

Environmental Data (Overseas Subsidiaries)

■ Musashi Auto Parts Co.,Ltd. (MAP-TH) Thailand

Employees : 1,476

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	65,293
Liquefied Petroleum Gas (LPG)	ton	623

< Waste Generated >

Items	Unit	Results
Quantity	ton	3,946

■ P.T. Musashi Auto Parts Indonesia (MAP-IN) Indonesia

Employees : 2,263

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	70,058
Diesel	kℓ	101
Gasoline	kℓ	85
Natural Gas	1,000Nm ³	654
Liquefied Petroleum Gas (LPG)	ton	220

< Waste Generated >

Items	Unit	Results
Quantity	ton	101

■ Musashi Auto Parts India Private Ltd. (MAP-ID) India

Employees : 2,803

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	46,919
Type-A Heavy Oil	kℓ	4,269
Diesel	kℓ	393
Liquefied Petroleum Gas (LPG)	ton	925

< Waste Generated >

Items	Unit	Results
Quantity	ton	2,340

■ Musashi Auto Parts Vietnam Co.,Ltd. (MAP-VN) Vietnam

Employees : 470

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	10,405
Liquefied Petroleum Gas (LPG)	ton	65

< Waste Generated >

Items	Unit	Results
Quantity	ton	518

■ Musashi Auto Parts (Zhongshan) Co.,Ltd. (MAP-CH) China

Employees : 1,045

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	28,198
Liquefied Petroleum Gas (LPG)	ton	65
City Gas	1,000Nm ³	686

< Waste Generated >

Items	Unit	Results
Quantity	ton	539

■ Musashi Auto Parts (Nantong) Co., Ltd. (MAP-NT) China

Employees : 255

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	5,177
City Gas	1,000Nm ³	16

< Waste Generated >

Items	Unit	Results
Quantity	ton	56

■ Musashi Auto Parts Michigan Incorporated (MAP-MI) US, Michigan

Employees : 612

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	41,958
Natural Gas	1,000Nm ³	2,581

< Waste Generated >

Items	Unit	Results
Quantity	ton	928

■ Musashi Auto Parts Canada Incorporated (MAP-CA) Canada

Employees : 516

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	25,554
Natural Gas	1,000Nm ³	727

< Waste Generated >

Items	Unit	Results
Quantity	ton	1,501

■ Musashi Auto Parts Mexico, S.A. de C.V. (MAP-MX) Mexico

Employees : 208

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	1,540

< Waste Generated >

Items	Unit	Results
Quantity	ton	394

■ Musashi Do Brasil Ltda. (MSB) Brazil, Pernambuco

Employees : 642

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	18,623
Diesel	kl	6
Natural Gas	1,000Nm ³	279
Liquefied Petroleum Gas (LPG)	ton	13

< Waste Generated >

Items	Unit	Results
Quantity	ton	566

■ Musashi Da Amazonia Ltda. (MDA) Brazil, Amazonia

Employees : 431

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	12,027
Diesel	kl	0
Liquefied Petroleum Gas (LPG)	ton	220

< Waste Generated >

Items	Unit	Results
Quantity	ton	521

■ Musashi Hungary Manufacturing, Limited (MHM) Hungary

Employees : 218

< Energy Consumption >

Items	Unit	Results
Electricity	MWh	6,387
Natural Gas	1,000Nm ³	70

< Waste Generated >

Items	Unit	Results
Quantity	ton	855

Environmental Data (Japan)

Ueta Plant

Employees 772 (at March 2017)

<Energy · Water Consumption>

No.	Items	Unit	Results
1	Electricity	MWh	15,392
2	Kerosene	kℓ	177
3	Liquefied Petroleum Gas (LPG)	ton	531
4	Water	m ³	57,473

