

# Kubota Domestic Manufacturing Plants Data

Items	Unit	Hanshin plant (Mukogawa)	Hanshin plant (Amagasaki)	Hanshin plant (Shin-yodogawa factory)	Keiyo plant (Funabashi)	Keiyo plant (Ichikawa)	Sakai PVC pipe plant	Odawara plant	Hirakata plant	Okajima plant	Sakai plant	Sakai coastal plant	Utsunomiya plant	Tsukuba plant	Kyuhoji business center	Ryugasaki plant	Shiga plant
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## INPUTS

Energy	Unit	Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)		Annual consumption (on calorie basis)								
		GJ	Value	GJ	Value	GJ	Value	GJ	Value	GJ	Value	GJ	Value	GJ	Value	GJ	Value	GJ	Value	GJ	Value	GJ	Value	GJ	Value	GJ	Value	GJ	Value					
Electricity	thousand kWh	46,930	461,337	28,470	279,894	3,050	29,993	47,220	464,169	5,660	55,598	25,460	250,272	30,140	296,315	52,260	513,719	79,610	782,566	36,470	358,495	17,730	174,258	8,630	84,832	32,330	317,824	2,680	26,354	3,660	36,021	4,510	44,292	
Coal cokes	ton	14,990	451,211	0	0	0	0	21,247	639,544	0	0	0	0	0	0	0	0	10,437	314,154	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Town gas	thousand m <sup>3</sup>	4,510	185,343	3,335	137,063	0	0	2,574	105,811	0	0	139	5,706	37	1,503	5,079	208,755	2,243	92,187	2,469	101,476	813	33,394	838	34,459	2,243	92,204	177	7,269	303	12,469	1,044	42,894	
Kerosene	kilo-liter	4,763	174,796	9	325	273	10,004	11,150	409,212	12	450	0	0	3	117	122	4,477	3	110	0	0	0	0	641	23,516	866	31,786	16	587	24	893	0	0	
Heavy oil	kilo-liter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	786	30,733	50	1,955	0	0	0	0	0	0	0	0	0	0	
LPG, light oil and others			793		2,108		907		22,049		4,273		1,066	2,409		12,993		3,768		25,696		44,319		0				1,143		554		0		
Total			1,273,479		419,390		40,905		1,640,784		60,321		257,043	300,344		739,944		1,192,785		516,400		253,927		142,807		441,814		35,353		49,937		87,186		

Water Consumption	ten thousand m <sup>3</sup>	111.3	16.9	2.6	148.2	1.7	6.1	38.3	23.2	19.9	15.3	4.9	39.6	17.9	1.4	2.8	31.5
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## OUTPUTS

CO <sub>2</sub> emissions	ton-CO <sub>2</sub>	87,895	17,942	1,893	121,510	2,439	9,988	11,644	31,660	69,016	22,886	11,588	6,627	19,110	1,495	2,123	3,904
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Exhaust gas	Major smoke and soot generating facilities	Unit	Melting furnace		Heating furnace		Drying furnace		Melting furnace		-		-		-		Heating furnace		Melting furnace		Boiler		Boiler		Boiler		Boiler		Boiler								
			Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value	Regulation classification	Measured value					
SOx	m <sup>3</sup> /h for regulation values of total pollutant load control and K-value regulation	Total pollutant load control	26.2	0.49	*Sulfur-free town gas in use	245	0.001	Total pollutant load control	19.3	0.14	-	-	-	-	-	-	*Sulfur-free town gas in use	Total pollutant load control	3.9	0.579	Total pollutant load control	2.18	0.13	-	-	*Sulfur-free town gas in use	K-value regulation	10.36	0.06	-	-						
NOx	Regulation value for the total pollutant load control-m <sup>3</sup> /h, ppm concentration regulation values	Total pollutant load control	33.81	24.11	Total pollutant load control	12.00	1.55	Concentration regulations	230	52	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Not applicable	Concentration regulations	Total pollutant load control	4.4	2.65	Concentration regulations	2.00	0.45	Not applicable	Concentration regulations	150	67	Concentration regulations	230	110	Not applicable	Concentration regulations	230	55.5	Concentration regulations	150	17
Soot and dust	g/m <sup>3</sup> N	Concentration regulations	0.1	0.003	Concentration regulations	0.1	0.002	Concentration regulations	0.1	0.005	-	-	-	-	-	-	-	Concentration regulations	0.1	0.02	Concentration regulations	0.1	0.006	Concentration regulations	0.05	0.005	Concentration regulations	0.18	0.001	Concentration regulations	0.25	0.01	-	-	-	-	

