

ECOMET-XT



Eco-friendly Mixed Tank Reactor BIOMETHANATION System

Biomethanation is a widely accepted method adopted by distilleries to reduce effluent load and simultaneously recover energy from effluent in the form of methane rich biogas.



Biomethanation Process

Biomethanation involves conversion of organic compounds present in the effluent using a genera/consortium of bacteria under anaerobic conditions. During their life cycle the bacteria break these organic compounds into methane gas and carbon dioxide.

The bacteria, being living organisms, require specific conditions to prosper. This is achieved by controlling parameters like temperature, acidity, organic loading, nutrient balance, etc.

ECOMET-XT

Biomethanation System

The composition of wastewater/vinasse from molasses based distillery requires knowledge of not only wastewater treatment system, but also of the overall distillery operations. Praj, with its extensive experience of molasses based distillery, has on offer a scientifically designed Biomethanation System, The Ecomet-XT Mixed Tank Reactor. EcoMet-XT incorporates unique features for trouble free operation benefiting customers by way of maximum returns. All aspects, right from raw spentwash/vinasse handling to sludge separation and recycle have received careful attention.

Salient Features : ECOMET-XT Biomethanation System

- Special geometry of the Reactor with unique design of the Mixing System ensures excellent mixing of organic matter with suspended biomass ensuring optimum reaction rate.
- The hydraulic retention time enables higher COD loading without dilution, reducing water consumption and further cost of treatment/disposal. It also avoids shock loading and malfunctioning of the reactor.
- Scientifically designed parallel plate clarifier system for separation and recycle of biomass to reactor maintains optimum biomass quantity thereby ensuring maximum biogas generation.
- Design of sludge receiving & settling system prevents buildup of inorganic solids in the reactor leading to consistent performance over a longer period.
- Minimum reactor internals prevent build up of inorganic sludge ensuring maximum utilization of reactor volume over longer period.
- Proper heating & cooling system provided to ensure consistent performance even during winter season.



Domestic

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