SKYWORLDS
Water Treatment

All types of water managements

- For support:-support@skyworlds.in
- Website:- Skyworlds.in

Welcome To Skyworlds

Welcome to Skyworlds We're leaders in cleaning up dirty water from factories and industries. Our main goal is to make sure that this wastewater doesn't harm the environment. We're really good at what we do because we have smart solutions and a team that cares a lot about keeping our planet clean. So, if you need help with industrial wastewater, come join us at Skyworlds. Together, let's make our world cleaner and brighter

OUR PRODUCTS

SEWAGE WATER TREATMENT (STP):-

-Specifications: -

Flow Range: 1KLD - 5MLD
Materials: FRP/SS/MSRL/MSEP and Civil construction.
Operation: Semi-automatic/fully automatic plants.
Service: 24*7 Support Available.
Maintenance: Free AMC for first year.
Installation & Commissioning: -Free, Parts of Project.

The treatment process typically involves several stages, including:

1.Preliminary Treatment: In this stage, large solids such as sticks, rags, and other debris are removed from the wastewater through screening and grit removal processes. This helps prevent damage to downstream equipment and ensures smoother operation of subsequent treatment processes.

2.Primary Treatment: During primary treatment, the wastewater flows into large settling tanks where heavier solids settle to the bottom as sludge, while lighter materials like oils and grease float to the surface and are skimmed off. The partially treated wastewater, known as primary effluent, moves on to the next stage.

SEAWAGE TREATMENT PLANT (STP)

A sewage treatment plant is a facility that processes wastewater to remove contaminants and pollutants, making it safe to release back into the environment or reuse. The process typically involves several stages, including physical, chemical, and biological treatments to remove solids, organic matter, and harmful microorganisms from the sewage

OUR SERVICES, FEATURES & BENEFITS:-

Our qualified team of professionals successfully manufacture & supply Sewage Water Treatment Plants.

Some of the key features of our STP being

1. Easy to install, & come with a user-friendly interface.

2. Compact design offers smooth functioning.

3. Designed robustly, our sewage water treatment plants are highly durable.

4. Come with weather-proof body along with the high anti- corrosive appeal.

5. Confer unbeatable performance aspects, demanding Low maintenance.

6. Effectively remove contaminations from waste water.

7. Fully automated controlled system.

8. No delicate expensive membranes.

9. Basic innovation utilized is enacted slop process.

3. Secondary Treatment: Secondary treatment focuses on removing dissolved and suspended organic matter from the wastewater using biological processes. Common methods include activated sludge processes, trickling filters, or sequencing batch reactors, where microorganisms break down organic pollutants into simpler, less harmful substances.

4. Tertiary Treatment: Tertiary treatment is an additional step in some sewage treatment plants to further improve water quality before discharge or reuse. This stage may involve advanced filtration methods, chemical treatment, or additional biological processes to remove remaining contaminants, nutrients, and pathogens.

5. Disinfection: Once the wastewater has undergone primary, secondary, and tertiary treatment (if applicable), it undergoes disinfection to kill or inactivate any remaining pathogens such as bacteria, viruses, and parasites. Common disinfection methods include chlorination, ultraviolet (UV) irradiation, or ozonation.

6. Sludge Treatment: Throughout the treatment process, solid materials that settle out of the wastewater, known as sludge, are collected and treated separately. Sludge treatment typically involves processes such as thickening, dewatering, digestion, and sometimes incineration or land application to reduce volume and stabilize the sludge for disposal or beneficial reuse.

Sewage treatment plants play a crucial role in protecting public health, safeguarding the environment, and ensuring the sustainable management of water resources. By treating wastewater effectively, these facilities help minimize pollution of water bodies, prevent the spread of waterborne diseases, and support the reuse of treated water for irrigation, industrial processes, and other non-potable applications.

❖ Membrane Bioreactor (MBR):-

Specifications: -

Flow Range: 1KLD - 5MLD
Materials: FRP/SS/MSRL/MSEP and Civil construction.
Operation: Semi-automatic/fully automatic plants.
Service: 24*7 Support Available.
Maintenance: Free AMC for first year.
Installation & Commissioning: -Free, Parts of Project.

MBR stands for Membrane Bioreactor, which is an advanced technology used in wastewater treatment processes. In an MBR system, biological treatment (bioreactor) is combined with membrane filtration. Instead of using conventional settling tanks to separate solids from liquid, MBRs use specialized membranes to effectively filter out suspended solids, bacteria, and other contaminants from the wastewater.

