KUBOTA Group Production Sites Data

(results of FY2015)

Data on KUBOTA production sites in Japan

Item \ Business site			Hanshin Plant (Mukogawa, Marushima)		Hanshin Plant (Amagasaki)		Keiyo Plant (Funabashi, Distribution Center)		Keiyo Plant (Ichikawa)		Hirakata Plant		Okajima Business Center		Sakai Plant		Sakai Rinkai Plant		Utsunomiya Plant	
INPUT																				
Energy		Unit	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ
	Fossil fuel	Crude oil equivalent KL	17,787	689,412	5,616	217,665	31,167	1,208,014	103	4,005	5,430	210,470	5,197	201,417	4,161	161,270	2,612	101,248	1,019	39,479
	Purchased electricity	MWh	46,545	454,569	33,571	324,574	57,035	551,781	5,747	55,607	41,876	409,579	37,622	365,233	36,746	358,575	16,771	163,419	5,888	58,122
	Total	Crude oil equivalent KL	29,515	1,143,982	13,990	542,240	45,403	1,759,795	1,538	59,612	15,997	620,050	14,620	566,650	13,412	519,844	6,828	264,667	2,518	97,601
Water usage		thousand m^3	798		215		1,048		14		201		77		118		49		102	
OUTPUT																				
CO_2 emission	CO2 emissions from energy sources	tons CO_{2e}	79,280		28,395		140,998		3,306		32,832		39,186		28,533		14,981		5,327	
Waste	Discharge amount	tons	10,912		5,131		25,176		93		3,629		12,560		1,432		983		435	
	Recycling ratio	%	99.7		99.9		99.9		99.8		100.0		100.0		99.8		98.1		99.1	

	Main smoke and soot generating facilities*2		Melting furnaces			Heating furnaces			Melting furnaces				Heating furnaces			Melting furnaces			Drying furnaces				Boilers		
		Unit	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement		Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement		Control content	Control value	Measurement
Exhaust gas*1	SOx	Total emission control and K-value control: m^3N/h	K-value control	1.17	0.003	Use of town gas with zero sulfur content			Total emission control	39.8	1.97	No smoke and soot generating facilities	Use of town gas with zero sulfur content			Total emission control	2.859	0.260	Total emission control	1.151	0.118	No smoke and soot generating facilities	Use of town gas with zero sulfur content		
	NOx	Total emission control: m^3N/h, Concentration control: ppm	Total emission control	29.9	3.55	Total emission control	2.24	0.368	Total emission control	26.7	6.68		Total emission control	1.19	0.053	Total emission control	2.4	0.21	Total emission control	1.059	0.261		Concentration control	150	40
	Soot and dust	Concentration control: g/m^3N	Concentration control	0.1	0.001	Concentration control	0.1	0.001	Concentration control	0.1	0.003		Concentration control	0.1	0.005	Concentration control	0.05	0.008	Concentration control	0.1	0.03		Concentration control	0.1	0.001

*1 Total emission control: Control value (including agreed value) by plant or facility and the measurement value. K-value control and concentration control: Control value (including agreed value) of major smoke and soot generating facilities and the measurement value (maximum value).

*2 Smoke and soot generating facilities: Those subject to the laws concerning emissions into the atmosphere.

