POSCO 2023 ESG Factbook

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Reporting Principles

This report was prepared in accordance with the ESG quantitative indicators : indicator definition book(included in the ESG Factbook appendix), which were referenced from global disclosure standards by POSCO.

Reporting Period

This report contains quantitative performance from January 1, 2023, to December 31, 2023, and includes three years of data from 2021 to 2023 to enable trend analysis.

Reporting Scope

This report includes all domestic worksites(Pohang, Gwangyang, Seoul, Songdo) and some overseas production subsidiaries(PT KRAKATAU POSCO in Indonesia, POSCO YAMATO VINA in Vietnam, POSCO-Thainox in Thailand), as well as POSCO Zhangjiagang Stainless Steel in China and POSCO-Maharashtra in India, which are under entruseted management. Only information from 2023 is included for POSCO-Thainox and POSCO-Maharashtra.

Assurance

To ensure credibility of the reporting, this report was assured in accordance with ISAE 3000 by Samil PricewaterhouseCoopers, an independent assurance provider.

Domestic Worksites

E (Environmental)

GHG Emissions

GHG Emissions	Unit	2021	2022	2023
Direct/indirect emissions (Scope 1&2)[1)]	tCO_2e	78,490,212	70,185,623	71,971,900
Direct emissions (Scope1)	tCO_2e	77,101,095	68,305,993	70,588,012
Indirect emissions (Scope2)	tCO_2e	1,389,117	1,879,630	1,383,895
Direct/indirect emissions intensity (based on crude steel production, Scope 1&2)	tCO_2e/ton	2.05	2.05	2.02
Other indirect emissions (Scope 3) [2)]	tCO_2e	12,872,905	7,107,502	7,419,787
Other indirect emissions (Scope 3, upstream)	tCO_2e	5,038,027	4,570,474	5,229,508
Purchased goods & services ①	tCO_2e	3,422,572	2,583,823	2,764,127
Capital goods ②	tCO_2e	-	857	563
Fuel and energy-related activities not included in Scope 1&2 ③	tCO_2e	-	298,540	334,942
Transportation of raw and subsidiary materials ④	tCO_2e	1,605,907	1,537,143	1,926,052
Waste generated in operations ⑤	tCO_2e	-	141,520	195,608
Business travel ⑥	tCO_2e	174	346	486
Employee commuting ⑦	tCO_2e	9,374	8,245	7,730
Other indirect emissions (Scope 3, downstream)	tCO_2e	7,834,878	2,537,028	2,190,279
Downstream transportation & distribution ⑧	tCO_2e	-	489,786	26,936
Downstream leased assets ⑨	tCO_2e	2,087,193	1,888,240	1,974,893
Downstream investments ⑩	tCO_2e	5,747,685	159,002	188,450

1) The total of direct and indirect emissions is derived by truncating decimal points from each worksite's direct and indirect emissions (Scope 1 & 2), which may result in discrepancies

2) The calculation boundaries for all categories are restricted to Pohang and Gwangyang Steelworks

① This is limited to purchased raw materials that have the most direct impact on steel production among purchased products (including iron ore, coal, and limestone, which together account for over 90% of usage).

② Calculated based on assets acquired by POSCO in 2023, including steel mill equipment and vehicles

③ Emissions are calculated using the carbon footprint from the energy used by the steelworks

④ ⑧ Emissions from transportation of certain sold products, based on the terms of delivery (cost of freight), have been reclassified (downstream → upstream)

⑤ Calculated based on commissioned waste from worksites, utilizing data from the government's waste management system 'Allbaro Sys.'

⑥ ⑦ Calculated from the business travel and commuting data of employees at Pohang and Gwangyang Steelworks

⑨ Calculated from the Scope 1 & 2 emissions of the lime calcination plant leased by POSCO FUTURE M among leased assets

⑩ Increase compared to the previous year is due to the inclusion of emissions data from other investment companies

Energy

Energy [1]	Unit	2021	2022	2023
Total energy consumed	GJ	380,052,800	333,781,599	354,002,733
Energy directly consumed	GJ	369,264,360	319,078,303	342,940,165
Natural gas	GJ	41,270,222	30,750,384	45,697,279
Renewable fuel	GJ	0	0	0
Kerosene	GJ	0	0	2,643
Gasoline (total)	GJ	4,587	6,249	5,569
Gasoline (for vehicles)	GJ	4,587	6,249	5,569
Diesel (total)	GJ	189,168	218,348	189,682
Diesel (for vehicles)	GJ	185,423	195,695	184,969
LPG (total)	GJ	34	30	0
LPG (for vehicles)	GJ	34	30	0
Off-gas	GJ	327,800,350	288,103,292	294,493,858
Propane	GJ	0	0	5,377
Other fuels	GJ	0	0	2,545,757
Energy indirectly consumed	GJ	10,788,169	14,703,073	11,058,453
Electricity	GJ	10,746,994	14,618,973	10,834,095
Steam	GJ	41,175	84,100	224,358
Percentage of electricity consumed	%	2.8	4.4	3.1
Renewable energy consumed [2]	GJ	270	223	4,116
Percentage of renewable energy consumed	%	0.00007	0.00007	0.00116
Total energy intensity (based on crude steel production)	GJ/ton	9.9	9.8	9.9
Electricity sold [3]	GJ	13,840	8,671	4,338

1) The energy consumption for 2021 and 2022 is limited to the Pohang/Gwangyang Steelworks, while the energy consumption for 2023 is on a company-wide basis. Total energy consumption includes K-ETS-based energy consumption and self-generated renewable energy consumption.

2) For 2021 and 2022, renewable energy consumption is limited to self-generated renewable energy consumption. For 2023, renewable energy consumption includes certified renewable energy consumption (purchased renewable energy and self-generated renewable energy consumption).

3) Applies only to renewable energy sales.

Water (Overall)

Water (Overall)	Unit	2021	2022	2023
Total water withdrawal	ton	143,218,271	145,115,608	153,645,403
Municipal water supply	ton	0	0	0
Surface water	ton	100,116,109	108,957,548	115,497,855
Groundwater	ton	6,298,260	3,451,420	4,154,290
Desalinated water	ton	7,390,041	3,608,003	5,044,618
Treated municipal wastewater	ton	29,413,861	29,098,637	28,948,640
Total water withdrawn from regions with 'High' baseline water stress	ton	0	0	79,009,396
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	0	0	0
Percentage of water withdrawn from regions with 'High' and 'Extremely High' baseline water stress	%	0	0	51.42
Total water withdrawn intensity (based on crude steel production)	ton/ton	3.7	4.2	4.3
Total water consumed	ton	68,353,529	73,375,512	72,416,383
Total water withdrawn from regions with 'High' baseline water stress	ton	0	0	35,888,873
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	0	0	0
Percentage of water withdrawn from regions with 'High' and 'Extremely High' baseline water stress	%	0	0	49.56
Total wastewater discharge	ton	74,864,742	71,740,096	81,229,020
Reused wastewater	ton	47,804,712	44,625,210	40,390,660
Percentage of reused wastewater [1)]	%	25.0	23.5	20.8
Number of worksites using recycled water	Count	2	2	2
TOC (Total Organic Carbon) [2)]	ton	-	96	291
T-N	ton	948	685	671
SS	ton	169	135	137

1) Data adjustment for 2021 and 2022 due to formula change

2) Measurements began in 2022, following the transition of the Ministry of Environment's metric for measuring organic substances in water pollutants to TOC. The 2022 performance data is limited to Gwangyang.

Water (Pohang)

Water (Pohang)	Unit	2021	2022	2023
Total water withdrawal	ton	-	-	69,591,389
Municipal water supply	ton	-	-	-
Surface water	ton	-	-	36,488,459
Groundwater	ton	-	-	4,154,290
Desalinated water	ton	-	-	-
Treated municipal wastewater	ton	-	-	28,948,640
Total water withdrawn from regions with ‘High’ baseline water stress	ton	-	-	-
Total water withdrawn from regions with ‘Extremely High’ baseline water stress	ton	-	-	-
Percentage of water withdrawn from regions with ‘High’ and ‘Extremely High’ baseline water stress	%	-	-	-
Total water withdrawn intensity (based on crude steel production)	ton/ton	-	-	4.8
Total water consumed	ton	-	-	34,235,266
Total water withdrawn from regions with ‘High’ baseline water stress	ton	-	-	-
Total water withdrawn from regions with ‘Extremely High’ baseline water stress	ton	-	-	-
Percentage of water withdrawn from regions with ‘High’ and ‘Extremely High’ baseline water stress	%	-	-	-
Reused wastewater	ton	-	-	19,516,566
Percentage of reused wastewater	%	-	-	21.9

Water (Gwangyang)

Water (Gwangyang)	Unit	2021	2022	2023
Total water withdrawal	ton	-	-	84,054,014
Municipal water supply	ton	-	-	-
Surface water	ton	-	-	79,009,396
Groundwater	ton	-	-	-
Desalinated water	ton	-	-	5,044,618
Treated municipal wastewater	ton	-	-	-
Total water withdrawn from regions with ‘High’ baseline water stress	ton	-	-	84,054,014
Total water withdrawn from regions with ‘Extremely High’ baseline water stress	ton	-	-	-
Percentage of water withdrawn from regions with ‘High’ and ‘Extremely High’ baseline water stress	%	-	-	100
Total water withdrawn intensity (based on crude steel production)	ton/ton	-	-	4.0
Total water consumed	ton	-	-	38,181,117
Total water withdrawn from regions with ‘High’ baseline water stress	ton	-	-	35,888,873
Total water withdrawn from regions with ‘Extremely High’ baseline water stress	ton	-	-	-
Percentage of water withdrawn from regions with ‘High’ and ‘Extremely High’ baseline water stress	%	-	-	94.0
Reused wastewater	ton	-	-	20,874,094
Percentage of reused wastewater	%	-	-	19.9

