

Suitable for processing organic wastewater, simple and conventional maintenance and management through energy efficient mechanism and a 50% reduction of sludge

Wastewater Treatment Equipment with The Cubic Latticed Contactor

Features

- Consumes approx 50% lower power than conventional wastewater treatment equipment using activated sludge.
- Generates less than half the quantity of sludge generated from equipment using activated sludge.
- Withstands inflow load changes and ensures ease of use and maintenance.



ESROTAE

Overview (Technical principles, actions, etc.)

Mechanism

This is a wastewater treatment system that purifies organic wastewater using biofilm.

This system consists of a very simple mechanism consisting of the following parts:

- ① Rotating contact body
- ② Main shaft (to fix the rotating contact body)
- ③ Driving system (transfers rotating movement to the main shaft)
- ④ Water tank (the rotating contact body is immersed in the wastewater to about 40%)

Use of Cubic Latticed Contactor

High processing efficiency is realized with the following characteristics"

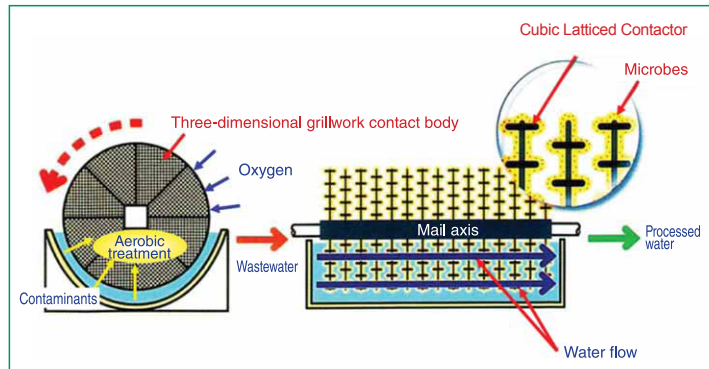
- ① Basic shape: small cylinder
The surface area of the contactor is increased for the thickness of microorganisms depending on the load.
- ② Protruding mechanism
Increased oxygen supply rate through the effect of aeration and vortex flow generated by the collision with the water surface that occurs with the rotating movement
- ③ Cubic latticed structure
Increased contact rate of the microorganism film and wastewater due to the effect of the flow-through of wastewater

Principle

The ESROTAE is wastewater treatment equipment that uses the microbe film on the cubic latticed contactor.

The contactor rotates slowly while approximately 40% of the contact body is immersed in wastewater, takes in oxygen from the air, adsorbs contaminants from the wastewater, and breaks down the contaminants aerobically with the work of microbes.

The microbes proliferate in process of wastewater decomposition, and those that lose activity fall off and they are separated in the sedimentation layer of the equipment.



Structure of ESROTAE

Introductory Track Record

- In Japan : More than 200 units (model type I and type II) have been delivered mainly for the wastewater treatment of food processing factories and chemical factories.

Examples overseas

1. China: Industrial wastewater treatment (type II, 2 units),
Domestic wastewater treatment (type I / II, about 70 units)
2. Indonesia: Domestic wastewater treatment (type I, 2 locations),
Hospital wastewater treatment (type I, 16 locations)
3. Bahrain: Domestic wastewater treatment (type II, 1 unit)

- ◎ Contribute to improve the aquatic environment of low-carbon societies and countries in Southeast Asia, which are going through rapid economic growth

Expected effects

- 1.Reduction of CO2 emissions
This system results in the reduction of energy consumption due to the low electricity consumption and low generation of sludge.
- 2.Low-cost and sustainable improvement of the aquatic environment
This system reduces the economic burden by reducing maintenance and management cost due to its great energy efficiency and simple operational management.

- ◎ When used with a new wastewater treatment facility, this system enables the introduction of an energy efficient and simple wastewater treatment system with simple operation management that does not require specialized knowledge of wastewater treatment.

- ◎ When used with an existing wastewater treatment facility, this system enables the enhancement of current processing capacity depending on requirements.

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