CATOXIM

HYBRID
WASTEWATER TREATMENT SOLUTIONS
FOR
SUGAR & DISTILLERIES

FIELDS OF APPLICATION

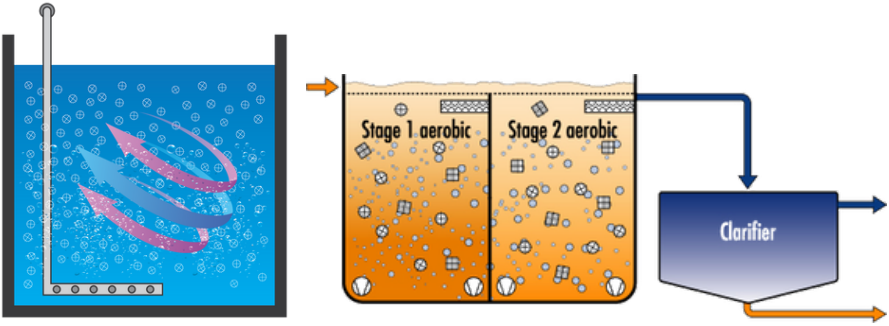
-
- Post concentration of Sulphited Syrup to increase Brix for reduced Pan vapor consumption.
- Clear Juice and Sulphited Juice heating using low-temperature vapor
- Use of 3rd Vapor for C massecuite boiling
- Increase Bagasse saving for Sale or Fuel for Distillery
- Thin Slop Evaporation in Grain distillery

Improve
Sugar Quality
Reduce Energy costs

CATOXIM

CATalytic **OX**idation **IM**mobilisation Hybrid Technology for Wastewater treatment in Sugar and Distilleries.

Catalytic Hydro-Oxidation is a proprietary process of Diva Envitec Pvt Ltd, we have combined this with Immobilized Microbiology to yield very good results in recycling wastewater from the Distillery and Sugar Industry. The Condensates with low pH and Volatiles are broken using CHD-Ox and then subjected to augmented bio digestion using microbiology and enzymes



PROCESS INTENSIFICATION - NANOPOREX

Vacuum fused cavitating Micronisers create fine nano-bubbles and millions of tiny bubbles are generated. The burst energy of these bubbles enhances the hydro-oxidation process. Increasing the surface area in a two-phase reaction between a gas and liquid improves the mass transfer.

Vacuum-fused Porous Micronisers far exceed the performance of drilled pipe and other types of diffusers. These have millions of pores over the surface. Defined morphology specific to the manufacturing process allows large volumes of gas to be passed creating very high specific areas at the interface.

With an equal volume of gas, 1 mm bubbles would have 600 times more gas-liquid contact surface area than 6 mm bubbles, and the magnitude is much higher with micro-bubbles.

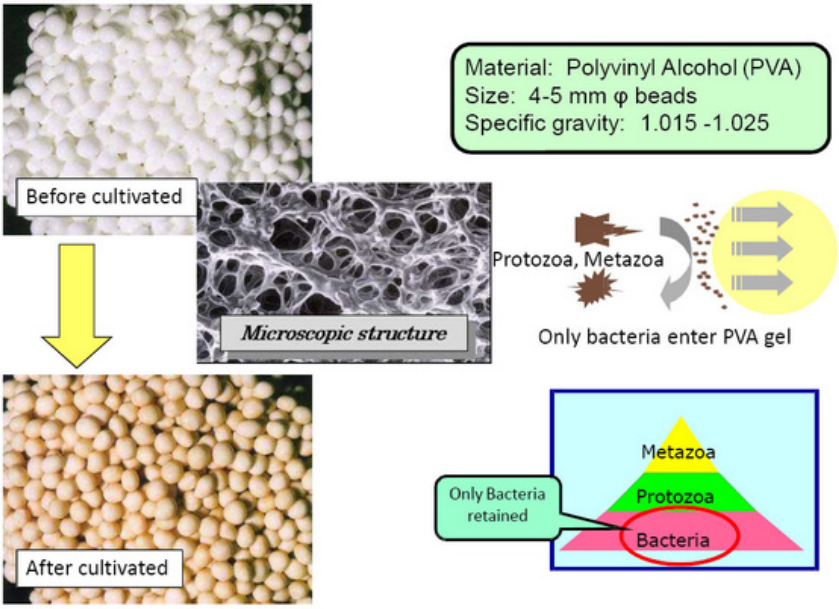
POREGEL a bio carrier is made from porous polymeric resin.

The bio-retention is high due to the high surface area for adsorption per cubic meter of the media. This enables more efficient wastewater treatment with a compact system.

The immobilization not only improves the bioactivity but also generates minimal sludge generation and keeps the proliferation and death of bacteria almost equal. This balance improves the overall efficiency of the reactor and also the down-stream processing

With a sphere diameter of about 4 mm and a specific density of 1.015 <± 0.01>, it floats through the system with the aeration blowers .

Principle of Immobilsation



Maximum BOD carrier load 50kg / m^3-Gel • d *
Volumetric load 5 kg / m^3 • d (carrier filling rate > 10%)

Maximum nitrogen carrier load 6 kg / m^3-Gel • d *
Volumetric load 0.6 kg / m^3 • d (carrier filling rate <Kragele®> 10%)

Processing capacity is 5 to 10 times that of the activated sludge method


(Before use)


(After one month)

For designing a good bio-engineered system get in touch with Diva Envitec and discover the new world of efficient wastewater management in Distillery and Sugar factories.

Diva Envitec

your Process Engineering Partners

diva envitec

For more details :

DIVA ENVITEC PVT LTD

ENGINEERING TODAY FOR A GREENER TOMORROW

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