



Water & Waste Water Treatment - Recycle



ESPURE WATER SOLUTIONS PVT LTD

ensure the purity of water



An ISO 9001:2015 Certified Company

An ISO 14001:2015 Certified Company



ESPURE is specialized in design, supply, erection, commissioning and operation maintenance of water & Waste water treatment plant for various types of waters which combines biological and chemical treatment followed by membrane technologies to remove organic, inorganic, heavy metals and suspended solids.

SEWAGE TREATMENT PLANTS

Sewage Treatment is a type of wastewater treatment which aims to remove contaminants from sewage to produce an effluent that is suitable for discharge to the surrounding environment or an intended reuse application, thereby preventing water pollution from raw sewage discharges.

ESPURE Offers following technologies:

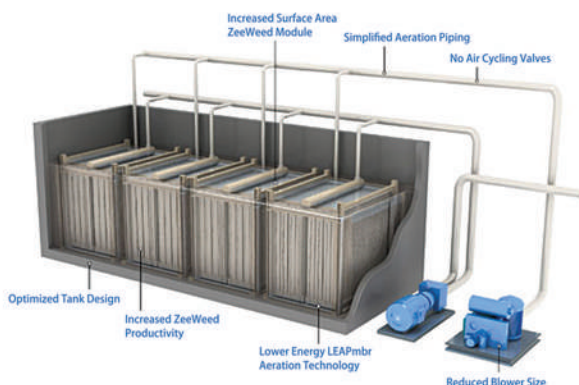
MBBR - Moving Bed Bio Reactor

The Moving Bed Biofilm Reactor (MBBR) wastewater treatment process has an aeration tank with plastic transporters filled with wastewater. This gives way to the growth of biofilm. The density of these carriers and water is the same. Usually, activated sludge systems require recycling of the sludge, which is not the case in the MBBR process. It is considered to be a better option as compared to other conventional methods.



MBR-Membrane Bio Reactor

Membrane Bioreactor (MBR) is a combination of membrane processes. Ultrafiltration (UF) or microfiltration (MF) process is combined with the activated sludge process, a biological wastewater treatment method. The basic function of the membranes is to separate organic matters from water. This is usually accomplished with the help of clarifiers and filters used in activated sludge facilities. The membrane zone is the first step that weakens the contaminants. Further, a series of membrane elements are used to filter these contaminants.



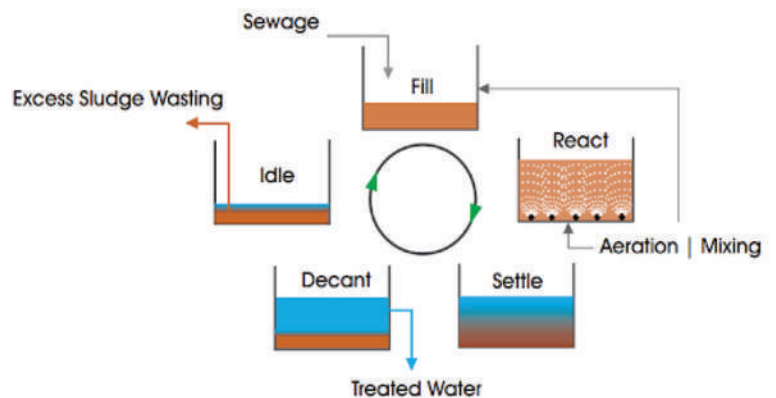
SBR-Sequential Batch Reactor

The sequencing batch reactor (SBR) is a fill-and draw activated sludge system for wastewater treatment. In this system, wastewater is added to a single "batch" reactor, treated to remove undesirable components, and then discharged. Equalization, aeration, and clarification can all be achieved using a single batch reactor.

SBR systems have been successfully used to treat both municipal and industrial wastewater. They are uniquely suited for wastewater treatment applications characterized by low or intermittent flow conditions.

