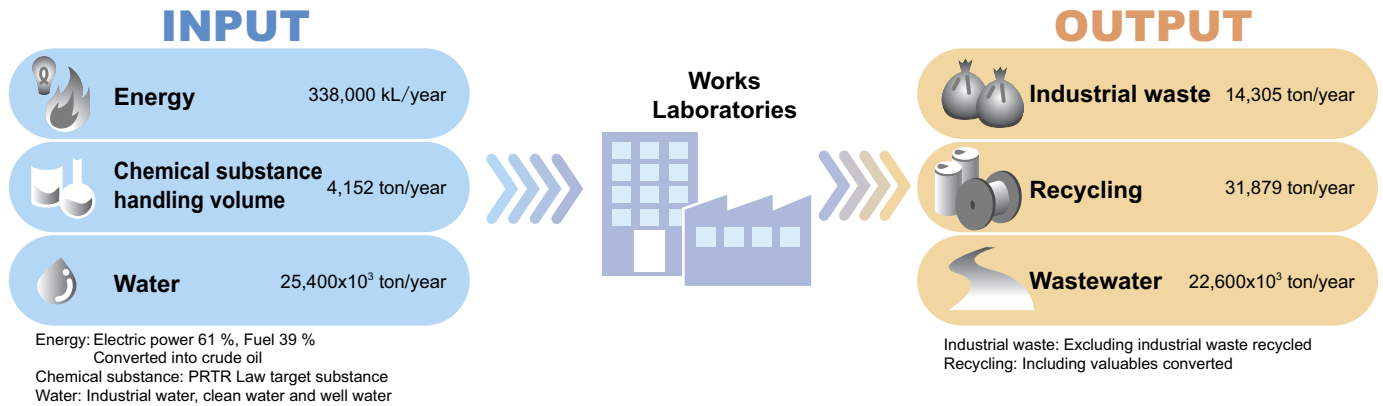


# Data Regarding Environment Preservation

## Entire Company



## Data Regarding Environment Preservation at Each Works

Below is presented the data for atmospheric emission and wastewater quality of seven Works that are notified as designated works, including NO<sub>x</sub>, SO<sub>x</sub> and dust for the former, and pH, COD (or BOD), SS and n-h (mineral oil) for the latter.



### Chiba Works

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (Nm <sup>3</sup> /h)	Boiler	0.45	82 (ppm)	71 (ppm)	80 (ppm)
	Melting furnace	1.77	63 (ppm)	28 (ppm)	30 (ppm)
	Heating furnace				
SO <sub>x</sub> (Nm <sup>3</sup> /h)	Boiler	0.502	58 (ppm)	32 (ppm)	46 (ppm)
	Melting furnace				
	Heating furnace				
Dust (g/Nm <sup>3</sup> )	Boiler	0.05	0.01	0.003	0.007
	Melting furnace	0.39	0.065	0.018	0.018
	Heating furnace				

Both NO<sub>x</sub> and SO<sub>x</sub> are under control by immutable weight, but daily management is done on ppm basis

### Mie Works

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	180	140	37	37
	Melting furnace	180	140	14	20
	Heating furnace	180	140	5	6
SO <sub>x</sub> (Nm <sup>3</sup> /h)	Boiler	0.6	0.5	0	0
	Melting furnace	41.6	33.3	0	0
	Heating furnace	2.2	1.8	0	0
Dust (g/Nm <sup>3</sup> )	Boiler	0.3	0.24	0.0015	0.002
	Melting furnace	0.3	0.24	0.002	0.002
	Heating furnace	0.2	0.16	0.0015	0.002

### Nikko Works (Kiyotaki District)

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	180	180	80	80
	Melting furnace	200	200	15	15
	Dryer furnace	300	250	18	20
SO <sub>x</sub> (K value)	Boiler	17.5	17.5	0.62	0.62
	Melting furnace	17.5	17.5	2.01	2.08
	Dryer furnace	17.5	17.5	0.13	0.17
Dust (g/Nm <sup>3</sup> )	Boiler	0.3	0.3	0.002	0.002
	Melting furnace	0.2	0.2	0.001	0.001
	Dryer furnace	0.5	0.2	0.011	0.018

### Osaka Works

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	150	120	11	12
	Melting furnace	200	160	10	14
	Heating furnace	170	144	12	12
SO <sub>x</sub> (K value)	Boiler	1.17	1.17	0	0
	Melting furnace	1.17	1.17	0	0
	Heating furnace	1.17	1.17	0	0
Dust (g/Nm <sup>3</sup> )	Boiler	0.1	0.08	0.004	0.006
	Melting furnace	0.2	0.16	0.016	0.027
	Heating furnace	0.25	0.2	0.008	0.014

### Fukui Works

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	120	110	81	99
	Melting furnace	120	110	82	120
	Heating furnace	120	110	40	63
	Dryer furnace	110	100	23	38
SO <sub>x</sub> (ppm)	Boiler	380	50	5	5
	Melting furnace	160	130	24	57
Dust (g/Nm <sup>3</sup> )	Boiler	0.1	0.05	0.005	0.005
	Melting furnace	0.2	0.16	0.008	0.014
	Heating furnace	0.12	0.1	0.005	0.005
	Dryer furnace	0.12	0.08	0.013	0.02