Waste

Waste	Unit	2021	2022	2023
Total waste generated	ton	21,806,614	19,116,670	19,523,945
Recycled	ton	21,509,991	18,787,137	19,242,974
Incinerated	ton	60,302	62,031	52,034
Landfilled	ton	236,196	267,470	228,633
Disposed in other ways	ton	125	32	304
General waste generated	ton	21,712,129	19,020,091	19,415,454
Recycled	ton	21,433,251	18,727,793	19,184,667
Incinerated	ton	49,900	45,485	43,342
Landfilled	ton	228,978	246,813	187,445
Disposed in other ways	ton	0	0	0
Designated waste generated	ton	94,485	96,579	108,491
Recycled	ton	76,740	59,344	58,307
Incinerated	ton	10,401	16,546	8,691
Landfilled	ton	7,219	20,657	41,188
Disposed in other ways	ton	125	32	304
Total waste generated intensity (based on crude steel production)	ton/ton	0.57	0.56	0.55
Percentage of total waste recycled	%	98.6	98.3	98.56

Resource recycling

Resource recycling	Unit	2021	2022	2023
Total Blast furnace slag recycled	ton	12,441,549	10,283,369	10,441,336
Granulated slag recycled	ton	11,454,700	9,422,994	8,902,915
For cement industry	ton	11,243,762	9,210,120	8,737,012
For other uses, including fertilizer	ton	210,938	212,874	165,903
Air-cooled slag recycled	ton	986,849	860,375	1,538,421

Air Pollutants

Air Pollutants	Unit	2021	2022	2023
Total emissions of air pollutants	ton	61,445	51,806	51,707
NOx	ton	35,755	27,877	27,796
SOx	ton	25,474	23,750	23,764
Dust	ton	216	180	147

Other Environmental Metrics

Other Environmental Metrics	Unit	2021	2022	2023
Number of environmental regulation violations	Case	12	9	12
Number of water quality-related regulation violations	Case	3	1	2
Number of administrative actions due to violations of environmental regulations and rules	Case	11	9	12
Administrative fines	Case	3	1	7
Non-monetary penalties (improvement orders, etc.)	Case	8	8	2
Number of wastewater-related incidents	Case	0	0	1
Percentage of zero-emission vehicles owned	%	12	21	16
Number of zero-emission vehicles owned	Count	71	156	121
Total number of vehicles owned	Count	590	751	757

Environmental and Energy Management System

Environmental and Energy Management System	Unit	2021	2022	2023
Environmental management system (ISO 14001) certification				
Target worksites for certification	Count	2	2	2
Worksites with certification	Count	2	2	2
Certification rate	%	100	100	100
Energy management system (ISO 50001) certification				
Target worksites for certification	Count	2	2	2
Worksites with certification	Count	2	2	2
Certification rate	%	100	100	100

S (Social)

Human Resources

Human Resources	Unit	2021	2022	2023
Total number of employees	Persons	18,259	18,122	17,985
Number of executives	Persons	86	67	67
By Gender				
Males	Persons	84	66	63
Females	Persons	2	1	4
Percentage of females	%	2.3	1.5	6.0
By Age				
Under 30 years old	Persons	0	0	0
30-50 years old	Persons	2	0	0
Over 50 years old	Persons	84	67	67
Number of employees excluding executives	Persons	18,173	18,055	17,918
By Gender				
Males	Persons	17,126	17,046	16,918
Females	Persons	1,047	1,009	1,000
Percentage of females	%	5.8	5.6	5.6
By Age				
Under 30 years old	Persons	2,921	3,035	3,241
30-50 years old	Persons	7,365	7,353	7,472
Over 50 years old	Persons	7,887	7,667	7,205
Number of management employees [1)]	Persons	4,030	4,068	4,041
By Gender				
Males	Persons	3,974	3,997	3,970
Females	Persons	56	71	71
Percentage of females	%	1.39	1.75	1.76
By Age				
Under 30 years old	Persons	0	1	2
30-50 years old	Persons	1,088	1,193	1,363
Over 50 years old	Persons	2,942	2,874	2,676
Number of regular employees (permanent)	Persons	17,559	17,107	16,926
By Gender				
Males	Persons	16,561	16,147	15,970
Females	Persons	998	960	956

Percentage of females	%	5.7	5.6	5.65
Percentage of regular employees (permanent)	%	96.2	94.4	94.1
Number of contingent employees (contractors)	Persons	685	1,007	1,052
By Gender				
Males	Persons	635	957	1,004
Females	Persons	50	50	48
Percentage of females	%	7.3	5.0	4.6
Percentage of contingent employees (contractors)	%	3.8	5.6	5.9
Total new hires	Persons	1,192	1,336	1,512
By Gender				
Males	Persons	1,114	1,276	1,467
Females	Persons	78	60	45
Percentage of females	%	6.5	4.5	3.0
By Age				
Under 30 years old	Persons	681	882	974
30-50 years old	Persons	78	103	119
Over 50 years old	Persons	433	351	419
Total employee turnover	Persons	1,070	1,180	962
Turnover rate	%	5.6	6.5	5.3
Number of voluntary departures	Persons	359	568	424
Voluntary departure rate	%	2	3.1	2.3
Number of involuntary departures	Persons	711	612	538
Retirements at mandatory age	Persons	691	588	519
Layoffs	Persons	0	0	0
Other reasons for departure	Persons	20	24	19
Number of employees subjected to regular performance evaluations [2)]	Persons	15,819	15,300	15,663
By Gender				
Males	Persons	14,952	14,464	14,795
Females	Persons	867	836	868
By employment type				
Non fixed-term employees (permanent)	Persons	15,663	15,137	15,492
Fixed-term employees (contract-based)	Persons	156	163	171
Number of employees with disabilities	Persons	588	565	580
Number of employed veterans	Persons	711	738	705

1) Data adjustment for 2021 and 2022 due to changes in internal management criteria.

2) Data adjustment for 2021 and 2022 due to aggregation errors in some metric data.

Work-Life Balance

Work-life balance	Unit	2021	2022	2023
Number of employees using flexible work arrangements	Persons	4,935	5,316	8,185
Number of employees using infertility vacation	Persons	85	81	111
Parental leave				
Total parental leave-takers	Persons	106	152	260
Males	Persons	57	96	156
Females	Persons	49	56	104
Employees returning from parental leave	Persons	121	141	249
Males	Persons	46	79	149
Females	Persons	75	62	100

Training

Training	Unit	2021	2022	2023
Total training hours	Hours	1,332,271	1,769,947	1,808,072
Average training hours per person	Hours/Person	73	98	100.53
Total training cost	KRW million	26,954	22,938	31,934
Average training cost per person	KRW million/ Person	1.48	1.27	1.78
Occupational safety training				
Number of employees who completed compulsory occupational safety training [1)]	Persons	-	73,964	82,366
Information security training				
Total training hours	Hours	31,953	24,338	14,228
Number of employees who completed compulsory information security training	Persons	17,589	17,180	17,073
Non fixed-term employees (permanent)	Persons	16,795	16,158	15,980
Fixed-term employees (contract-based)	Persons	794	1,022	1,093

1) Duplicate calculation of completers based on mandatory training completion criteria

Retirement Pension Plans

Retirement Pension Plans	Unit	2021	2022	2023
Defined Benefit (DB) Retirement Pension				
Current value of defined benefit liabilities	KRW million	1,330,938	1,193,500	1,259,340
Fair value of plan assets	KRW million	1,543,469	1,475,606	1,557,782
Recognition of net asset amount under defined benefit plans	KRW million	212,531	282,106	298,442

Labor-Management Relations

Labor-Management relations	Unit	2021	2022	2023
Percentage of employees under collective bargaining agreements	%	100	100	100
Number of strikes causing work stoppages	Count	0	0	0

Safety

Safety	Unit	2021	2022	2023
LTIR	Person/200,000 hours	0.10	0.19	0.07
Employee LTIR	Person/200,000 hours	0.10	0.11	0.03
Contractor LTIR	Person/200,000 hours	0.10	0.25	0.10
LTIFR	Person/1 million hours	0.51	0.93	0.35
Employee LTIFR	Person/1 million hours	0.52	0.56	0.17
Contractor LTIFR	Person/1 million hours	0.51	1.26	0.50
TRIR [1)]	Person/200,000 hours	-	0.35	0.34
Employee TRIR	Person/200,000 hours	-	0.27	0.35
Contractor TRIR	Person/200,000 hours	-	0.41	0.32
TRIFR [1)]	Person/1 million hours	-	1.73	1.67
Employee TRIFR	Person/1 million hours	-	1.37	1.76
Contractor TRIFR	Person/1 million hours	-	2.06	1.60
Accident rate	%	0.06	0.13	0.07
Employee accident rate	%	0.04	0.08	0.02
Contractor accident rate	%	0.09	0.19	0.13
Fatality rate	‰	0.29	0.30	0
Employee fatality rate	‰	0	0	0
Contractor fatality rate	‰	0.60	0.63	0

Employees				
Number of employee LTIs	Persons	19	20	6
Number of employee TRIs [1)]	Persons	-	49	62
Number of employee fatalities	Persons	0	0	0
Number of employees injured in accidents	Persons	7	14	4
Number of employee near-miss accidents	Cases	5,149	6,391	5,987
Contractors				
Number of Contractor LTIs	Persons	20	50	20
Number of Contractor TRIs [1)]	Persons	-	82	64
Number of Contractor fatalities	Persons	1	1	0
Number of Contractor employees injured in accidents	Persons	15	30	16
Number of Contractor near-miss accidents	Cases	362	289	1,909
Safety and Health Management System (ISO 45001/OHSAS 18001/ KOSHA-MS) Certification				
Target worksites for certification	Count	2	2	2
Worksites with certification	Count	2	2	2
Certification rate	%	100	100	100
Quality Management System (ISO 9001 or IATF 16949) Certification				
Target worksites for certification	Count	2	2	2
Worksites with certification	Count	2	2	2
Certification rate	%	100	100	100

1) By identifying and addressing even minor incidents, preventive metrics have been introduced and managed to prevent major accidents (since 2022).

