

COMPANY
PROFILE

XYLEM ENVOCARE INDIA PVT. LTD.

From Water To Life!



ABOUT US

At **XYLEM ENVOCARE INDIA PVT. LTD.** We all come to work with a passion to solve world's wastewater management problems. Our focus is not just to meet legislative requirements for discharges through our process solutions. But we come to work with an enthusiasm to promote reuse and recycle of wastewater generated from every sphere of human activities. We take utmost care to study clients' wastewater management problem and help them to develop optimum, efficient, economical, robust and workable process solutions for their requirement.

Our Mission

Our mission is to make reuse and recycle the most effective and economical wastewater management tool for all by providing practice-oriented process solutions for their effluent treatment.

Our Services include

- Problem Analysis
- Treatment goals identification, conceptual process design
- Pilot testing services, finalization of design parameters
- Complete engineering design
- Start up and commissioning of the process along with operation and maintenance assistance/training services for the proposed wastewater treatment process scheme.

Benefit of our Services

- Well proven and tested process solutions which delivers results under all conditions.
- Reduced CAPEX because of practically derived designs.
- Reduced OPEX due to fine tuning of process operating window well before full scale operation.
- Lower process upsets during operations due to attention given to specific problems disturbing the process and performance.
- Well trained operational staff because of extensive training and know how gained about the proposed process during pilot testing and also further reinforced during plant start up , commissioning and operational period.
- Smoother and Faster process start up and commissioning reducing the downtime for full scale implementation and thus overall project costs.



ABOUT US

OUR PRODUCTS

Turnkey Project with Operation and Maintenance of

- Effluent Treatment Plant (ETP)
- Sewage Treatment Plant (STP)
- Zero Liquid Discharge Plant (ZLD)
- Multi Effect Evaporator (MEE)
- Dissolved Air Flotation System (DAF)
- Electro-Coagulation System (Proprietary Technology)
- Waste Water Recycling Plant
- Reverse Osmosis Plant (RO)
- Ultra Filtration Plant (UF)
- Softener Plant
- DM Plant
- Screw Press Sludge Dewatering System

Water and Wastewater Treatment Chemicals

We can meet all of your wastewater treatment chemical needs for **Industrial and Municipal Applications**. We offer everything from defoamers and flocculants to inorganic and organic coagulants and filter aids.

- Coagulants
- Flocculants
- Sludge Conditioners
- Neutralization
- COD Reduction Chemicals
- Antiscalent
- Cooling Tower Chemicals
- Boiler Chemicals
- Defoamers
- Activated Carbon
- Odor Control Agents
- Cleaners



TECHNOLOGIES WE OFFER

Electro Coagulation (Proprietary Technology)

Electro-Coagulation is a water treatment process that utilizes metal hydroxide produced by a soluble metal anode during flocculation to remove contaminants from water. The anode material usually uses aluminum, iron and other readily available and inexpensive metals.

Why Electro Chemistry System?

