JTEKT CSR Report 2015

Environmental Data by Operations Base ①

This page includes the environmental data for 2 locations, Kokubu and Kariya, out of our 13 locations; 12 domestic plants and 1 operations center.

[Chemicals] Substances subject to PRTR **[Atmosphere]** Measured values are the maximum values **[Water quality]** pH: Hydrogen-ion concentration/ COD:Chemical oxygen demand/ BOD: Biochemical oxygen demand/ SS: Suspended solids in water/ Oil content: N-hexane extract content/ ND: Lower than determination limit/ Values in parenthesis show the daily average values **[Regulated value]** JTEKT internal standards (some more stricter than regulatory amounts) **[Substances subject to PRTR]** Shows substances which are handled in amounts of 1,000 kg/year or more. Substance number shows the legislative number for each of the No. 1 type chemical substances of the PRTR regulations. Removal processing amount is the amount of substances subject to PRTR which are incinerated, neutralized, broken down, put through reaction treatment, etc. within JTEKT premises. Consumed amount is the amount of substances subject to PRTR which are changed to another substance through reaction treatment, or removed from JTEKT premises in, or attached to, products. **[Target period] April 2014 to March 2015**

Kokubu Plant

No. of Employees 2,103

Production items

- All types of ball bearings
- Roller bearings
- Ultra-large bearings
- Hub units
- High-accuracy bearings

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	1,121,227
		Water consumed	(km^3)	447
		Chemical substances handled	(t)	9.4
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	44,584
		NOx	(kg)	13,152
		SOx	(kg)	0
		Chemical substances released	(t)	4.1
	Sewage	Wastewater	(km^3)	169
		COD	(kg)	5,114
		Nitrogen	(kg)	0
		Phosphorus	(kg)	0
		Chemical substances transferred	(t)	0.07
	Materials discarded	Recycled for profit	(t)	5,083
		Recycled at a charge	(t)	1,832
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	1.7

* Due to sewage disposal, there are no regulation values for COD, nitrogen, or phosphorus

Water quality measurement data

Index	Regulation value	Results	
		Maximum	Average
pH	5.2～8.8	7.8	7.1
BOD	480	96	44
SS	480	18	6.0
Oil content	4	3.6	1.2

Unit : mg/ℓ (Excluding pH)

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
Boiler (Annealing furnace)	Dust	0.08	0.003
	NOx	144	47
	SOx	—	—
Boiler (Hot and cold water generator)	Dust	0.08	0
	NOx	120	110
	SOx	—	—

Unit : Dust= g/Nm^3 NOx= ppm SOx= Value K

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	59	57	49
	Afternoon	64	63	51
	Evening	59	61	52
	Night	54	54	48
Vibration	Daytime	63	47	47
	Nighttime	58	48	47

Foul odor

Unit : ppm

Measurement item	Regulation value	Measurement
Ammonia	0.8	0.58
Methanethiol	0.0016	0.0005
Trimethylamine	0.0040	0.0001

* Malodorous substances (22 substances) were measured.
* All items not listed were below minimum determination limit.

Substances subject to PRTR

Unit : kg/year

Substance number	Chemical name	Amount handled	Amount released			Amount transferred		Amount recycled	Amount Removed and treated	Amount consumed
			Atmosphere	Waterways	Soil	Sewage	Waste			
1	Water-soluble zinc compounds	2,313	0	0	0	0	231	0	0	2,082
80	Xylene	3,126	3,126	0	0	0	0	0	0	0
412	Manganese and its compounds	1,223	0	25	0	0	440	0	0	758

Kariya Plant

No. of Employees 1,287

Production items

- Machine tools
- Damper pulleys
- Machined parts

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	201,287
		Water consumed	(km^3)	130
		Chemical substances handled	(t)	2.3
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	7,740
		NOx	(kg)	371
		SOx	(kg)	0
		Chemical substances released	(t)	1.9
	Waterways	Wastewater	(km^3)	182
		COD	(kg)	669
		Nitrogen	(kg)	972
		Phosphorus	(kg)	7
		Chemical substances transferred	(t)	0
	Materials discarded	Recycled for profit	(t)	441
		Recycled at a charge	(t)	220
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	0

Water quality measurement data

Index	Regulation value	Results	
		Maximum	Average
pH	5.9～8.5	7.0	6.6
COD	19	5.3	3.9
BOD	20	8.7	3.3
SS	20	5.5	2.0
Oil content	4	0.5	0.3
Zinc	1.6	0.1	0.0

Unit : mg/ℓ (Excluding pH)

