

INTRODUCTION

- **M/S. ETP PRODUCTS** is promoted by the Chemical Engineer who has expertise in water and wastewater treatment products and related services. It's an Environmental Engineering Company providing solutions for drinking water, Industrial process water and wastewater recycling.
- We offer complete solutions for the following applications.
 - ❖ Institutional water treatment – Drinking water and soft water.
 - ❖ Industrial water treatment-Filtration, Softeners, DM Plants, RO Plants.
 - ❖ Purified water generation, storage and distribution for pharmacy application.
 - ❖ Wastewater treatment. (Sewage and effluent treatment plants)
 - ❖ Water treatment chemicals for RO, boiler, cooling tower and chillers.
 - ❖ AMC, Operation and Maintenance Contracts.
- **Our in-house capabilities include:**
 - ❖ System design and engineering
 - ❖ Detailed engineering for process, Electrical & Mechanical
 - ❖ Strong project management
 - ❖ Process commissioning services
 - ❖ Customer support and After-sales services
 - ❖ Motivated team of highly qualified and skilled personnel

OUR SOLUTIONS:

- **DRINKING WATER TREATMENT:**
- We provide drinking water solutions Apartments, Educational Institutions, Hotels, Hospitals, Office buildings and Industries. Each source of water has a unique set of contaminants; groundwater contains dissolved solids includes fluoride, calcium,

magnesium, sodium, chlorides, pesticides, nitrates and. heavy metals while surface water contains suspended solids and microorganisms. It is very essential to purify the water before consuming because of health hazards. The treatment depends upon the raw water quality. The main stages of water purification are filtration, reverse osmosis, UV disinfection and ozonation.

- We design and manufacture plants as per the Bureau of Indian standards for packaged drinking water industry.

COMMERCIAL WATER TREATMENT:

- Water is an essential element in our daily life. The availability of fresh water is reducing every year and it became essential to treat the water before using for washing, utilities and drinking.

The various treatment methods are as below.

- Suspended solids, dust particles and silt: Filters-pressure sand filters, activated carbon filters, micron cartridge filters etc.
- Dissolved solids: ion exchange and reverse osmosis (softeners and RO plants)
- Bacteria and viruses: Chlorination, UV disinfection and ozonation.

INDUSTRIAL WATER TREATMENT:

- Water treatment is used to optimize most water-based industrial processes, such as: heating, cooling, processing and cleaning so that operating costs and risks are reduced. Poor water treatment leads to scaling and corrosion of utility equipment.
- **Filtration:** Filtration is the removal of turbidity, color and suspended solids from the water stream. The equipment selection depends on the water source, quality and quantity. The various equipment used for filtration is;

- ❖ Clarifiers
 - ❖ Pressure sand filters
 - ❖ Activated carbon filters
 - ❖ Dual media filters
 - ❖ Micron filtration
- **Ion exchange equipment:** Ion exchange equipment used to modify or remove the ionic content of water. Ions usually are atoms, groups of atoms, or compounds that are electrically charged.
 - There are two basic types of ion exchange equipment:
 - ❖ **Softeners:** Softener is ion exchange equipment used to replace iron, calcium, magnesium and other metallic ions with sodium ions. This device is used to treat hard water and prevents the accumulation of scale in industrial pipes and boilers.
 - ❖ **Demineralizers:** Demineralizers are ion exchange equipment, which are used to replace mineral content with hydroxyl and oxygen groups.
 - **Membrane technology:** RO has been proven to be the most economical technology not only for the desalination of water containing salts, but also for purifying water contaminated with heavy metals, pesticides and other contaminants.
 - ❖ **Ultra-filtration:** Ultra filtration provides macro-molecular separation for particles in the 20 to 1,000 Angstrom range (up to 0.1 micron). All dissolved salts and smaller molecules pass through the membrane. Ions or elements rejected by the membrane include colloids, proteins, microbiological contaminants, and large organic molecules. Most UF membranes have molecular weight cut-off values between 1,000 and 100,000. Trans membrane pressures are typically 15 to 100 psi (1 to 7 bar).

