Nutrients Removal System Using Microorganism Immobilization Carriers (Bio-tube System)

Technology Overview

- Immobilization carriers supplied to a reactor hold highly concentrated nitrifier.
- Enables nutrients removal in the same retention time as CASP

Characteristics of carriers

- High retention capacity: Bio-tube can hold a large amount of microorganism (nitrifier)
- High durability: In some WWTPs, bio-tube run for over 10 years without reloading.
- High dispersibility: Bio-tube can disperse inside a reactor evenly.
- Easy storage

Scope of Application

- Applicable treatment process: ①Carrier added A_2O Process, ②Carrier added modified Ludzack-Ettinger process
- Applicable water temperature: Over 15˚C

Benefits

- For retrofit: No reactor expansion is required for the application of high-performance nutrients removal
- For new construction: Space-saving reactor

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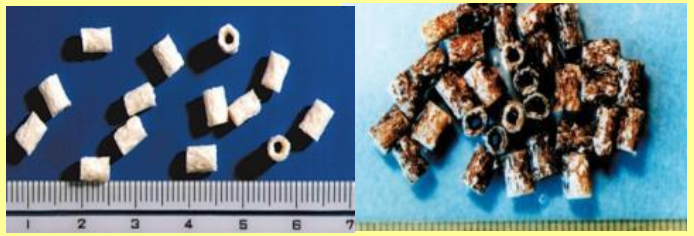
Bio-tube
Size: Outer diameter x Inner diameter x Length
(4mm x 3mm x 5mm)
Materials: Polypropylene + talc
Specific weight: 1.01(almost equivalent to water)



Circulation water
P
B
First settling tank
Inflow screen
Screen
Mixer
Overflow
Final settling tank
P
P
Excess sludge
Return sludge
Diffuser
Anoxic tank
Aerobic tank