Index	Regulation value	Results	
		Maximum	Average
Soluble iron	4	0.5	0.5
Soluble manganese	1.6	4.7※1	2.4
Fluorine	4	0.1	0.1
Nitrogen	16.1	11.0	8.1
Phosphorus	1.5	0.1	0.1
Boron	8	0.1	0.0

*1: Exceeds internal standard value but complies with regulatory standard value (10 mg/ℓ)

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
Boiler (for cafeteria use)	Dust	0.08	0.004
	NOx	104	64
	SOx	1.2	—
Boiler (Hot and cold water generator)	Dust	0.08	0.003
	NOx	104	54
	SOx	1.2	—

Unit : Dust= g/Nm^3 NOx= ppm SOx=Nm^3/hr

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	64	55	48
	Afternoon	69	62	51
	Evening	64	60	50
	Night	59	57	48
Vibration	Daytime	68	48	33
	Nighttime	63	33	24

Foul odor

Measurement item	Regulation value	Measurement
Odor index	12	10

Substances subject to PRTR

Unit : kg/year

Substance number	Chemical name	Amount handled	Amount released			Amount transferred		Amount recycled	Amount Removed and treated	Amount consumed
			Atmosphere	Waterways	Soil	Sewage	Waste			
300	Toluene	1,566	1,257	0	0	0	0	0	0	309

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Environmental Data by Operations Base ②

This page includes the environmental data for 2 locations, Tokushima and Okazaki, out of our 13 locations; 12 domestic plants and 1 operations center.

[Chemicals] Substances subject to PRTR **[Atmosphere]** Measured values are the maximum values **[Water quality]** pH: Hydrogen-ion concentration/ COD:Chemical oxygen demand/ BOD: Biochemical oxygen demand/ SS: Suspended solids in water/ Oil content: N-hexane extract content/ ND: Lower than determination limit/ Values in parenthesis show the daily average values **[Regulated value]** JTEKT internal standards (some more stricter than regulatory amounts) **[Substances subject to PRTR]** Shows substances which are handled in amounts of 1,000 kg/year or more. Substance number shows the legislative number for each of the No. 1 type chemical substances of the PRTR regulations. Removal processing amount is the amount of substances subject to PRTR which are incinerated, neutralized, broken down, put through reaction treatment, etc. within JTEKT premises. Consumed amount is the amount of substances subject to PRTR which are changed to another substance through reaction treatment, or removed from JTEKT premises in, or attached to, products. **[Target period] April 2014 to March 2015**

Tokushima Plant

No. of Employees 1,306

Production items

- Ball bearings
- Water pump bearings
- Cylindrical roller bearings
- Special environment bearings
- Double row angular contact ball bearings
- Hub units
- Tensioner pulleys

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	969,086
		Water consumed	(km³)	993
		Chemical substances handled	(t)	9.9
OUTPUT	Atmosphere	Greenhouse gases	(t-CO_2)	37,493
		NOx	(kg)	35,952
		SOx	(kg)	1,281
		Chemical substances released	(t)	4.1
	Waterways	Wastewater	(km³)	233
		COD	(kg)	5,143
		Nitrogen	(kg)	4,349
		Phosphorus	(kg)	11
		Chemical substances transferred	(t)	0
	Materials discarded	Recycled for profit	(t)	7,192
		Recycled at a charge	(t)	1,060
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	0.001

Water quality measurement data

Index	Regulation value	Results	
		Maximum	Average
pH	5.9～8.5	7.3	6.8
COD	16	9.1	7.6
SS	24	5.0	2.8
Oil content	2.4	1.5	1.3
Nitrogen	25	6.3	4.3
Phosphorus	2.5	0.06	0.04

Unit : mg/ℓ (Excluding pH)

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
Boiler (Absorption type cold and hot water generator)	Dust	0.24	0.01
	NOx	144	51
	SOx	16.8	0.03
Diesel engine	Dust	0.08	0.026
	NOx	902.5	845
	SOx	16.8	0.067

Unit : Dust= g/Nm³ NOx= ppm SOx= Value K

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	59	51	48
	Afternoon	64	58	55
	Evening	59	53	51
	Night	55	52	49
Vibration	Daytime	63	56.2	49
	Nighttime	58	55	48

Foul odor

* Malodorous substances (22 substances) were measured.
* All items were below minimum determination limit.