<Water Quality>

Date : May 24, 2016

No.	Control Items	Unit	Regulation Value*	Measured Value
1	pH(hydrogen ion concentration)	-	5.8~8.6	7.3
2	BOD(biological oxygen demand)	mg/ℓ	25(20)	1.6
3	COD(chemical oxygen demand)	mg/ℓ	25(20)	8.1
4	Nitrogen Content	mg/ℓ	120(60)	11
5	Phosphorus Content	mg/ℓ	16(8)	1.2
6	SS(suspended solids)	mg/ℓ	30(20)	3

<Air>

Date : Dec. 5, 2016

No.	Control Items	Object Facility	Unit	Regulation Value	Measured Value
1	Dust	Heater, West Plant	g/Nm ³	0.30	<0.003
		Heater, South Plant	g/Nm ³	0.30	<0.003
2	Sulfur Oxide	Heater, West Plant	Nm ³ /h	1.8	<0.003
		Heater, South Plant	Nm ³ /h	0.87	<0.004
3	Nitrogen Oxide	Heater, West Plant	ppm	180	47
		Heater, South Plant	ppm	180	51

<Waste>

No.	Items	Unit	Results
1	Amount	ton	484
2	Amount Sent Directly to Landfills	ton	0

*Self-imposed standards except BOD, bracket () shows daily average effluent standard

Akemi Plant #1

Employees 137 (at March 2017)

<Energy · Water Consumption>

No.	Items	Unit	Results
1	Electricity	MWh	9,559
2	Kerosene	kℓ	115
3	Liquefied Petroleum Gas (LPG)	ton	36
4	Water	m ³	19,203

<Water Quality>

Date : May 2, 2017

No.	Control Items	Unit	Regulation Value	Measured Value
1	pH(hydrogen ion concentration)	-	6.0~8.5	7.0
2	BOD(biological oxygen demand)	mg/ℓ	10	3.9
3	COD(chemical oxygen demand)	mg/ℓ	10	4.3
4	Nitrogen Content	mg/ℓ	20	13
5	Phosphorus Content	mg/ℓ	2	0.87
6	SS(suspended solids)	mg/ℓ	10	<1

<Air>

Date : Feb. 17, 2017

No.	Control Items	Object Facility	Unit	Regulation Value	Measured Value
1	Dust	Heater, Plant #1	g/Nm ³	0.10	<0.002
		Heater, Plant #2	g/Nm ³	0.10	<0.002
		Heater, Plant #3	g/Nm ³	0.10	<0.002
2	Sulfur Oxide	Heater, Plant #1	Nm ³ /h	0.053	<0.0009
		Heater, Plant #2	Nm ³ /h	0.053	<0.001
		Heater, Plant #3	Nm ³ /h	0.28	<0.002
3	Nitrogen Oxide	Heater, Plant #1	ppm	150	46
		Heater, Plant #2	ppm	150	50
		Heater, Plant #3	ppm	150	40

<Waste>

No.	Items	Unit	Results
1	Amount	ton	148
2	Amount Sent Directly to Landfills	ton	0

Akemi Plant #2

Employees 173 (at March 2017)

<Energy · Water Consumption>

No.	Items	Unit	Results
1	Electricity	MWh	14,667
2	City Gas	1,000Nm ³	374
3	Liquefied Petroleum Gas (LPG)	ton	7
4	Water	m ³	16,943

<Water Quality>

Date : Oct. 26, 2016

No.	Control Items	Unit	Regulation Value	Measured Value
1	pH(hydrogen ion concentration)	-	6.0~8.5	7.2
2	BOD(biological oxygen demand)	mg/ℓ	20	5.5
3	COD(chemical oxygen demand)	mg/ℓ	20	7.9
4	Nitrogen Content	mg/ℓ	20	12
5	Phosphorus Content	mg/ℓ	2	1.8
6	SS(suspended solids)	mg/ℓ	30	<5

<Air>

Date : Feb. 9, 2017

No.	Control Items	Object Facility	Unit	Regulation Value	Measured Value
1	Dust	Normalizing Furnace	g/Nm ³	0.10	<0.002
2	Sulfur Oxide	Normalizing Furnace	Nm ³ /h	0.014	<0.002
3	Nitrogen Oxide	Normalizing Furnace	ppm	150	<4