CSR Activity Achievements

CSR Activity Achievements	Unit	2021	2022	2023
Employee volunteering				
Hours volunteered	Hours	296,729	346,855	402,945
Number of volunteers	Persons	12,024	13,096	13,589
Volunteer hours per person	Hours/Person	16	19	21.8
Employee volunteering participation rate	%	67	73	73.6
CSR expenses	KRW million	49,115	54,257	52,171
Donations [1)]	KRW million	38,891	47,970	47,129
Investment in local communities	KRW million	9,323	5,306	4,788
Other	KRW million	901	982	254

1) CSR expenses in 2021, excluding expenses related to the GEM matching fund, has been revised from KRW 49.45 billion to KRW 49.11 billion.

Supply Chain Management

Supply Chain Management	Unit	2021	2022	2023
Supplier Relationship Management (SRM) assessments				
Total number of suppliers	Count	1,469	1,408	1,380
Number of assessed suppliers	Count	1,159	1,182	1,132
Percentage of assessed suppliers	%	78.9	83.9	82.02

G(Governance)

Production Information

Production Information	Unit	2021	2022	2023
Crude steel produced	kt	38,263	34,219	35,682
Blast furnace/converter	kt	36,907	33,255	34,625
Electric arc furnace	kt	1,356	964	1,057
Percentage from blast furnace/converter	%	96.5	97.2	97.03
Percentage from electric arc furnace	%	3.5	2.8	2.96
Main raw material consumed				
Iron ore	Mt	55.6	49.1	50.3
Metallurgical coal	Mt	25.4	22.7	23.2
Limestone	Mt	6.9	5.5	5.5

Fair Trade/Anti-Corruption

Fair Trade/Anti-Corruption	Unit	2021	2022	2023
Number of employees who completed fair trade training [1)]	Persons	3,136	3,783	3,836
Fair trade law violations				
Total number of instances for which fines were incurred for unfair competition and violation of the fair trade compliance	Cases	0	0	0
Number of ongoing cases	Cases	0	0	0
Number of resolved cases	Cases	0	0	0
Total number of instances for which non-monetary sanctions were incurred	Cases	0	0	0
Number of ongoing cases	Cases	0	0	0
Number of resolved cases	Cases	0	0	0
Total monetary value of fines for instances of unfair competition and violation of the fair trade compliance	KRW	0	0	0

1) Based on the individual completion of training programs, which may result in double counting the same individuals

Ethics

Ethics	Unit	2021	2022	2023
Number of ethics reports filed	Cases	322	403	420
Corruption	Cases	107	165	124
Violations of human rights	Cases	34	46	68
Abuse of power	Cases	19	16	23
Other	Cases	162	176	205
Number of resolved ethics reports	Cases	322	403	420
Ethics training				
Total training hours	Hours	36,444	35,198	23,320
Number of participants who completed compulsory ethics training	Persons	18,222	17,599	17,490

Domestic and International Subsidiaries

E (Environmental)

GHG Emissions

GHG Emissions [1]	Unit	2021	2022	2023
Direct/indirect emissions (Scope 1&2)	tCO_2e	86,839,473	78,597,749	80,670,542
Direct emissions (Scope 1)	tCO_2e	84,175,763	75,459,988	77,733,232
Indirect emissions (Scope 2)	tCO_2e	2,663,710	3,137,761	2,937,316
Direct/indirect emissions intensity [2] (Based on crude steel production, Scope 1&2)	tCO_2e/ton	2.02	2.03	2.02

1) The 2023 emissions of overseas subsidiaries have not been subject to third-party verification by a GHG verification agency.

2) Rolling mills that do not produce crude steel (POSCO Maharashtra, POSCO Thainox) are excluded.

Energy

Energy	Unit	2021	2022	2023
Total energy consumed	GJ	421,703,663	375,227,502	399,524,674
Energy directly consumed	GJ	400,355,301	350,246,630	376,575,153
Coal	GJ	481,616	455,618	578,042
Natural gas	GJ	46,499,182	35,806,533	53,490,729
Gasoline (total)	GJ	4,587	6,249	7,234
Diesel (total)	GJ	350,923	395,479	380,995
LPG (total)	GJ	34	30	2,837
Off-gas	GJ	353,018,961	313,582,720	319,561,539
Others	GJ	0	0	2,553,777
Energy indirectly consumed	GJ	21,341,433	24,973,020	22,716,209
Electricity	GJ	19,549,609	23,178,662	20,847,918
Steam	GJ	1,791,824	1,794,358	1,868,291
Renewable energy consumed	GJ	6,928	7,852	233,314
Total energy intensity (based on crude steel production) [1]	GJ/ton	9.8	9.7	10.0
Electricity sold	GJ	2,910,784	2,925,795	2,914,377

1) Rolling mills that do not produce crude steel (POSCO Maharashtra, POSCO Thainox) are excluded.

Water

Water	Unit	2021	2022	2023
Total water withdrawal [1]	ton	157,593,396	158,824,531	170,812,894
Municipal water supply	ton	9,947,095	9,536,820	12,877,787
Surface water	ton	104,544,139	113,129,651	119,787,559
Groundwater	ton	6,298,260	3,451,420	4,154,290
Desalinated water	ton	7,390,041	3,608,003	5,044,618
Treated municipal wastewater	ton	29,413,861	29,098,637	28,948,640
Total water withdrawn from regions with 'High' baseline water stress	ton	-	-	89,212,884
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	-	-	0
Total water withdrawn intensity [2] **(based on crude steel production)**	ton/ton	3.7	4.1	4.3
Total water consumed	ton	79,035,722	83,411,991	85,469,418
Total water withdrawn from regions with 'High' baseline water stress	ton	-	-	43,323,450
Total water withdrawn from regions with 'Extremely High' baseline water stress	ton	-	-	0
Total wastewater discharge	ton	78,557,674	75,412,540	85,343,476
Reused wastewater	ton	49,740,878	46,422,080	42,810,429
Percentage of reused wastewater [3]	%	24.0	22.6	20.0
Number of worksites using recycled water	Count	5	5	6

1) Data update for 2021 and 2022 (Management criteria change)

2) Rolling mills that do not produce crude steel (POSCO Maharashtra, POSCO Thainox) are excluded.

3) Data adjustment for 2021 and 2022 due to formula change

Air Pollutants

Air Pollutants	Unit	2021	2022	2023
Total emissions of air pollutants [1]	ton	76,865	64,887	65,083
NOx	ton	43,121	34,416	34,403
SOx	ton	30,974	28,298	28,500
Dust	ton	2,770	2,174	2,178

1) POSCO Maharashtra and POSCO Thainox comply with country-specific regulations, but their emissions are measured using concentration standards (ppm) and are therefore not included in the total air pollutant emissions.

Environmental and Energy Management System

Environmental and Energy Management System	Unit	2021	2022	2023
Environmental management system (ISO 14001) certification				
Target worksites for certification	Count	5	5	7
Worksites with certification	Count	5	5	7
Certification rate	%	100	100	100

Waste

Waste [1]	Unit	2021	2022	2023
Total waste generated	ton	23,969,604	21,434,230	21,850,026
Recycled	ton	23,654,146	21,085,401	21,529,069
Incinerated	ton	64,944	66,795	57,401
Landfilled	ton	236,469	267,486	231,224
Disposed in other ways	ton	14,045	14,548	32,332
General waste generated	ton	23,412,389	20,903,291	21,211,451
Recycled	ton	23,130,060	20,607,298	20,965,635
Incinerated	ton	53,351	49,180	47,357
Landfilled	ton	228,978	246,813	187,480
Disposed in other ways	ton	-	-	10,979
Designated waste generated	ton	557,215	530,939	638,574
Recycled	ton	524,086	478,103	563,434
Incinerated	ton	11,592	17,615	10,045
Landfilled	ton	7,492	20,673	43,743
Disposed in other ways	ton	14,045	14,548	21,353
Total waste generated intensity (based on crude steel production) [2]	ton/ton	0.56	0.55	0.55
Percentage of total waste recycled [2]	%	98.68	98.37	98.53

1) Data adjustments for 2021 and 2022 are due to error correction.

2) Rolling mills that do not produce crude steel (POSCO Maharashtra, POSCO Thainox) are excluded.