Substances subject to PRTR

Unit : kg/year

Substance number	Chemical name	Amount handled	Amount released			Amount transferred		Amount recycled	Amount Removed and treated	Amount consumed
			Atmosphere	Waterways	Soil	Sewage	Waste			
80	Xylene	4,021	4,021	0	0	0	0	0	0	0
438	Methylnaphthalene	5,827	0	0	0	0	0	0	0	5,827

Okazaki Plant

No. of Employees 828

Production items

- 4WD coupling
- Linear solenoid valves for AT and CVT
- Oil pumps for AT and CVT
- Propeller shafts
- Cast parts

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	681,618
		Water consumed	(km³)	120
		Chemical substances handled	(t)	4.7
OUTPUT	Atmosphere	Greenhouse gases	(t-CO_2)	27,736
		NOx	(kg)	24,049
		SOx	(kg)	0
		Chemical substances released	(t)	3.0
	Waterways	Wastewater	(km³)	45
		COD	(kg)	17
		Nitrogen	(kg)	37
		Phosphorus	(kg)	0
		Chemical substances transferred	(t)	0
	Materials discarded	Recycled for profit	(t)	9,867
		Recycled at a charge	(t)	2,714
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	0

Water quality measurement data

Index	Regulation value	Results	
		Maximum	Average
pH	6.6～8.4	8.1	7.6
COD	16	8.0	3.6
BOD	16	17.1※1	2.8
SS	16	2.5	1.3
Oil content	1.6	0.9	0.5
Zinc	2.4	0.10	0.05

Unit : mg/ℓ (Excluding pH)

Index	Regulation value	Results	
		Maximum	Average
Soluble iron	4	0.5	0.4
Soluble manganese	2.4	0.9	0.3
Fluorine	0.8	0.10	0.10
Nitrogen	12	7.9	6.5
Phosphorus	1.6	0.04	0.03
Boron	8	0.02	0.02

*1: Exceeds internal standard value but complies with regulatory standard value (20 mg/ℓ)

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
Electric furnace	Dust	0.12	0.002
	NOx	80	10
	SOx	6.072	—
Boiler (for air conditioning)	Dust	0.08	0.002
	NOx	104	83.2
	SOx	—	—
Heating furnace	Dust	0.12	0.002
	NOx	80	10
	SOx	6.072	—
Gas engine (cogeneration)	Dust	0.04	0.002
	NOx	160	128
	SOx	6.072	—

Unit : Dust= g/Nm³ NOx= ppm SOx=Nm³/hr

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	64	53	50
	Afternoon	69	55	52
	Evening	64	52	50
	Night	59	54	50
Vibration	Daytime	69	38	33
	Nighttime	64	35	31

Foul odor

Measurement item	Regulation value	Measurement
Odor index	12	10

Substances subject to PRTR

Unit : kg/year

Substance number	Chemical name	Amount handled	Amount released			Amount transferred		Amount recycled	Amount Removed and treated	Amount consumed
			Atmosphere	Waterways	Soil	Sewage	Waste			
300	Toluene	2,817	2,262	0	0	0	0	0	0	555

JTEKT CSR Report 2015

Environmental Data by Operations Base ③

This page includes the environmental data for 2 locations, Tokyo and Kagawa, out of our 13 locations; 12 domestic plants and 1 operations center.

[Chemicals] Substances subject to PRTR **[Atmosphere]** Measured values are the maximum values **[Water quality]** pH: Hydrogen-ion concentration/ COD:Chemical oxygen demand/ BOD: Biochemical oxygen demand/ SS: Suspended solids in water/ Oil content: N-hexane extract content/ ND: Lower than determination limit/ Values in parenthesis show the daily average values **[Regulated value]** JTEKT internal standards (some more stricter than regulatory amounts) **[Substances subject to PRTR]** Shows substances which are handled in amounts of 1,000 kg/year or more. Substance number shows the legislative number for each of the No. 1 type chemical substances of the PRTR regulations. Removal processing amount is the amount of substances subject to PRTR which are incinerated, neutralized, broken down, put through reaction treatment, etc. within JTEKT premises. Consumed amount is the amount of substances subject to PRTR which are changed to another substance through reaction treatment, or removed from JTEKT premises in, or attached to, products. **[Target period] April 2014 to March 2015**

Tokyo Plant

No. of Employees 574

Production items

- Needle roller bearings
- Constant velocity joints
- Drive shafts
- Propeller shafts

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	367,572
		Water consumed	(km^3)	120
		Chemical substances handled	(t)	9.4
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	13,847
		NOx	(kg)	24
		SOx	(kg)	7
		Chemical substances released	(t)	6.2
	Sewage	Wastewater	(km^3)	79
		BOD	(kg)	951
		Nitrogen	(kg)	633
		Phosphorus	(kg)	26
		Chemical substances transferred	(t)	0.002
	Materials discarded	Recycled for profit	(t)	1,652
		Recycled at a charge	(t)	746
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	1.4

