

# 落合クリーンセンター



## OCHIAI CLEAN CENTER

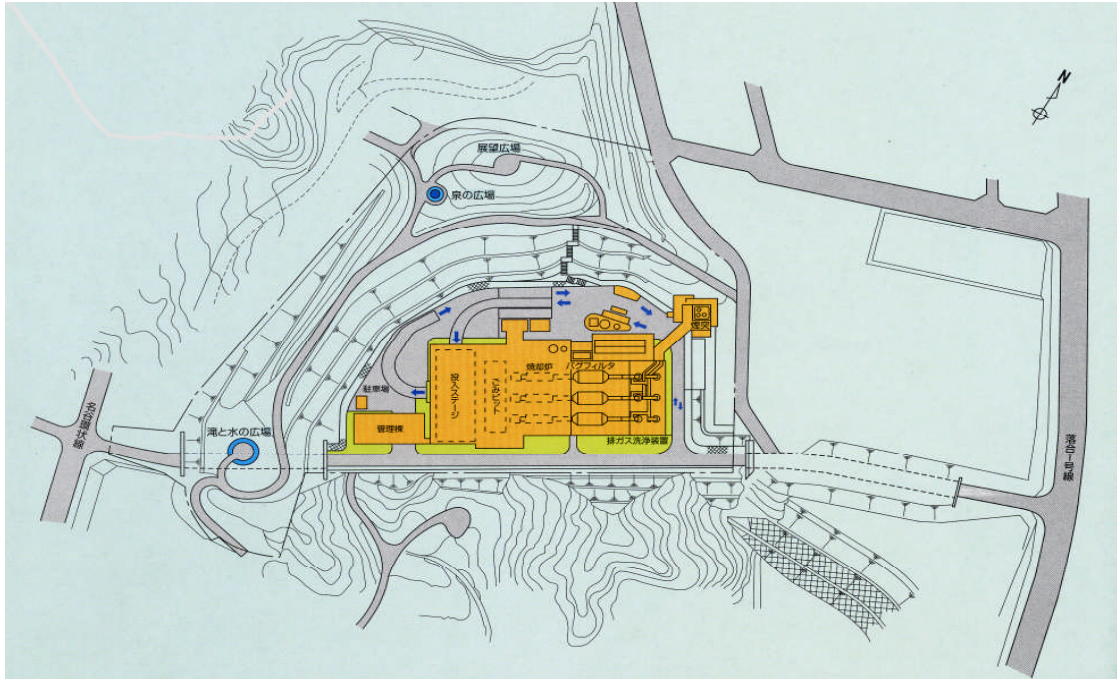


ENVIRONMENT BUREAU, KOBE CITY GOVERNMENT

### Outline of Center

<b>Name:</b>	Ochiai Clean Center
<b>Location:</b>	3-1, Nakaochiai, Suma-ku, Kobe City
<b>Lot area:</b>	38,550m <sup>2</sup>
<b>Building area:</b>	6,574m <sup>2</sup>
<b>Total floor area:</b>	14,679m <sup>2</sup>
<b>Building structure:</b>	Steel-frame steam reinforced concrete (4 aboveground and 1 underground stories)
<b>Incinerator type:</b>	Kawasaki-VKW Type Rotary Fire Grate Incinerator
<b>Installation capacity:</b>	450 tons per day (150 tons per day) x 3 fire pits
<b>Construction Period:</b>	February 1977 – November 1979
<b>Others:</b>	Countermeasure work against dioxin December 1998 – January 2001

## Ground Plan



## Features

### 1. Well-developed pollution control

Special attention is paid to prevent pollution. The latest technology and equipment perfectly control pollution such as gas emission, water discharged, noise and odour.

#### ●Standard value of emission gas

Dust volume: 0.02g/Nm<sup>3</sup> or less (dry O<sub>2</sub>=12% in conversion)

Sulfur oxide 20ppm or less (dry O<sub>2</sub>=12% in conversion)

Hydrogen chloride 30ppm or less (dry O<sub>2</sub>=12% in conversion)

Nitrogen oxide 6Nm<sup>3</sup> or less (dry O<sub>2</sub>=12% in conversion)

#### (1) Elimination of dust, hydrogen chloride and sulphur oxide in emission gas

The dust and the hydrogen chloride and sulphur oxide react to calcium hydroxide in emission gas and are eliminated through fabric of bag filter.