❖ **Nano filtration:** Nano filtration refers to a specialty membrane process which rejects particles in the approximate size range of 1 nanometer (10 Angstroms). Organic molecules with molecular weights greater than 200-400 are rejected. Also, dissolved salts are rejected in the range of 20- 98%. Salts which have monovalent anions (e.g. sodium chloride or calcium chloride) have rejections of 20-80%, whereas salts with divalent anions (e.g. magnesium sulfate) have higher rejections of 90-98%. Typical applications include removal of color and total organic carbon (TOC) from surface water, removal of hardness or radium from well water, overall reduction of total dissolved solids (TDS), and the separation of organic from inorganic matter in specialty food and wastewater applications. Transmembrane pressures are typically 50 to 225 psi (3.5 to 16 bar).

❖ **Reverse osmosis:** Reverse osmosis is the finest level of filtration available. The RO membrane acts as a barrier to all dissolved salts and inorganic molecules, as well as organic molecules with a molecular weight greater than approximately 100. Water molecules, on the other hand, pass freely through the membrane creating a purified product stream. Rejection of dissolved salts is typically 95% to greater than 99%.

The efficiency and life of a reverse osmosis (RO) system depends on effective pre-treatment of the feed water. The pre-treatment includes any process which can minimize fouling, scaling and membrane degradation to optimize product flow, salt rejection, product recovery and operating costs.

A proper pre-treatment scheme for the feed water will depend on feed water source, feed water composition and application. Once the feed water source has been determined, an accurate analysis of the feed water composition including bacteria count should be done to determine the dosage size of scale inhibitor (Anti scaling Chemical) and a biocide for the pre-treatment.

WASTEWATER TREATMENT:

- Wastewater is any water that has been adversely affected in quality by human influence.
- ❖ **Sewage treatment plant:** Sewage is generated by residential, institutional, and industrial establishments. It includes physical, chemical, and biological contaminants. Its objective is to produce an environmentally-safe water stream and a solid waste suitable for disposal or reuse.
- Handling and treatment of sewage involves three distinct phases; collection and removal of sewage from the immediate human proximity, suitable treatment and disposal or reuse of treated sewage. We design and supply conventional treatment to membrane-based treatment plants.
- ❖ **Effluent treatment plant:** Industries require water as raw material and for utilities purposes. Wastewater generated after the process consists of color, suspended solids, dissolved solids and microorganisms. The quality varies on industry type and process. Treatment and reuse is essential due to increased water scarcity. We design zero liquid discharge plants which help in maximum reuse of wastewater.

WATER TREATMENT CHEMICALS:

