	396,122	593,183
	Training hours	Annual hours	Hours	34,049	47,982	68,283
		Hours per capita	Hours	13.5	18.7	26.9
Education for those who are supposed to retire		Persons	75	63	45	

Labor-Management Culture

Category		Unit	2020	2021	2022
Union membership status	Employees subject to union membership	Persons	2,057	1,994	1,956
	No. of union members		1,424	1,452	1,460
	Union membership rate	%	69.2	72.8	74.6

Diversity

Category	Unit	2020	2021	2022
Female executives and managers ¹⁾	Total	0	0	0
	Executives	Persons	0	0
	Team leaders		0	0
No. of employees with disabilities	Total	42	40	35
	Employees	Persons	42	40
	Team leaders		0	0
Employment rate of the disabled		2.0	1.8	1.4

1) The manager refers to someone who has the authority of personnel management, decision-making, or budget.

Category	Unit	2022	
Executives	Male	30	
Employees in administrative services	General manager	Male	283
		Female	8
	Senior manager	Male	153
		Female	29
	Manager	Male	76
		Female	18
Associate	Male	60	
	Female	65	
Employees in technical services	General manager	13	
	Senior manager	159	
	Manager	Male	344
	Associate	1,012	
	Junior associate	288	
Total		2,538	

Family and Maternity Protection

Category	Unit	2020	2021	2022
Childbirth leave	Total	53	64	61
	Male	Persons	51	60
	Female		2	4
Childcare leave	Total	8	9	12
	Male	Persons	5	5
	Female		3	4
Employees who returned to work after childcare leave	Total	8	8	8
	Male	Persons	3	5
	Female		5	3
Employees who work for 12 months or more after using childcare leave ¹⁾	Total	8	7	7
	Male	Persons	4	2
	Female		4	5

1) Data changed due to the change in the criteria for data calculation

Social Contribution and Communication with Local Communities

Category	Unit	2020	2021	2022
Investment in social contribution	KRW million	321	691	572
Participants in volunteer works	Persons	891	1,138	2,059

Governance

Board of Directors

Category	Unit	2020	2021	2022
BOD composition	Executive directors	4	4	2
	Non-executive directors	6	6	5
	Ratio of non-executive directors	60	60	71
	Female registered executives	0	0	1
BOD operation	Total BOD meetings held	28	28	31
	Regular BOD meetings held	9	4	7
	Ad-hoc BOD meetings held	19	24	24
Agenda items at the BOD	Total issues	46	42	56
	Agenda items objected or amended	0	0	0
Average attendance rate of directors	Total	96	91	90
	Executive director attendance rate	95	88	90
	Non-executive director attendance rate	96	93	91
Average retention period of directors (based on non-executive directors)	Years	2.58	3.58	3.57

Remuneration of Directors

Category	Unit	2020	2021	2022	
Total remuneration paid to directors	Total	4,855	6,939	7,031	
	Remuneration of executive directors	4,539	6,531	6,674	
	Remuneration of non-executive directors (excluding the Audit Committee members)	KRW million	53	68	67
	Remuneration of the Audit Committee members ¹⁾	263	340	290	
Payment ratio to remuneration limit	%	49	69	70	

1) All four members of the Audit Committee are concurrently working as non-executive directors.

Audit Committee

Category	Unit	2020	2021	2022
Composition	No. of members	5	5	4
	Ratio of non-executive directors	100	100	100
	Experts in accounting and finance	2	2	1
Committee operation	No. of meetings held	5	6	5
	Non-executive director attendance rate	92	97	85
Audit education from professional institutes	Times	4	5	6

Share Ownership

Category	Unit	2020	2021	2022
Ownership of the largest shareholder and persons with special relationships		26.2	26.3	26.2
Ownership of registered executive directors excluding the largest shareholder and persons with special relationships	%	0.01	0.03	0.00
Ownership of 5% or more equity holders (excluding persons with special relationships)		8.7	15.7	14.7

GRI Standards 2021

Universal Standards(GRI 2)

