

FISH MEAL INDUSTRIES
WASTE WATER TREATMENT
& ODOUR CONTROL SYSTEMS



#### About Us

We, S.K.ASSOCIATES, an Engineering Company have more than 10 years of Practical Experience in Water and Waste Water Treatments. We installed many successful operating plants in various fishmeal company in India and abroad. We provide a complete solutions of Odour Controlling Systems and Effluent treatment with reuse of Treated water from effluent to industries, Our complete Zero Liquid Discharge Systems with latest technology such as Reverse Osmosis Plant, Ultrafiltration





#### Aeration Tank

All Condensate water and UASB Outlet will be treated in Aeration tank and Specific Bio Culture will be maintained for digesting organic loads from evaporator condensate water and treated blood water. This Treated water is settled in secondary clarifier and further treated with lime and alum for removal of all colloidal particles. In Teritary Clarifier, this lime alum sludge is separeted in Sludge dry bed / filter press. Futher Clear overflow Treated Water from teritiary clarifier will be treated with hypo chloride

#### Multiple Effect Evaporator

Fish Meal Industries. After Centrifuge, remaining cola water evaporated in multiple effect evaporator and concentrated paste returned to Drier. We ensured our quality systems to give TVBN under control and not affecting fish meal powder by adding this paste. Further, we designed to use hot air vapour energy for evaporator and running under vacuum with semi automatic PLC Controlled systems. Further. provide Forced Circulation Evaporator for concentrating cola water up to 55Brix (55%) for resale of paste.

#### Odour Controlling systems

After Evaporator, Vapour will be condensed inCooling Condenser and Scrubbed inWet Scrubber. We designed our condenser and scrubber to remove odour and reduce temperature with out affecting drier performance by back pressure. Our Cooling Condenser and Scrubber will reduce odour up to 90% and all odour producing substance as condensate to treat in Effluent TreatementPlant.



## Bio Filter

Odour from scrubber is released in Bio filter and using Micro Bilogical Action odour in air treated by bio filter media. Bio filter media have Coir and Coir Material with added nutrient, bio culture with stabilizer. This media will ensure removal of Odour and all Fish cooking and Drying Vapour will be treated. This efficient odour removal systems will provide a clean air environment and avoid all objectionable odour emissions to atmosphere.



#### **Effluent Treatment Plant**

In Fish meal Industries, Blood from Vehicle Parking area Collected Blood will be treated in our Latest UpFlowAnaerobic Sludge Blanket (UASB) Reactor. It is Anaerobic reactor having moving bed media and digest all blood and heavy organic loads and produce methane and other gases. This Gas is burnt in boiler and used its energy. Further, 90% Organic loads is reduced and outlet from UASB reactor can be easily treated in Aeration Tank.

# Ultrafiltrations System.

UF (Ultrafiltration System) will give clear water for reuse of Treated Effluent to Cooling Tower, Floor wash, Bio Filter etc. UF have 0.02 micron holes and separate all organic molecules and Iron, Heavy metals, Colour producing substances etc.



So Final Output will be a Crystal Clear water and it will be reused in 100% in industries. Backwash from UF will be resend to aeration tank for further treatment.

### Reverse Osmosis Plant

Treated UF Water will be processed in RO Plant and produce low TDS water with neglible Hardness for Boiler Feed water. Our RO Plant will ensure boiler feed water quality and enable industries for make up boiler water. Reject from RO Plant will be used in Bio Filter and Cooling tower make up.all Boiler blowdown and Cooling tower bleed water will be treated in ETP/ sent to solar ponds for ensuring Zero Liquid Discharge systems.

Our System ensure all government Norms in Legally, and ensure happiest customer for operation of Plants.



















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