* Due to sewage disposal, there are no regulation values for COD

Water quality measurement data

Index	Regulation value	Results	
		Maximum	Average
pH	5.9~8.6	7.8	7.5
BOD	240	83	12
SS	200	20	13
Oil content	24	4.0	1.3
Nitrogen	96	34	8.4
Phosphorus	13	0.6	0.3

Unit : mg/ℓ (Excluding pH)

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
Gas suction type boiler	Dust	0.08	0.005
	NOx	44	43
	SOx	0.33	0.01

Unit : Dust= g/Nm^3 NOx= ppm SOx= Value K

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	59	57	56
	Afternoon	69	63	61
	Evening	59	56	56
	Night	54	52	51
Vibration	Daytime	58	49	39
	Nighttime	48	42	35

Foul odor

* Malodorous substances (22 substances) were measured.
* All items were below minimum determination limit.

Substances subject to PRTR

Unit : kg/year

Substance number	Chemical name	Amount handled	Amount released			Amount transferred		Amount recycled	Amount Removed and treated	Amount consumed
			Atmosphere	Waterways	Soil	Sewage	Waste			
1	Water-soluble zinc compounds	1,417	0	0	0	0	142	0	0	1,275
80	Xylene	1,818	1,818	0	0	0	0	0	0	0
300	Toluene	4,322	4,322	0	0	0	0	0	0	0

Kagawa Plant

No. of Employees 951

Production items

- Tapered roller bearings

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	1,032,721
		Water consumed	(km^3)	362
		Chemical substances handled	(t)	5.7
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	39,765
		NOx	(kg)	4,951
		SOx	(kg)	436
		Chemical substances released	(t)	3.1
	Waterways	Wastewater	(km^3)	251
		COD	(kg)	5,016
		Nitrogen	(kg)	2,686
		Phosphorus	(kg)	55
		Chemical substances transferred	(t)	0
	Materials discarded	Recycled for profit	(t)	9,662
		Recycled at a charge	(t)	1,131
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	0

Water quality measurement data

Index	Regulation value	Results	
		Maximum	Average
pH	5.9~8.5	7.7	6.7
COD	40	29	22
BOD	40	38	31
SS	40	2.0	1.4

Unit : mg/ℓ (Excluding pH)

Index	Regulation value	Results	
		Maximum	Average
Oil content	2.4	2.0	1.6
Nitrogen	48	15	11
Phosphorus	6.4	0.2	0.1

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
Boiler	Dust	0.24	0.028
	NOx	208	69
	SOx	4	1.1
Private power generator	Dust	0.08	0.04
	NOx	902.5	830
	SOx	4	0.75

Unit : Dust= g/Nm^3 NOx= ppm SOx= Value K
* Less than regulatory amounts (950)

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	64	60	55
	Afternoon	64	59	55
	Evening	64	60	55
	Night	59	56	53
Vibration	Daytime	49	26	21
	Nighttime	46	25	20

Foul odor

Unit : ppm

Measurement item	Regulation value	Measurement
Ammonia	1.2	0.58

Substances subject to PRTR

Unit : kg/year

Substance number	Chemical name	Amount handled	Amount released			Amount transferred		Amount recycled	Amount Removed and treated	Amount consumed
			Atmosphere	Waterways	Soil	Sewage	Waste			
80	Xylene	3,091	3,091	0	0	0	0	0	0	0
438	Methylnaphthalene	2,487	12	0	0	0	0	0	0	2,475

JTEKT CSR Report 2015

Environmental Data by Operations Base ④

This page includes the environmental data for 2 locations, Nara and Higashi-kariya, out of our 13 locations; 12 domestic plants and 1 operations center.

