



Albion
Water Recycling Company

ABOUT US

Albion has a focus on healthier and Greener tomorrow. The result of many man years of sweat and toil has ripened into an objective "Mission with a Vision". In an age where technology is the key competitive advantage, Albion has carved a niche for itself. At Albion, we realize that this is a moment of vast possibilities. Just supply a drop of pure water and there is an ocean of people with demand. Albion developer Mr.Nilesh Kothari is the working under many reputed consultancy for water management projects, also providing Rain Water Harvesting projects to local builders associations and government organizations from last 8 years. Albion is committed to provide environmentally safer products to match International standards of safety, health and hygiene.

MISSION

Albion water recycling company mission is to consistently provide a comprehensive range of high quality, cost effective and sustainable water treatment products and services to our valued customers, in order to satisfy their specific water service delivery needs and objectives.

“As an Experienced Design-Build Company and a Specialized Provider of Technological Solutions in Water and Wastewater Treatment”
Albion Ecotech Pvt.Ltd.

PRODUCTS WE OFFERS

Waste Water Treatment Plants

-  PRO - Electro Coagulation System
-  PRO - Dissolved Air Floatation System

Sewage Water Treatment Plants

-  FLOCS - Membrane Bio-reactors
-  FLOCS - Moving Bed Bio-reactors

Rain Water Harvesting System
ZLD - Mechanical Vapor Recompression
CETP Project / Consultancy

Membranes:

- UF Membranes
- MBR Membranes
- Cross flow Membranes
- Ceramic Membranes

CHALLENGES FOR TODAY INDIA

Water is a precious resource, yet less than 5% of India's urban and industrial wastewater is recycled. Water recycling is a socially, environmentally and economically viable solution to help utilize our water resource more efficiently.

Recycling our water can offer substantial benefits to our society including:

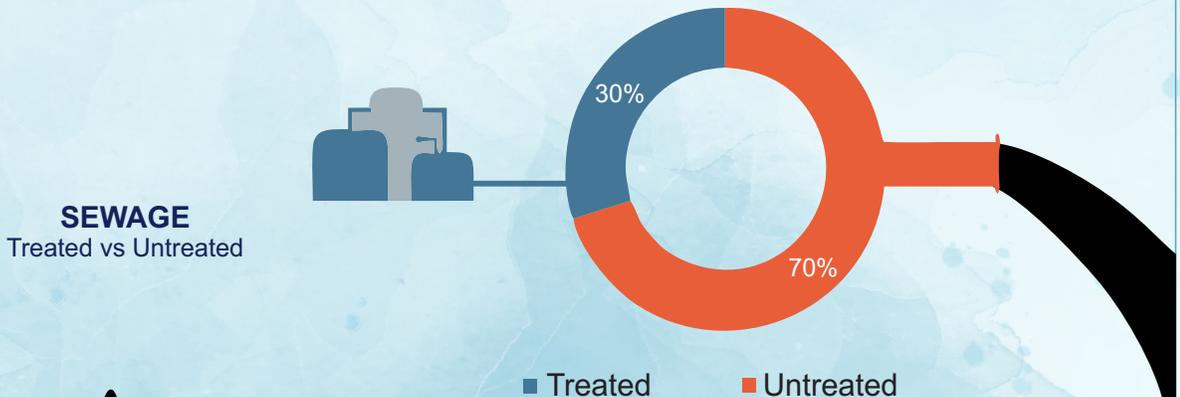
- Reduction of nutrient and contaminant loads into oceans and rivers
- Providing more drinking quality water for domestic uses by substituting drinking quality water with recycled water for irrigation of agricultural crops and amenity horticulture
- Reducing demand and stress on freshwater resources such as the groundwater and rivers by providing alternative water supplies.
- Provide Recycling water can save the water for future world

There may also be benefits to agricultural and amenity enterprises through:

- Guaranteed water supply
- Supply of water quality underpinned with a comprehensive water quality assurance program
- Security for investment in agricultural enterprises
- Recycling of valuable nutrients