Drainage	Public water areas	pH	Regulation value		Measured value		Regulation value		Measured value		Regulation value		Measured value		Regulation value		Measured value		Regulation value		Measured value		Regulation value		Measured value		Regulation value		Measured value		Regulation value		Measured value				
			Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max			
Sewerage	pH	-	5.8	8.6	7.2	-	-	-(N/A)	7.9	5	9	7.2	5	9	6.9	-	-	5.8	8.6	7.8	5.8	8.6	7.3	-	-	5.8	8.6	7.0	5.8	8.6	7.4	5.8	8.6	7.8	6.0	8.5	7.6
		BOD	mg/liter	30	2	-	-	-	4	-	-	60	2	-	-	60	ND	-	-	25	6.9	-	-	-	-	15	1	25	ND	20	2.6	-	-	-	-	20	4
		COD	mg/liter	20	4	-	-	-	7	20	2.7	60	9	-	-	60	ND	-	-	25	4.2	-	-	-	-	25	9	-	-	20	7.6	-	-	-	-	20	8
		Nitrogen	mg/liter	40	5.10	-	-	-	2.29	20	2.06	70	4.82	-	-	120	ND	-	-	120	6.7	-	-	-	-	120	8.3	120	18	60	3.3	-	-	-	-	8	2.4
		Phosphorous	mg/liter	1	ND	-	-	-	0.11	2	0.14	7	0.73	-	-	16	ND	-	-	16	0.53	-	-	-	-	8	0.40	16	3.6	8	1.2	-	-	-	-	0.8	0.08
		Hexavalent chromium	mg/liter	0.35	ND	-	-	-	ND	0.05	ND	0.5	ND	-	-	0.5	ND	-	-	0.05	ND	-	-	-	-	0.5	ND	0.5	ND	0.5	ND	-	-	-	-	0.05	ND
		Lead	mg/liter	0.1	ND	-	-	-	ND	0.1	ND	0.1	ND	-	-	0.1	ND	-	-	0.01	ND	-	-	-	-	0.1	ND	0.1	ND	0.1	ND	-	-	-	-	0.1	ND
		COD control value	kg/day	113	14.7	-	-	-	-	230.3	20.1	2.6	0.337	-	-	-	-	-	-	49.93	7.1	-	-	-	-	3.3	1.03	-	-	-	-	-	-	-	-	-	-
		Nitrogen control value	kg/day	110	16.1	-	-	-	-	163.5	4.83	2.855	0.41	-	-	-	-	-	-	52.6	7.98	-	-	-	-	5.5	1.01	-	-	-	-	-	-	-	-	-	-
		Phosphorous control value	kg/day	14	0.212	-	-	-	-	21.8	0.19	0.257	0.027	-	-	-	-	-	-	6.26	0.408	-	-	-	-	0.44	0.11	-	-	-	-	-	-	-	-	-	-

Wastes	Waste discharge	ton	14,770	2,935	2,095	25,615	137	163	259	4,944	32,921	1,160	898	282	1,752	494	424	657
Recycling rate	%	98	100	30	99	100	98	99	99	99	100	100	100	99	100	99	99	100

## Results of PRT reporting FY2004

(Below figures are stated in double digit as significant figure) (In kg/year, except for dioxins in mg-TEQ/year)

Plants and factories	Chemical substances	Ordinance No.	Releases					Transfers	
			Air	Public water areas	Soil	On-site landfills	Sewerage	Transfers to off-site	
Hanshin plant (Mukogawa)	Ethylbenzene	40	3,200.0	0	0	0	0	0	0
	Xylene	63	7,100.0	0	0	0	0	0	0
	1, 3, 5-trimethylbenzene	224	1,700.0	0	0	0	0	0	0
	Toluene	227	55,000.0	0	0	0	0	0	0
	Nickel	231	3.3	0	0	0	0	120.0	0
	Phenol	266	0	0	0	0	0	0	0
Hanshin plant (Marushima)	Ethylbenzene	40	8,700.0	0	0	0	0	0	0
	Xylene	63	33,000.0	0	0	0	0	0	0
	Toluene	227	34,000.0	0	0	0	0	0	0
	Nickel	231	0.6	0	0	0	0	17.0	0
Hanshin plant (Amagasaki)	Chromium and chromium(iii) compounds	68	0	0	0	0	0	1,900.0	0
	Toluene	227	5,500.0	0	0	0	0	0	0
	Nickel	231	0	0	0	0	0	1.8	0
	Boron and its compounds	304	0	0	0	0	0	1,700.0	0
Hanshin plant (Nagasaki)	Manganese and its compounds	311	0	0	0	0	0	710.0	0
	Molybdenum and its compounds	346	0	0	0	0	0	0	0
	Ethylbenzene	40	2,500.0	0	0	0	0	0	0
	Xylene	63	2,800.0	0	0	0	0	0	0
Hanshin plant (Shin-yodogawa factory)	Toluene	227	1,900.0	0	0	0	0	0	0
	Bisphenol A type epoxy resin (liquid)	30	0	0	0	0	0	0	0
	Xylene	63	2,700.0	0	0	0	0	0	0
	Cobalt and its compounds	100	0	0	0	0	0	170.0	0
Keiyo plant (Funabashi)	Styrene	177	14,000.0	0	0	0	0	0	0
	Ethylbenzene	40	35,000.0	0	0	0	0	0	0
	Xylene	63	110,000.0	0	0	0	0	0	0
	1, 3, 5-trimethylbenzene	224	1,900.0	0	0	0	0	0	0
Keiyo plant (Ichikawa)	Toluene	227	88,000.0	0	0	0	0	0	0
	Nickel	231	0	0	0	0	0	20.0	0
	Phenol	266	0	0	0	0	0	0	0
	Bis (2-ethylhexyl) phthalate	272	0	0	0	0	0	430.0	0
Keiyo plant (Gyotoku processing centre)	Manganese and its compounds	311	0	0	0	0	0	35.0	0
	Organic tin compounds	176	1.3	0	0	0	0	24.0	0
	Lead and its compounds	230	2.5	0	0	0	0	0.9	0
	Xylene	63	45.0	0	0	0	0	0	0
Ishizu-nishi factory in Sakai PVC pipe plant	Toluene	227	390.0	0	0	0	0	0	0
	Lead and its compounds	230	1.4	0	0	0	0	0	0
	Organic tin compounds	176	10.0	0	0	0	0	6.0	0
	Lead and its compounds	230	31.0	0	0	0	0	160.0	0
Odawada plant	Bisphenol A type epoxy resin (liquid)	30	0	0	0	0	0	370.0	0
	Ethylbenzene	40	7,600.0	0	0	0	0	13,000.0	0