Environmental Data

Fiscal 2021 Data on Airborne Release and Water Discharge at Each KOBELCO Group Business Site

Air and water quality data from all of Kobe Steel's business sites as well as its major Group companies are reported below.

For exhaust gases, NOx, dust, and dioxins from representative facilities are included, along with regulation values.

For wastewater, COD (or biochemical oxygen demand (BOD) in some cases), suspended solids (SS), oil, and dioxins are included, along with regulation values.

Air Quality Data

Regulation values are based on the Air Pollution Control Act, prefectural ordinances, conventions, and the Act on Special Measures against Dioxins.

Water Quality Data

Regulation values are based on the Water Pollution Prevention Act, the Sewerage Act, prefectural ordinances, conventions, and the Act on Special Measures against Dioxins.

Steel & Aluminum

■ Kakogawa Works

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Boiler	250	33
	Boiler	60	10
	Heating furnace	100	43
Dust (mg/Nm³)	Boiler	100	5
	Boiler	50	8
	Heating furnace	100	2
Dioxins (ng-TEQ/Nm³)	Industrial waste incinerator	5	0.0061
	Sintering plant	1	0.000032

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	5	4.4
SS (mg/L)	20	10
Oil (Mineral oil) (mg/L)	1	<1
Dioxins (pg-TEQ/L)	10	0.006

The latest environmental data from Kakogawa Works can be viewed from our website (updated monthly) (in Japanese only).
http://www.kobelco.co.jp/about_kobelco/csr/information

■ Kobe Wire Rod & Bar Plant

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Boiler	250	38
	Heating furnace	130	79
	Heating furnace	100	55
Dust (mg/Nm³)	Boiler	200	3
	Heating furnace	100	2
	Heating furnace	100	<1
Dioxins (ng-TEQ/Nm³)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	15	3.9
SS (mg/L)	30	1
Oil (Mineral oil) (mg/L)	1	<1
Dioxins (pg-TEQ/L)	—	—

The latest environmental data from Kobe Wire Rod & Bar Plant can be viewed on our corporate website (updated monthly) (in Japanese only).
(https://www.kobelco.co.jp/about_kobelco/csr/information)

■ Moka Works

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Melting furnace	180	37
	Boiler	250	30
	Waste incinerator	300	47
Dust (mg/Nm³)	Melting furnace	300	<5
	Boiler	150	<1
	Waste incinerator	250	29
Dioxins (ng-TEQ/Nm³)	Melting furnace	5	0.2
	Boiler	10	0
	Waste incinerator	10	0

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	25	19.1
SS (mg/L)	50	14
Oil (Mineral oil) (mg/L)	5	1.2
Dioxins (pg-TEQ/L)	—	—

■ Shinko Wire Company, Ltd. (Amagasaki Works)

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Boiler	150	34
	Heating furnace	130	26
	Heating furnace	180	16
Dust (mg/Nm³)	Boiler	50	<1
	Heating furnace	100	<2
	Heating furnace	100	<5
Dioxins (ng-TEQ/Nm³)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	20	6
SS (mg/L)	30	8
Oil (Mineral oil) (mg/L)	2	<1
Dioxins (pg-TEQ/L)	—	—

■ Shinko Wire Company, Ltd. (Onoe Works)

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Heating furnace	170	22
	Boiler	150	31
Dust (mg/Nm³)	Heating furnace	250	3
	Boiler	100	1
Dioxins (ng-TEQ/Nm³)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	15	5.7
SS (mg/L)	25	12
Oil (Mineral oil) (mg/L)	2	<0.5
Dioxins (pg-TEQ/L)	—	—

■ Shinko Wire Company, Ltd. (Nishikinohama Works)

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	N/A	—	—
Dust (mg/Nm³)	N/A	—	—
Dioxins (ng-TEQ/Nm³)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	300 mg/l or less (5 days BOD)	2
SS (mg/L)	300	3
Oil (Mineral oil) (mg/L)	5	1
Dioxins (pg-TEQ/L)	—	—

Environmental Data

■ Shinko Bolt, Ltd.

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	N/A	—	—
Dust (mg/Nm³)	N/A	—	—
Dioxins (ng-TEQ/Nm³)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	25	7
SS (mg/L)	70	7
Oil (Mineral oil) (mg/L)	3	<1
Dioxins (pg-TEQ/L)	—	—

■ Nippon Koshuha Steel Co., Ltd.

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Boiler	180	79
	Melting furnace	—	—
	Heating furnace	180	170
Dust (mg/Nm³)	Boiler	200	62
	Electric arc furnace	100	1.3
	Heating furnace	180	24
Dioxins (ng-TEQ/Nm³)	Electric arc furnace	—	0.5

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	20	6
SS (mg/L)	50	13
Oil (Mineral oil) (mg/L)	3	0.8
Dioxins (pg-TEQ/L)	—	—

■ Shinko Aluminum Wire Co., Ltd.