[Chemicals] Substances subject to PRTR **[Atmosphere]** Measured values are the maximum values **[Water quality]** pH: Hydrogen-ion concentration/ COD:Chemical oxygen demand/ BOD: Biochemical oxygen demand/ SS: Suspended solids in water/ Oil content: N-hexane extract content/ ND: Lower than determination limit/ Values in parenthesis show the daily average values **[Regulated value]** JTEKT internal standards (some more stricter than regulatory amounts) **[Substances subject to PRTR]** Shows substances which are handled in amounts of 1,000 kg/year or more. Substance number shows the legislative number for each of the No. 1 type chemical substances of the PRTR regulations. Removal processing amount is the amount of substances subject to PRTR which are incinerated, neutralized, broken down, put through reaction treatment, etc. within JTEKT premises. Consumed amount is the amount of substances subject to PRTR which are changed to another substance through reaction treatment, or removed from JTEKT premises in, or attached to, products. **[Target period] April 2014 to March 2015**

Nara Plant

No. of Employees 1,872

Production items

- Electric power steering
- Electric pumps for hydraulic-electric type power steering
- Hydraulic power steering
- Manual steering

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	216,872
		Water consumed	(km^3)	51
		Chemical substances handled	(t)	13
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	8,112
		NOx	(kg)	68
		SOx	(kg)	37
		Chemical substances released	(t)	11.9
	Waterways	Wastewater	(km^3)	35
		COD	(kg)	267
		Nitrogen	(kg)	481
		Phosphorus	(kg)	97
		Chemical substances transferred	(t)	0.0003
	Materials discarded	Recycled for profit	(t)	1,180
		Recycled at a charge	(t)	1,191
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	0.1

Water quality measurement data

Unit : mg/ℓ (Excluding pH)

Index	Regulation value	Results	
		Maximum	Average
pH	5.9~8.5	7.6	7.1
COD	12	8.7	7.1
BOD	12	6.1	1.7
SS	20	2.8	0.3
Oil content	2	0.9	0.2

Index	Regulation value	Results	
		Maximum	Average
Soluble iron	1	0.05	0.03
Soluble manganese	1	0.04	0.02
Nitrogen	40	29	18
Phosphorus	15	3.8	3.0

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
No. 1 Plant, No. 1 (Boiler)	Dust	0.24	0.02
	NOx	144	50
	SOx	1.60	0.02
No. 1 Plant, No. 2 (Boiler)	Dust	0.24	0.01
	NOx	144	55
	SOx	1.60	0.02
South No. 2 Plant (Boiler)	Dust	0.24	0.01
	NOx	144	52
	SOx	1.6	0.01

Unit : Dust= g/Nm^3 NOx= ppm SOx= Value K

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	64	57	54
	Afternoon	67	59	56
	Evening	64	61	55
	Night	54	52	50
Vibration	Daytime	59	55	41
	Nighttime	54	53	39

Foul odor

* Malodorous substances (22 substances) were measured.

* All items were below minimum determination limit.

Substances subject to PRTR

Unit : kg/year

Substance number	Chemical name	Amount handled	Amount released			Amount transferred		Amount recycled	Amount Removed and treated	Amount consumed
			Atmosphere	Waterways	Soil	Sewage	Waste			
80	Xylene	8,879	8,879	0	0	0	0	0	0	0
300	Toluene	3,009	3,009	0	0	0	0	0	0	0

Higashi-kariya operations center

No. of Employees 124

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	39,515
		Water consumed	(km^3)	4
		Chemical substances handled	(t)	0
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	1,561
		NOx	(kg)	227
		SOx	(kg)	98
		Chemical substances released	(t)	0
	Waterways	Wastewater	(km^3)	3
		COD	(kg)	0.32
		Nitrogen	(kg)	0.09
		Phosphorus	(kg)	0.0014
		Chemical substances transferred	(t)	0
	Materials discarded	Recycled for profit	(t)	166
		Recycled at a charge	(t)	41
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	0

Water quality measurement data

Unit : mg/ℓ (Excluding pH)

Index	Regulation value	Results	
		Maximum	Average
pH	6.0~8.3	7.6	7.2
COD	16	5.3	4.4
BOD	16	5.0	1.4
SS	16	2.5	1.4
Oil content	4	0.5	0.2
Zinc	2	0.1	0.1

Index	Regulation value	Results	
		Maximum	Average
Soluble iron	4	0.5	0.5
Soluble manganese	4	0.3	0.2
Fluorine	5	0.15	0.11
Nitrogen	48	4.0	3.38
Phosphorus	6	0.07	0.05
Boron	8	0.05	0.03

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
Boiler (Hot and cold water generator)	Dust	0.12	0.003
	NOx	104	70
	SOx	0.46	0.01

Unit : Dust= g/Nm^3 NOx= ppm SOx=Nm^3/hr

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	64	56	47
	Afternoon	69	52	47
	Evening	64	52	46
	Night	59	53	45
Vibration	Daytime	68	32	27
	Nighttime	63	41	32

Foul odor

Measurement item	Regulation value	Measurement
Odor index	12	10

Substances subject to PRTR

* No substances had handling amounts of over 1,000 kg /year

JTEKT CSR Report 2015

Environmental Data by Operations Base ⑤

This page includes the environmental data for 2 locations, Toyohashi and Tadomisaki, out of our 13 locations; 12 domestic plants and 1 operations center.