			Unit	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement
Drainage*3	Public water areas	pH	Minimum value, Maximum value	5.8-8.6	6.8 , 7.9	–	–	5.0-9.0	6.4 , 8.0	5.0-9.0	6.9 , 7.8	5.8-8.6	6.8, 7.6	–	–	–	–	5.8-8.6	5.3 , 7.6	5.8-8.6	7.1, 7.5		
		BOD	mg/L	30	4	–	–	–	–	60	22	25	11	–	–	–	–	30	4	25	8.4		
		COD	mg/L	20	6	–	–	20	2	60	15	25	8.5	–	–	–	–	30	13	–	–		
		Nitrogen	mg/L	120	5.9	–	–	20	4	70	20	120	4.2	–	–	–	–	120	36	–	–		
		Phosphorus	mg/L	16	0.3	–	–	2	0.06	7	2	16	0.8	–	–	–	–	16	2.9	–	–		
		Hexavalent chromium	mg/L	0.35	0.02	–	–	0.05	0.02	–	–	0.05	ND	–	–	–	–	0.5	ND	–	–		
		Lead	mg/L	0.1	0.01	–	–	0.1	0.01	0.1	–	0.01	ND	–	–	–	–	0.1	ND	–	–		
		COD, total emission control	kg/day	97.44	18.02	–	–	110.5	17.2	4	0.5	37.95	2.61	–	–	–	–	3.3	0.79	–	–		
		Nitrogen, total emission control	kg/day	40.51	21.17	–	–	114.7	10	2.865	0.56	38.3	3.52	–	–	–	–	13.2	2.20	–	–		
		Phosphorus, total emission control	kg/day	1.424	0.9633	–	–	11.65	0.32	0.391	0.05	4.4	0.33	–	–	–	–	1.76	0.196	–	–		
	Sewerage lines	pH	Minimum value, Maximum value	5.7-8.7	6.7 , 8.3	5.7-8.7	6.2 , 7.8	–	–	–	–	–	–	5.7-8.7	6.76 , 8.22	5.0-9.0	7.2,7.5	–	–	–	–		
		BOD	mg/L	300	70	300	8	–	–	–	–	–	–	600	22	600	77	–	–	–	–		
		COD	mg/L	–	–	–	–	–	–	–	–	–	–	–	–	–	240	–	–	–	–		
		SS	mg/L	300	6	300	55	–	–	–	–	–	–	600	16	600	27	–	–	–	–		

*3 Total emission control: Control value (including agreed value) by plant and the measurement value. Concentration control: Control value (including agreed value) by plant and the measurement value (maximum value).

*4 Includes Group company data within the same site.

Item \ Business site			Tsukuba Plant*4		Kyuhoji Business Center*4		Ryugasaki Plant*4		Shiga Plant	
INPUT										
Energy		Unit	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ
	Fossil fuel	Crude oil equivalent KL	5,861	227,164	234	9,054	177	6,865	459	17,807
	Purchased electricity	MWh	43,163	443,024	2,171	21,322	2,928	29,195	2,164	21,572
	Total	Crude oil equivalent KL	17,291	670,188	784	30,376	930	36,060	1,016	39,379
Water usage		thousand m^3	18.2		2.2		1.0		7.0	
OUTPUT										
CO_2 emission	CO2 emissions from energy sources	tons CO_{2e}	36,966		1,629		1,573		2,017	
Waste	Discharge amount	tons	2,705		93		203		172	
	Recycling ratio	%	99.8		99.4		99.4		98.9	

	Main smoke and soot generating facilities*2		Boilers				Boilers			Boilers		
		Unit	Control content	Control value	Measurement		Control content	Control value	Measurement	Control content	Control value	Measurement
Exhaust gas*1	SOx	Total emission control and K-value control: m^3N/h	K-value control	10.4	0.0625	No smoke and soot generating facilities	Use of town gas with zero sulfur conten			Use of town gas with zero sulfur content		
	NOx	Total emission control: m^3N/h, Concentration control: ppm	Total emission control	230	100		Concentration control	230	39	Concentration control	180	30
	Soot and dust	Concentration control: g/m^3N	Concentration control	0.25	0.01		Concentration control	0.2	Less than 0.01	–	–	

