

Environmental results report

Company Name : Kyoden(Thailand)Co., Ltd.

Factory Name : Thai Factory

Address : 209 Moo 8, Yutthasat 331 Rd., Bowin, Sriracha, Chonburi 20230 Thailand
34/4 Moo 8, Yutthasat 331 Rd., Bowin, Sriracha, Chonburi 20230 Thailand

Report object period: 2016/04/1~2017/3/31

Report person in charge: Ms. Punnee Kokong /ISO: Environment chief

Report responsible: Ms. Pasita Sukprasert / ISO/Document & Environment Ass't GM

No	Theme	Aim 2016	The results	Evaluation	Aim of 2017
1	Regional harmonization activities	Claim environmental neighbors must be zero	0	O	0
2	Preventing of global warming	Total electric consumption per unit (SEC) less than 42.00 kWh / m ² (reduce 5% from 2015) 42 kWh / m ²	37.02 kWh/m ²	O	42 kWh / m ²
3	Promotion of energy conservation/ Reduction of water resources	Water Resources Consumption / 0.67 m ³ / m ² (Reduce 5% from 2015) 0.67 m ³ / m ²	0.53 m ³ /m ²	O	0.67 m ³ / m ²
4	Reduction of waste	The amount of white cloth cleaning the screen down 1 % from 2015/each of month (t) 1%	△ 1.22%	X	Don't target
5		Etching waste shall be down 1 % from 2015 (t) 1%	△ 9.28 %	X	Don't target
6		Chelate waste shall be down 30 % from 2015 (t) (Start April 2016, Chelate from F3) 30%	49.71%	O	Don't target
7		PCB Scrap not more than 2% per month. 2%	△ 2.78%	X	PCB Scrap not more than 2% per month. 2%