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Heating furnace	180	100
	Heating furnace	180	38
	Heating furnace	180	42
Dust (mg/Nm³)	Heating furnace	100	2
	Heating furnace	100	2
	Heating furnace	100	2
Dioxins (ng-TEQ/Nm³)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	25	4
SS (mg/L)	90	1.8
Oil (Mineral oil) (mg/L)	5	0.5
Dioxins (pg-TEQ/L)	—	—

Advanced Materials

■ Chofu Works

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Boiler	150	21
	Melting furnace	200	49
	Melting furnace	180	36
Dust (mg/Nm³)	Boiler	100	9
	Melting furnace	300	75
	Melting furnace	200	25
Dioxins (ng-TEQ/Nm³)	50 m smoke stack	5	0.085

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	30	4.3
SS (mg/L)	50	2
Oil (Mineral oil) (mg/L)	2.5	<1
Dioxins (pg-TEQ/L)	10	0.07

■ Daian Works

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Melting furnace	120	56
	Boiler	110	40
	Heating furnace	120	42
Dust (mg/Nm³)	Melting furnace	100	14
	Boiler	100	5
	Heating furnace	100	<20
Dioxins (ng-TEQ/Nm³)	Melting furnace	5	0.0075
	Melting furnace	1	0.016

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	10	3
SS (mg/L)	10	4
Oil (Mineral oil) (mg/L)	2 (mineral oil 1)	<0.5
Dioxins (pg-TEQ/L)	—	—

■ Shinko Leadmikk Co., Ltd.

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	N/A	—	—
Dust (mg/Nm³)	N/A	—	—
Dioxins (ng-TEQ/Nm³)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	1,500	38
SS (mg/L)	1,500	2
Oil (Mineral oil) (mg/L)	Mineral oil 5 (fauna and flora 150)	Mineral oil <1 (fauna and flora <1)
Dioxins (pg-TEQ/L)	10	0.00029

Welding

■ Fujisawa Plant

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	N/A	—	—
Dust (mg/Nm³)	N/A	—	—
Dioxins (ng-TEQ/Nm³)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	60	13
SS (mg/L)	90	9
Oil (Mineral oil) (mg/L)	10	<1
Dioxins (pg-TEQ/L)	—	—

■ Ibaraki Plant

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Drying furnace	230	18
	Boiler	150	32
	Calcining furnace (Firing)	200	38
Dust (mg/Nm³)	Drying furnace	200	1
	Boiler	100	1
	Calcining furnace (Firing)	300	4
Dioxins (ng-TEQ/Nm³)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	300	121
SS (mg/L)	300	33
Oil (Mineral oil) (mg/L)	5	1.2
Dioxins (pg-TEQ/L)	—	—

Environmental Data

■ Saijo Plant

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Drying furnace	250	47
	Drying furnace	230	35
Dust (mg/Nm^3)	Drying furnace	350	5
	Drying furnace	200	2
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	—	—
SS (mg/L)	—	—
Oil (Mineral oil) (mg/L)	5	0.5
Dioxins (pg-TEQ/L)	—	—

■ Fukuchiyama Plant

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Heating furnace	160	98
	Heating furnace	160	51
	Boiler	135	24
Dust (mg/Nm^3)	Heating furnace	20	4
	Heating furnace	20	2
	Boiler	10	2
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	300	2.8
SS (mg/L)	300	1.5
Oil (Mineral oil) (mg/L)	3	<0.5
Dioxins (pg-TEQ/L)	—	—

■ Hanshin Yosetsu Kizai Co., Ltd

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Melting furnace	180	<36
	Drying furnace	150	29
	Firing furnace	175	47
Dust (mg/Nm^3)	Melting furnace	100	60
	Drying furnace	100	20
	Firing furnace	100	30
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	30	7.2
SS (mg/L)	30	4
Oil (Mineral oil) (mg/L)	—	—
Dioxins (pg-TEQ/L)	—	—

Machinery

■ Kobelco Compressors Corporation (Harima Plant)

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	N/A	—	—
Dust (mg/Nm^3)	N/A	—	—
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	50	9.1
SS (mg/L)	90	9
Oil (Mineral oil) (mg/L)	5	0.5
Dioxins (pg-TEQ/L)	—	—

■ Shinko Engineering Co., Ltd.

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	N/A	—	—
Dust (mg/Nm^3)	Melting furnace	200	5
	Melting furnace	200	<2
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	1.65 (kg/day)	0.72
SS (mg/L)	60	1
Oil (Mineral oil) (mg/L)	5	1
Dioxins (pg-TEQ/L)	—	—

Company included in water quality data: Kobelco Construction Machinery Co., Ltd. (Ogaki Factory)

Engineering

■ Kobelco Eco-Solutions Co., Ltd. (Harima Plant)

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Firing furnace	180	106
	Firing furnace	180	91
	Firing furnace	180	43
Dust (mg/Nm^3)	Firing furnace	250	1
	Firing furnace	250	2
	Firing furnace	250	2
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	15	5
SS (mg/L)	28	3
Oil (Mineral oil) (mg/L)	5	ND
Dioxins (pg-TEQ/L)	—	—

Electric Power

■ Kobelco Power Kobe Inc.