S (Social)

Human Resources

Human Resources [1]	Unit	2021	2022	2023
Total number of employees	Persons	22,976	23,181	24,340
Number of executives	Persons	92	76	84
By Gender				
Males	Persons	90	75	80
Females	Persons	2	1	4
Percentage of females	%	2.2	1.3	4.8
By Age				
Under 30 years old	Persons	0	0	0
30-50 years old	Persons	2	0	6
Over 50 years old	Persons	90	76	78
Number of employees excluding executives	Persons	22,884	23,105	24,256
By Gender				
Males	Persons	21,444	21,692	22,735
Females	Persons	1,440	1,413	1,521
Percentage of females	%	6.29	6.12	6.27
By Age				
Under 30 years old	Persons	4,496	4,618	4,764
30-50 years old	Persons	10,295	10,581	11,854
Over 50 years old	Persons	8,093	7,906	7,638
Number of management employees	Persons	4,388	4,472	4,640
By Gender				
Males	Persons	4,296	4,357	4,507
Females	Persons	92	115	133
Percentage of females	%	2.10	2.57	2.87
By Age				
Under 30 years old	Persons	19	13	8
30-50 years old	Persons	1,383	1,541	1,849
Over 50 years old	Persons	2,986	2,918	2,783
Number of regular employees (permanent)	Persons	21,914	21,793	22,869
By Gender				
Males	Persons	20,573	20,484	21,448
Females	Persons	1,341	1,309	1,421

Percentage of females	%	6.12	6.01	6.21
Percentage of regular employees (permanent)	%	95.38	94.01	93.96
Number of contingent employees (contractors)	Persons	1,047	1,380	1,464
By Gender				
Males	Persons	947	1,276	1,360
Females	Persons	100	105	104
Percentage of females	%	9.6	7.6	7.1
Percentage of contingent employees (contractors)	%	4.6	6.0	6.0
Total new hires	Persons	1,502	1,663	1,807
By Gender				
Males	Persons	1,382	1,554	1,729
Females	Persons	120	109	78
Percentage of females	%	7.99	6.55	4.32
By Age				
Under 30 years old	Persons	883	1,146	1,139
30-50 years old	Persons	154	144	215
Over 50 years old	Persons	465	373	453
Total employee turnover	Persons	1,334	1,424	1,287
Turnover rate [1)]	%	5.46	6.17	5.53
Number of voluntary departures	Persons	609	794	715
Voluntary departure rate	%	2.49	3.44	3.07
Number of involuntary departures	Persons	725	630	572
Retirements at mandatory age	Persons	699	598	537
Layoffs	Persons	2	4	11
Other reasons for departure	Persons	24	28	24

1) Data adjustments for 2021 and 2022 are due to changes in internal management criteria.

Safety

Safety	Unit	2021	2022	2023
LTIR	Person/200,000 hours	0.08	0.14	0.06
Employee LTIR	Person/200,000 hours	0.08	0.10	0.03
Contractor LTIR	Person/200,000 hours	0.08	0.19	0.08
LTIFR	Person/1 million hours	0.41	0.72	0.28
Employee LTIFR	Person/1 million hours	0.4	0.48	0.14

Contractor LTIFR	Person/1 million hours	0.42	0.94	0.39
TRIR [1)]	Person/200,000 hours	-	0.27	0.26
Employee TRIR	Person/200,000 hours	-	0.23	0.28
Contractor TRIR	Person/200,000 hours	-	0.31	0.24
TRIFR [1)]	Person/1 million hours	-	1.35	1.29
Employee TRIFR	Person/1 million hours	-	1.14	1.38
Contractor TRIFR	Person/1 million hours	-	1.53	1.22
Accident rate	%	0.05	0.10	0
Employee accident rate	%	0.03	0.06	0.02
Contractor accident rate	%	0.07	0.14	0.09
Fatality rate	‰	0.22	0.23	0
Employee fatality rate	‰	0	0	0
Contractor fatality rate	‰	0.44	0.46	0
Employees				
Number of employee LTIs	Persons	19	22	7
Number of employee TRIs 1)	Persons	-	53	69
Number of employee fatalities	Persons	0	0	0
Number of employees injured in accidents	Persons	7	14	5
Contractors				
Number of Contractor LTIs	Persons	22	50	23
Number of Contractor TRIs 1)	Persons	2	82	71
Number of Contractor fatalities	Persons	1	1	0
Number of Contractor employees injured in accidents	Persons	16	30	19
Safety and Health Management System (ISO 45001/OHSAS 18001/ KOSHA-MS) Certification				
Target worksites for certification	Count	5	5	7
Worksites with certification	Count	4	5	7
Certification rate	%	80	100	100
Quality Management System (ISO 9001 or IATF 16949) Certification				
Target worksites for certification	Count	5	5	7
Worksites with certification	Count	5	5	7
Certification rate	%	100	100	100

1) By identifying and addressing even minor incidents, preventive metrics have been introduced and managed to prevent major accidents (since 2022).

G(Governance)

Production Information

Production Data	Unit	2021	2022	2023
Crude steel produced	kt	42,964	38,635	39,942
Blast furnace/converter	kt	40,043	36,285	37,630
Electric arc furnace	kt	2,921	2,350	2,312
Percentage from blast furnace/converter	%	93.2	93.9	94.2
Percentage from electric arc furnace	%	6.8	6.1	5.8

GV-24273

Verification Opinion Statement

GHG Emissions

POSCO Corporation

Verification Target

Korean Foundation for Quality (hereinafter 'KFQ') has conducted a verification of Greenhouse Gas Emissions (hereinafter 'GHG Inventory') of POSCO Corporation (hereinafter 'Company') for 2023.

Verification Scope

KFQ's verification covered on all facilities and emission sources under the operational control and organizational boundary of Company during 2023.

Verification Criteria

The verification process was based on [Rule for emission reporting and certification of greenhouse gas emission trading Scheme[1)]], [Rules for verification of operating the greenhouse gas emission trading scheme[2)]] and 'ISO14064-3' for every applicable part.

1) Notification No. 2023-221 of Ministry of Environment 2) Notification No. 2021-112 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 was confirmed through an internal review whether the process before the verification was 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" and "ISO 14064-1".
2) The materiality assessment result of GHG emissions has satisfied the criteria for an organization that emits more than 5,000,000tCO_2-eq by meeting less than 2% of the total emissions, as per "Rules for verification of operating the greenhouse gas emission trading scheme".
3) Thus, KFQ concludes that the Greenhouse Gas Emissions of Company in 2023 is correctly calculated and stated in accordance with "Rule for emission reporting and certification of greenhouse gas emission trading Scheme".

Unit : tCO_2eq

Scope 1	Scope 2	Total
70,588,011.591	1,383,894.847	71,971,900

* The totals in this verification statement do not match the totals in emission trading scheme because the total emissions of each facility are calculated by truncating to integer units

June 19th, 2024

Ji Young Song

CEO Ji-Young Song
Korean Foundation for Quality

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GI-24272

Verification Opinion Statement

GHG Emissions

POSCO Corporation

Verification Target

Korean Foundation for Quality (hereinafter "KFQ") was engaged to conduct an independent verification for "2023 Quantity of GHG emission (Scope3) and Avoided GHG Emissions" reported by POSCO Corporation(hereinafter 'the Company').

Verification Scope & Purpose

This verification provides limited assurance that GHG emission (Scope3) and Avoided GHG Emissions are reported without not significant errors and distortions.

The scope of verification under the Company's operational control is as follows:

- GHG emission (Scope3) : Purchased goods and services, Upstream transportation and distribution, Business travel, Employee commuting, Investments, Downstream leased assets
- Avoided GHG Emissions : High-strength automotive steel sheets, Low core loss electrical steel, Blast furnace slag

Verification Criteria

his verification was conducted based on the following criteria:

- GHG emission (Scope3)
  - WBCSD/WRI, Corporate Value Chain (Scope 3) Accounting and Reporting Standard
  - ISO14064-1:2018
  - GHG Protocol Corporate Standard
  - ISO14064-3:2019
- Emission factor
  - Upstream emissions information disclosed by raw material suppliers
  - LCA information for 'Environmental Product Declaration' products
  - Environmental Product Declaration evaluation coefficient (2021)
  - GHG emission calculator tool (UNFCCC)
  - ICAO calculator
- Avoided GHG Emissions
  - Internal calculation criteria of the Company

Level of Assurance & Responsibility

The assurance level of the verification was performed to satisfy the limited assurance level. The Company is responsible for selecting verification standards, the criteria of the verification & emission calculation and the scope of verification (Scope3) further to calculation of GHG emission and Avoided GHG Emissions.

Verification Process

KFQ performed verification in accordance with ISO14064-3(Specification with guidance for the verification and validation of greenhouse gas statements) and the above verification criteria. To obtain limited confidence that the emission has been properly calculated based on accurate data, KFQ planned and conducted the verification through an identification of the calculation result of GHG emission (Scope 3) and Avoided GHG Emissions which were provided by the Company and a cross-check between them.

Verification Limitation

This verification is not intended to confirm the validity of the calculation criteria itself which was established by the company. Therefore, the verification results contain inherent limitations of uncertainty in the Company's own calculation criteria. Depending on the Company's own calculation criteria, a significant difference can occur in the result of the calculation, and it can affect comparability.