[Chemicals] Substances subject to PRTR **[Atmosphere]** Measured values are the maximum values **[Water quality]** pH: Hydrogen-ion concentration/ COD:Chemical oxygen demand/ BOD: Biochemical oxygen demand/ SS: Suspended solids in water/ Oil content: N-hexane extract content/ ND: Lower than determination limit/ Values in parenthesis show the daily average values **[Regulated value]** JTEKT internal standards (some more stricter than regulatory amounts) **[Substances subject to PRTR]** Shows substances which are handled in amounts of 1,000 kg/year or more. Substance number shows the legislative number for each of the No. 1 type chemical substances of the PRTR regulations. Removal processing amount is the amount of substances subject to PRTR which are incinerated, neutralized, broken down, put through reaction treatment, etc. within JTEKT premises. Consumed amount is the amount of substances subject to PRTR which are changed to another substance through reaction treatment, or removed from JTEKT premises in, or attached to, products. **[Target period] April 2014 to March 2015**

Toyohashi Plant

No. of Employees 771

Production items
- Hydraulic power steering
- Manual steering
- Safety handle column

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	296,818
		Water consumed	(km^3)	41
		Chemical substances handled	(t)	3.0
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	11,293
		NOx	(kg)	1,521
		SOx	(kg)	71
		Chemical substances released	(t)	0.4
	Waterways	Wastewater	(km^3)	13
		COD	(kg)	53
		Nitrogen	(kg)	69
		Phosphorus	(kg)	4.7
		Chemical substances transferred	(t)	0
	Materials discarded	Recycled for profit	(t)	2,314
		Recycled at a charge	(t)	448
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	0.2

Water quality measurement data

Unit : mg/ℓ (Excluding pH)

Index	Regulation value	Results	
		Maximum	Average
pH	6.1～8.4	7.6	7.2
COD	16	6.1	4.0
BOD	16	1.9	0.8
SS	24	1.0	1.0

Index	Regulation value	Results	
		Maximum	Average
Oil content	4	1.0	1.0
Nitrogen	48	9	5.0
Phosphorus	6	0.7	0.3

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
No. 1 Plant (Boiler)	Dust	0.03	0.001
	NOx	120	40
	SOx	1	0.031
No. 2 Plant (Hot and cold water generator)	Dust	0.03	0.002
	NOx	120	26
	SOx	1	0.003
No. 3 Plant (Hot and cold water generator)	Dust	0.03	0.001
	NOx	120	19
	SOx	1	0.001

Unit : Dust= g/Nm^3 NOx= ppm SOx= Value K

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	60	56	53
	Afternoon	65	59	55
	Evening	64	57	55
	Night	59	52	50
Vibration	Daytime	55	38	36
	Nighttime	50	34	32

Foul odor

Measurement item	Regulation value	Measurement
Odor index	14	10

Substances subject to PRTR

Unit : kg/year

Substance number	Chemical name	Amount handled	Amount released			Amount transferred		Amount recycled	Amount Removed and treated	Amount consumed
			Atmosphere	Waterways	Soil	Sewage	Waste			
453	Molybdenum and its compounds	1,959	0	0	0	0	0	0	0	1,959

Tadomisaki Plant

No. of Employees 1,148

Production items
- Drive shafts
- 4WD coupling

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	663,650
		Water consumed	(km^3)	144
		Chemical substances handled	(t)	1.0
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	24,829
		NOx	(kg)	878
		SOx	(kg)	60
		Chemical substances released	(t)	0.02
	Waterways	Wastewater	(km^3)	100
		COD	(kg)	569
		Nitrogen	(kg)	620
		Phosphorus	(kg)	20
		Chemical substances transferred	(t)	0
	Materials discarded	Recycled for profit	(t)	9,188
		Recycled at a charge	(t)	867
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	0.05

Water quality measurement data

Unit : mg/ℓ (Excluding pH)

Index	Regulation value	Results	
		Maximum	Average
pH	6.0～8.8	7.5	7.3
COD	18	12.0	7.1
BOD	18	3.2	2.6
SS	24	4.0	2.1
Oil content	1.6	0.5	0.5
Zinc	0.8	0.07	0.05

