



ION SECURE

Total Water and Waste Water Solutions



ION SECURE WATER TECHNOLOGIES



✉ ionsecure311@yahoo.com

📍 6-15-13/1/1, Auto Nagar, Gajuwaka,
Visakhapatnam-530026



99372 32160
82705 57977

INTRODUCTION OF ION SECURE

Total Water and Waste Water Solutions



ION Secure Water Technologies was established in 2019. The company was incorporated with the sole aim of providing timely, cost effective, engineered solutions to the Water and Waste Water Industries. ION Secure offers a complete solution from conceptual design to procurement, construction, installation, preventative maintenance and monitoring of Water and Wastewater Treatment Plants and associated accessories.

As time progressed, additional products were added to the scope of supply, particularly linked to the Pharma and Chemical Industries, which includes Boiler, Cooling, Chiller and RO Water Treatment Chemicals, ETP & STP Chemicals, Pumping Systems and Accessories, and the list is continually expanding today

THE INDUSTRIES WE WORK WITH

ION Secure Water Technologies has specialised experience with the following industries:

- Chemical & Textile Industries
- Food and Beverage - Breweries,
- Wineries, Dairies & Abattoirs
- Automobile
- Local Government & Municipal Councils
- Pharmaceutical & Healthcare
- Power Generation
- Maximize Customer Satisfaction
- Maximize Plant Productivity
- Maximize Return on Investment
- Minimize Operational Risk
- Minimize Environmental Impact
- Minimize Operational Expenditure
- Pulp & Paper
- Mining, Oil & Gas
- Packaging
- Defence and Military
- Hotels & Resorts
- Hospitals
- Institutions & Schools

WHAT WE STAND for at

ION Secure Water Technologies our aim is to exceed customer expectations and partnering with them in order to:

- Maximize Customer Satisfaction
- Maximize Plant Productivity
- Maximize Return on Investment
- Minimize Operational Risk
- Minimize Environmental Impact
- Minimize Operational Expenditure



OUR MISSION

Our mission is to provide high-performance products and top-notch services to our customers.

We pursue the path of continuous improvements



OUR VISION

Our vision is to be recognised as a leader in providing sustainable and proven solutions in the water and wastewater fields across multiple industries



CORE VALUES

- Quality
- Integrity
- Passion
- Trust
- Innovation
- Detail



QUALITY ASSURANCE

It is absolutely essential to ensure that the goods produced are of the right quality to ensure trouble-free operation at site. It is also essential that the inputs used meet stringent quality requirements, which is a prerequisite for meeting the finished product specifications. Guidelines have been well laid out to fulfill this important requirement.

ION Secure realizes the very importance of maintaining the quality of the products produced and every attention will be placed to ensure that we meet that objective.

PERSONAL SERVICE :

Getting the right treatment every time also applies to the service we provide. Whenever you contact us you can be assured that you will be dealt with in a friendly and efficient manner by one of our dedicated on-site staff.

EQUIPMENTS LIST

- **Water Filtration Plant**
 - Multigrade Sand Filter
 - Dual Media Filter
 - Activated Carbon Filter
 - Iron Removal Filter
- **Water Softener Plant**
- **Demineralisation Plant**
 - Two Bed Plant
 - Mixed Bed Plant
- **Reverse Osmosis Plant**
- **Purified Water Generation Systems**
- **Waste Water Treatment Plants**
- **UV System**

SPARE ITEMS LIST

- **Ion Exchange Resin**
 - Softener Plant Resin
 - DM Plant Resin
 - ✓ Cation
 - ✓ Anion
 - Mixed Bed Plant Resin
- **Water Testing Kits**
- **Sand Media & Activated Carbon**
- **Membrane**
- **WTP Spares Parts**

WATER TREATMENT CHEMICALS

- ✓ **Cooling Water Treatment**
 - Scale & Corrosion Inhibitors
 - Bio-dispersants
 - Oxidising Biocides
 - Non-oxidising Biocides
- ✓ **Boiler Water Treatment**
 - Oxygen Scavengers
 - Sludge Conditioners
 - pH Booster
 - Condensate Treatment
 - De-Scaling Chemicals
- ✓ **Closed Circuit Scale & Corrosion Inhibitors**
 - Hot Water Systems
 - Chilled Water Systems
- ✓ **RO Systems Treatment Chemicals**
 - Anti-scalent Chemicals
 - Membrane Cleaning Chemicals
- ✓ **Fuel Additives**
- ✓ **De-Foamers**

OUR SERVICES

AMC | Modification | O&M Contracts



➤ Multigrade Sand Filter

ION SECURE Multi grade filter is a depth filter that makes use of coarse and fine media mixed together in a fixed proportion. This arrangement produces a filter bed with adequate pore dimensions for retaining both large and small suspended particles. This filter performs at a substantially higher specific flow rate than conventional filters.

RANGE OF PRODUCT MODEL AVAILABILITY-

Multi grade Filter is comprises of Mild Steel /MSRL/SS/FRP Pressure Vessel, Frontal piping wok with manual / Automatic - multi port valve/ butterfly valve / conventional valves for easy operation and control.