- **The MBR process typically involves the following steps:**

1. Biological Treatment: Waste water is introduced into a bioreactor where microorganisms break down organic pollutants through biological processes. This stage is similar to the secondary treatment in conventional sewage treatment plants.

2. Membrane Filtration: Unlike traditional treatment methods, where settling tanks are used to separate solids from liquid, MBRs utilize membranes with fine pores to physically filter out suspended solids, bacteria, and other contaminants from the wastewater. The membranes act as a barrier, allowing only clean water to pass through while retaining the solids and microorganisms.

- **MBR technology offers several advantages over conventional wastewater treatment methods, including:**

1.Higher Treatment Efficiency: MBRs can achieve superior removal of suspended solids, organic matter, and pathogens compared to conventional systems, resulting in higher water quality standards.

2.Compact Footprint: MBRs typically require less space than conventional treatment systems because they eliminate the need for large settling tanks.

3.Flexibility and Scalability: MBR systems are modular and can be easily expanded or modified to accommodate changing treatment needs or increased wastewater flow.

4.Reuse Potential: The high-quality effluent produced by MBRs is suitable for various non-potable applications such as irrigation, industrial processes, and groundwater recharge.

Overall, **MBR** technology represents a sustainable and efficient approach to wastewater treatment, offering improved effluent quality, reduced environmental impact, and greater operational flexibility compared to conventional treatment methods.

❖ Ultrafiltration (UF):-

Specifications :-

Flow Range: 1 LPH - 50000 LPH
Materials: FRP/SS/MSRL/MSEP and Civil construction.
Operation: Semi-automatic/fully automatic plants.
Service: 24*7 Support Available.
Maintenance: Free AMC for first year.
Installation & Commissioning:-Free, Parts of Project.

UF stands for Ultrafiltration, a membrane filtration process used in water treatment to remove particulate matter, bacteria, viruses, and other contaminants from water. It is a type of pressure-driven membrane process that employs semi-permeable membranes with fine pores to separate suspended solids and microorganisms from water.

❖ **Here's an introduction to UF:**

1. **Membrane Technology:** UF utilizes membranes with pore sizes typically ranging from 0.01 to 0.1 micrometers. These membranes act as a physical barrier, allowing water molecules to pass through while blocking larger particles, including bacteria, viruses, colloids, and suspended solids.

2. Pressure-Driven Process: UF operates under pressure, forcing water through the semi-permeable membrane. The pressure differential across the membrane causes water molecules to permeate through the membrane, leaving behind contaminants, which are retained on the membrane surface or within its pores.

3. Versatile Applications: UF finds applications in various water treatment processes, including drinking water purification, wastewater treatment, industrial process water treatment, and water recycling. It is particularly effective in removing turbidity, pathogens, and particulate matter from water, producing high-quality treated water.

4. Pre-Treatment and Polishing: UF is commonly used as a pre-treatment step in water treatment systems to remove larger particles and microorganisms before subsequent treatment processes such as reverse osmosis (RO) or as a standalone treatment for water polishing to improve water quality.

5. Low Chemical Usage: Unlike some other water treatment processes that require extensive chemical usage for coagulation, flocculation, and disinfection, UF typically requires minimal or no chemical additives, making it environmentally friendly and cost-effective.

6. Compact Design: UF systems are modular and can be designed in compact configurations, making them suitable for both small-scale and large-scale applications. They can be easily integrated into existing treatment plants or used as standalone units.

7. Efficient Removal of Contaminants: UF membranes effectively remove a wide range of contaminants, including suspended solids, bacteria, viruses, cysts, and some dissolved substances, providing reliable and consistent water quality.

Overall, **UF** technology offers an efficient and sustainable solution for water treatment, providing high-quality treated water for various applications while minimizing chemical usage and environmental impact.

Our Clints

KFC | Haldiram's | oppo

LARSEN & TOUBRO | MARUTI SUZUKI

❖ EFFLUENT TREATMENT PLANT (ETP):-

EFFLUENT TREATMENT PLANT:

An Effluent Treatment Plant (ETP) is a facility designed to treat industrial wastewater before it is discharged into the environment. It involves a series of processes to remove contaminants and pollutants from the water, making it safe for release or reuse. ETPs typically employ physical, chemical, and biological methods such as sedimentation, filtration, oxidation, and biological degradation to clean the wastewater. These plants are essential for minimizing environmental pollution and ensuring compliance with regulatory standards.

Specifications: -

Flow Range: 1 KLD to 500 KLD
Materials: FRP/SS/MSRL/MSEP and Civil construction.
Operation: Semi-automatic/fully automatic plants.
Service: 24*7 Support Available.
Maintenance: Free AMC for first year.
Installation & Commissioning: -Free, Parts of Project.