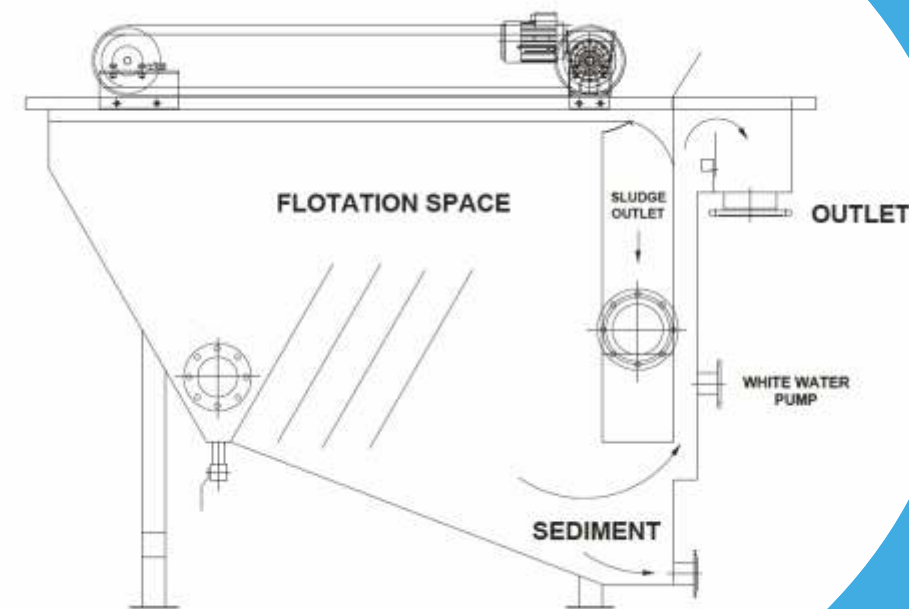
- High Automation
- Wide Range Application
- Pollution Free Accumulation
- Low Energy Consumption
- Small Quantity of Sludge
- Less Investment Costs
- High Pollutant Removal Rate
- Small Footprint



Dissolved Air Flotation (DAF)

The XYLEM Dissolved Air Flotation (DAF) wastewater treatment plant is typically used in a wide range of industrial applications to mitigate the financial impact of trade effluent charges, and maintain environmental compliance. The XYLEM DAF wastewater treatment system is widely used for the reduction of Chemical Oxygen Demand (COD) present in fats, oils and greases, colour, organic matter, biological sludge's and colloidal material.

The XYLEM DAF process has also been successfully applied to sensitive industrial applications, such as textile, dairy, petrochemical, chemical production, pharmaceutical, waste reception facilities and paper production. The XYLEM DAF is ideal for new projects and existing plant upgrades.



XYLEM DAF MODEL



The XYLEM DAF System is Ideal for

- New Projects
- Existing Plant Upgrades
- Replacement Plants



Conventional Activated Sludge (CAS)

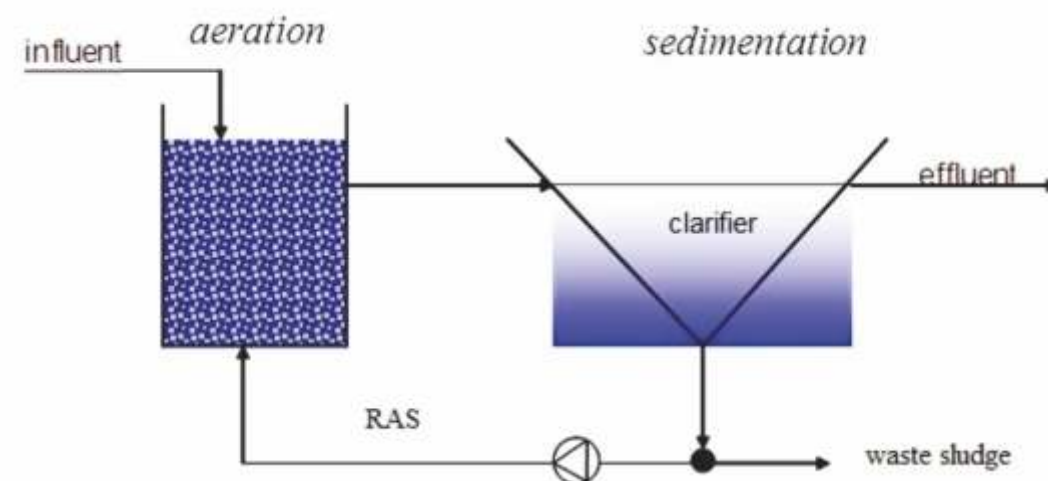
A **Conventional Activated Sludge (CAS)** system commonly include an aeration tank, which is used for biological degradation, and a secondary clarifier (sedimentation tank), where the sludge is separated from the treated wastewater.