Index	Regulation value	Results	
		Maximum	Average
Soluble iron	2.4	0.4	0.3
Soluble manganese	4	0.1	0.1
Fluorine	12	0.1	0.1
Nitrogen	24	5.4	2.8
Phosphorus	3.2	0.4	0.3
Boron	184	0.1	0.1

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
Boiler (Hot and cold water generator)	Dust	0.05	0.001
	NOx	104	57
	SOx	0.6	0
Continuous carburizing furnace	Dust	0.1	0.001
	NOx	104	12
	SOx	0.6	0

Unit : Dust= g/Nm^3 NOx= ppm SOx=Nm^3/hr

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	64	53	50
	Afternoon	69	55	52
	Evening	64	52	50
	Night	59	54	50
Vibration	Daytime	55	38	33
	Nighttime	50	35	31

Foul odor

Measurement item	Regulation value	Measurement
Odor index	16	10

Substances subject to PRTR

* No substances had handling amounts of over 1,000 kg /year

JTEKT CSR Report 2015

Environmental Data by Operations Base ⑥

This page includes the environmental data for 2 locations, Hanazono and Kameyama, out of our 13 locations; 12 domestic plants and 1 operations center.

[Chemicals] Substances subject to PRTR **[Atmosphere]** Measured values are the maximum values **[Water quality]** pH: Hydrogen-ion concentration/ COD:Chemical oxygen demand/ BOD: Biochemical oxygen demand/ SS: Suspended solids in water/ Oil content: N-hexane extract content/ ND: Lower than determination limit/ Values in parenthesis show the daily average values **[Regulated value]** JTEKT internal standards (some more stricter than regulatory amounts) **[Substances subject to PRTR]** Shows substances which are handled in amounts of 1,000 kg/year or more. Substance number shows the legislative number for each of the No. 1 type chemical substances of the PRTR regulations. Removal processing amount is the amount of substances subject to PRTR which are incinerated, neutralized, broken down, put through reaction treatment, etc. within JTEKT premises. Consumed amount is the amount of substances subject to PRTR which are changed to another substance through reaction treatment, or removed from JTEKT premises in, or attached to, products. **[Target period] April 2014 to March 2015**

Hanazono Plant

No. of Employees 1,209

Production items

- Electric power steering
- Hydraulic power steering pump
- Control computer

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	327,597
		Water consumed	(km^3)	90
		Chemical substances handled	(t)	1.0
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	12,762
		NOx	(kg)	201
		SOx	(kg)	834
		Chemical substances released	(t)	0.3
	Waterways	Wastewater	(km^3)	85
		COD	(kg)	235
		Nitrogen	(kg)	230
		Phosphorus	(kg)	2
		Chemical substances transferred	(t)	0
	Materials discarded	Recycled for profit	(t)	820
		Recycled at a charge	(t)	471
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	0.1

Water quality measurement data

Unit : mg/ℓ (Excluding pH)

Index	Regulation value	Results	
		Maximum	Average
pH	5.9~8.5	7.7	7.1
COD	8	4.4	3.3
BOD	8	6.5	1.5
SS	8	4.5	2.8
Oil content	1.6	1.0	1.0
Zinc	0.8	0.14	0.06

Index	Regulation value	Results	
		Maximum	Average
Soluble iron	2.4	0.5	0.5
Soluble manganese	2.4	1.0	0.3
Fluorine	0.8	0.10	0.10
Nitrogen	24.0	19.0	13.4
Phosphorus	2.4	0.2	0.1
Boron	8.0	1.00	1.00

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
Compact once-through boiler	Dust	0.08	0.002
	NOx	100	31
	SOx	6.07	0.03
Boiler (Hot and cold water generator)	Dust	0.08	0.002
	NOx	100	67
	SOx	6.07	0.01

Unit : Dust= g/Nm^3 NOx= ppm SOx=Nm^3/hr

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	74	53	49
	Afternoon	74	53	50
	Evening	74	54	49
	Night	69	54	49
Vibration	Daytime	60	38	32
	Nighttime	56	37	32

Foul odor

Measurement item	Regulation value	Measurement
Odor index	14	10

Substances subject to PRTR

* No substances had handling amounts of over 1,000 kg /year

Kameyama Plant

No. of Employees 301

Production items

- Ball bearings
- Clutch bearings
- Clutch pulleys for alternator

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	163,316
		Water consumed	(km^3)	26
		Chemical substances handled	(t)	2
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	6,120
		NOx	(kg)	400
		SOx	(kg)	229
		Chemical substances released	(t)	0.6
	Waterways	Wastewater	(km^3)	20.5
		COD	(kg)	59
		Nitrogen	(kg)	364
		Phosphorus	(kg)	2
		Chemical substances transferred	(t)	0
	Materials discarded	Recycled for profit	(t)	704
		Recycled at a charge	(t)	183
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	1.2