SBR utilizes a simple repeated time-based sequence that incorporates:

- Fill-aeration (for biological reactions)
- Fill-settle (for solid/liquid separation)
- Decant (for treated effluent removal)



Packaged Sewage Treatment Plant (PSTP)

Espure also offers Packaged Sewage Treatment Plant PSTP, easy to-install, prefabricated solution, outstanding performance and efficiency.

Packaged Sewage Treatment Plant is an innovative and truly versatile system for the effective treatment of wastewater, including Nutrient removal. They can be configured for BOD reduction, suspended solids reduction, Ammoniacal and/or total Nitrogen reduction and Phosphorus reduction.



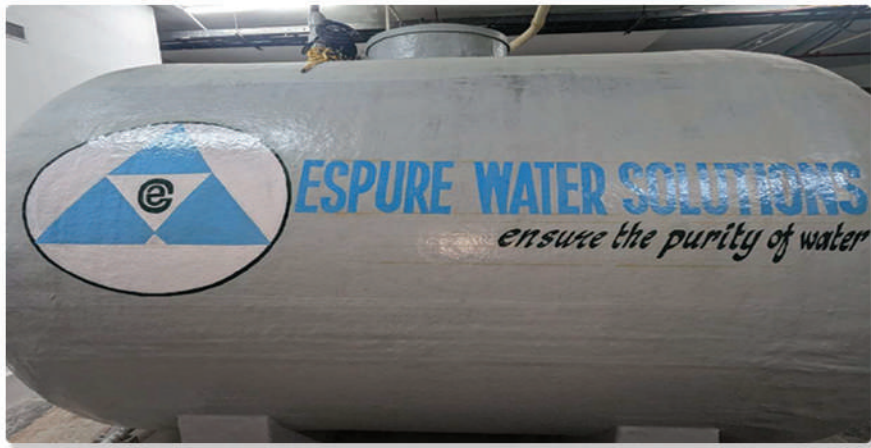
Package plants are used in rural areas, highway rest stops and trailer parks where population to be served ranges from 10 – 100 people or so.

Packaged Sewage Treatment Plants are based on anaerobic and aerobic process and are designed to have dual functions for efficient treatment of domestic wastewater from toilets, bathrooms, kitchens and washing area.

- **Anaerobic zone:** Solids in the raw sewage settle, and scum floats on the surface.
- **Anoxic zone :** During the denitrification process, anoxic microbes break down to the existing nitrates, this results in the release of inert nitrogen gas into the atmosphere.
- **Aeration zone:** Air is diffused to encourage the growth of bacteria cultures.
- **Sedimentation zone:** Organic waste settles, and the settled waste is pumped back to the anoxic zone.

Advantages

- Portable type, Compact & Easy to handle
- Plug and Play system
- Low Maintenance
- Meets regulatory Standards
- No Smell & Low Noise
- More Reliable
- Two Stage Aerobic Treatment



EFFLUENT TREATMENT PLANTS

An Effluent Treatment Plant (ETP) is a facility that treats industrial wastewater to make it safe for reuse or discharge into the environment. ETPs use physical, chemical, and biological processes to remove contaminants from the wastewater.

We provide various range of ETP plants based on conceptual designing and process as per requirements of our clients. Common application of ETP such as pulp, paper, dairies and pharma industries.

ETP Range:

- Packaged ETP
- Pre-fabricated MSEP skid
- Conventional ETP (civil tanks)
- DAF



DAF-Dissolved Air Floatation

DAF systems are designed to remove total suspended solids (TSS), biochemical oxygen demand (BOD), and oils and greases (O&G) from a wastewater stream. Contaminants are removed using a dissolved air-in-water solution produced by injecting air under pressure into a recycle stream of clarified DAF effluent.



UF-Ultra Filtration

An ultrafiltration (UF) water system is an efficient means of removing solids and particulate from waste water. Ultrafiltration systems remove all suspended particulate in water on a microscopic level. Ultrafiltration is a water treatment process that uses a hollow fiber or a sheet membrane to mechanically filter water containing very small particulate. An ultrafiltration drinking water system uses this super fine membrane technology to filter particulate down to 0.025 microns.