			Unit	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement
Drainage*3	Public water areas	pH	Minimum value, Maximum value	5.8-8.6	7.0 , 8.1	–	–	–	–	6.0-8.5	7.6 , 7.7
		BOD	mg/L	20	4	–	–	–	–	30	1
		COD	mg/L	20	10	–	–	–	–	30	2
		Nitrogen	mg/L	60	11	–	–	–	–	12	0.6
		Phosphorus	mg/L	8	0.7	–	–	–	–	1.2	0.5
		Hexavalent chromium	mg/L	0.5	ND	–	–	–	–	0.05	0
		Lead	mg/L	0.1	ND	–	–	–	–	0.1	0
		COD, total emission control	kg/day	–	–	–	–	–	–	–	–
		Nitrogen, total emission control	kg/day	–	–	–	–	–	–	–	–
		Phosphorus, total emission control	kg/day	–	–	–	–	–	–	–	–
	Sewerage lines	pH	Minimum value, Maximum value	–	–	5.7-8.7	6.7 , 7.9	5-9	6.5 , 7.0	–	–
		BOD	mg/L	–	–	300	23	600	150	–	–
		COD	mg/L	–	–	–	–	–	–	–	–
		SS	mg/L	–	–	300	14	600	11	–	–

KUBOTA Group Production Sites Data

(results of FY2015)

Data on KUBOTA Group production sites in Japan

Item \ Business site			KUBOTA-C.I. (Sakai)		KUBOTA-C.I. (Odawara)		KUBOTA-C.I. (Tochigi)		KUBOTA Air Conditioner (Tochigi)		KUBOTA Precision Machinery		Nippon Plastic Industry		Kyushu KUBOTA Chemical	
INPUT																
Energy		Unit	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ
	Fossil fuel	Crude oil equivalent KL	92	3,554	108	4,170	24	939	260	10,073	666	25,824	38	1,485	2	67
	Purchased electricity	MWh	13,472	131,487	29,554	286,360	20,786	200,261	2,538	24,945	13,255	128,676	14,601	146,008	7,053	67,889
	Total	Crude oil equivalent KL	3,484	135,041	7,496	290,530	5,191	201,200	903	35,018	3,986	154,500	3,805	147,492	1,753	67,957
Water usage		thousand m^3	20		35		276		67		19		210		6	
OUTPUT																
CO_2 emission	CO2 emissions from energy sources	tons CO_{2e}	5,940		15,885		11,077		1,854		8,239		7,816		4,328	
Waste	Discharge amount	tons	15		77		78		190		473		67		15	
	Recycling ratio	%	100.0		99.6		100.0		99.9		99.8		99.7		99.8	
Exhaust gas*1	Main smoke and soot generating facilities*2		No smoke and soot generating facilities		No smoke and soot generating facilities		No smoke and soot generating facilities		Boilers: Control content: Use of town gas with zero sulfur content; Control value: SOx: K-value control; NOx: Concentration control: 230 ppm; Soot and dust: Concentration control: 0.2 g/m^3N; Measurement: Less than 5 ppm; Less than 0.005 g/m^3N		No smoke and soot generating facilities		No smoke and soot generating facilities		No smoke and soot generating facilities	
Drainage*3	Public water areas	Unit	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement
	pH	Minimum value, Maximum value	5.8-8.6	7.2	5.8-8.6	8.2 , 8.3	5.8-8.6	8.3	5.8-8.6	7.1 , 7.6	—	—	5.8-8.6	7.5	—	—
	BOD	mg/L	25	9	60	1	20	2	20	10	—	—	160	0.2	—	—
	COD	mg/L	25	15	60	3	—	—	—	—	—	—	160	2	—	—
	Nitrogen	mg/L	60	0.8	120	0.5	60	0.9	—	—	—	—	—	—	—	—
	Phosphorus	mg/L	8	0.03	16	0.13	1	0.3	—	—	—	—	—	—	—	—
	Hexavalent chromium	mg/L	0.5	Less than 0.05	0.5	Less than 0.05	0.1	Less than 0.02	0.1	ND	—	—	—	—	—	—
	Lead	mg/L	0.1	0.02	0.1	Less than 0.01	0.1	0.02	0.1	ND	—	—	0.1	0.02	—	—
	COD, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Nitrogen, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Phosphorus, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sewerage lines															
	pH	Minimum value, Maximum value	—	—	—	—	—	—	—	—	No specific facilities		—	—	No specific facilities	
	BOD	mg/L	—	—	—	—	—	—	—	—			—	—		
	COD	mg/L	—	—	—	—	—	—	—	—			—	—		
	SS	mg/L	—	—	—	—	—	—	—	—			—	—		

*1 K-value control and concentration control: Control value (including agreed value) of major smoke and soot generating facilities and the measurement value (maximum value).