An Effluent Treatment Plant (ETP) is a comprehensive facility designed to treat wastewater generated by industrial processes, ensuring it meets environmental standards before discharge. Here's a detailed introduction:

1. Purpose: ETPs are crucial for industries to responsibly manage their wastewater, removing harmful contaminants and pollutants to prevent environmental damage.

2. Components:-Preliminary Treatment: Screening and grit removal to remove large solids and debris.
Primary Treatment: Settling tanks or clarifiers to separate suspended solids and organic matter through sedimentation.

Primary Treatment: Settling tanks or clarifiers to separate suspended solids and organic matter through sedimentation.

Secondary Treatment: Biological processes such as activated sludge, trickling filters, or sequencing batch reactors (SBR) to biologically degrade organic pollutants.

OUR SERVICES, FEATURES & BENEFITS:-

Our qualified team of professionals successfully manufacture & supply Sewage Water Treatment Plants.

Some of the key features of our ETP being

1. Easy to install, & come with a user-friendly interface.

2. Compact design offers smooth functioning.

3. Designed robustly, our sewage water treatment plants are highly durable.

4. Come with weather-proof body along with the high anti- corrosive appeal.

5. Confer unbeatable performance aspects, demanding Low maintenance.

6. Effectively remove contaminations from waste water.

7. Fully automated controlled system.

8. No delicate expensive membranes.

9. Basic innovation utilized is enacted slop

Tertiary Treatment: Additional processes like chemical coagulation, flocculation, filtration, or advanced oxidation to further purify the effluent if needed.
- *Disinfection*: UV disinfection or chlorination to kill pathogens before discharge.
- *Sludge Treatment*: Handling and treatment of sludge generated during the process, often through dewatering and disposal or reuse.

3. Operation:
- Wastewater from the industrial process is collected and transferred to the ETP.
- It undergoes various treatment stages as per the plant's design.
- Monitoring and control systems ensure efficient operation and compliance with regulations.
- Treated water is discharged or reused, while sludge is managed appropriately.

4. Design Considerations:
- The design of an ETP depends on factors such as the type and volume of wastewater, pollutants present, local regulations, and site-specific conditions.
- Flexibility is often built-in to accommodate fluctuations in wastewater flow and composition.

5. Environmental Impact:
- ETPs play a crucial role in reducing water pollution and protecting aquatic ecosystems.
- Compliance with environmental regulations is essential to minimize negative impacts on the environment and public health.

6. Benefits:
- Protecting the environment and public health.
- Compliance with regulations, avoiding penalties and legal issues.
- Resource conservation through water reuse and sludge management.
- Enhancing corporate social responsibility and sustainability efforts.

In summary, **ETPs** are essential infrastructure for industries to responsibly manage their wastewater, safeguarding the environment and public health while ensuring compliance with regulations.

Our Clints

V-GUARD
Bring home a better tomorrow

Hero

❖ Reverse Osmosis (RO):-

Specifications: -

Flow Range: 50 LPH to 999999 LPH
Materials: FRP/SS/MSRL/MSEP and Civil construction.
Operation: Semi-automatic/fully automatic plants.
Service: 24*7 Support Available.
Maintenance: Free AMC for first year.
Installation & Commissioning: -Free, Parts of Project.

A **Reverse Osmosis (RO)** plant is a specialized facility designed to purify water by removing impurities and contaminants through the process of reverse osmosis.

Here's a full introduction:

1. Purpose: An RO plant is built to produce clean, potable water from various sources such as seawater, brackish water, groundwater, or wastewater. It is widely used in industries, municipalities, households, and even aboard ships and submarines for water purification.

2. Operation:

Filtration: The process begins with pre-treatment to remove large particles, sediment, and debris.

Reverse Osmosis: Water is then pressurized and forced through semi-permeable membranes that selectively allow water molecules to pass while blocking dissolved solids, salts, and other contaminants.

Product and Reject Streams: The purified water (permeate) is collected, while the concentrated waste stream (reject or brine) containing rejected contaminants is discharged or treated separately.

Post-treatment: In some cases, the permeate undergoes further treatment to adjust pH, remineralizer, or disinfect it before distribution or storage.

Storage and Distribution: Tanks or reservoirs to store purified water before distribution to consumers.

OUR SERVICES, FEATURES & BENEFITS:-

Our qualified team of professionals successfully manufacture & supply Sewage Water Treatment Plants.