Water quality measurement data

Unit : mg/ℓ (Excluding pH)

Index	Regulation value	Results	
		Maximum	Average
pH	5.9~8.5	8.3	7.2
COD	8	8.0	3.1
BOD	8	6.0	1.7
SS	20	3.0	1.3
Oil content	1.0	0.5	0.5
Zinc	4	0.03	0.02

Index	Regulation value	Results	
		Maximum	Average
Soluble iron	8	0.03	0.02
Soluble manganese	2	0.10	0.03
Fluorine	5	0.10	0.10
Nitrogen	50	33	20
Phosphorus	1.0	0.31	0.11
Boron	8	0.06	0.06

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
No. 1 Plant (Boiler)	Dust	0.1	0.005
	NOx	150	60
	SOx	1.65	0.05

Unit : Dust= g/Nm^3 NOx= ppm SOx=Nm^3/hr

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	60	56	55
	Afternoon	60	58	57
	Evening	60	58	56
	Night	55	52	51
Vibration	Daytime	58	36	34
	Nighttime	48	24	24

Foul odor

* Malodorous substances (22 substances) were measured.
* All items were below minimum determination limit.

Substances subject to PRTR

* No substances had handling amounts of over 1,000 kg /year

JTEKT CSR Report 2015

Environmental Data by Operations Base ⑦

This page includes the environmental data for Sayama Plant out of our 13 locations; 12 domestic plants and 1 operations center.

[Chemicals] Substances subject to PRTR **[Atmosphere]** Measured values are the maximum values **[Water quality]** pH: Hydrogen-ion concentration/ COD:Chemical oxygen demand/ BOD: Biochemical oxygen demand/ SS: Suspended solids in water/ Oil content: N-hexane extract content/ ND: Lower than determination limit/ Values in parenthesis show the daily average values **[Regulated value]** JTEKT internal standards (some more stricter than regulatory amounts) **[Substances subject to PRTR]** Shows substances which are handled in amounts of 1,000 kg/year or more. Substance number shows the legislative number for each of the No. 1 type chemical substances of the PRTR regulations. Removal processing amount is the amount of substances subject to PRTR which are incinerated, neutralized, broken down, put through reaction treatment, etc. within JTEKT premises. Consumed amount is the amount of substances subject to PRTR which are changed to another substance through reaction treatment, or removed from JTEKT premises in, or attached to, products. **[Target period] April 2014 to March 2015**

Sayama Plant

No. of Employees 85

Production items

- TORSEN

Overall environmental data

		Classification		Volume
INPUT		Energy consumption	(GJ)	34,595
		Water consumed	(km³)	5
		Chemical substances handled	(t)	0.002
OUTPUT	Atmosphere	Greenhouse gases	($t\text{-}CO_2$)	1,307
		NOx	(kg)	121
		SOx	(kg)	0
		Chemical substances released	(t)	0
	Waterways	Wastewater	(km³)	3
		COD	(kg)	0.43
		Nitrogen	(kg)	4.3
		Phosphorus	(kg)	0
		Chemical substances transferred	(t)	0
	Materials discarded	Recycled for profit	(t)	672
		Recycled at a charge	(t)	109
		Waste (incineration+landfill)	(t)	0
		Chemical substances transferred	(t)	0

Water quality measurement data

Index	Regulation value	Results	
		Maximum	Average
pH	5.2～8.8	7.5	7.5
Oil content	4	ND	ND
Nitrogen	192	27	27
Phosphorus	25.6	ND	ND

Unit : mg/ℓ (Excluding pH)

Atmosphere measurement data

Facility	Index	Regulation value	Maximum value
No.1 Plant (Boiler)	Dust	0.08	0.001
	NOx	120	84
	SOx	0.52	0

Unit : Dust= g/Nm³ NOx= ppm SOx=Nm³/hr

Noise / Vibration data

Unit : dB

Index		Regulation value	Maximum	Average
Noise	Morning	64	62	57
	Afternoon	69	64	57
	Evening	64	63	56
	Night	59	56	52
Vibration	Daytime	Unmeasured		
	Nighttime			

Foul odor

* Unmeasured

Vibration and foul odor are not measured as these items are not applicable within the scope of regulations.

Substances subject to PRTR

* No substances had handling amounts of over 1,000 kg /year