*2 Smoke and soot generating facilities: Those subject to the laws concerning emissions into the atmosphere.

*3 Total emission control: Control value (including agreed value) by plant and the measurement value. Concentration control: Control value (including agreed value) by plant and the measurement value (maximum value).

Data on KUBOTA Group Overseas production sites

Region			North America						Europe									
Item \ Business site			Kubota Manufacturing of America Corporation		Kubota Industrial Equipment Corporation		Kubota Materials Canada Corporation		Kubota Baumaschinen GmbH		Kverneland Group Operations Norway AS		Kverneland Group Soest Gmbh		Kverneland Group Nieuw-Vennep B.V.		Kverneland Group Kerteminde AS	
INPUT																		
Energy		Unit	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ
	Fossil fuel	Crude oil equivalent KL	4,303	166,777	3,301	127,961	5,789	224,361	614	23,792	2,430	94,176	520	20,141	784	30,388	899	34,835
	Purchased electricity	MWh	24,869	247,939	29,432	293,437	19,731	196,719	3,233	32,228	39,080	389,631	3,262	32,526	2,469	24,617	6,488	64,682
	Total	Crude oil equivalent KL	10,700	414,716	10,872	421,398	10,864	421,079	1,445	56,020	12,482	483,807	1,359	52,667	1,419	55,006	2,568	99,516
Water usage		thousand m^3	67		41		89		80		67		4		14		41	
OUTPUT																		
CO_2 emission	CO2 emissions from energy sources	tons CO_{2e}	24,160		24,726		14,775		2,857		5,373		2,623		2,551		4188	
Waste	Discharge amount	tons	4,130		1,194		4,118		523		234		478		451		324	
	Recycling ratio	%	94.5		95.9		92.5		98.2		100.0		91.7		92.7		98.9	
Exhaust gas*1	Main smoke and soot generating facilities*2		Boilers: Control content: Concentration control; Control value: —; Measurement: —		Boilers: Control content: Concentration control; Control value: (ppm) 30; Measurement: 18		—: Control content: Concentration control; Control value: —; Measurement: —		No smoke and soot generating facilities		—: Control content: Concentration control; Control value: —; Measurement: —		—: Control content: Concentration control; Control value: —; Measurement: —		—: Control content: Concentration control; Control value: Non-detected; Measurement: —		—: Control content: Concentration control; Control value: Non-detected; Measurement: —	
Drainage*3	Public water areas	Unit	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement
	pH	Minimum value, Maximum value	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	BOD	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	COD	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Nitrogen	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Phosphorus	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Hexavalent chromium	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Lead	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	COD, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Nitrogen, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Phosphorus, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sewerage lines																	
	pH	Minimum value, Maximum value	6.0-9.5	6.6-8.1	6.0-9.0	7.3	5.5-9.5	8.0	6.5-9.0	7.5-8.9	6.2-9.5	7.1-8.9	(Sewage discharge)		6.5-9.0	7.1-7.7	6.5-9.5	8.7
	BOD	mg/L	900	46	250	31	300	4	-	—	30	26			-	—	-	—
	COD	mg/L	—	—	—	—	—	—	1,000	1467*4	—	—			-	—	-	—
	SS	mg/L	900	66	250	29.5	350	10	-	—	—	—			-	—	-	—

*4 Post-treatment water quality temporarily exceeded regulated values, but the water was discharged with government approval.