The first step of a CAS system is the aeration tank, where the wastewater is mixed with air to activate micro-organisms. While digesting the wastewater, the organisms collide with each other, forming larger particles called flocs, which have a larger capacity to degrade the biological components of the wastewater.

The aeration basin is followed by a secondary clarifier or settling tank. During this step, micro-organisms with their adsorbed organic material settle.

Water from the clarifier is transported to installations for disinfection and final discharge or to other tertiary treatment units for further purification.

The surplus micro-organisms can easily be channeled to any of our sludge treatment solutions



Conventional Activated Sludge (CAS)

Moving Bed Bio Reactor (MBBR)

As MBBR process involves attached growth microbial communities for the biochemical oxidation, the MBBR media is the most crucial element of process which allows growth of micro organism in the form of biofilm on it.

Advantages of MBBR

Though having same metabolic pathways for removal as suspended growth process, attached growth processes offer distinct advantages over suspended growth processes such as:

- Smaller Foot Print
- Minimized Needs for Settling Equipment
- Operational Simplicity
- Protection Against Toxic Shock loads
- Reduced Operating and Energy Costs

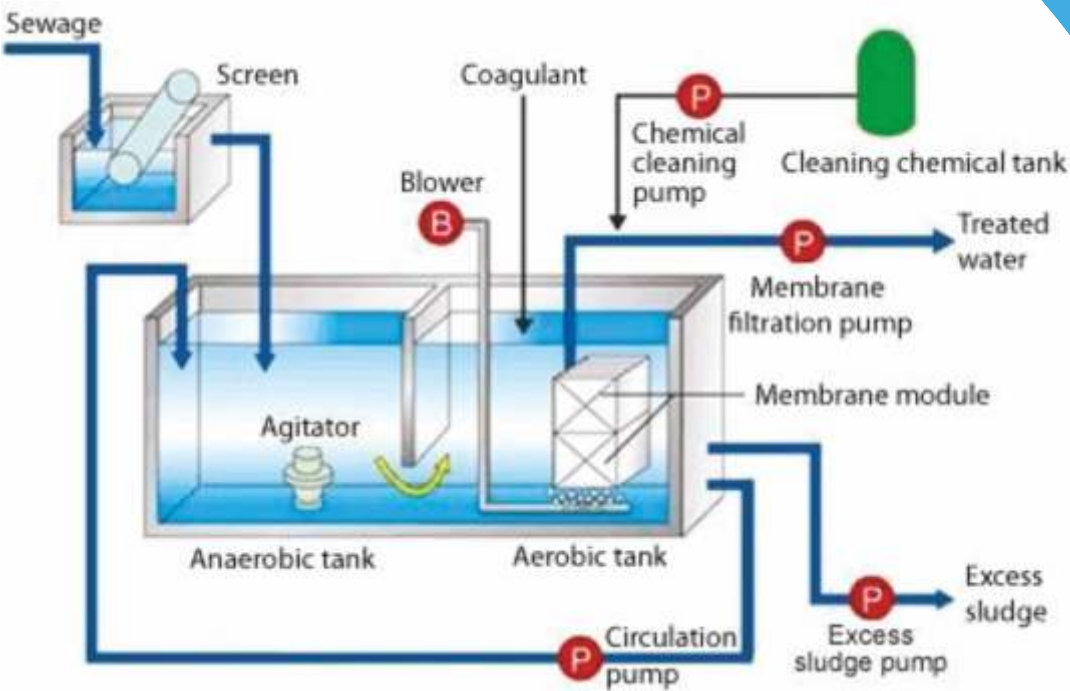
We offer our clients complete retrofit solution with pilot testing, detailed engineering and also process start up and commissioning after up gradation. To estimate the upgrading capability of your existing activated sludge, contact us.



Membrane Bio Reactor (MBR)

Membrane bioreactor for wastewater treatment is a combination of a suspended growth biological treatment method, usually activated sludge, with membrane filtration equipment, typically low-pressure microfiltration (MF) or ultra filtration (UF) membranes. The membranes are used to perform the critical solid-liquid separation function. In activated sludge facilities, this is traditionally accomplished using secondary and tertiary clarifiers along with tertiary filtration.