Verification Opinions

Through the verification process, KFQ obtained the following conclusion on the GHG emission (Scope3) and Avoided GHG Emissions results

1) The Company's "2023 GHG emission (Scope3) and Avoided GHG Emissions" was appropriately calculated according to the "Technical Guidance for Calculation Scope 3 Emission (Greenhouse Gas Protocol)" and internal standards.
2) Critical errors and omissions were not found in The Company's "2023 GHG emission(Scope3) and Avoided GHG Emissions" in the Carbon Reporting. Parts of the activity data in the process of emission calculation are assumed based on conservative principles to prevent underestimation of the emission.
3) It was confirmed that the internal criteria of Avoided GHG Emissions maintains consistency and accuracy in its' internal criteria. Parts of activity data and parameters in the process of reduction effects calculation were assumed based on conservative principles to prevent overestimation of the reduction.
4) The final calculated "2023 GHG(Scope3) emission and Avoided GHG Emissions" are as follows

Unit : tCO_2eq

Criteria		2023
GHG Emission (Scope3)	Purchased goods and services	2,764,127
	Capital goods	563
	Fuel-and energy-related activities(not included in scope1 or scope2)	334,942
	Upstream transportation & distribution	1,926,052
	Waste generated in operations	195,608
	Business travel	486
	Employee commuting	7,730
	Downstream transportation & distribution	26,936
	Downstream leased assets	1,974,893
	Franchises	188,450
	Total	7,419,787
Avoided GHG Emissions	High-strength automotive steel sheets	1,799,663
	Low core loss electrical steel	4,518,715
	Blast furnace slag	5,803,260
	Total	12,121,638

June 19th, 2024

Ji Young Song

CEO Ji-Young Song
Korean Foundation for Quality

National Institute of Environmental Research

Independent Assurance Report on the Identified Sustainability Information in POSCO's 2023 ESG Factbook
(English Translation of a Report Originally Issued in Korea)

To the management of POSCO.

We have undertaken a limited assurance engagement in respect of the selected sustainability information (the 'Identified Sustainability Information') in the POSCO's ESG Factbook for the year ended 31 December 2023 ('ESG Factbook' or the, Report), listed below.

Identified Sustainability Information

The Identified Sustainability Information included in the POSCO's Report for the year ended 31 December 2023 is summarized below:

- 'ESG DATA' within the 'ESG Factbook'

Our assurance was with respect to the year ended 31 December 2023 information only and we have not performed any procedures with respect to earlier periods or any other elements included in the Report and, therefore, do not express any conclusion thereon.

Criteria

The criteria used by POSCO to prepare the Identified Sustainability Information are ESG quantitative indicators: indicator definition book (included in the ESG Factbook appendix).

POSCO's Responsibility for the Identified Sustainability Information

POSCO is responsible for the preparation of the Identified Sustainability Information in accordance with the Criteria. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation of Identified Sustainability Information that is free from material misstatement, whether due to fraud or error.

Inherent Limitations

The absence of a significant body of established practice on which to draw to evaluate and measure non-financial information allows for different, but acceptable, measures and measurement techniques and can affect comparability between entities.

Our Independence and Quality Management

We have complied with the ethical requirements of the Republic of Korea, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies International Standards on Quality Management 1 and accordingly maintains a comprehensive system of quality management including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Identified Sustainability Information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised), Assurance Engagements other than Audits or Reviews of Historical Financial Information issued by the International Auditing and Assurance Standards Board. These standards require that we plan and perform this engagement to obtain limited assurance about whether the Identified Sustainability Information is free from material misstatement.

A limited assurance engagement involves assessing the suitability in the circumstances of POSCO's use of the Criteria as the basis for the preparation of the Identified Sustainability Information, assessing the risks of material misstatement of the Identified Sustainability Information whether due to fraud or error, responding to the assessed risks as necessary in the circumstances, and evaluating the overall presentation of the Identified Sustainability Information. A limited assurance engagement is substantially less in scope than a reasonable assurance engagement in relation to both the risk assessment procedures, including an understanding of internal control, and the procedures performed in response to the assessed risks.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, review of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records.

Given the circumstances of the engagement, in performing the procedures listed above we:

- Understand the systems and processes in place for managing and reporting the Identified Sustainability Information
- Review documents relevant to the risk assessment process, sustainability-related policies and standards, materiality assessment, engagement activities of the stakeholders and others
- Perform inquiries and analytical reviews on the Identified Sustainability Information

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement. Accordingly, we do not express a reasonable assurance opinion about whether POSCO's Identified Sustainability Information has been prepared, in all material respects, in accordance with the Criteria.

Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that POSCO's Identified Sustainability Information for the year ended 31 December 2023 is not prepared, in all material respects, in accordance with the Criteria.

Restricted Use

This Report is prepared solely for the management of POSCO to assist in obtaining understanding of POSCO's sustainable management performance and activities. Accordingly, we accept no liability or responsibility to any third party, other than POSCO and its management, who gains access to this report.

Samil PricewaterhouseCoopers

Seoul, Korea

Hoonsoo Yoon, Chief Executive Officer

27 June 2024

This report is effective as of 27 June 2024, the report date. Certain subsequent events or circumstances, which may occur between the report date and the time of reading this report, could have a material impact on the Report on the Identified Sustainability Information. Accordingly, the readers of the report should understand that there is a possibility that the above report may have to be revised to reflect the impact of such subsequent events or circumstances, if any.

Appendix. Definition of Indicators in ESG Factbook

Category	Indicators	Definition	Formula
GHG Emissions	**Direct/indirect emissions (Scope 1&2)**	The sum of direct and indirect greenhouse gas emissions	Direct emissions + Indirect emissions (Scope1+2)
	Direct emissions (Scope1)	Scope 1 emissions are those from sources owned or controlled by the company - Detailed standards: Same as direct emissions (Scope 1) standards of 「Greenhouse gas emissions and energy consumption statement」 ("Overall greenhouse gas emissions and energy consumption of companies (subsidiaries)") as direct greenhouse gas emissions through fuel combustion - Disclosure coverage: Gross global Scope 1 greenhouse gas (GHG) emissions to the atmosphere of the seven GHGs covered under the Kyoto Protocol—carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF6), and nitrogen trifluoride (NF3) - Gross emissions are GHGs emitted into the atmosphere before accounting for offsets, credits, or other similar mechanisms that have reduced or compensated for emissions.	Σ[Stationary combustion, Mobile combustion, Process-related emissions, Fugitive emissions, Waste processing]
	Indirect emissions (Scope2)	Scope 2: Indirect GHG emissions from sources owned and controlled by other organizations, even though they are generated as a result of the company's activities - Detailed standard: Same as the standards for preparing indirect GHG emissions (Scope 2) of 「Quantity of Greenhouse Gases Emitted and Quantity of Energy Consumed Statement」(The "Company's (Corporate's) Greenhouse Gas Emissions and Energy Usage")	Σ[Purchased electricity, Purchased heat(warm water, steam, etc.)]
	Direct/indirect emissions intensity (based on crude steel production, Scope 1&2)	The value of greenhouse gas emissions (Scope 1+2) divided by crude steel production	GHG emissions(Scope1+2) ÷ Crude steel produced
	Other indirect emissions (Scope 3)	Indirect greenhouse gas emissions from value chains other than business sites owned and managed by the organization (boundary) - Upstream: Purchase of raw materials and services, investment and purchase of capital goods, fuel and energy related that do not fall into the first two categories, transportation of raw materials, waste generated from worksites, employees' business travels, employee commutes, rental assets - Downstream: Transportation and distribution, processing of sales products, use of sales products, disposal of sales products, leased assets, franchise goodwill, investment	Σ[Indirect greenhouse gas emissions from upstream and downstream within the value chain]
Energy	**Total energy consumed**	The sum of direct energy usage, indirect energy usage, and renewable energy usage	Energy directly consumed + Energy indirectly consumed + Renewable energy consumed
	Energy directly consumed	Total direct energy consumption within the organization - Direct energy: use fuel such as gasoline, diesel, kerosene, LNG, LPG - Energy obtained by burning fuel such as coal and gas inside a building/facility is classified as direct energy * Refers to biofuel or biomass, and broadly includes fuels derived from the natural environment, such as sunlight, solar heat, wind power, hydropower, ocean, waste, and geothermal heat.	Σ[Natural gas, Renewable fuel, Kerosene, Gasoline(total), Diesel(total), LPG(total), Off-gas, Propane, Other fuels]
	Energy indirectly consumed	Total indirect energy consumption in the organization - Indirect energy: electricity, steam - Energy (electricity, thermal energy (regional heating, etc.)) converted from primary energy (unprocessed energy in its natural state) is classified as indirect energy	Σ[Electricity, Steam]
	Percentage of electricity consumed	The value of electricity usage divided by total energy usage	Electricity consumed ÷ Total energy consumed
	Renewable energy consumed	The amount of electricity consumed by self-generation (converting/producing renewable resources such as solar and wind power into energy) or externally procured renewable energy sources	Renewable energy consumed + Renewable energy self-generation counsumed
	Percentage of renewable energy consumed	The value of renewable energy usage divided by total energy usage	Renewable energy consumed ÷ Total energy consumed
	Total energy intensity (based on crude steel production)	The value of total energy usage divided by crude steel production	Total energy usage ÷ Crude steel production
	Electricity sold	Limited to the amount of renewable energy sold as electricity sold externally	-