KUBOTA Group Production Sites Data

(results of FY2015)

Data on KUBOTA Group Overseas production sites(Continued from page 2/3)

Region	Europe, Russia								Asia									
Item \ Business site	Kverneland Group Les Landes Génusson SAS		Kverneland Group Modena SpA		Kverneland Group Ravenna S.r.l.		Kverneland Group Manufacturing Lipetsk		Kubota Agricultural Machinery (SUZHOU) Co., Ltd.		Kubota Construction Machinery (WUXI) Co., Ltd.		Kverneland Agricultural Equipment Daqing Ltd		Kubota Engine (WUXI) Co., Ltd.		Kubota Guozhen Environmental Engineering(ANHUI) Co., Ltd.	
INPUT																		
Energy		Unit	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ
	Fossil fuel	Crude oil equivalent KL	19	753	231	8956	406	15740	5	208	1574	60996	235	9125	56	2161	129	4984	2	87
	Purchased electricity	MWh	547	5450	739	7371	1557	15521	72	714	10865	108321	2838	28291	113	1128	2127	21209	56	557
	Total	Crude oil equivalent KL	160	6202	421	16327	807	31260	24	922	4368	169318	965	37416	85	3289	676	26193	17	644
Water usage		thousand m^3	1		2		9		0.4		114		6		0.4		4		8	
OUTPUT																				
CO_2 emission	CO2 emissions from energy sources	tons CO_{2e}	85		764		1427		46		11913		2704		197		1942		49	
Waste	Discharge amount	tons	72		157		217		3		725		54		—		265		—	
	Recycling ratio	%	98.2		50.1		61.7		80.0		99.0		85.7		—		38.2		—	
Exhaust gas*1	Main smoke and soot generating facilities*2		—				Boilers				—				Boilers				Drying furnaces				—				Engine test				No smoke and soot generating facilities
		Unit	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	
	SOx	K-value control	Concentration control	Non-detected	—	(mg/Nm^3)	35	1.8	Concentration control	Non-detected	—	Concentration control	Non-detected	—	(mg/m3)	100	5	(mg/m3)	550	4.67	Concentration control	Non-detected	—	(mg/m3)	550	8.58				
	NOx	Concentration control: ppm	Concentration control	Non-detected	—	(mg/Nm^3)	350	45	Concentration control	Non-detected	—	Concentration control	Non-detected	—	(mg/m3)	400	74	(mg/m3)	240	22.5	Concentration control	Non-detected	—	(mg/m3)	240	12.3				
	Soot and dust	Concentration control: g/m^3N	Concentration control	Non-detected	—	(mg/Nm^3)	5	0.08	Concentration control	Non-detected	—	Concentration control	Non-detected	—	(mg/m3)	50	13	(mg/m3)	120	7.05	Concentration control	Non-detected	—	(mg/m3)	120	44.9				
Drainage*3	Public water areas	Unit	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement
	pH	Minimum value, Maximum value	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	BOD	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	COD	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Nitrogen	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Phosphorus	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Hexavalent chromium	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Lead	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	COD, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Nitrogen, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Phosphorus, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	Sewerage line	Unit																												
	pH	Minimum value, Maximum value	(Sewage discharge)		(Sewage discharge)		5.5-9.5	7,4-7,7	(Sewage discharge)		6.5-9.5	7.8-8.2	6.0-9.0	8.0	(Sewage discharge)		6.0-9.0	6.5-6.9	(Sewage discharge)	
	BOD	mg/L					250	<5			300	56	300	0			—	—		
	COD	mg/L					500	28			500	152	500	12			500	55		
	SS	mg/L					200	<0,5			400	19	400	9			—	—		

*1 Concentration control: Control value (including agreed value) of major smoke and soot generating facilities and the measurement value (maximum value).

*2 Smoke and soot generating facilities: Those subject to the laws concerning emissions into the atmosphere.

*3 Total emission control: Control value (including agreed value) by plant and the measurement value. Concentration control: Control value (including agreed value) by plant and the measurement value (maximum value).