### Nikko Works (Sheet Plant)

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	230	230	54	74
	Melting furnace	180	150	56	59
	Heating furnace	200	160	17.5	17.5
SO <sub>x</sub> (K value)	Boiler	17.5	14.5	0.47	0.59
	Melting furnace	17.5	14.5	0.17	0.27
	Heating furnace	17.5	14.5	0.04	0.04
Dust (g/Nm <sup>3</sup> )	Boiler	0.25	0.25	0.03	0.04
	Melting furnace	0.3	0.25	0.03	0.05
	Heating furnace	0.25	0.25	0.05	0.05

### Oyama Works

Item	Facility	Legal control level	Self-imposed control level	Averaged level	Maximum level
NO <sub>x</sub> (ppm)	Boiler	150	120	100	101
	Melting furnace	180	180	168	173
	Heating furnace	130	120	117	130
SO <sub>x</sub> (K value)	Boiler	7	1	0.03	0.03
	Melting furnace	7	1	0.1	0.11
	Heating furnace	7	1	0.07	0.07
Dust (g/Nm <sup>3</sup> )	Boiler	0.3	0.1	0.007	0.011
	Melting furnace	0.2	0.1	0.016	0.02
	Heating furnace	0.2	0.1	0.003	0.004



## Wastewater Quality



### Chiba Works

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.0 ~ 9.0	5.0 ~ 9.0	7.9	8.2
COD (mg/ℓ)	15	15	6.1	9.6
SS (mg/ℓ)	20	20	3.9	3.9
n-h (mineral oil) (mg/ℓ)	2	2	0.2	0.2

### Mie Works

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.8 ~ 8.6	6.5 ~ 8.5	7.3	8.2
BOD (mg/ℓ)	10	4	2	4.1
SS (mg/ℓ)	25	6	1	4.5
n-h (mineral oil) (mg/ℓ)	1	0.7	0.2	0.6

### Nikko Works (Kiyotaki District)

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.8 ~ 8.6	6.0 ~ 8.5	7.2	7.4
BOD (mg/ℓ)	25	16	1.9	2.5
SS (mg/ℓ)	50	20	2.7	9.5
n-h (mineral oil) (mg/ℓ)	5	0.5	0.4	0.5

### Osaka Works

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.7 ~ 8.7	5.7 ~ 8.7	7.5	7.9
BOD (mg/ℓ)	300	10	4.6	8
SS (mg/ℓ)	300	50	13	32
n-h (mineral oil) (mg/ℓ)	5	2	1.6	2

### Fukui Works

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.0 ~ 9.0	5.5 ~ 8.8	7.5	8.6
COD (mg/ℓ)	600	250	50	110
SS (mg/ℓ)	600	250	26	128
n-h (mineral oil) (mg/ℓ)	5	4.5	0.3	2

### Nikko Works (Sheet Plant)

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.8 ~ 8.6	6.5 ~ 8.5	7.6	8.3
BOD (mg/ℓ)	25	10	1.5	2.3
SS (mg/ℓ)	50	25	less than 0.1	less than 0.1
n-h (mineral oil) (mg/ℓ)	5	2.5	less than 1	less than 1

### Oyama Works

Item	Legal control level	Self-imposed control level	Averaged level	Maximum level
pH	5.8 ~ 8.6	6.0 ~ 8.0	7.3	7.4
BOD (mg/ℓ)	25	20	2.9	4.9
SS (mg/ℓ)	50	30	9.8	16.4
n-h (mineral oil) (mg/ℓ)	5	2	0.5	0.5

## Environment-Related Accounting

### Cost of Environment Preservation

Unit : million yen

Category	Major contents	Amount of cost*
(1) Cost of environment preservation to suppress environmental impact caused by the production or service activities of business, generated within the business area (In house cost)	Pollution prevention, global environment preservation, resource recycling, etc.	3,194
(2) Cost of environment preservation to suppress environmental impact caused by the production or service activities of business, generated within the upstream and downstream of business area (Up- and down-stream cost)	Retrieval and recycling of containers, packaging, drums, etc.	421
(3) Cost of environment preservation associated with management activities (Management cost)	Construction, maintenance and management of environmental managing system, maintenance of environment preservation, measurement of environmental impact, etc.	791
(4) Cost of environment preservation associated with research and development activities (Research and development cost)	R&D of environment-friendly products, research in substitutes for toxic substances, R&D of environmental impact reduction in manufacturing processes, etc.	992
(5) Cost of environment preservation associated with social activities (Social activity cost)	Publication of information, greening, etc.	19
(6) Cost of environment preservation dealing with environmental impact (Environmental impact cost)	Assessment for environmental impact, inquiries and measures for soil contamination and groundwater, etc.	88
<b>Total</b>		<b>5,505</b>

\* The amount of cost excludes investment cost

### Investment and Research Costs

Unit : million yen

Environment-related investment	4,320
(Entire investment cost)	48,800
(Entire research cost)	17,100

### Economic Effects Associated with Environment Preservation Measures

Unit : million yen

Content	Amount
(1) Income gained by recycling	121
(2) Reduction in waste disposal costs through recycling	-59
(3) Reduction in energy costs through energy conservation	1,114
<b>Total</b>	<b>1,175</b>

### Physical Effects Associated with Environment Preservation Measures

Environmental impact	Amount	Reduction (over previous FY)
(1) Industrial waste (ton) *	14,305	1,907
(2) Energy thrown in (converted into crude oil) (kL)	338,000	28,000
(3) Emission of volatile organic chemicals (ton)	106	10
(4) CO <sub>2</sub> (C-ton)	159,286	12,803
(5) SO <sub>x</sub> (ton)	74	-13
(6) NO <sub>x</sub> (ton)	881	424
(7) Dust (ton)	63	42

\* Excluding industrial waste recycled