Challenge for conventional Government Water Recycling Plants :

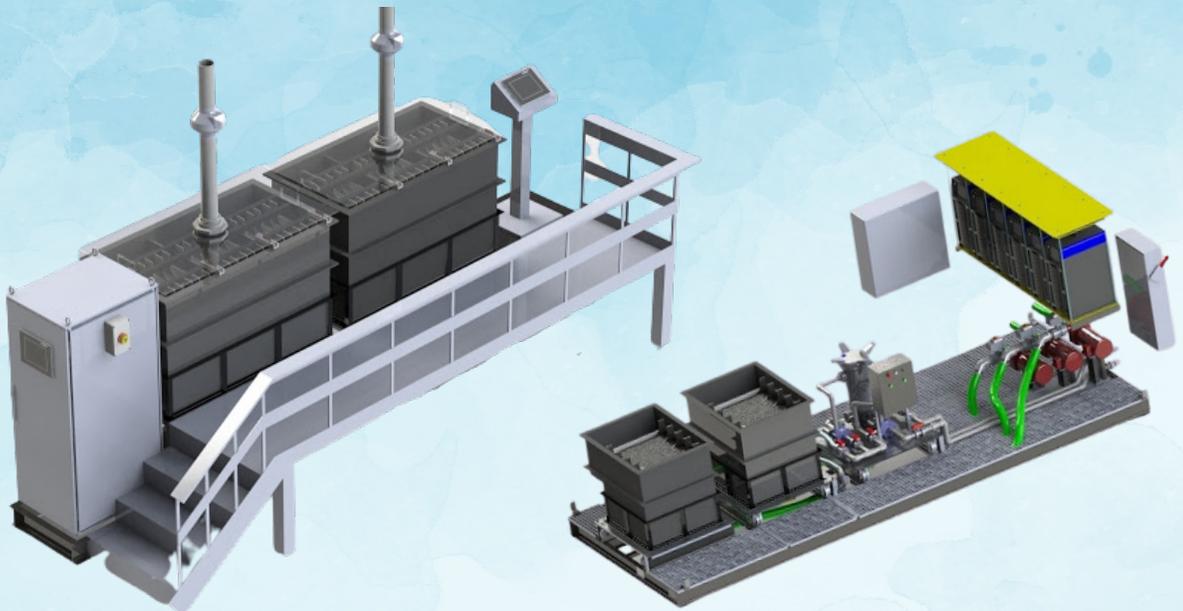
- Centralized nature of treatment With increase in Sewage generation,
- Centralized plant have Zero scope of capacity expansion
- Difficulty to meet existing norms due to every increasing complexity of Sewage Increasing issue of Sludge Management and disposal
- High foot print of conventional technology, limiting scale of new plant
- Limited water reuse scope with poor output quality



X-PRO - ELECTRO COAGULATION SYSTEM

X-Pro is a unique technology for treatment and recycling of industrial and sewage wastewater. It works on the principle of Electro-coagulation which is a process of controlled release of metal ions mainly iron or aluminum in waste water. At the heart of **X-Pro** is a powerful and intelligent power control unit along with a simple yet effective electrochemical reactor. **X-Pro** is an indigenously designed process, keeping in mind local users and dealers.

X-Pro is an Electrocoagulation technology, wherein wastewater is passed through an specially designed electrochemical cell which is having uniquely fitted electrodes and are made of either iron or aluminum or both. This electrochemical cell is powered with a specific density of electrical current through an intelligent power supply unit. Interaction of the current, electrode and wastewater flowing through the reactor destabilizes the suspended and dissolved contaminants in wastewater, converting them into an easily filterable floes. This floe laden water post its exit from the reactor is send to a suitable filtration device to filter out the floes, resulting in a clear treated water which can then be send for further treatment or reuse.



