



GTS

**ZERO LIQUID DISCHARGE
EFFLUENT TREATMENT PLANTS
RO UF NANO EVAPORATORS SLF**

GTS PROJECTS

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ABOUT GTS PROJECTS

GTS PROJECTS is a rapid growing fast track project engineering organization dedicated to the field of WASTEWATER TREATMENT with professionally qualified and experienced team of Engineers. The company undertakes turnkey projects consisting of design, Engineering, construction, manufacturing and Installation of air pollution control, water / waste water treatment systems and solid waste management systems. The company undertakes the O&M Contracts and Equipment Fabrication.

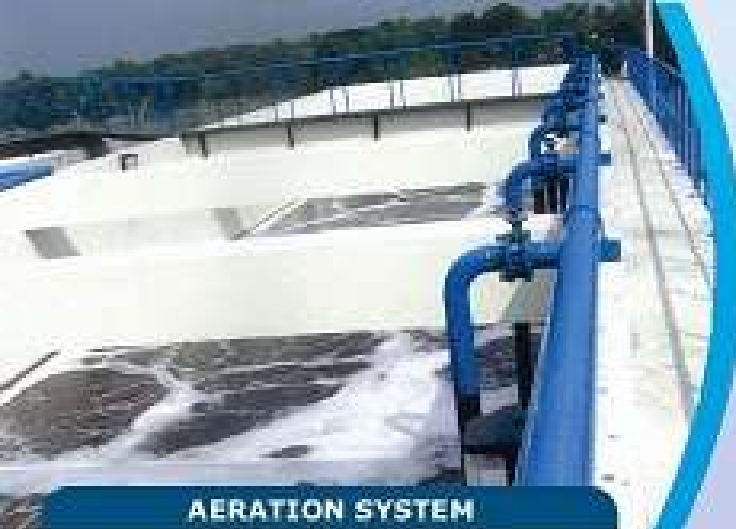
Achieving Zero Liquid Discharge:

“Zero Discharge” is the want of today that ensures no treated effluent is discharged to the ground.

The Five main systems: ✦ Primary Chemical flocculation ✦ Secondary Biological treatment ✦ Tertiary UF/Reverse Osmosis Plant/NANO filtration ✦ Multiple effect Evaporators ✦ Scientific Secured Landfill Facility.

PRIMARY TREATMENT :

- Bar screen chamber, Coagulation equipment, Flocculation equipment, Primary Clarifier and Neutralizing and flocculant chemicals & Agents
- It features assured levels of TSS, Colour and heavy metal removal



AERATION SYSTEM



PRE-FAB EFFLUENT TREATMENT PLANT



CLARIFIER MECHANISM



PRESSURE SAND FILTRATION SYSTEM

- Every system built as per customer's specific requirements
- Level of pre-treatment adjusted to meet downstream equipment tolerances
- Special recovery systems for recovering Acids, Precious Metals and other effluents

BIOLOGICAL TREATMENT:

GTS PROJECTS has wide experience with different types of biological treatment methods.

MBBR: Within this field our key technology is an advanced, high-loaded biological treatment method called Moving Bed Bioreactor (MBBR). It is a biological treatment of industrial process or waste waters. The biology consists of micro-organisms both attached to the carriers and suspended in the water. The GTS's MBBR solution has been the choice for several types of water such as effluent from process industries, Textile Dyeing Industries, Tanneries, Pharmaceutical and food processing industries Effluents.

ACTIVATED SLUDGE PROCESS: Industrial effluents typically have high concentration of

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RO PLANT ZLD



UF PLANT



NANO FILTRATION SYSTEM



RO PLANT FOR ETP



MBR SYSTEM

organics and there are significant variations in both flow and concentration. EnviroSolutions & services's Conventional Aeration System (Aeration tank followed by Clarifier and continuous sludge recirculation) called ACTIVATED SLUDGE PROCESS enable stable functioning and manage the peak loads and will give good treated effluent quality as final result.

ULTRA FILTRATION SYSTEMS:

PROCESS:

- To remove particles upto 0.001 micron ;MoC: Poly Acrylo Nitrile/Polyethersulfone Hollow fiber/ Out to In configuration
- Single skid assembly/PLC or SCADA controlled back flush.
- Ideal for RO Pretreatment/Raw water treatment/ wastewater recovery; Skid comprises flow meters/pressure gauges/ pneumatic valves/ 80 schedule SS or PVC piping/Electrical control panel

PRESSURE SAND FILTER, ACTIVATED CARBON FILTER, MICRON FILTER

- To remove particulates, TSS, Turbidity from water
- MoC: SS/MS/FRP/GRP Vessels; Lining: FRP/Rubber lining

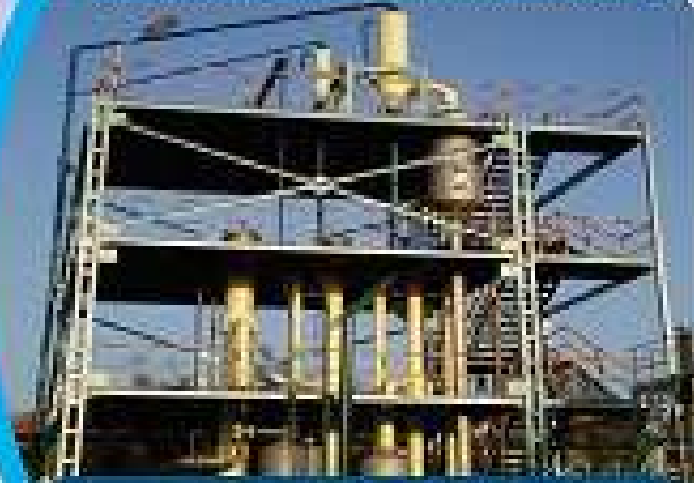
Features

- Filtration Media: Filter Sand, Graded Pebbles, Anthrasite, Green sand
- PLC/SCADA controlled Diaphragm valve / butterfly valves



RAW EFFLUENT SAMPLE

FERRICATE WATER SAMPLE



MULTIPLE EFFECT EVAPORATOR SYSTEM



SLF

REVERSE OSMOSIS PLANTS / NANO FILTRATION SYSTEMS

Reverse Osmosis Systems offered by us are built for specific effluent treatment based applications. These provide assured recovery of 95% or more as well as provide necessary power savings. Further, these are also cost effective alternate to evaporator and can tolerate high residual concentration in RO feed water.