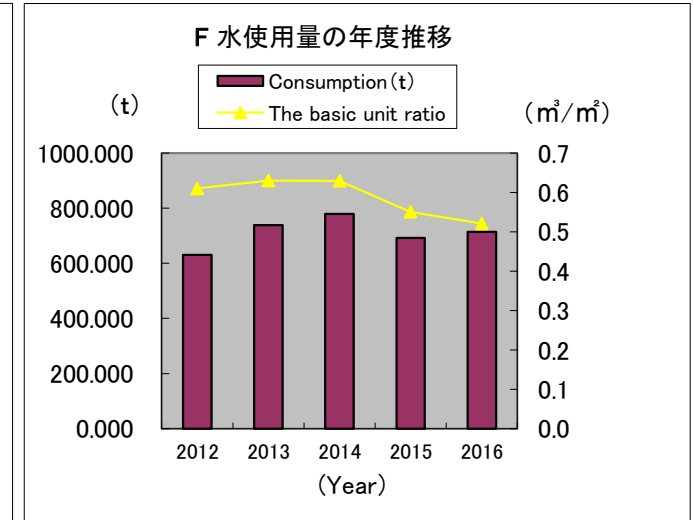
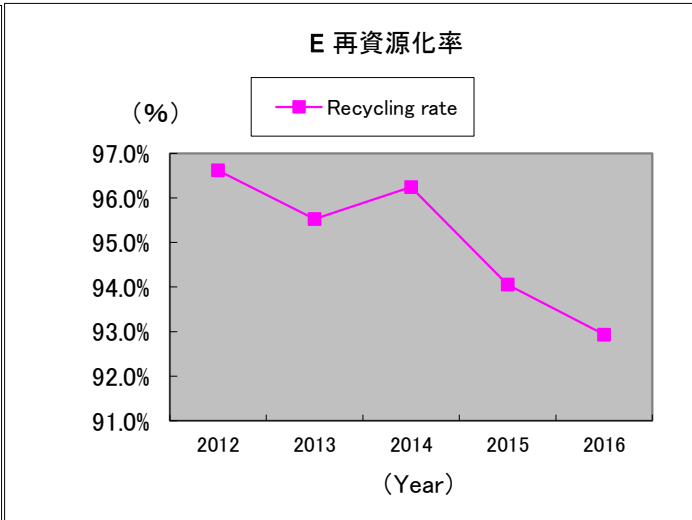
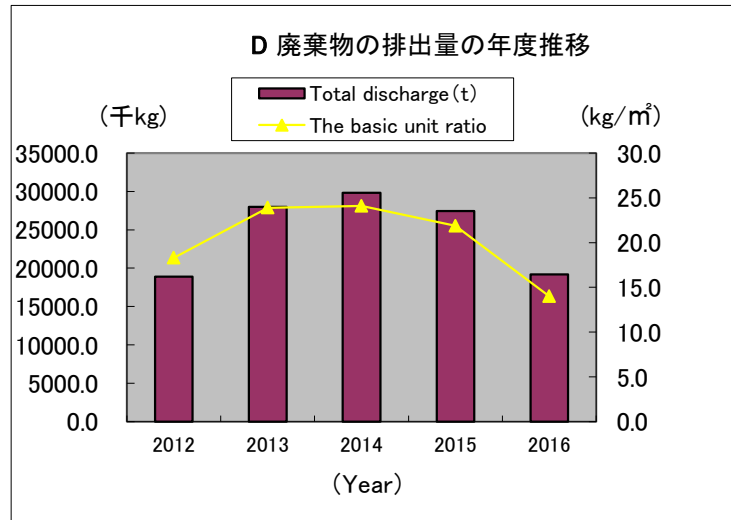
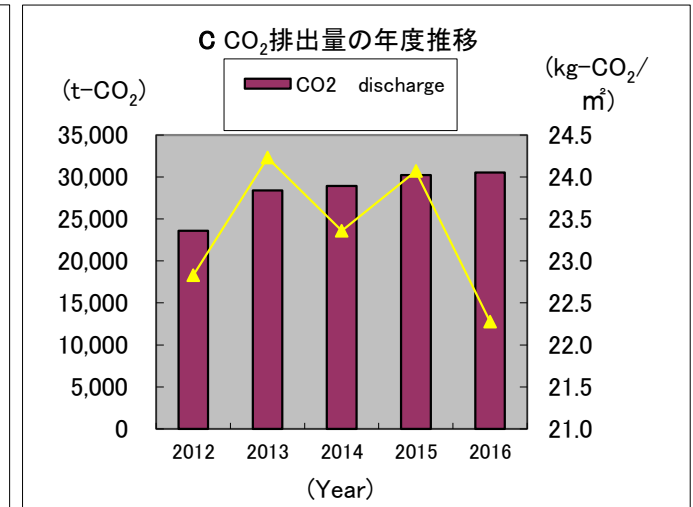
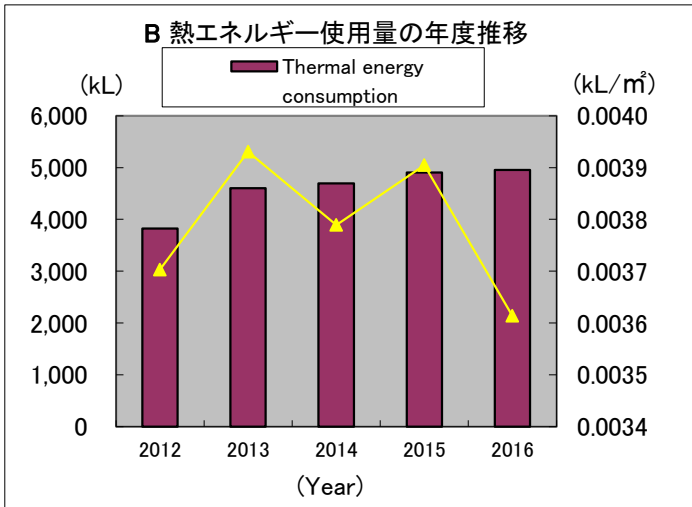
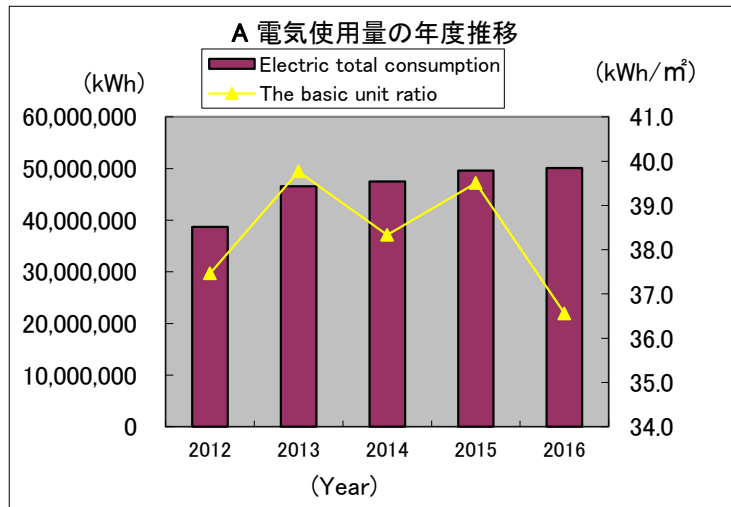
<Instructions in the report>