<Waste>

No.	Items	Unit	Results
1	Amount	ton	364
2	Amount Sent Directly to Landfills	ton	0

■ Horai Plant

Employees 87 (at March 2017)

<Energy · Water Consumption>

No.	Items	Unit	Results
1	Electricity	MWh	7,472
2	Kerosene	kℓ	106
3	Water	m ³	4,544

<Air>

Date : Dec. 6, 2016

No.	Control Items	Object Facility	Unit	Regulation Value	Measured Value
1	Dust	Heater	g/Nm ³	0.30	<0.003
2	Sulfur Oxide	Heater	Nm ³ /h	1.7	<0.002
3	Nitrogen Oxide	Heater	ppm	180	51

<Water Quality>

Date : Nov. 9, 2016

No.	Control Items	Unit	Regulation Value*	Measured Value
1	pH(hydrogen ion concentration)	-	5.8~8.6	7.4
2	BOD(biological oxygen demand)	mg/ℓ	20	18
3	COD(chemical oxygen demand)	mg/ℓ	160(120)	15
4	Nitrogen Content	mg/ℓ	120(60)	28
5	Phosphorus Content	mg/ℓ	16(8)	2.6
6	SS(suspended solids)	mg/ℓ	200(150)	2

<Waste>

No.	Items	Unit	Results
1	Amount	ton	472
2	Amount Sent Directly to Landfills	ton	0

*Self-imposed standards except BOD, bracket () shows daily average effluent standard

■ Suzuka Plant

Employees 12 (at March 2017)

<Energy · Water Consumption>

No.	Items	Unit	Results
1	Electricity	MWh	70
2	Water	M ³	151

<Air>

No.	Control Items	Object Facility	Unit	Regulation Value	Measured Value
Not Applicable					

<Water Quality>

Date : Sep. 15, 2016

No.	Control Items	Unit	Regulation Value*	Measured Value
1	pH(hydrogen ion concentration)	-	5.8~8.6	6.7
2	BOD(biological oxygen demand)	mg/ℓ	20	9
3	COD(chemical oxygen demand)	mg/ℓ	160(120)	26
4	Nitrogen Content	mg/ℓ	120(60)	74
5	Phosphorus Content	mg/ℓ	16(8)	8.1
6	SS(suspended solids)	mg/ℓ	200(150)	5

<Waste>

No.	Items	Unit	Results
1	Amount	ton	12
2	Amount Sent Directly to Landfills	ton	0

*Self-imposed standards except BOD, bracket () shows daily average effluent standard

■ Kyushu Musashi Seimitsu

Employees 681 (at March 2017)

<Energy · Water Consumption>

No.	Items	Unit	Results
1	Electricity	MWh	29,803
2	Kerosene	kℓ	3
3	Type-A Heavy Oil	kℓ	169
4	Gasoline	kℓ	16
5	Liquefied Petroleum Gas (LPG)	ton	725
6	Water	m ³	232,190

<Air>

Date : Aug. 23, 2016

No.	Control Items	Object Facility	Unit	Regulation Value	Measured Value
1	Dust	Private Generator	g/Nm ³	0.1	0.01
2	Sulfur Oxide	Private Generator	Nm ³ /h	3.23	0.7
3	Nitrogen Oxide	Private Generator	ppm	950	690

<Water Quality>

Date : Jan. 18, 2017

No.	Control Items	Unit	Regulation Value	Measured Value
1	pH(hydrogen ion concentration)	-	5.8~8.6	7.0
2	BOD(biological oxygen demand)	mg/ℓ	600	17
3	COD(chemical oxygen demand)	mg/ℓ	-	25
4	Nitrogen Content	mg/ℓ	240	5.7
5	Phosphorus Content	mg/ℓ	32	2.4
6	SS(suspended solids)	mg/ℓ	600	26

<Waste>

No.	Items	Unit	Results
1	Amount	ton	570
2	Amount Sent Directly to Landfills	ton	0