Category	Indicators	Definition	Formula
Water	**Total water withdrawal**	The total amount of water entering the organization's boundaries for irrigation from all types of water sources, including surface water, groundwater, stormwater and municipal water supplies, during the reporting period. - Includes surface water (including surface water from wetlands, rivers, lakes and seas) taken directly, groundwater, rainwater and water obtained from municipal suppliers or other organizations.	Σ[Freshwaterm, surface water, groundwater, Desalinated water, Others]
	Municipal water supply	Water resources supplied by local government water suppliers (including municipal sewage treatment water)	-
	Surface water	Water that occurs naturally on the Earth's surface in ice sheets, ice caps, glaciers, icebergs, bogs, ponds, lakes, rivers, and streams	-
	Groundwater	Water that is being held in, and that can be recovered from, an underground formation	-
	Desalinated water	Water produced by removing salt from seawater	-
	Treated municipal wastewater	Reprocessed water for recycling instead of discharging sewage and other wastewater generated in the area where the worksite is located	-
	Total water withdrawn from regions with 'High' baseline water stress	Total water withdrawals in areas with high water stress index from the World Resources Institute (WRI) (High: 40–80%)	-
	Total water withdrawn from regions with 'Extremely High' baseline water stress	Total water withdrawals in areas with extremely high water stress index from the World Resources Institute (WRI) (Extremely High: > 80%)	-
	Percentage of water withdrawn from regions with 'High' and 'Extremely High' baseline water stress	Ratio of total water withdrawals from areas with high or extremely high water stress index according to the World Resources Institute (WRI)	Water withdrawals in areas with 'High' and 'Extremely High' ÷ Total water withdrawal
	Total water withdrawn intensity (based on crude steel production)	The total amount of water withdrawn divided by the crude steel production	Total water withdrawal ÷ Crude steel production
	Total water consumed	The value obtained by subracting the wastewater discharge from the total water withdrawl	Total water withdrawal - Wastewater discharge
	Total water counsumed from regions with 'High' baseline water stress	Total water withdrawal in areas with high water stress indices of the World Resources Institute (WRI) (High : water stress 40-80%)	-
	Total water counsumed from regions with 'Extremely High' baseline water stress	Total water withdrawal in areas with extremely high water stress indices of the World Resources Institute (WRI) (Extremely high : water stress > 80%)	-
	Percentage of water counsumed from regions with 'High' and 'Extremely High' baseline water stress	Ratio of total water comsume from areas with high or extremely high water stress index according to the World Resources Institute (WRI)	Water consume in areas with 'High' and 'Extremely High' ÷ Total water withdrawal
	Total wastewater discharge	The total amount of wastewater discharged into the sea after being finally treated at the business site during the reporting period * Wastewater: Water that is mixed with liquid and solid contaminants and cannot be used for business activities in that state.	Total water withdrawal - total water consumed
	Reused wastewater	Water recycling: water that has been used more than once in the organization and is recycled within the process; instead of indirect reuse where recycled wastewater is discharged and then taken back, direct reuse where recycled wastewater is reused for the business and business activities of an organization without being discharged.	-
	Percentage of reused wastewater 1)	The value obtained by dividing the Reused wastewater by the sum of the Total water withdrawl and the Reused wastewater.	Reused wastewater ÷ (Total water withdrawal + Reused wastewater)
	Number of worksites using recycled water	The number of worksites recycling water	-
	TOC (Total Organic Carbon) 2)	Total amount of carbon in organic pollutants in water	-
	T-N	Amount of Nitrogen in water	-
	SS	The amount of suspended solids with a particle diameter of 2mm or less that do not dissolve in water.	-

Category	Indicators	Definition	Formula
Waste	**Total waste generated**	The amount of waste generated related to the activities of the organization itself and it is sum of General waste and Designated waste	Subtotal = ∑ (by treatment type) = ∑ (by treatment method)
	Recycled	Waste reused and recycled through various recovery/conversion methods among designated wastes that are landfilled or incinerated 1) Material Recovery: A method of recovering and recycling specific secondary materials such as valuable metals, iron scraps, paper, and wood by treating waste or by-products 2) Chemical recovery: A method of transforming the molecular structure of waste or by-products so that previously unrecyclable materials can be recycled. 3) Energy conversion: A method of recovering solid fuel, methane gas, or other energy sources from waste or by-products and converting them into new energy sources	-
	Incinerated	Controlled burning of waste at high temperatures. Incineration of waste can be carried out with or without energy recovery.	-
	Landfilled	Final depositing of solid waste at, below, or above ground level at engineered disposal sites. In the context of waste reporting, landfilling refers to depositing of solid waste in sanitary landfills, and excludes uncontrolled waste disposal such as open burning and dumping.	-
	Disposed in other ways	Waste which is disposed except recycling/incinerating/landfilling, disposed such as dumping, furnace incineration, deep well injection, etc.	-
	General waste generated	Sum of general waste	Subtotal = ∑ (by treatment type) = ∑ (by treatment method)
	Recycled	Waste reused and recycled through various recovery/conversion methods among designated wastes that are landfilled or incinerated 1) Material Recovery: A method of recovering and recycling specific secondary materials such as valuable metals, iron scraps, paper, and wood by treating waste or by-products 2) Chemical recovery: A method of transforming the molecular structure of waste or by-products so that previously unrecyclable materials can be recycled. 3) Energy conversion: A method of recovering solid fuel, methane gas, or other energy sources from waste or by-products and converting them into new energy sources	-
	Incinerated	Controlled burning of waste at high temperatures. Incineration of waste can be carried out with or without energy recovery.	-
	Landfilled	Final depositing of solid waste at, below, or above ground level at engineered disposal sites. In the context of waste reporting, landfilling refers to depositing of solid waste in sanitary landfills, and excludes uncontrolled waste disposal such as open burning and dumping.	-
	Disposed in other ways	Waste which is disposed except recycling/incinerating/landfilling, disposed such as dumping, furnace incineration, deep well injection, etc.	-
	Designated waste generated	Sum of designated waste	Subtotal = ∑ (by treatment type) = ∑ (by treatment method)
	Recycled	Waste reused and recycled through various recovery/conversion methods among designated wastes that are landfilled or incinerated 1) Material Recovery: A method of recovering and recycling specific secondary materials such as valuable metals, iron scraps, paper, and wood by treating waste or by-products 2) Chemical recovery: A method of transforming the molecular structure of waste or by-products so that previously unrecyclable materials can be recycled. 3) Energy conversion: A method of recovering solid fuel, methane gas, or other energy sources from waste or by-products and converting them into new energy sources	-
	Incinerated	Controlled burning of waste at high temperatures. Incineration of waste can be carried out with or without energy recovery.	-
	Landfilled	Final depositing of solid waste at, below, or above ground level at engineered disposal sites. In the context of waste reporting, landfilling refers to depositing of solid waste in sanitary landfills, and excludes uncontrolled waste disposal such as open burning and dumping.	-
	Disposed in other ways	Waste which is disposed except recycling/incinerating/landfilling, disposed such as dumping, furnace incineration, deep well injection, etc.	-
	Total waste generated intensity (based on crude steel production)	The value obtained by dividing the total waste generated by the crude steel production.	Total waste generated ÷ Total crude steel produced
	Percentage of total waste recycled	The value obtained by dividing the total waste recycled by the total waste generated.	Total waste recycled ÷ Total waste generated

Category	Indicators	Definition	Formula
Resource recycling	**Total Blast furnace slag recycled**	Total amount of blast furnce slag recycled	-
	Granulated slag recycled	Amount of slag like sand througn high-pressure water	-
	For cement industry	Amount of granulated blast furnace slag for cement	-
	For other uses, including fertilizer	Amount of granulated blast furnace slag for other uses, including fertilizer	-
	Air-cooled slag recycled	Amount of slag cooled slowly by natural cooling and water spray	-
Air Pollutants	**Total emissions of air pollutants**	Gases and particles recognized as causes of air pollution based on the review and evaluation results in accordance with Article 7 of the "Air Quality Preservation Act,"	ΣNOx, SOx, Dust]
	NOx	A compound of nitrogen and oxygen, a pollutant produced by oxidation of nitrogen in the air at high temperatures during the combustion process. Air pollution is a mixture of nitrogen monoxide (NO) and nitrogen dioxide (NO2), usually expressed as NOx.	-
	SOx	A pollutant created when sulfur in fuel combines with oxygen in the air during combustion. Hydrogen sulfide (H2S) is the most abundant sulfur oxide in the air, and it is expressed as SOx, including sulfur dioxide (SO2) and sulfur trioxide (SO3).	-
	Dust	Classified as TSP (Total Suspended Particulate) pM10 pM2.5. TSP is the total amount of dust suspended in the air, and pM10 and pM2.5 mean dust smaller than 10/1000 mm and 2.5/1000 mm, respectively.	-
Other Environmental Metrics	**Number of environmental regulation violations**	Needs to match the sanctions/violations related to the environment in the 'Sanctions and Related Matters' section of the business report.	-
	Number of water quality-related regulation violations	Needs to match the sanctions/violations related to the water quality violation in the 'Sanctions and Related Matters' section of the business report.	-
	Number of administrative actions due to violations of environmental regulations and rules	Needs to match the number of cases subject to administrative action under status of sanctions by administrative agencies in the 'Sanctions and Related Matters' section of the business report.	-
	Administrative fines	Needs to match the number of cases subject to fine under status of sanctions by administrative agencies in the 'Sanctions and Related Matters' section of the business report.	-
	Non-monetary penalties (improvement orders, etc.)	Needs to match the number of cases subject to non-monetary sanctions such as improvement orders and others under status of sanctions by administrative agencies in the 'Sanctions and Related Matters' section of the business report.	-
	Number of wastewater-related incidents	Needs to match the sanctions/violations related to the accidents related to heavy wastewater in the 'Sanctions and Related Matters' section of the business report.	-
	Percentage of zero-emission vehicles owned	The value obtained by dividing the number of zero-emission vehicles owned by the total number of vehicles	Number of zero-emission vehicles owned ÷ Number of vehicles owned
	Number of zero-emission vehicles owned	Vehicles with no emissions of air pollutants * Includes electric cars and hydrogen cars, excludes hybrid vehicles(includes passenger cars/vans/trucks, excludes heavy equipment)	-
	Total number of vehicles owned	Vehicles except for zero-emission vehicles	-
Environmental and Energy Management System	**Environmental management system (ISO 14001) certification**	-	-
	Target worksites for certification	The number of worksites that can cause negative environmental impacts during the company's product production process, based on the business registration certificate	-
	Worksites with certification	The number of worksites certified with the Environmental management system	-
	Certification rate	The ratio of certified worksites subject to the Environmental management system	Worksites with certification ÷ Target worksites for certification
	Energy management system (ISO 50001) certification	-	-
	Target worksites for certification	The number of workplaces requiring efficient energy management in the company's product production process, based on the business registration certificate	-
	Worksites with certification	The number of worksites certified with the Energy Management System	-
	Certification rate	The ratio of certified worksites subject to the Energy Management System	Worksites with certification ÷ Target worksites for certification