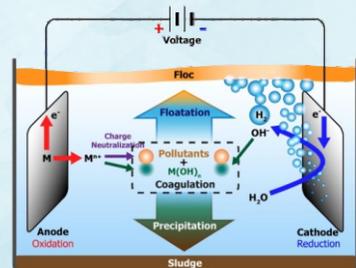
Applications

- Textile Industries (Weaving / Dyeing)
- Automobile Industries
- Grey Water Treatment
- Sewage Water Treatment
- Removal of Heavy Metal
- For Primary Treatments

Advantages

In comparison to other conventional water and waste water treatment systems EC have various advantages:

- Requires lesser foot print.
- Completely modular and mobile system.
- Fully automated, less man power required.
- Customization options available.
- Generates less sludge.



A-PRO - DISSOLVED AIR FLOTATION SYSTEM (DAF)

A-Pro is gravity separation process where by the separation of two phases is achieved by increasing the specific gravity difference of the two phases. This is achieved by attaching micro air bubbles, brought about by saturating water with air under pressure, and then expanding the water stream through valves to atmospheric pressure. These micro bubble nucleate into the solid particles to be separated, thus lowering the specific gravity and allowing contaminants to rise the surface. Dissolved air flotation (**A-Pro**) is a water treatment process that clarifies wastewaters (or other waters) by the removal of suspended matter such as oil or solids. The removal is achieved by dissolving air in the water or wastewater under pressure and then releasing the air at atmospheric pressure in a flotation tank basin. The released air forms tiny bubbles which adhere to the suspended matter causing the suspended matter to float to the surface of the water where it may then be removed by a skimming device.



Applications

- Poultry processing, meat processing and packing
- Dairy processing unit
- Fish processing
- Mining industry
- Petro-chemical industry
- Textile industry
- Tanneries, other industry
- Pulp and paper industry

Advantages

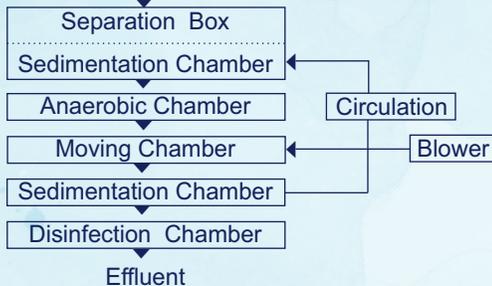
- High loading rate: Typically 10-20m/h. New process variants have operated success fully up to 40-45m/h.
- Very thick float (sludge) product: Typically 2-3% total solids float can be achieved using hydraulic or mechanical skimming devices. Float can be de watered without intermediate thickening.
- Often, no polymer is required, as DAF does not require a large, dense floc. Coagulant dosages may also be reduced in some circumstances.
- Shorter flocculation times, as compared to gravity separation, are possible, because a smaller floc particle size is required.
- Rapid startup, typically <30-60 min to reach steady state, depending on size.
- Excellent algae removal efficiencies.
- Excellent Giardia and Cryptosporidium removal efficiencies (.....2-2.5log), depending on temperature.
- Smaller footprint required as compared to conventional flocculation and gravity sedimentation

FLOCS - MOVING BED BIO REACTOR PROCESS (MBBR)

M-Flocs technology employs thousands of polyethylene bio film carriers operating in mixed motion within an aerated wastewater treatment basin. Each individual bio carrier increases productivity through providing protected surface area to support the growth of heterotrophic and autotrophic bacteria within its cells. It is this high-density population of bacteria that achieves high-rate biodegradation within the system, while also offering process reliability and ease of operation. This technology provides cost-effective treatment with minimal maintenance since MBBR processes self-maintain an optimum level of productive bio film. Additionally, the bio film attached to the mobile bio carriers within the system automatically responds to load fluctuations.