The benefits of MBR include a reduced footprint, usually 30-50% smaller than an equivalent conventional active sludge facility with secondary clarifiers and media tertiary filtration. The process also produces exceptional effluent quality capable of meeting the most stringent water quality requirements, a modular schematic that allows for ease of expansion and configuration flexibility, a robust and reliable operation and reduced downstream disinfection requirements.



Membrane Bio Reactor (MBR)

Advanced Oxidation Process (AOP)

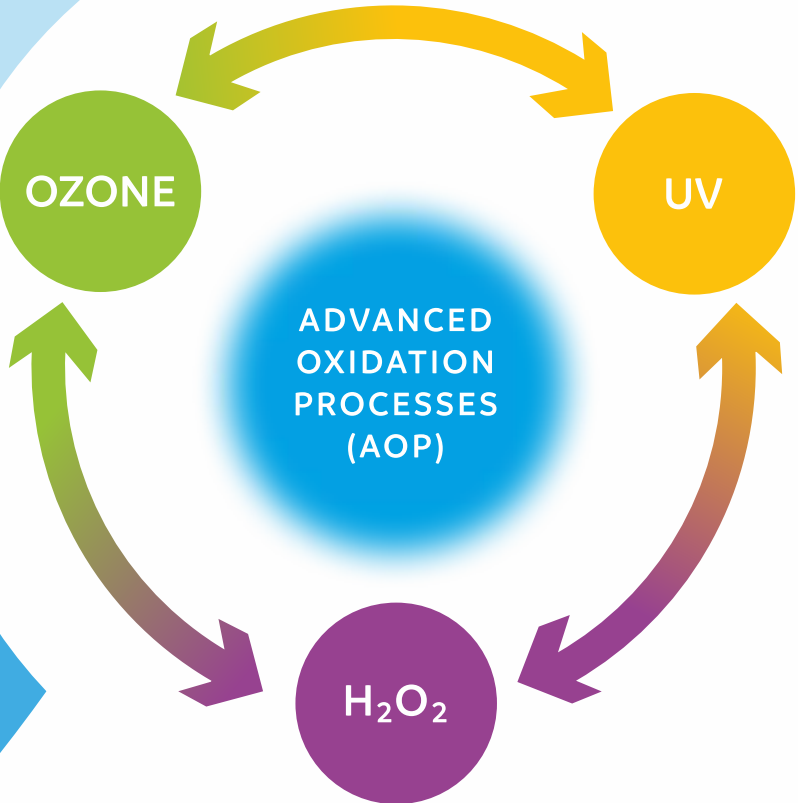
AOP systems are used or combine two or more oxidizing agents to create hydroxyl radicals, the ultimate oxidant for elimination of organic pollutants. We design and manufacture the widest range of ultraviolet, ozone and AOP systems incorporating the most sophisticated electronics and lamp technologies available to meet the needs of industrial and municipal customers. Our experts partner with customers to achieve the best overall answer to meet treatment requirements safely and economically.

How Advanced Oxidation Processes Work?