Classification	Disclosure	Indicators	Page
Organizational profile and report practices	2-1	Organizational details	2, 6~9, 14
	2-2	Entities included in the organization's sustainability reporting	2
	2-3	Reporting period, frequency, and contact point	2
	2-4	Restatements of information	2
	2-5	External assurance	85~86
Corporate activities and employees	2-6	Activities, value chain and other business relationships	12~14
	2-7	Employees	80
	2-8	Workers who are not employees	80
Governance	2-9	Governance structure and composition	66~67
	2-10	Nomination and selection of the highest governance body	66~67
	2-11	Chair of the highest governance body	66
	2-12	Role of the highest governance body in overseeing the management of impacts	66
	2-13	Delegation of responsibility for managing impacts	67
	2-14	Role of the highest governance body in sustainability reporting	67
	2-15	Conflicts of interest	67
	2-16	Communication of critical concerns	67
	2-17	Collective knowledge of the highest governance body	66
	2-21	Annual total compensation ratio	82
	Strategies, policies, and practices	2-22	Statement on sustainable development strategy
2-23		Policy commitments	34~36, 63~64, 68~69, 70~71
2-24		Embedding policy commitments	34~36, 63~64, 68~69, 70~71
2-25		Processes to remediate negative impacts	29~32, 35, 47
2-26		Mechanisms for seeking advice and raising concerns	34
2-27		Compliance with laws and regulations	For more information about Dongkuk Holdings' legal breaches and violations, please see the '3. Matters Related to Sanctions' section on page 315 of the business report.
2-28		Membership associations	19
Stakeholder engagement	2-29	Approach to stakeholder engagement	19
	2-30	Collective bargaining agreements	80

Universal Standards(GRI 3)

Classification	Disclosure	Indicators	Page
Disclosures on material topics	3-1	Process to determine material topics	15~16
	3-2	List of material topics	17, 47
	3-3	Management of material topics	17

Economic Topics(GRI 200)

Classification	Disclosure	Indicators	Page
GRI 205: Anti-Corruption	205-1	Operations assessed for risks related to corruption	CP grade evaluation to be conducted (2026 ~ 2028)
	205-2	Communication and training about anti-corruption policies and procedures	69
	205-3	Confirmed incidents of corruption and actions taken	See the '3. Matters Related to Sanctions' section on page 315 of the business report.
GRI 206 : Anti-competitive Behavior	206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	N/A

Environmental topics(GRI 300)

Classification	Disclosure	Indicators	Page
GRI 301: Materials	301-1	Materials used by weight or volume	46, 75
	301-2	Recycled input materials used	75
GRI 302 : Energy	302-1	Energy consumption within the organization	46, 77
	302-2	Energy consumption outside of the organization	N/A
	302-3	Energy intensity	32
	302-4	Reduction of energy consumption	53~54
	302-5	Reductions in energy requirements of products and services	N/A
GRI 303 : Water	303-1	Interactions with water as a shared resource	50, 76
	303-2	Management of water discharge-related impacts	50
	303-3	Water withdrawal	50, 76
	303-4	Water discharge	76
	303-5	Water consumption	76
GRI 305 : Emissions	305-1	Direct (Scope 1) GHG emissions	32, 78
	305-2	Energy indirect (Scope 2) GHG emissions	32, 78
	305-3	Other indirect (Scope 3) GHG emissions	To be managed
	305-4	GHG emissions intensity	78
	305-5	Reduction of GHG emissions	To be managed
	305-6	Emissions of ozone-depleting substances (ODS)	N/A
	305-7	Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	75
GRI 306 : Waste	306-1	Waste generation and significant waste-related impacts	47, 52
	306-2	Management of significant waste-related impacts	52, 77
	306-3	Waste generated	52, 77
	306-4	Waste diverted from disposal	52, 77
	306-5	Waste directed to disposal	52, 77
GRI 308 : Supplier Environmental Assessment	308-2	Negative environmental impacts in the supply chain and actions taken	63

Social topics(GRI 400)