- 1 About a crude oil conversion factor and a CO2 emission coefficient, it varies according to an electric power company, the gas company of each factory.
- 2 About aquatic resources, the use source of a river of each factory is different.
- 3 Because laws and regulations vary according to the local government of each factory location about water quality measurement, a measurement item and the standard values are different.
- 4 About the atmosphere measurement, I exclude the factory without facilities targeted for laws and regulations from a report.

環境負荷データ(load data)

工場名 (Factory name)	エネルギー(Energy)			廃棄物(Waste)		水資源 (Aquatic resources)	水質測定結果(Water quality measurement result)						大気の実績 (The atmospheric measurement results)			
	Electric total consumption	Thermal energy consumption	CO ₂ discharge	Total discharge	Quantity of recycling	Water for industrial use	pH	BOD	COD	SS	n-ヘキサン(鉱油類)(n-hexane Mineral oil)	n-ヘキサン(動植物油類)(n-hexane Animals and plants oil)	大腸菌群数 (The number of the coliform bacteria)	特定施設名(Specific facilities name)		
	(kWh)	(kL)	(t-CO ₂)	(t)	(t)	Consumption(千㎡)	-	mg/L	mg/L	mg/L	mg/L	mg/L	個/cm ³	Nox(ppm)	Sox(ppm)	ばいじん(mg/m ³ N)
Thai factory	50,105,400	4,953	30,529	19,206.79	17,849.52	713.914	7.91 (5.5-9)	31.5 (500)	92.67 (750)	10.83 (200)	N/A	N/A	N/A	40.15	N/A	0.15