#### (2) Elimination of Nitrogen oxide in emission gas

The nitrogen oxide in emission gas reacts with ammonium, and is resolved into nitrogen and water. The catalyst in the denitration reaction tower accelerates a reaction to ammonium.

#### (3) Reduction of dioxin

With the aim of reducing the dioxin concentration to 0.1ng-TEQ/Nm<sup>3</sup>, the following measures are taken:

- 1) To homogenize the waste by stirring
- 2) To maintain the stable combustion of incinerator  
Stabilizing the fire condition by way of the improvement of secondary air nozzle, etc.
- 3) To elude the resynthesis of dioxin  
Avoiding the adequate temperature (about 300°C) for resynthesis of dioxin with the installation of spray tower.
- 4) To remove the dioxin of emission gas  
Upgrading the emission gas treatment with the installation of bag filter.

### 2. Efficient use of waste heat

The combustion heat is collected in a boiler, and the energy is efficiently used.

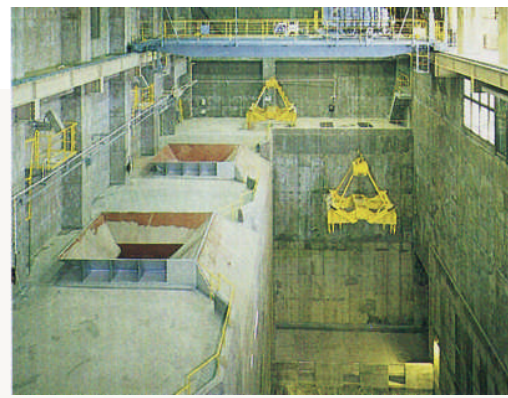
- (1) The collected steam is sent to adjacent Kitasuma Culture Center, and utilized as heat source for air conditioning and a heated swimming pool.
- (2) The combustion heat is used for the heat source of heating and hot-water supply.

### 3. Harmony with ambient surrounding

Special consideration is given to the appearance and colour tone of the buildings. A park is laid out to produce an affluent and healthy living environment in the circumference.