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Boiler	24	17.1
	Boiler	24	17.6
Dust (mg/Nm^3)	Boiler	10	4
	Boiler	10	4
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

The latest environmental data from Kobelco Power Kobe Inc. can be viewed on our corporate website (updated monthly) (in Japanese only).
(https://www.kobelco.co.jp/about_kobelco/csr/information)

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	15	2.5
SS (mg/L)	30	19
Oil (Mineral oil) (mg/L)	1	<1
Dioxins (pg-TEQ/L)	—	—

■ Kobelco Power Kobe No. 2 Inc.

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Boiler	15[1] 20[2]	9.6
Dust (mg/Nm^3)	Boiler	5	<1
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

1 During normal operations
2 Outside of normal operations

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	15	2.5
SS (mg/L)	30	5
Oil (Mineral oil) (mg/L)	1	<1
Dioxins (pg-TEQ/L)	—	—

Environmental Data

Head Office

■ Kobelco Power Moka Inc.

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Gas turbine	70	3.7
	Gas turbine	70	4.6
	Boiler	130	64
Dust (mg/Nm^3)	Gas turbine	50	<5
	Gas turbine	50	<5
	Boiler	100	<1
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	—	—
SS (mg/L)	—	—
Oil (Mineral oil) (mg/L)	—	—
Dioxins (pg-TEQ/L)	—	—

The latest environmental data from Kobelco Power Moka Inc. can be viewed on our corporate website (updated monthly) (in Japanese only).
(https://www.kobelco.co.jp/about_kobelco/csr/information)

■ Takasago Works

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Boiler	130	14
	Heating furnace	170	50
	Steel powder reduction	150	18
Dust (mg/Nm^3)	Boiler	100	4.4
	Heating furnace	250	0.5
	Steel powder reduction	200	9.4
Dioxins (ng-TEQ/Nm^3)	Steel powder reduction	5	0.014

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	15	5.6
SS (mg/L)	26	9
Oil (Mineral oil) (mg/L)	1.5	<0.5
Dioxins (pg-TEQ/L)	—	—

Company included in water quality data: Sputtering Target Division of Kobelco Research Institute, Inc.

■ Kobe Corporate Research Laboratories

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Cold/hot water generator	48.57	33
Dust (mg/Nm^3)	Cold/hot water generator	50	<1
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	2,000	3.1
SS (mg/L)	2,000	6
Oil (Mineral oil) (mg/L)	5	<1
Dioxins (pg-TEQ/L)	10	0.025

■ Kobelco Construction Machinery Co., Ltd. (Hiroshima Factory)

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Frame undercoating	230	24
	Frame finishing coating	230	37
	ATT* coating	230	12
Dust (mg/Nm^3)	Frame undercoating	200	5
	Frame finishing coating	200	4
	ATT coating	200	6
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	—	—
SS (mg/L)	—	—
Oil (Mineral oil) (mg/L)	35	39
Dioxins (pg-TEQ/L)	—	—

In April 2021, oil exceeded the sewage exclusion standard value. Necessary countermeasures are being implemented to prevent recurrence.

* Adhesive transfer tape (ATT)

■ Kobelco Construction Machinery Co., Ltd. (Ogaki Factory)

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	N/A	—	—
Dust (mg/Nm^3)	N/A	—	—
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
COD (mg/L)	—	—
SS (mg/L)	—	—
Oil (Mineral oil) (mg/L)	—	—
Dioxins (pg-TEQ/L)	—	—

■ Kobelco Construction Machinery Co., Ltd. (Okubo Factory)

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	Drying furnace	230	18
	Drying furnace	230	10
	Drying furnace	230	10
Dust (mg/Nm^3)	Drying furnace	200	2.5
	Drying furnace	200	1.7
	Drying furnace	200	2.4
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	600	7.1
SS (mg/L)	600	12
Oil (Mineral oil) (mg/L)	5	4.5
Dioxins (pg-TEQ/L)	—	—

■ Shinko Industrial Co., Ltd.

Air

Substance	Facility	Regulation Value	Actual Measurement (Max.)
NOx (ppm)	N/A	—	—
Dust (mg/Nm^3)	N/A	—	—
Dioxins (ng-TEQ/Nm^3)	N/A	—	—

Water

Substance	Regulation Value	Actual Measurement (Max.)
BOD (mg/L)	160	2.4
SS (mg/L)	200	<1
Oil (Mineral oil) (mg/L)	5	<0.5
Dioxins (pg-TEQ/L)	—	—