Region	Asia																	
Item \ Business site	SIAM KUBOTA Corporation (Headquarter)		SIAM KUBOTA Corporation (Amata Nakorn Plant)		SIAM KUBOTA Metal Technology		KUBOTA Engine (Thailand)		Kubota Precision Machinery (Thailand)		P.T.Kubota Indonesia		P.T.Metec Semarang		Kubota Saudi Arabia Company	
INPUT																		
Energy		Unit	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ	Volume of use	Heat conversion GJ
	Fossil fuel	Crude oil equivalent KL	428	16598	1099	42581	952	36893	363	14071	16	610	254	9851	349	13533	4124	159836
	Purchased electricity	MWh	10923	108905	11484	114500	38337	382219	8657	86306	1803	17980	1855	18493	4193	41806	0	0
	Total	Crude oil equivalent KL	3238	125503	4053	157081	10813	419112	2590	100377	480	18590	731	28344	1428	55339	4124	159836
Water usage		thousand m^3	72		131		70		14		10		26		39		23	
OUTPUT																		
CO_2 emission	CO2 emissions from energy sources	tons CO_{2e}	6658		8579		22205		5453		982		2069		3975		10592	
Waste	Discharge amount	tons	347		783		18585		661		121		16		307		1007	
	Recycling ratio	%	100.0		100.0		76.4		89.0		94.6		85.4		95.4		1.7	
Exhaust gas*1	Main smoke and soot generating facilities*2		Engine test			Drying furnaces			Heating furnaces			Drying furnaces			—			—			—			Drying furnaces			—		
		Unit	Control content	Control value	Measuremen	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement	Control content	Control value	Measurement
	SOx	K-value control	(ppm)	950	2	Concentration control	950	41	(ppm)	500	11	(ppm)	60	22	Concentration control	Non-detected	—	Concentration control	Non-detected	—	(mg/m3)	800	97	Concentration control	Non-detected	—			
	NOx	Concentration control: ppm	(ppm)	200	4	Concentration control	200	14	(ppm)	180	2	(ppm)	200	23	Concentration control	Non-detected	—	Concentration control	Non-detected	—	(mg/m3)	1000	41	Concentration control	Non-detected	—			
	Soot and dust	Concentration control: g/m^3N	(mg/m3)	320	17	Concentration control	320	19	(mg/m3)	15	3	(mg/m3)	320	52	Concentration control	Non-detected	—	Concentration control	Non-detected	—	(mg/m3)	350	37	Concentration control	Non-detected	—			
Drainage*3	Public water areas	Unit	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement	Control value	Measurement
	pH	Minimum value, Maximum value	6-9	6.8	—	—	—	—	—	—	—	—	6.0-9.0	8	6.0-9.0	7.0-8.2	—	—		
	BOD	mg/L	225	4	—	—	—	—	—	—	—	—	50	22	50	41	—	—		
	COD	mg/L	300	35	—	—	—	—	—	—	—	—	100	73	100	95	—	—		
	Nitrogen	mg/L	50	15	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Phosphorus	mg/L	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Hexavalent chromium	mg/L	—	—	—	—	—	—	—	—	—	—	0.1	0.008	0.5	0.09	—	—		
	Lead	mg/L	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.1	0.09	—	—		
	COD, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Nitrogen, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Phosphorus, total emission control	kg/day	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		
	Sewerage line	Unit																		
	pH	Minimum value, Maximum value	6.0-9.0	6.2-6.8	5.5-9.0	6.7-7.4	5.5-9.0	6.7-8.0	5.5-9.0	6.7 - 7.4	5.5-9.0	7.5-8.0	—	—	—	—	(Transported to sewage plant)	
	BOD	mg/L	450	90	500	82	20	18	20	2	500	90	—	—	—	—		
	COD	mg/L	650	189	750	196	120	92	120	29	750	300	—	—	—	—		
	SS	mg/L	500	65	200	89	50	31	50	2	200	370*4	100	30	—	—		

*4 Post-treatment water quality temporarily exceeded regulated values, but the water was adjusted before decharge.