

Multi-layer Fluidized Incinerator

Developers: Bureau of Sewerage, Tokyo Metropolitan Government,
METAWATER Co.,Ltd.

Supply controlled combustion air from three inlets to optimize inner temperature. The incinerator enables low fuel consumption and reduction of greenhouse gas emissions

N₂O
reduction

Low fuel
consumption

Improve combustion
efficiency inside
furnace

Tertiary air

Secondary air

Supply combustion air
from the central zone of
a furnace

**Multi-layer
combustion control**

Exhaust gas

(Exhaust gas treatment system is
same as the conventional system)

**Complete
combustion zone**

Complete combustion of
unburnt gas

**High temperature
zone**

accelerates degradation
of N₂O

**Controlled
gasification zone**

Reduction of primary air
inhibits N₂O generation

Primary air

Reduce the combustion
air volume from the
bottom of a furnace

Needs

- Reduce both O&M costs and N₂O emissions
- Stable operation against load fluctuations

Benefits

- Low fuel consumption
- Inhibition of greenhouse gas (N₂O) emissions