Some of the key features of our STP being

1. Easy to install, & come with a user-friendly interface.

2. Compact design offers smooth functioning.

3. Designed robustly, our sewage water treatment plants are highly durable.

4. Come with weather-proof body along with the high anti- corrosive appeal.

5. Confer unbeatable performance aspects, demanding Low maintenance.

6. Effectively remove contaminations from waste water.

7. Fully automated controlled system.

8. No delicate expensive membranes.

9. Basic innovation utilized is enacted slop process

4. Design Considerations:
- RO plant design depends on factors such as feed water quality, desired water quality, capacity requirements, and operating conditions.
- Consideration must be given to energy efficiency, membrane fouling, scaling, and system maintenance.

5. Applications:
- Drinking water production for municipalities and communities.
- Industrial processes requiring high-purity water, such as pharmaceutical, food and beverage, and electronics manufacturing.
- Desalination of seawater or brackish water for coastal regions or arid areas.
- Wastewater treatment and recycling.

6. Benefits:
- Provides high-quality, safe drinking water.
- Removes contaminants and impurities effectively.
- Versatile and adaptable to various water sources and applications.
- Environmentally friendly compared to traditional treatment methods.

In summary, an RO plant is a sophisticated water treatment facility employing reverse osmosis technology to produce clean, potable water from diverse sources, serving a wide range of industrial, municipal, and residential needs.

❖ Zero Liquid Discharge(ZLD):-

Specifications: -

Flow Range: 1.5 MLD
Materials: FRP/SS/MSRL/MSEP and Civil construction.
Operation: Semi-automatic/fully automatic plants.
Service: 24*7 Support Available.
Maintenance: Free AMC for first year.
Installation & Commissioning: -Free, Parts of Project.

ZLD stands for Zero Liquid Discharge, which is a water treatment process aimed at eliminating liquid waste discharge from a system. In a ZLD system, all wastewater generated is treated and recycled, leaving zero liquid waste to be discharged into the environment.

Here's a full introduction:

1. Objective: The primary goal of ZLD is to minimize or eliminate the discharge of liquid waste streams from industrial or municipal operations, thereby reducing pollution, conserving water resources, and ensuring compliance with environmental regulations. By treating and recycling wastewater, ZLD helps industries achieve sustainability goals and mitigate their environmental impact.

2. Process Overview: ZLD systems typically involve a combination of advanced water treatment technologies to treat and recover water from various wastewater streams. These technologies may include pre-treatment processes (such as filtration, sedimentation, and chemical conditioning), membrane-based processes (such as reverse osmosis, nanofiltration, and ultrafiltration), thermal processes (such as evaporation and crystallization), and advanced oxidation processes (such as ozonation and UV disinfection).
3. Key Components: A typical ZLD system comprises several key components, including pretreatment units to remove suspended solids, dissolved contaminants, and pollutants from the wastewater, membrane-based separation units to concentrate the treated water and recover clean water for reuse, thermal evaporation and crystallization units to further concentrate the brine and produce solid salts or crystals, and brine management systems to handle and dispose of the concentrated brine or solids in an environmentally responsible manner.
4. Applications: ZLD systems are used in a wide range of industries and applications, including power plants, oil and gas refineries, chemical manufacturing facilities, textile and dyeing industries, pulp and paper mills, semiconductor manufacturing, and municipal wastewater treatment plants. They are particularly beneficial in water-scarce regions or areas with strict environmental regulations governing wastewater discharge.
5. Benefits: Implementing a ZLD system offers several benefits, including compliance with regulatory requirements for wastewater discharge, reduction of freshwater consumption and wastewater disposal costs, recovery of valuable resources from wastewater (such as clean water, salts, and minerals), prevention of pollution and environmental contamination, and enhancement of corporate sustainability and social responsibility initiatives.
6. Challenges: While ZLD systems offer significant environmental and economic benefits, they also present challenges such as high capital and operational costs, energy-intensive processes (especially thermal evaporation), complex system integration and operation, and management of concentrated brine or solid waste streams. Overcoming these challenges requires careful planning, technology selection, and optimization of system performance.

Overall, **ZLD** represents a proactive and sustainable approach to managing wastewater and water resources, helping industries minimize their environmental footprint, conserve water, and achieve long-term sustainability objectives. As water scarcity and environmental concerns continue to grow, the adoption of ZLD technologies is expected to increase worldwide.

Our Clints

MIRAJ GROUP SINCE 1987 | DRD TECHNOLOGY | Dalmia cement

JAKSON | OMAXE Turning dreams into reality

Address :-
150/2 Nikhil Vihar, ismailpur, Faridabad
Haryana (121003).

Contact us:-
9315990316/8800606184

SKYWORLDS
Water Treatment

Web site :- Skyworlds.in
Mail :- support@Skyworlds.in