Classification	Disclosure	Indicators	Page
GRI 401 : Employment	401-1	New employee hires and employee turnover	36,80
	401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	38,58
	401-3	Parental leave	38,81
GRI 403 : Occupational Health and Safety	403-1	Occupational health and safety management system	23~26
	403-2	Hazard identification, risk assessment, and incident investigation	24,25
	403-3	Occupational health services	To be disclosed
	403-4	Worker participation, consultation, and communication on occupational health and safety	26
	403-5	Worker training on occupational health and safety	Provided safety training tailored to business sites in addition to statutory education
	403-6	Promotion of worker health	Manufactured earplugs for hearing health, operated health improvement programs including job stress test and counseling Selected as an exemplary workplace for employee health improvement by the Korea Occupational Safety and Health Agency (Dangjin and Busan Works)
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	26
	403-8	Workers covered by an occupational health and safety management system	26
	403-9	Work-related injuries	79
	403-10	Work-related ill health	79
GRI 404 : Training and Education	404-1	Average hours of training per year per employee	80
	404-2	Programs for upgrading employee skills and transition assistance programs	56, 57, 80
GRI 405 : Diversity and Equal Opportunity	405-1	Diversity of governance bodies and employees	36, 67, 81
GRI 406 : Non-discrimination	406-1	Incidents of discrimination and corrective actions taken	36
GRI 413 : Local Communities	413-1	Operations with local community engagement, impact assessments, and development programs	59, 60, 81
GRI 414 : Supplier Social Assessment	414-1	New suppliers that were screened using social criteria	Plan to conduct ESG assessments of new suppliers (2024)
	414-2	Negative social impacts in the supply chain and actions taken	N/A

Independent Assurance Statement

To readers of 2023 Dongkuk Holdings Sustainability Report

Introduction

Korea Management Registrar (KMR) was commissioned by Dongkuk Steel to conduct an independent assurance of its 2023 Dongkuk Holdings Sustainability Report (the "Report"). The data and its presentation in the Report is the sole responsibility of the management of Dongkuk Steel. KMR's responsibility is to perform an assurance engagement as agreed upon in our agreement with Dongkuk Steel and issue an assurance statement.

Scope and Standards

Dongkuk Steel described its sustainability performance and activities in the Report. Our Assurance Team carried out an assurance engagement in accordance with the AA1000AS v3 and KMR's assurance standard SRV1000. We are providing a Type 2, moderate level assurance. We evaluated the adherence to the AA1000AP (2018) principles of inclusivity, materiality, responsiveness and impact, and the reliability of the information and data provided using the Global Reporting Initiative (GRI) Index provided below. The opinion expressed in the Assurance Statement has been formed at the materiality of the professional judgment of our Assurance Team.

Confirmation that the Report was prepared in accordance with GRI standards 2021 was included in the scope of the assurance. We have reviewed the topic-specific disclosures of standards which were identified in the materiality assessment process.

- GRI Sustainability Reporting Standards 2021
- Universal standards
- Topic specific standards
 - GRI 205: Anti-Corruption
 - GRI 302: Energy
 - GRI 305: Emissions
 - GRI 306: Effluents and Waste
 - GRI 403: Occupational Health and Safety

- GRI 414: Supplier Social Assessment

As for the reporting boundary, the engagement excludes the data and information of Dongkuk Steel' partners, suppliers and any third parties.

KMR's Approach

To perform an assurance engagement within an agreed scope of assessment using the standards outlined above, our Assurance Team undertook the following activities as part of the engagement:

- reviewed the overall Report;
- reviewed materiality assessment methodology and the assessment report;
- evaluated sustainability strategies, performance data management system, and processes;
- interviewed people in charge of preparing the Report;
- reviewed the reliability of the Report's performance data and conducted data sampling;
- assessed the reliability of information using independent external sources such as Financial Supervisory Service's DART and public databases.

Limitations and Recommendations

KMR's assurance engagement is based on the assumption that the data and information provided by Dongkuk Steel to us as part of our review are provided in good faith. Limited depth of evidence gathering including inquiry and analytical procedures and limited sampling at lower levels in the organization were applied. To address this, we referred to independent external sources such as DART and National Greenhouse Gas Management System (NGMS) and public databases to challenge the quality and reliability of the information provided.

Conclusion and Opinion

Based on the document reviews and interviews, we had several discussions with Dongkuk Steel on the revision of the Report. We reviewed the Report's final version in order to make sure that our recommendations for improvement and revision have been reflected. Based on the work performed, it is our opinion that the Report applied the GRI Standards. Nothing comes to our attention to suggest that the Report was not prepared in accordance with the AA1000AP (2018) principles.