Treatment process



Advanced Bio-Carrier for high BOD Load Wastewater Treatment

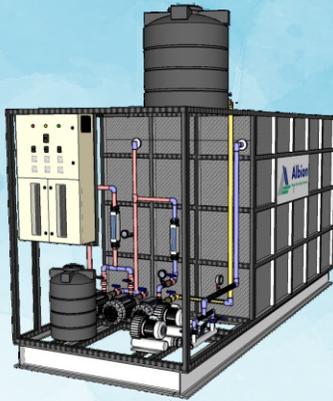


Advantages

- Compact units with small size.
- Increased treatment capacity.
- Complete solids removal.
- Improved settling characteristics.
- Operation at higher suspended biomass.
- Concentrations leading to long sludge retention times.
- Enhanced process stability.
- Low head loss.
- No filter channeling.
- No need of periodic back washing.
- Reduced sludge production and no problems with Sludge bulking.
- Life of carrier media up to 10 years.

X-FLOCS - MEMBRANE BIO REACTOR PROCESS (MBR)

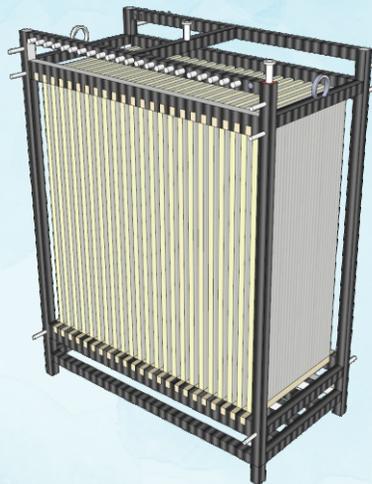
X-Flocs operates on the principle of biological/ bacterial treatment. Raw untreated wastewater is sent to **X-Flocs** reactor using a pre filter screen to prevent any larger debris, plastics etc clogging the reactor. **X-Flocs** module is a bio reactor fitted with necessary air diffuser and filtration membrane with a pore size ranging from 0.1 micron to 0.06 micron. Residence time of waste water within the reactor is controlled by drawing rate from the membrane module. treated water is drawn from the reactor using suitable pump. As the pore size of the membrane is too small to allow any bacteria or other contaminants to pass through, the treated water at the outlet of the membrane is clean with reduced organic content. This water is thereafter is dosed with necessary chlorine and sent for eventual reuse or discharge.



Packaged MBR



MBR Module



Applications

- Sewage Treatment
- Effluent Treatment
- Drinking water treatment plants
- Compact sewage treatment plants
- Food industries

Advantages

- Better COD/BOD reduction compared to ASP, MBBR, FAB and others
- Lower sludge production
- Higher nutrient removal compared to conventional process
- Lower footprint
- Better treated water quality.

MBR Membrane





AIR DIFFUSER

- Tubular Diffuser : 65 x 620mm
65 x 1000mm
65 x 2200mm
90 x 1000mm
- Disc Diffuser : 9"Dia ,12"Dia
- Retrievable Assembly for Diffusers



SLUDGE DECANTER UNIT

- Used to separate Solids from Liquid Continuously.
- Available in Range of 1 m³/h , 25 m³/h.



BACTERIA

- STP Bacteria
- ETP Bacteria
- Nutrient Removal Bacteria
- Textile Bacteria
- Oil and Grease Removal bacteria



CHEMICALS

- Alum.
- Poly Aluminum Chloride
- Poly Electrolyte
- Caustic Soda
- Ferrous Sulphate



FILTER PRESS

- Used for Sludge Treatment to Separate Solids from Sludge Slurry.
- Available in Size 24"x24", 36"x36" and 48"x48".



DRUM & PARABOLIC SCREEN

- Used to Separate Floatable Solids from Effluent / Sewage at Preliminary Stage.
- Size can be Customize as per Requirement.



MBR MEMBRANE

- Hollow Fiber Membrane Available in 10sq.m, 20sq.m and 30sq.m
- Flat Sheet Membrane



UF MEMBRANE

- High pressure resistance;
- Stable and long-lasting operation;
- Excellent cleaning and recoverability;
- A variety of inflow channels are alternative;
- Good tolerance to chemical cleaning agent and temperature.