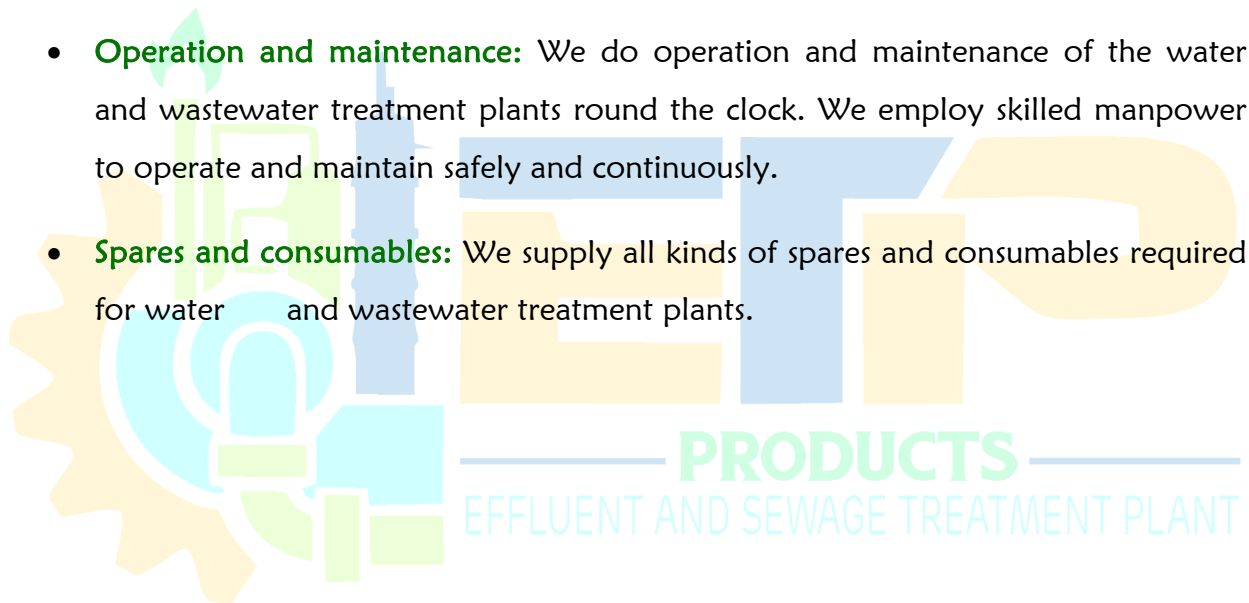
- ❖ **Coagulants & flocculants:** Coagulation and flocculation involves the removal of suspended solids and turbidity from water. This step typically uses the difference in density between the water and the suspended material for separation. The process of coagulation, along with flocculation, is used whenever the natural settling rate of suspended material is too slow to provide effective clarification. Coagulants are used to neutralize the charge of the suspended solids, bringing the particles together to create a small “pin flocks”. To generate larger particles or flocks for faster settling, a high molecular weight, organic flocculants are generally used in combination with a coagulant.

- We have wide range of specialty chemicals for coagulation, flocculation and dewatering.
- ❖ **RO chemicals:** We have specialty chemicals for membrane pre-treatment, anti-scalant, cleaning chemicals and biocides to enhance the membrane life. We help you in troubleshooting membrane systems by identifying the problem and selecting the right product and application. An accurate analysis of the feed water composition including bacteria count should be done to determine the dosage size of scale inhibitor (anti-scalant) and a biocide for the pretreatment.
- ❖ **Boiler water treatment:** Proper boiler cleaning, lay-up, start-up, shutdown and boil out are important in preventing corrosion, scale, and tube failures. The boiler feed water, internal and condensate treatment must satisfy three main objectives:
 - ❖ Continuous and efficient heat exchange
 - ❖ Scale and Corrosion protection
 - ❖ Production of high-quality steam
- Our expertise and technically advanced products help you in reliable boiler water treatment programs.
- ❖ **Cooling water treatment:** Cooling water systems have many critical variables that must be monitored and controlled. Otherwise, an out-of-control system will result in scale, corrosion, fouling, or befouling. These conditions reduce system efficiency and may ultimately lead to a unit or plant shutdown.
- We treat open circulation and closed circulating systems. Our cooling water treatment programs include:
 - ❖ Scale prevention and deposit control.
 - ❖ Corrosion control.
 - ❖ Microbiological control.

- Wide range of specialty chemicals to reduce operating costs and improve system reliability.

SERVICES:

- **Troubleshooting:** We troubleshoot the operational and maintenance problems related to water and wastewater treatment plants.
- **Annual maintenance contracts:** We do AMC jobs for water and wastewater treatment plants. We provide operational and routine maintenance training, periodical inspection for smoother and long-term operation.
- **Operation and maintenance:** We do operation and maintenance of the water and wastewater treatment plants round the clock. We employ skilled manpower to operate and maintain safely and continuously.
- **Spares and consumables:** We supply all kinds of spares and consumables required for water and wastewater treatment plants.