Category	Indicators	Definition	Formula
Human Resources	**Total Number of employees**	Total number of employees in the company as end of the year(31.Dec) - Classification criteria : By gender(male, female), By age(under 30 years old, 30-50 years old, over 50 years old)	Number of executives + Number of employees excluding executives
	Number of executives	Total number of executives* in the company as end of the year(31.Dec) * Including Outside director/non-executive director, Vice President is excluded	-
	Percentage of females	The ratio of female executives among the executives	Number of female executives ÷ Number of executives X 100
	Number of employees excluding executives	Total number of employees excluding executives* in the company as end of the year(31.Dec) * Regular(permanent), Contract(including intern), Vice President, Researcher	-
	Percentage of females	The ratio of female employees excluding executives among the employees excluding executives	Number of female employees excluding executives ÷ Number of employees excluding executives X 100
	Number of management employees	Total number of management employees* in the company as end of the year(31.Dec) * Employees who are receiving positional allowance(executives are excluded from management employees)	-
	Percentage of females	The ratio of female management employees among the management employees	Number of female management employees ÷ Number of management employees X 100
	Number of regular employees(permanent)	Total number of regular employees* in the company as end of the year(31.Dec) * Indefinite contract is included and Vice President is excluded	-
	Percentage of females	The ratio of female regular employees among the regular employees	Number of female regular employees ÷ Number of regular employees X 100
	Percentage of regular employees(permanent)	The ratio of regular employees among total employees	Number of regular employees ÷ Total number of employees X 100
	Number of contingent employees(contractors)	Total number of contingent employees* in the company as end of the year(31.Dec) * Executives, Vice President are included	-
	Percentage of females	The ratio of female contingent employees among the contingent employees	Number of female contingent employees ÷ Number of contingent employees X 100
	Percentage of contingent employees(contractors)	The ratio of contingent employees among total employees	Number of contingent employees ÷ Total number of employees X 100
	Total New hires	Total number of employees who are hired* in the company during the relevant year(1.Jan~31.Dec) * People who hired during the relevant year and retire in the same year are included	-
	Percentage of females	The ratio of new female hires among new hires	Number of female employees hired ÷ Number of employees hired
	Total employee turnover	Total number of employees who are retired* in the company during the relevant year(1.Jan~31.Dec) * Including contract expiration of contingent employees	-
	Turnover rate	The ratio of total number of employees retired during the relevant year(1.Jan~31.Dec)	Number of total employee turnover ÷ Number of employee as end of the previous year
	Number of voluntary departures	Number of employees leaving the organization based on individual judgment regardless of the organization's intention	-
	Voluntary departure rate	The ratio of total number of employees retired voluntarily during the relevant year(1.Jan~31.Dec)	Number of total voluntary departures ÷ Number of employee as end of the previous year
	Number of involuntary departures	Number of employees terminating the employment under organization's initiative	-
	Retirements at mandatory age	Retirement upon reaching the retirement at mandatory age as defined by the company	-
	Layoffs	Resignation due to business reasons as defined by the company	-
	Other reasons for departure	Involuntary departures excluding retirements at mandatory age and layoffs as defined by the company	-
	Number of employees subjected to regular performance evaluations	Number of employees who received regular performance evaluations as defined by the company - Evaluation has to be conducted at least once a year with the employee's awareness - It may include evaluation from the employee's manager, colleagues, other employees, and HR department	-
	Number of employees with disabilities	Number of employees specified in the disability employment levy report reflecting the severity of disabilities * There may be a difference from the number of current disabled employees	-
	Number of employed veterans	Number of sacrifice or contributor* and their bereaved family or relatives, who are eligible for the application of national veterans-related laws and receive respect and support * A person who meets the eligibility requirements prescribed by the national veterans-related laws and regulations (such as those who have contributed to the country's independence from Japanese rule, the protection or security of the nation, the development of South Korea's liberal democracy, or the protection of the lives or property of the people through public service)	-

Category	Indicators	Definition	Formula
Work-Life Balance	**Number of employees using flexible work arrangements**	Number of employees who used flexible working hours at least once during the relevant year(1.Jan~31.Dec)	-
	Number of employees using infertility vacation	Number of employees who used infertility vacation at least once during the relevant year(1.Jan~31.Dec)	-
	Parental leave	Number of employees who used parental leave* at least once during the relevant year(1.Jan~31.Dec) * Including employees who use company discretionary parental leave(1 year) in addition to statutory parental leave	-
	Employees returning from parental leave	The number of employees who returned after the end of the parental leave period (1.1~12.31) for the relevant year.	-
Training	**Total training hours**	Total training hours aggregated and documented for the relevant year(1.Jan~31.Dec)	-
	Average training hours per person	The value obtained by divind the total training hours by the total number of employees	Total training hours ÷ Total number of employees
	Total training cost	Total training cost* aggregated and documented for the relevant year * Even if the charged account is not 'education expenses', it will be included if the educational purpose is clear and there is supporting evidence. This includes not only in-house education expenses but also external education expenses and commissioned education expenses.	-
	Average training cost per person	The value obtained by divind the total training cost by the total number of employees	Total training cost ÷ Total number of employees
Retirement Pension Plans	**Defined Benefit(DB) Retirement Pension**	A retirement pension system where the level of salary to be received by the employee is determined in advance.	-
	Current value of defined benefit liabilities	The present value of the cumulative amount of expected future payment obligations that the company bears as a result of providing service during the current and previous periods.	-
	Fair value of plan assets	Assets prepared in advance by a company for future retirement benefit payments	-
	Recognition of net asset amount under defined benefit plans	The value obtained by subtracting the fair value of plan assets from the current value of defined benefit liabilities	Current value of defined benefit liabilities - Fair value of plan assets
Labor Management Relations	**Percentage of employees under collective bargaining agreements**	The proportion of employees covered by collective bargaining agreements	Number of employees under collective bargaining agreements ÷ Total number of employees
	Number of strikes causing work stoppages	The number of strikes confirmed in the last 3 years	-
Safety	**LTIR**	The number of injured persons who have suffered more than the loss of work that occurred per 200,000 working hours about employees and contractors* (In case of inability to work due to work-related death, permanent disability, or accident that prevents work for more than one day) * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	{(Employee LTI + Number of Employee fatalities + Contractor LTI + Number of Contractor fatalities) ÷ (Employee annual working hours + Contractor annual working hours)} X 200,000
	Employee LTIR	The number of injured persons who have suffered more than the loss of work that occurred per 200,000 working hours about employees (In case of inability to work due to work-related death, permanent disability, or accident that prevents work for more than one day)	(Employee LTI + Number of Employee fatalities) ÷ Employee annual working hours X 200,000
	Contractor LTIR	The number of injured persons who have suffered more than the loss of work that occurred per 200,000 working hours about contractors* (In case of inability to work due to work-related death, permanent disability, or accident that prevents work for more than one day) * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	(Contractor LTI + Number of Contractor fatalities) ÷ Contractor annual working hours X 200,000
	LTIFR	The number of injured persons who have suffered more than the loss of work that occurred per 1,000,000 working hours about employees and contractors* (In case of inability to work due to work-related death, permanent disability, or accident that prevents work for more than one day) * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	{(Employee LTI + Number of Employee fatalities + Contractor LTI + Number of Contractor fatalities) ÷ (Employee annual working hours + Contractor annual working hours)} X 1,000,000
	Employee LTIFR	The number of injured persons who have suffered more than the loss of work that occurred per 1,000,000 working hours about employees (In case of inability to work due to work-related death, permanent disability, or accident that prevents work for more than one day)	(Employee LTI + Number of Employee fatalities) ÷ Employee annual working hours X 1,000,000
	Contractor LTIFR	The number of injured persons who have suffered more than the loss of work that occurred per 1,000,000 working hours about contractors* (In case of inability to work due to work-related death, permanent disability, or accident that prevents work for more than one day) * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	(Contractor LTI + Number of Contractor fatalities) ÷ Contractor annual working hours X 1,000,000