Truck scale



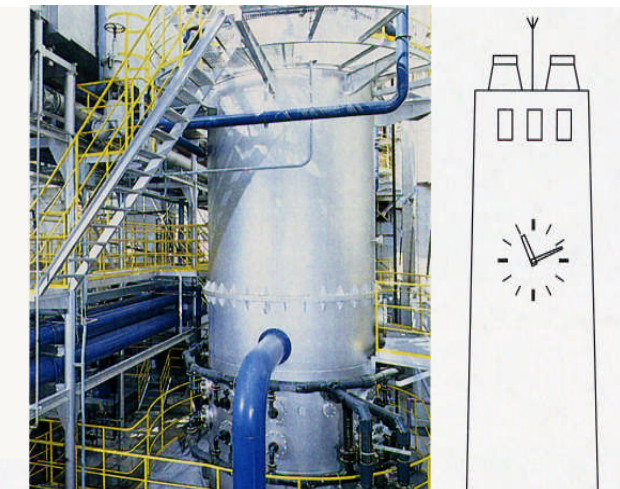
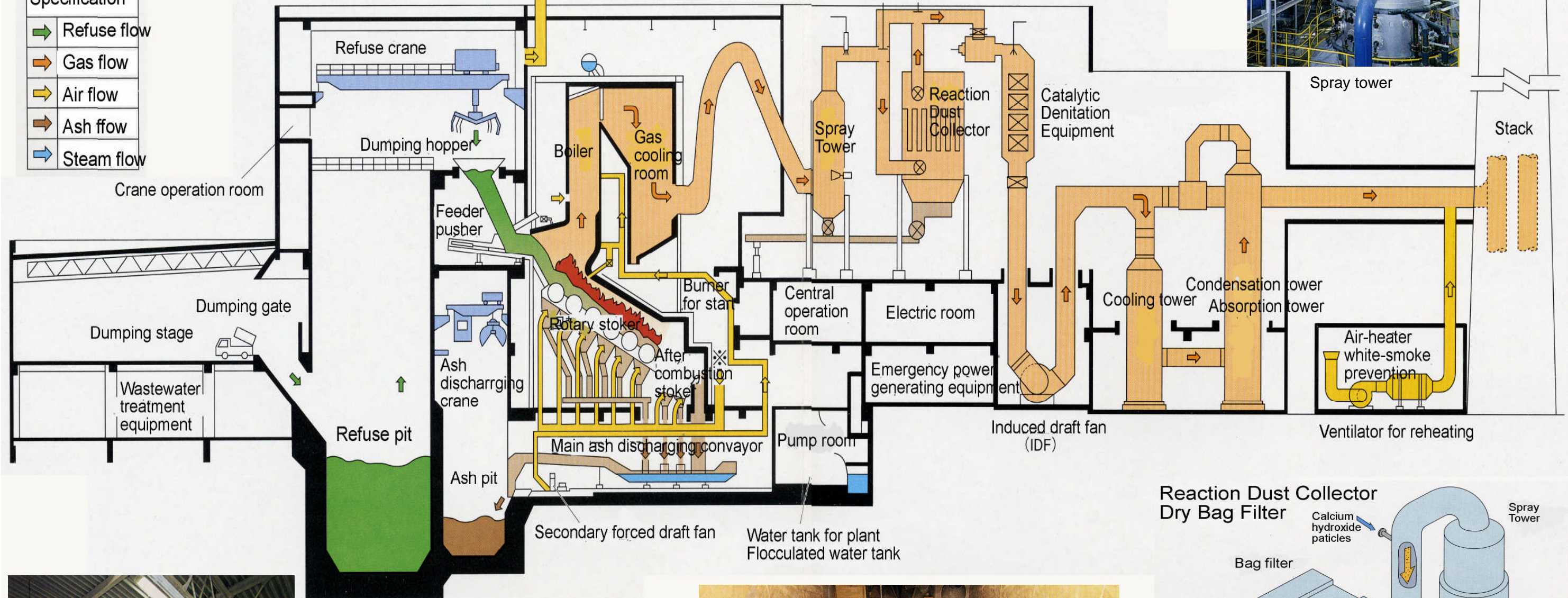
Refuse Crane  
Dumping Hopper



Central operation room

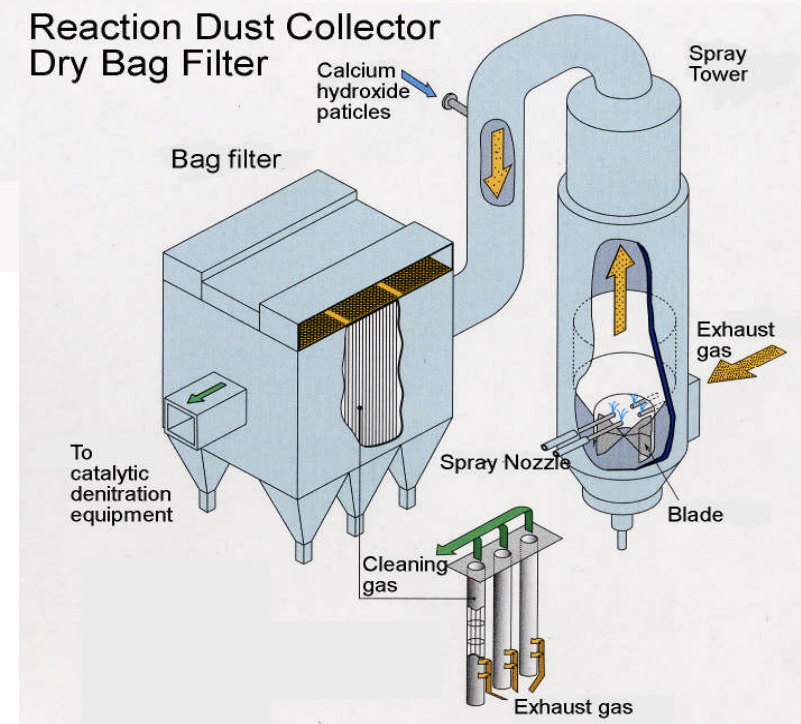
**Process Flow Diagram**

Specification	
	Refuse flow
	Gas flow
	Air flow
	Ash flow
	Steam flow



Spray tower

Stack



Dumping stage



Wastewater treatment facility



Stoker