COMPANY OVERVIEW:

We are a leading provider of cutting-edge solutions in the field of industrial air handling, water treatment, and environmental management. As authorized dealers of **A1 Blowers India Pvt Ltd**, we specialize in supplying high-performance blowers for various industrial applications. Our expertise also extends to the design, equipment supply, installation, and commissioning of **Effluent Treatment Plants (ETP)** and **Sewage Treatment Plants (STP)**. Additionally, we offer specialized **Pollution Control Board (PCB) Liasoning Services** to assist industries with regulatory compliance, ensuring smooth interactions for certifications like **Consent for Establishment (CFE)**, **Consent for Operation (CFO)**, and **TSIPASS**.

CORE SERVICES & OFFERINGS:

1. A1 Blowers – Authorized Dealers:

- ❖ We offer a wide range of **A1 blowers**, known for their reliability and efficiency in industrial aeration handling applications.
- ❖ Products include high-pressure blowers, low-pressure blowers, and customized solutions for specific industrial needs.
- ❖ Blowers are widely used in industries such as wastewater treatment, cement, power plants, and HVAC systems.

2. Effluent Treatment Plants (ETP):

- ❖ **Design & Engineering:** Tailored solutions for treating industrial wastewater, meeting stringent pollution control standards.
- ❖ **Equipment Supply:** We supply high-quality equipment including clarifiers, aerators, filtration units, and chemical dosing systems.

- ❖ **Installation & Commissioning:** We offer end-to-end services for the setup of ETP systems, ensuring proper functionality and compliance with regulations.

3. Sewage Treatment Plants (STP):

- ❖ **Design & Build:** We provide customized STP solutions for residential, commercial, and industrial sectors.
- ❖ **Technology Integration:** We integrate modern technologies such as MBBR, SBR, and MBR for efficient wastewater treatment.
- ❖ **Maintenance & Optimization:** Ongoing maintenance services to ensure long-term performance and sustainability.

4. Pollution Control Board Liasioning:

- ❖ **Consent for Establishment (CFE):** Assist industries in obtaining permissions for the establishment of new projects or units from the Pollution Control Board.
- ❖ **Consent for Operation (CFO):** Guidance and support to secure operational permits, ensuring compliance with environmental standards.
- ❖ **TSIPASS (Telangana State Industrial Project Approval and Self Certification System):** We provide assistance in fast-tracking environmental clearance processes under TSIPASS.

INDUSTRIES SERVED:

- **Manufacturing:** Automotive, Chemicals, Textiles, Pharmaceuticals, etc.
- **Construction & Infrastructure:** High-rise buildings, commercial complexes, and industrial parks.
- **Municipal & Urban Development:** Smart cities, residential complexes, and sewage treatment.
- **Power Generation & Cement:** Coal, gas, and renewable energy plants, cement production facilities.
- **Food & Beverage:** Industrial wastewater treatment for food processing and beverage production.
- **Government & Public Sector:** Projects related to public health and safety, including sewage treatment and environmental compliance.

WHY CHOOSE US?

- **Authorized Partnership with A1 Blowers:** As trusted dealers of A1 Blowers, we offer premium, energy-efficient products backed by exceptional service.
- **Comprehensive Environmental Solutions:** From ETP & STP design to installation, maintenance, and compliance services, we provide an all-in-one solution for wastewater management.
- **Expert Liaisoning Services:** Our in-depth knowledge of environmental regulations helps industries navigate the complex processes of obtaining CFE, CFO, and TSIPASS approvals, reducing delays and ensuring smooth project execution.

- **Quality Assurance:** Our products and services adhere to the highest industry standards, ensuring reliability, durability, and compliance with environmental laws.
- **Experienced Team:** Our team consists of highly skilled engineers, project managers, and regulatory experts dedicated to delivering superior results.

MISSION:

To provide innovative, cost-effective, and sustainable solutions for air handling, water treatment, and pollution control, ensuring environmental compliance and promoting eco-friendly industrial practices.

VISION:

To be a leading provider of comprehensive industrial environmental solutions, recognized for our commitment to quality, customer satisfaction, and environmental sustainability.

Our philosophy to prosper:

- Work
- Achieve
- Grow

Together

Best Regards,

Team Sri Sai Enviro Engineers & ETP Products.