RO PLANT: To remove TDS from water/treated effluent upto 10^{-11} m size molecules

NANO FILTRATION PLANT: To remove TDS from water upto 10^{-9} m size molecules to get brine solution

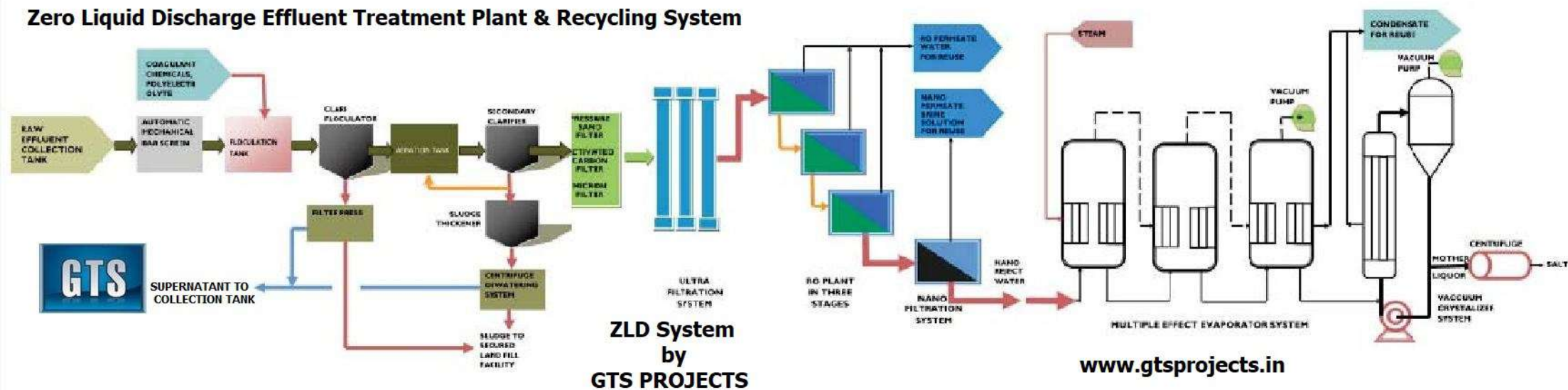
MoC: Poly Amide/Type: Spiral wound; Single skid assembly/PLC or SCADA controlled back flushing

APPLICATION: Raw water treatment/wastewater recovery/To get demineralised water/Seawater Desalination to obtain drinking water or Boiler feed water Skid comprises FRP/GRP Housing/flow meters/pressure gauges/switches/pneumatic valves/80 schedule SS or PVC piping/Electrical control panel

Dosing of Antiscalant/dechlorinator/neutralizers; Pretreatment: granular medium filters/Micron filters; High Pressure pumps:vertical multistage/triplex plunger

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Zero Liquid Discharge Effluent Treatment Plant & Recycling System



SCIENTIFIC SECURED LAND FILL FACILITY:

GTS PROJECTS undertake SLF system as turnkey basis including Design and supply of the Components involved in SLF and complete Erection and commissioning and Followup for Approval from Govt.Statutories.

Double Composite Liner System / Leachate Containment system (LCS)

The landfills primary objectives is not to allow the leachate to leave the landfill and enter into the soil & ground water. The liner system is designed to provide an effective barrier beneath the land-filled waste and to allow the effective removal of leachate generated within the waste.

In the present case, a double composite liner system consisting of (from bottom sub soil upwards), Compacted Clay Liner compacted amended of 45 cm. 1.5 mm thick HDPE (Geo membrane) Liner Secondary leachate collection system : 30 cm. Compacted clay liner / compacted amended 45 cm. 1.5 mm thick HDPE (Geo membrane) liner

Primary leachate collection : 30 cm

MULTIPLE EFFECT EVAPORATORS AND VACUUM CRYSTALLIZER SYSTEM

GTS PROJECTS offers Multiple Effect Evaporators followed by Crystallizer unit for Separation of High conc. of dissolved salt present in the effluent by Evaporation and Condensation principle. The salt finally separated in centrifuge and disposed further. The recovered condensate shall be reused as Boiler feed water or in Process..

COMPONENTS :

- Evaporator Bodies (falling Film Evaporator, Forced Circulation Evaporators, Short Tube Vertical)
- Steam Jet Ejector As Thermal Vapor Recompressor

- Circulation Pumps, Balancing Tanks, Concentrate Thickener Drum
- Barometric Condensers And Jet Ejector And Cooling Towers/ Vacuum Pumps
- Adiabatic Crystallizer Vessel, Baffle Type Spray Evaporator, Vacuum Pump And Salt Separating Centrifuge
- Necessary Piping, Instruments And Structural Supports

Features:

- PLC/ SCADA Controlled, Moc: SS304/SS316, High Steam Economy, Low Operating Cost, Very Much Operator Friendly/ Less Routine Maintenance

Applications:

Textile Washwater Ro Reject, Dyepath Water, Pharmaceutical , Food Process Industries, Tanneries, Milk Processing, Automobiles, Various Chemical Process Industries & CETPs.



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*Engineering for
sustainable environment...*

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