Category	Indicators	Definition	Formula
Safety	**TRIR**	Ratio of the total number of recorded accidents** per 200,000 working hours for employees and contractors* * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks. ** Refers to death, work restrictions or changes, treatment beyond first aid, or loss of consciousness due to work-related injuries or illnesses. This also includes cases where a significant injury or illness is diagnosed by a doctor or a licensed medical professional, even if such reasons do not occur.	{(Employee TRI + Contract TRI) ÷ (Employee annual working hours + Contractor annual working hours)} X 200,000
	Employee TRIR	Ratio of the total number of recorded accidents** per 200,000 working hours for employees ** Refers to death, work restrictions or changes, treatment beyond first aid, or loss of consciousness due to work-related injuries or illnesses. This also includes cases where a significant injury or illness is diagnosed by a doctor or a licensed medical professional, even if such reasons do not occur.	(Employee TRI ÷ Employee annual working hours) X 200,000
	Contractor TRIR	Ratio of the total number of recorded accidents** per 200,000 working hours for contractors* * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks. ** Refers to death, work restrictions or changes, treatment beyond first aid, or loss of consciousness due to work-related injuries or illnesses. This also includes cases where a significant injury or illness is diagnosed by a doctor or a licensed medical professional, even if such reasons do not occur.	(Contractor TRI ÷ Contractor annual working hours) X 200,000
	TRIFR	Ratio of the total number of recorded accidents** per 1,000,000 working hours for employees and contractors* * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks. ** Refers to death, work restrictions or changes, treatment beyond first aid, or loss of consciousness due to work-related injuries or illnesses. This also includes cases where a significant injury or illness is diagnosed by a doctor or a licensed medical professional, even if such reasons do not occur.	{(Employee TRI + Contract TRI) ÷ (Employee annual working hours + Contractor annual working hours)} X 1,000,000
	Employee TRIFR	Ratio of the total number of recorded accidents** per 1,000,000 working hours for employees ** Refers to death, work restrictions or changes, treatment beyond first aid, or loss of consciousness due to work-related injuries or illnesses. This also includes cases where a significant injury or illness is diagnosed by a doctor or a licensed medical professional, even if such reasons do not occur.	(Employee TRI ÷ Employee annual working hours) X 1,000,000
	Contractor TRIFR	Ratio of the total number of recorded accidents** per 1,000,000 working hours for contractors* * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks. ** Refers to death, work restrictions or changes, treatment beyond first aid, or loss of consciousness due to work-related injuries or illnesses. This also includes cases where a significant injury or illness is diagnosed by a doctor or a licensed medical professional, even if such reasons do not occur.	(Contractor TRI ÷ Contractor annual working hours) X 1,000,000
	Accident Rate	Ratio of the total number of persons have suffered more than work-related accidents per 100 workers for employees and contractors* * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	{(Number of employees injured in accidents + Number of contractors injured in accidents) ÷ (Total number of employees + Total number of contractors)} X 100
	Employee accident rate	Ratio of the total number of persons have suffered more than work-related accidents per 100 workers for employees	Number of employees injured in accidents ÷ Total number of employees X 100
	Contractor accident rate	Ratio of the total number of persons have suffered more than work-related accidents per 100 workers for contractors* * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	Number of contractors injured in accidents ÷ Total number of contractors X 100
	Fatality rate	Ratio of the number of fatality per 10,000 workers for employees and contractors* * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	{(Number of employee fatalities + Number of contractor fatalities) ÷ (Total number of employees + Total number of contractors)} X 10,000
	Employee fatality rate	Ratio of the number of fatality per 10,000 workers for employees	Number of employee fatilities ÷ Total number of employees X 10,000
	Contractor fatality rate	Ratio of the number of fatality per 10,000 workers for contractors* * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	Number of contractor fatilities ÷ Total number of contractors X 10,000
	Employees returning from parental leave	-	-
	Number of employee LTIs	Cases where employees are unable to work due to work-related fatal accidents, accidents involving permanent disability, or accidents that prevent them from working for more than one day	Employees General Accident + Occupational Injury
	Number of employee TRIs	Cases aboue employees' death, work restrictions or changes, treatment beyond first aid, or loss of consciousness due to work-related injuries or illnesses. This also includes cases where a significant injury or illness is diagnosed by a doctor or a licensed medical professional, even if such reasons do not occur.	Number of employee fatalities + LTI + work-related injuries
	Number of employee fatalities	The number of fatality for employees	-
	Number of employees injured in accidenets	The total number of fatality and injuries resulting from work-related accidents** for employees (closed for more than 3 days) * According to the reporting standards for industrial accidents under the Occupational Safety and Health Act, an incident where a fatality occurs, an injury requiring more than three days of leave, or a person contracts a disease.	-
	Number of employee near-miss accidents	An unexpected accident that could have occurred with a slight change in circumstances, even though no actual property or environmental/physical damage occurred to the employees.	-
	Contractors	-	-
	Number of contractor LTIs	Cases where contractors* are unable to work due to work-related fatal accidents, accidents involving permanent disability, or accidents that prevent them from working for more than one day * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	Contractors General Accident + Occupational Injury
	Number of contractor TRIs	Cases aboue contractors*' death, work restrictions or changes, treatment beyond first aid, or loss of consciousness due to work-related injuries or illnesses. This also includes cases where a significant injury or illness is diagnosed by a doctor or a licensed medical professional, even if such reasons do not occur. * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	Number of contract fatalities + LTI + work-related injuries
	Number of contractor fatalities	The number of fatality for contractors* * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	-
	Number of contractor employees injured in accidenets	The total number of fatality and injuries resulting from work-related accidents** for contractors* (closed for more than 3 days) * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks. ** According to the reporting standards for industrial accidents under the Occupational Safety and Health Act, an incident where a fatality occurs, an injury requiring more than three days of leave, or a person contracts a disease.	-
	Number of contractor near-miss accidents	An unexpected accident that could have occurred with a slight change in circumstances, even though no actual property or environmental/physical damage occurred to the contractors* * A company that has received a contract from POSCO to manufacture products, construct, repair, provide services, or other tasks.	-
	Safety and Health Management System (ISO 45001/OHSAS 18001/KOSHA-MS) Certification	-	-
	Target worksites for certification	The number of workplaces that aim to continuously improve the level of safety and health by eliminating or minimizing risks to workers exposed to hazardous factors and other stakeholders based on the business registration certificate	-
	Worksites with certification	The number of worksites certified with the Safety and Health Management System	-
	Certification rate	The ratio of certified worksites subject to the Safety and Health Management System	Worksites with certification ÷ Target worksites for certification

Category	Indicators	Definition	Formula
Quality Management	**Quality Management System (ISO 9001 or IATF 16949) Certification**	-	-
	Target worksites for certification	The number of manufacturing plants producing products such as steel, based on the business registration certificate	-
	Worksites with certification	The number of worksites certified with the Quality Management System	-
	Certification rate	The ratio of certified worksites subject to the Quality Management System	Worksites with certification ÷ Target worksites for certification
CSR Activity Achievements	**Employee volunteering**	-	-
	Hours volunteered	Total hours of employee participation in volunteer	-
	Number of volunteers	Number of employee participation in volunteer	-
	Volunteer hours per person	The value obtained by dividing the total volunteer participation hours by the total number of employees, based on the period from 1.Jan to 31.Dec of the relevant year	Hours volunteered ÷ Number of volunteers
	Employee volunteering participation rate	The proportion of employees who participated in volunteer	Number of volunteers ÷ Total number of employees
	CSR expenses	Calculate the value in accordance with the method defined by the Federation of Korean Industries for social contribution costs (autonomous program costs + indirect program costs): - Autonomous Program: Programs that each company independently plans and implements, either on their own or in cooperation with NPOs, etc. - Indirect Program: Sponsorships and donations to existing external programs, non-designated donations such as general disaster relief funds, etc. * Corporate social contribution costs are limited to "accountable items expended at the company level."	Σ[Donations, Investment in local communities, Other]
Supply Chain Management	**Supplier Relationship Management (SRM) assessments**	-	-
	Total number of suppliers	The number of suppliers doing business with the company	-
	Number of assessed suppliers	The number of suppliers among the trading suppliers who have undergone supply chain assessments	-
	Percentage of assessed suppliers	The proportion of suppliers among the trading suppliers who have undergone supply chain assessments	Number of assessed suppliers ÷ Total number of suppliers
Production Information	**Crude steel produced**	Total amount of crude steel* produced by steelmaking plants(blast furnace/converter, electric arc furnace) within the steelworks * It refers for 'steel ingots(for rolling, for forging), continuous casting steel and cast steel.'	Σ[Produced from blast furnace/converter, produced from electric arc furnace]
	Blast furnace/converter	Total amount of crude steel produced by steelmaking plants(blast furnace/converter) within the steelworks	-
	Electric arc furnace	Total amount of crude steel produced by steelmaking plants(electric arc furnace) within the steelworks	-
	Percentage from blast furnace/converter	Ratio of crude steel produced in the steelmaking plants(blast furnace/converter) to the total crude steel produced in the steelworks	(Crude steel produced from blast furnace/converter) ÷ (Total crude steel produced)
	Percentage from electric arc furnace	Ratio of crude steel produced in the steelmaking plants(electric arc furnace) to the total crude steel produced in the steelworks	(Crude steel produced from electric arc furnace) ÷ (Total crude steel produced)
	Main raw material consumed	-	-
	Iron ore	Total amount of iron ore used in the steelworks	-
	Metallurgical coal	Total amount of metallurgical coal used in the steelworks	-
	Limestone	Total amount of limestone used in the steelworks	-
Fair Trade/Anti-Corruption	**Number of employees who completed fair trade training**	Number of employees who completed fair trade training	-
	Fair trade law violations	Need to match the status of sanctions in the business report : 'FairTrade Commission Sacntion Status' disclosure details	-
Ethics	**Number of ethics reports filed**	Total number of cases received through ethical reports, excluding general complaints/false reports that are not suitable for ethical reporting.	Σ[Corruption, Violations of human rights, Abuse of power, Other]
	Corruption	Cases regarding personal corruption and non-personal corruption	-
	Violations of human rights	Cases regarding sexual harassment, workplace bullying, etc	-
	Abuse of power	Cases regarding customer complaints, suppliers, and partner grievances	-
	Other	Other cases besides the above classification	-
	Number of resolved ethics reports	Number of actions completed for reports received through ethical reporting	-
	Ethics training	-	-
	Total training hours	Total training hours related to ethics	-
	Number of participants who completed complusory ethics training	Number of participants who completed complusory ethics training	-