MBBR MEDIA

- Diameter up to 30 mm with large pores
- Highest removal rates in the industry
- Cost savings per m2 of protected active surface area
- Manufactured from high quality PE material (virgin) free from carcinogenic plasticizers



ULTRAVIOLET SYSTEMS (UV)

- We offers a complete range of ultraviolet water disinfection systems.
- Special Advanced FEP Tubing System
- Kill rate of over 99.99%
- Breakable Quartz Eliminated
- Capacity : 1m3/h to 100m3/h



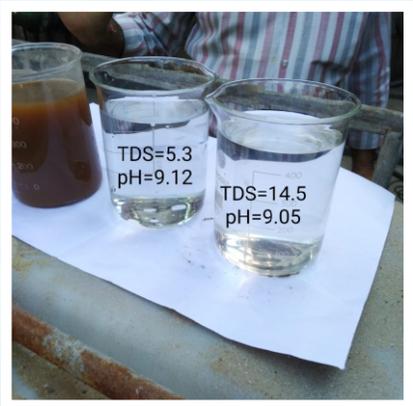
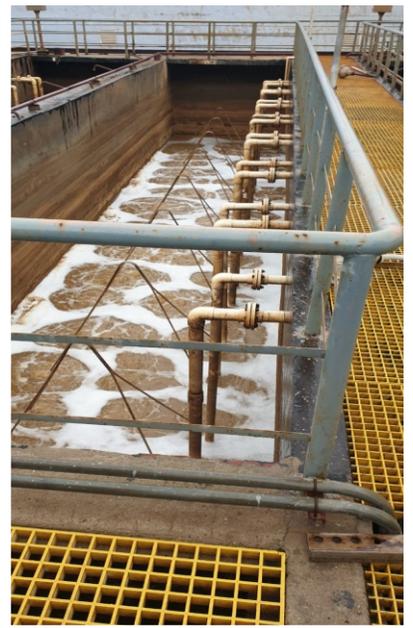
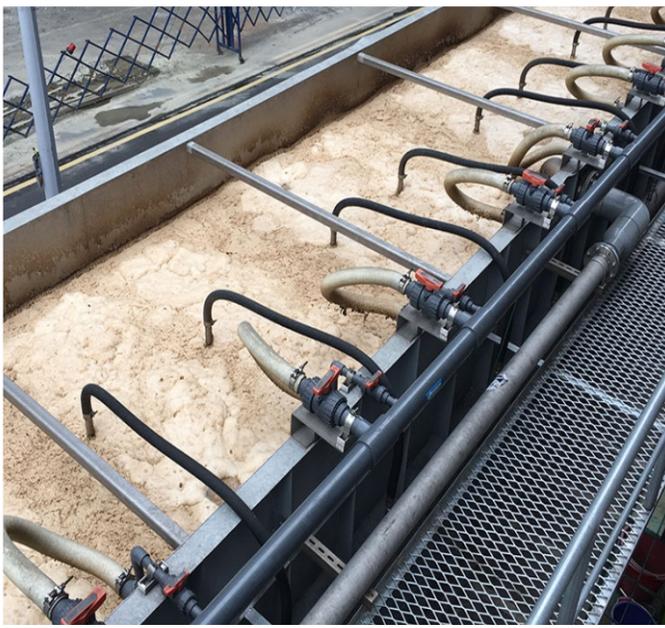
AIR BLOWER

- Type: Side Channel and Root Blowers
- Available Brand: SPM and USHA
- Available Capacity: 10 CMH to 3000 CMH



PUMPS

- Type: Mono-block Pumps, Multistage Pumps, Centrifugal Pumps, Self Priming Pumps, Pressure Pumps, Jet Pump and Submersible Pumps
- Available Capacity: 250 LPH to 100000 LPH
- Available Head: 5 Meter to 35 Meter



ESTEEM CLIENTS





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