

Innovative wastewater treatment system with higher efficiency and energy-saving effects

Powerful aerating system, Aerator S-1

Feature

- This system cuts electricity costs through high efficient operation, which generates ultra-fine air bubbles and energy-saving effects.
- With no clogging or accumulation of sludge, this system keeps operating in stable conditions for more than ten years without maintenance.
- This system can be installed without draining the waste liquid. Installation cost is low.

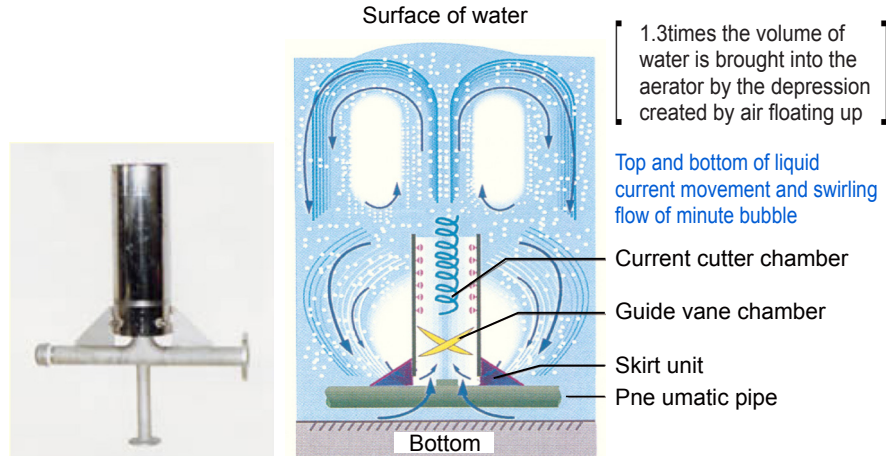
Overview

(Technical principles, actions, etc.)

Addition of BOD and COD treatment capacity
Contact of vapor and liquid through powerful aeration, improvement of oxygen dissolving efficiency, reduction of odor, and reduction of excess sludge

Aerator S-1 is a stationary aeration system without moving parts specifically developed to aerate activated sludge tanks

The air released to the bottom of a tank is turned into ultra-fine air bubbles at the moment that it passes through the Aerator S-1 with water as the air and water collide and mix. The air bubbles circulate in the tank by convection and thereby continuously and efficiently exchange liquid in the upper and lower layers of the tank and oxidize the liquid.



Applicable field
1. Aeration system for wastewater treatment in industry complexes, food factories, dyeing factories, paper factories, chemical factories, palm oil factories, and rubber factories
2. Desorption of solvents, desorption treatment, denitrification treatment using membrane aeration, stirring, and mixing of volatile toxic gases (e.g. ammonia and hydrogen sulfide)

Water

Energy saving/Energy recovery

Energy storage/Energy creation

New energy

Waste disposal/Recycling/Resource saving

Air

Soil

Other

Introductory Track Record

Installation and operation in Japan

The Aerator S-1 has been installed in more than 500 locations to aerate wastewater treatment tanks in factories, including dyeing factories and food factories. We automatically compute the necessary number of Aerator S-1 units based on the computation of the necessary amount of air for BOD treatment to achieve energy-saving effects.



AC industry complex and AN industry complex in Thailand

Operations and installation outside of Japan

Aerator S-1 has been installed in many factories such as dyeing factories, food factories, paper factories, chemical factories, palm oil factories, and rubber factories in countries, including China, Thailand, Malaysia, Indonesia, Myanmar, India, and Vietnam.



D beer factory in Myanmar

P palm oil factory in Indonesia

SD palm oil factory in Malaysia

Effects

- ◎ The airlift effect creates an environment full of DO in the entire tank and enables high-efficient wastewater treatment based mainly on beneficial bacteria.
- ◎ More than 30% to 50% higher energy-saving effect! (compared to diffusers and surface aeration method)
- ◎ The cost may be recovered in 1.5 years because of the low installation cost.
- ◎ Improvement in SV30 and reduction of excess sludge due to the highly activated sludge effects
- ◎ Regular cleaning is not necessary because of the absence of clogging. Most systems require no maintenance for more than ten years. Intermittent movement can also be freely activated.

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