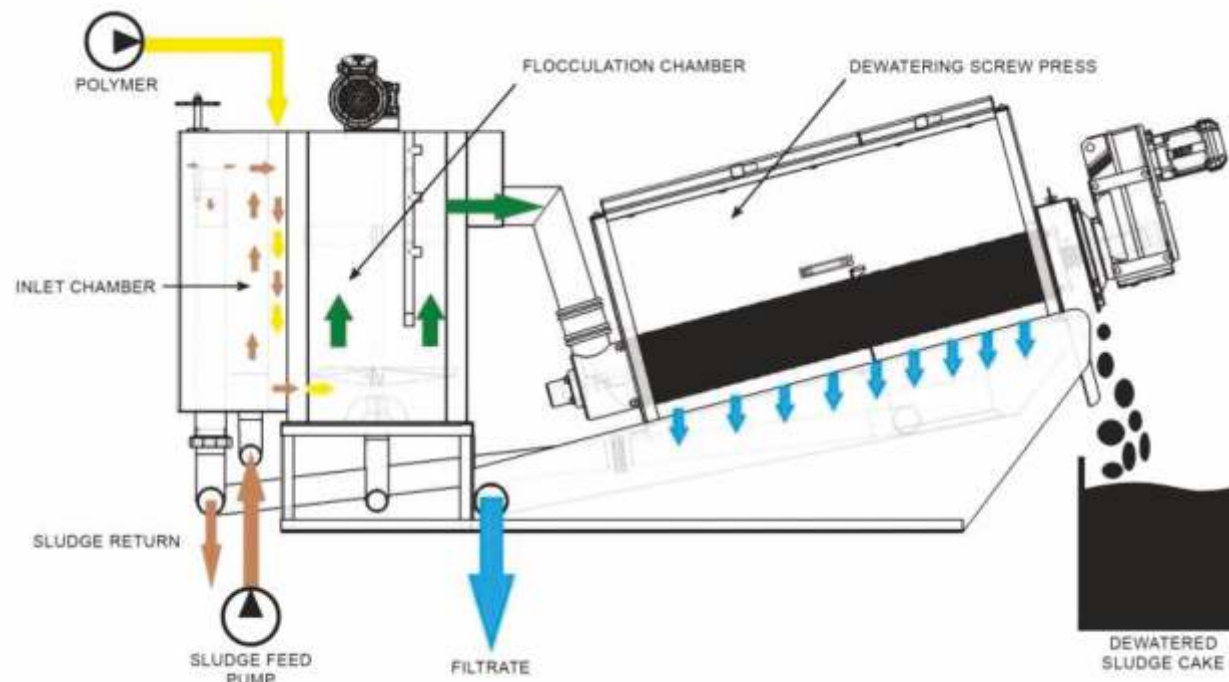
AOP are aqueous phase oxidation methods consisting of highly reactive species used in the oxidative destruction of target pollutants. AOP creates a more powerful and less selective secondary oxidant, hydroxyl radicals, in the water. This secondary oxidant can cause the oxidation of most organic compounds until they are fully mineralized as carbon dioxide and water. The hydroxyl radical has a much higher oxidation potential than ozone or hydrogen peroxide and usually reacts at least one million times faster, thus leading to a smaller contact time and footprint.

AOP Combinations Provided by XYLEM Include

- Ozone
- Ozone/ UV
- Ozone / H2O2
- UV / H2O2
- UV / Ozone / H2O2



Screw Press Dewatering for Sludge Dewatering



- Since the moving rings continuously comb the gaps in the dewatering drum throughout the thickening and dewatering process, clogging is avoided and therefore cleansing water is not required.
- Solid substances separated in the dewatering process are also combed out and are automatically washed away using a timer controlled-shower. The solids flow back into the sludge tank, returned to the thickening and dewatering process. The inner pressure increases further as the end plate blocks the flow. This encourages further dewatering of the sludge which is finally discharged as sludge cake zone. The gaps between the rings and screw pitch gradually narrow, thereby, increasing the pressure and encouraging the dewatering process.

How Does Screw Press Work?

- Inorganic coagulant is added and stirred to produce flocks. Sludge reacted with the inorganic coagulant is transferred to the metering tank by the sludge pump from where it flows to the flocculation tank.
- The sludge flows into the dewatering drum from the flocculation tank. The rotation of the screw forces the flocks to slowly flow down to the thickening zone. The flocks are thickened by gravity. The filtrate separated in the thickening zone is returned to the oxidation ditch.
- Thickened sludge moves to the dewatering zone. The gaps between the rings and screw pitch gradually narrow, thereby, increasing the pressure and encouraging the dewatering process.





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