Independent Assurance Statement

Inclusivity

Dongkuk Steel has developed and maintained different stakeholder communication channels at all levels to announce and fulfill its responsibilities to the stakeholders. Nothing comes to our attention to suggest that there is a key stakeholder group left out in the process. The organization makes efforts to properly reflect opinions and expectations into its strategies.

Materiality

Dongkuk Steel has a unique materiality assessment process to decide the impact of issues identified on its sustainability performance. We have not found any material topics left out in the process.

Responsiveness

Dongkuk Steel prioritized material issues to provide a comprehensive, balanced report of performance, responses, and future plans regarding them. We did not find anything to suggest that data and information disclosed in the Report do not give a fair representation of Dongkuk Steel' actions.

Impact

Dongkuk Steel identifies and monitors the direct and indirect impacts of material topics found through the materiality assessment, and quantifies such impacts as much as possible.

Reliability of Specific Sustainability Performance Information

In addition to the adherence to AA1000AP (2018) principles, we have assessed the reliability of economic, environmental, and social performance data related to sustainability performance. We interviewed the in-charge persons and reviewed information on a sampling basis and supporting documents as well as external sources and public databases to confirm that the disclosed data is reliable. Any intentional error or misstatement is not noted from the data and information disclosed in the Report.

Competence and Independence

KMR maintains a comprehensive system of quality control including documented policies and procedures in accordance with ISO/IEC 17021:2015 - Requirements for bodies providing audit and certification of management systems. This engagement was carried out by an independent team of sustainability assurance professionals. KMR has no other contract with Dongkuk Steel and did not provide any services to Dongkuk Steel that could compromise the independence of our work.

June 2023 Seoul, Korea



SRV1000
Sustainability Committee Assurance



AA1000
Licensed Report
000-129/V3-9DRRJ

CEO *E. J. Hwang*

Verification Statement on 2022 Greenhouse Gas Emission Report

Verification Target

Korean Foundation for Quality (hereinafter "KFQ") has conducted the verification of "2022 Report on Quantity of emitted Greenhouse gas Consumption (hereinafter ' Inventory Report ") for DONGKUKSTEEL MILL CO., LTD (hereinafter "Company")

Verification Scope

KFQ's verification was focused on all the facilities which emitted the greenhouse gas during the year of 2022 under Company's operational control and organizational boundary. GHG emissions from direct and indirect emission sources (Scope 1 and 2) were calculated for all GHG emission facilities under the operational control of each company.

Verification Criteria

The verification process was based on 'Rule for emission reporting and certification of greenhouse gas emission trading Scheme (Notification No. 2021-112 of Ministry of Environment)', 'Rules for verification of operating the greenhouse gas emission trading scheme (Notification No. 2022-279 of Ministry of Environment)'.

Level of Assurance

The Verification has been planned and conducted as the 'Rules for verification of operating the greenhouse gas emission trading scheme', and the level of assurance for verification shall be satisfied as reasonable level of assurance. And it confirmed through the internal review whether the process before the verification conducted effectively.

Verification Limitation

The verification shall contain the potential inherent limitation in the process of application of the verification criteria and methodology.

Verification Opinions

Regarding to the data of the Greenhouse Gas Emission Consumption from the report through the verification, KFQ provides our verification opinions as below;

- 1) The Inventory Report has been stated in accordance with 'Rule for emission reporting and certification of greenhouse gas emission trading Scheme'
- 2) The result of Material discrepancy satisfied the criteria for an organization that emits 500,000 or more and less than 5,000,000 tCO₂-e shall not exceed 2.5% from total emission as per 'Rules for verification of operating the greenhouse gas emission trading scheme'
- 3) Thus, KFQ conclude that the Greenhouse Gas Emissions of Each Company in 2022 is correctly calculated and stated in accordance with 'Rule for emission reporting and certification of greenhouse gas emission trading Scheme'.

Emission calculation results

(Unit : tCO₂eq)

Report Year	Scope 1	Scope 2	Total
2022	690,986.040	1,187,731.298	1,878,714

There is a difference between the total emissions and the sum of emissions by business site (truncated emissions by business site are added together by company).



May 25th, 2023

Korean Foundation for Quality CEO Ji-Young Song

Ji Young Song

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