RO - Reverse Osmosis

Espure is specialized in design, supply, erection and commissioning of various range of RO systems consent to our client requirements. Reverse Osmosis systems can remove pollutants from water including lead, pesticides, fluoride, pharmaceuticals, arsenic and much more. And with a carbon filter, an RO system can also remove chlorine to improve the taste, odor and appearance of waste water. We design RO for Drinking, DM, cooling tower and effluent water as well.

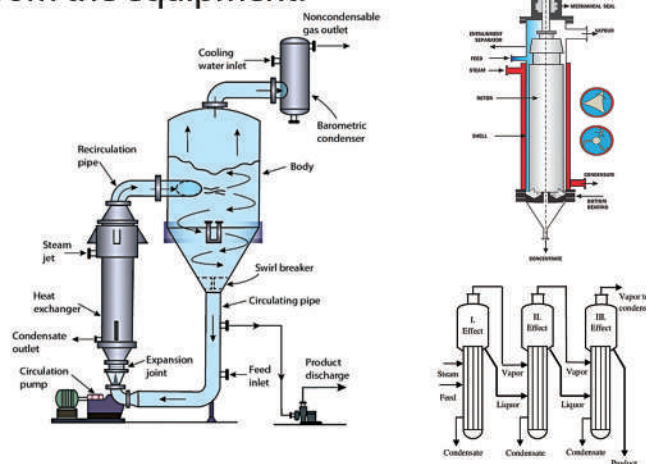


Evaporator (ZLD)

An evaporator is a device used in a process to turn the liquid form of a chemical substance, such as water, into its gaseous form - vapor. In this process, the liquid is evaporated, or vaporized.

■ Multiple-Effect Evaporators

Multiple effect evaporation commonly uses sensible heat in the condensate to preheat liquor to be flashed. In practice the design liquid flow paths can be somewhat complicated in order to extract the most recoverable heat and to obtain the highest evaporation rates from the equipment.



■ Agitated Thin Film Evaporators

ATFD is stands for evaporation of water/solvents to make concentrated liquid to dry powder or flakes. ATFD is the ideal apparatus for continuous processing of concentrated material to dry solids. ATFD is consist of cylindrical, vertical body with heating jacket and a rotor inside of the shell which is equipped with rows and pendulum blades all over the length of the dryer. The hinged blades spread the wet feed product in a thin film over the heated wall.



Applications

- ◆ Chemical, petrochemical and process industries
- ◆ Sugar, beverage industries
- ◆ Fertilizers industries
- ◆ Paper and pulp industries
- ◆ Pharmaceutical industries
- ◆ Water and waste water management
- ◆ Food and drug industries
- ◆ Dredging industries

Organic Waste Composter

Organic Waste Composter is a fully automatic composting machine which uses special microorganisms to break down and decompose all kinds of organic waste into compost with a volume reduction of 85-90%. The entire process is natural and biological.



Electromagnetic Flow Meter

Electromagnetic Flowmeters are based on Faraday's law of Electromagnetic Induction. In an Electromagnetic Flowmeter, the magnetic field is generated by a set of coils. As the conductive liquid passes through the Electromagnetic Field, an electric voltage is induced in the liquid which is directly proportional to its velocity. This induced voltage is perpendicular to both, the liquid flow direction and the electromagnetic field direction. The voltage sensed by the electrodes is further processed by the transmitter to give standardised output signal or displayed in appropriate engineering unit.

Electromagnetic Flowmeters are mainly used in various industries, ETP, STP, WTP plants, Borewell and Conductive liquids for measuring the flowmeter and totalizer.

Electromagnetic Flowmeter available in various size ranges.



Online Water Analyzer

Online Water Analyzer based on UV vis absorption, which associate proprietary high resolution with Fourier Transform & Least Square mathematical treatment and it has found increasingly wide application in process industries. The spectrum of interest here extends from 200 nm to 750 nm. Direct absorbance for COD, BOD, TOC, NO₃, COLOR, PH, TSS and Cr bring fast and stable measurements.





www.espure.in

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