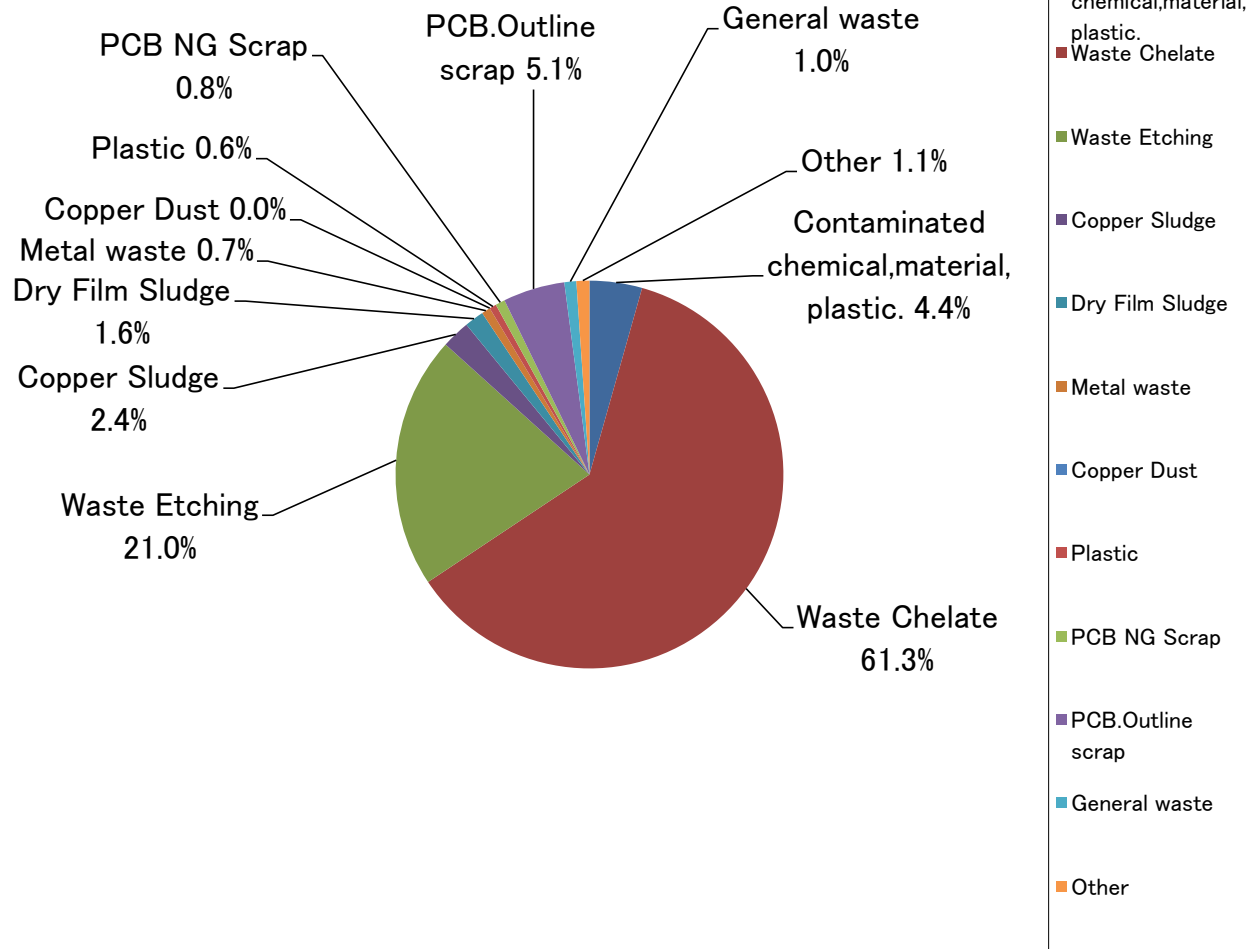
CO₂Discharge coefficient:0.6093



廃棄物発生量内訳(Breakdown of the quantity of waste outbreak)

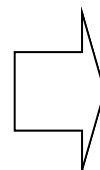
廃棄物名(Name of the waste)	発生量 Quantity of outbreak (t)	割合 (Ratio)
Contaminated chemical,material,plastic.	841.2750	4.4%
Waste Chelate	11,768.0600	61.3%
Waste Etching	4,042.2150	21.0%
Copper Sludge	452.6754	2.4%
Dry Film Sludge	310.4500	1.6%
Metal waste	140.3748	0.7%
Copper Dust	0.0000	0.0%
Plastic	111.3457	0.6%
PCB NG Scrap	152.9147	0.8%
PCB.Outline scrap	988.9467	5.1%
General waste	191.1380	1.0%
Other	207.3945	1.1%
合計	19,206.7898	100.0%

廃棄物発生量内訳



マテリアルバランス(Material balance)

INPUT	
エネルギー(Energy)	
電気(Electricity)	50,105 MWh
重油(Heavy oil)	0 kL
灯油(Kerosene)	0 kL
軽油(Light oil)	0 kL
都市ガス(Gas)	408 km ³
LPG(Liquefied natural gas)	0 km ³
資源(Resources)	
地下水(Groundwater)	0 t
上水・工水(Water supply)	714 t
基板コア材(Board Core)	927,999 m ²
段ボール(Corrugated cardboard)	153 t



OUTPUT	
大気(Atmosphere)	
CO ₂	30,529 t-CO ₂
水域(Area of the sea)	
河川(River)	0 t
下水(Sewage)	571 t
廃棄物(Waste)	
再資源化量(Quantity of recycling)	17,850 t
最終処分量(Quantity of last disposal)	1,357 t
製品(Product)	
プリント配線板 (Printed wiring board)	871,498 m ²

※出荷面積(Shipment area)