

Nitrogen-contained Wastewater Treatment with Micro-nano Bubbles

Feature

- It brings massive improvement on the stability of microbe processing.
- In particular, it enables the microbe processing of nitrogen-contained wastewater without diluting wastewater.
- It has achieved the generation of sludge to zero.
- It is also applicable to organic wastewater processing.



Appearance of Nitrogen Processing Plant (Came into Operation in 2006)

Overview

(Technical principles, actions, etc.)

Micro-nano bubbles are air bubbles underwater that are as fine as a few micrometers to nanometers in diameter and generated by a dedicated generator. The new technology of micro-nano bubbles can be utilized for a variety of applications by using the characteristics of the bubbles (e.g., oxidizing effect, microbe activation, etc.). Sharp combined its unique microbe processing technology with micro-nano bubbles, developed environment-friendly and highly economical wastewater treatment technology, and put the technology into practical use. Furthermore, it has turned out that persistent chemical substances, such as perfluorooctane sulfonates (PFOS), can also be decomposed using the technology of micro-nano bubbles. Widespread applications are expected in health, cosmetics, and medicals, etc.

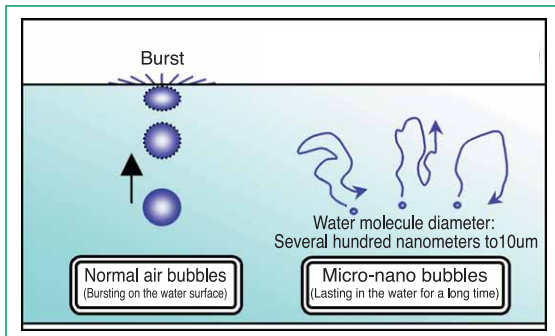


Fig. 1 Micro-nano Bubble

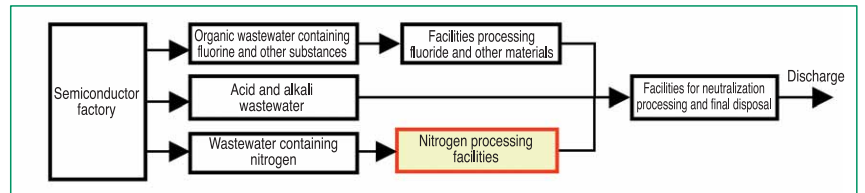


Fig. 2 Factory Wastewater Processing

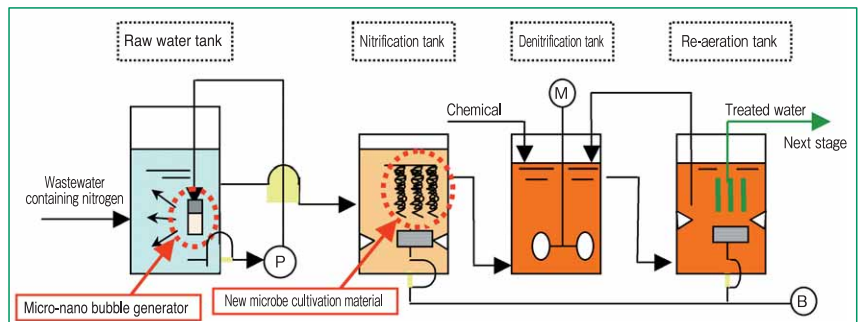


Fig. 3 Nitrogen Processing Flow

Introductory Track Record

- Micro-nano bubbles have been already introduced into a number of semiconductor plans including Sharp's for the treatment of used developing fluids and wastewater with high-concentration nitrogen.

Effects

- By using Sharp's processing technology of wastewater with high-concentration nitrogen amalgamated from the technology of micro-nano bubbles and the technology of microbe processing enables to eliminate the high-concentration nitrogen ingredient 90% or more.

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