

Provides large- to small-scale systems tailored to customer needs.

SHIMAKAWA SEISAKUSYO CO., LTD. Catalytic thermal oxidizer system

Features

- Combustion at lower temperatures reduces running costs.
- The shorter catalytic reaction time allows for downsizing of the system.

Overview

(Technical principles, actions, etc.)

Catalytic thermal oxidizer systems incorporate a precious metal catalyst comprised of a metal honeycomb structure, and break down volatile organic compounds (VOC) or ammonia with high control efficiency.

1. VOC oxidizer system

Our VOC oxidizer systems range from small-scale catalytic combustion systems equipped with a heat exchanger for recovering heat generated by the exothermic oxidation reaction of VOC, to large-scale catalytic thermal oxidizer systems incorporating a concentrator and regenerative thermal oxidizer systems for treating large amounts of air with low levels of pollutants.

2. Ammonia oxidizer system

Our ammonia oxidizer systems incorporate unique flow and temperature control systems and a catalyst that selectively oxidizes ammonia. The systems are designed to produce low NO_x (i.e., eliminate NO_x generated by ammonia breakdown by oxidation).

3. Ethylene oxide gas oxidizer system

Ethylene oxide gas oxidizer systems incorporate a catalyst that selectively oxidizes the ethylene oxide gas (EOG) used for sterilizing medical instruments.

4. Customization

In addition to safety devices such as a temperature controller, our treatment systems provide an external communication interface, and operation log and other functions as standard. However, we are ready to consult on system conditions such as optimal gas concentration, flow rate and other parameters, customization requests (engineering changes), safety measures (gas concentration sensor, seismic detector, etc.), and ideas for reducing running costs to meet customer needs.

Introductory Track Record

- Our sales experience includes sales of more than 100 emission control systems ranging from small-scale systems with a treatment capacity of 2 m³/min to large-scale systems with a treatment capacity of 2700 m³/min.

Effects

- VOC gas control efficiency: 95.0% or higher
- Ammonia control efficiency: 95.0% or higher
- Ethylene oxide control efficiency: 99.0% or higher

環境対策
VOC emissions from manufacturing plants
Ammonia emissions from manufacturing plants
Treatment of emissions from ethylene oxide sterilizers

Water

Energy saving/Energy recovery

Energy storage/Energy creation

New energy

Waste disposal/
Recycling/
Resource saving

Air

Soil

Other



Large-scale deodorizer



Small-scale catalytic deodorizer

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※Note: This publication introduces examples of technologies and products believed useful towards solving environmental and energy issues. In no way does it constitute guarantees concerning their transfer or sale.