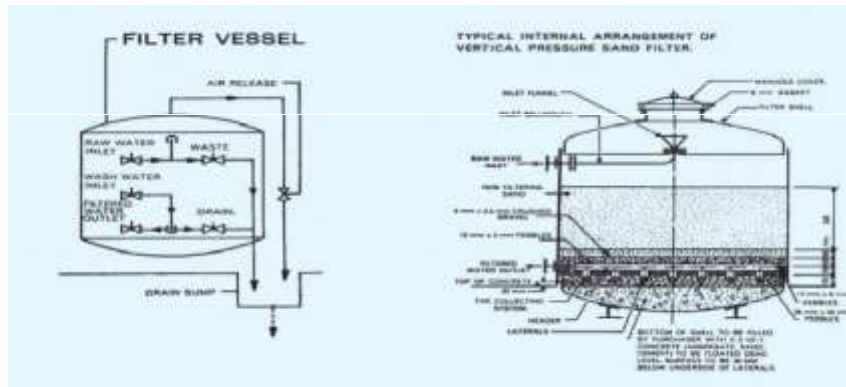
Available from 1 m³/hr. to 100 m³/hr.



Applications: -

The Multigrade sand filter is an ideal choice for all applications where a conventional sand filter is used.

- Raw Water Treatment Process.
- Drinking Water.
- Side Stream Filtration for cooling water.
- Filtration Process in Industries.
- Pre-Treatment for Membrane systems.
- Swimming Pool water Filtration.
- Filtration in Tertiary waste water treatment.
- Pharmaceutical Production processes.



➤ Dual Media Filter

ION SECURE Dual Media Filter is used for removal of suspended solids, turbidity and some part of color and odor from Water & Wastewater. We, at **ION SECURE** offer Series of filters at a low cost, reliable and highly efficient way to filter your water.

Removes the Dual Media Filter

- Iron
- Manganese
- Turbidity
- Suspended solid
- Arsenic
- Fluoride

RANGE OF PRODUCT MODEL AVAILABILITY-

Dual Media Filter is comprises of Mild Steel /MSRL/SS/FRP Pressure Vessel, Frontal piping wok with manual / Automatic - multi port valve/ butterfly valve / conventional valves for easy operation and control.

Available from 1 m³/hr. to 100 m³/hr.



Applications: -

The Dual Media filter is an ideal choice for all applications where a conventional sand filter is used.

- Raw Water Treatment Process.
- Drinking Water.
- Side Stream Filtration for cooling water.
- Filtration Process in Industries.
- Pre-Treatment for Membrane systems.
- Swimming Pool water Filtration.
- Filtration in Tertiary waste water treatment.

➤ Activated Carbon Filter

ION SECURE Activated Carbon Filters are designed to remove free residual chlorine and toxic organic compounds from water like pesticides and heavy metal organic compounds.

For removal of odour, organic matter and traces of oil, peat based activated carbon with larger pore size can be supplied on request.

FEATURES

- ✓ Filters are compact and easy to install and maintain.
- ✓ The filters can tolerate any variation or shock loads in free residual chlorine unlike chemical dosing systems which require constant monitoring and adjustment of dosages.
- ✓ Pressure gauges at inlet and outlet are provided to measure pressure gauges across the unit. Filter backwash is carried out by reversal of flow.

RANGE OF PRODUCT MODEL AVAILABILITY-

Activated Carbon Filter is comprises of Mild Steel /MSRL/SS/FRP Pressure Vessel, Frontal piping wok with manual / Automatic - multi port valve/ butterfly valve / conventional valves for easy operation and control.

Available from 1 m³/hr. to 100 m³/hr.



Applications: -

The Activated Carbon filter is an ideal choice for all applications where a conventional sand filter is used.

- Raw Water Treatment Process.
- Drinking Water.
- Side Stream Filtration for cooling water.
- Filtration Process in Industries.
- Pre-Treatment for Membrane systems.
- Swimming Pool water Filtration.
- Filtration in Tertiary waste water treatment.

➤ Iron Removal Filter

ION SECURE Iron Removal Filters are designed to remove the Excess Iron content present in the feed water with minimum pressure drop. These filters remove up to 10 ppm of inorganic iron from water, reducing this to an average of 0.3 ppm. They do not use chemicals and can be backwashed with only water/treated water. The media remains effective as long as the feed water contains dissolved oxygen to the extent of its natural solubility.

FEATURES

- ✓ Increased solid removal
- ✓ Ensures processing stability
- ✓ Hexagonal tube shape provides better tube drainage
- ✓ Better drainage reduces blockage cleaning
- ✓ Less tube blockages increase effective settlement rates
- ✓ In-tube contact flocculation

RANGE OF PRODUCT MODEL AVAILABILITY-

Iron Removal Filter is comprises of Mild Steel /MSRL/SS/FRP Pressure Vessel, Frontal piping wok with manual / Automatic - multi port valve/ butterfly valve / conventional valves for easy operation and control.

Available from 1 m³/hr. to 100 m³/hr.



Applications: -

The Iron Removal filter is an ideal choice for all applications where a conventional sand filter is used.

- Drinking water for residential colonies and commercial complexes
- Pre-treatment for industrial water treatment plants
- Food processing, beverages and mineral

➤ Water Softener Plant

Ionsecure is a leading brand in the field of Water Softeners. This water softening Plants are based on the proven ion exchange process. The Water Softeners are simple in operation, highly efficient and compact units designed to produce soft water efficiently and economically.

The Water Softeners are charged with a high capacity polystyrene bead cation exchange resin in sodium form. When hard water passes through this resin column, the hardness forming calcium and magnesium salts are replaced with sodium salts which do not carry any hardness properties. This softening process is continuous until the material is exhausted of sodium salts when it is regenerated with a solution of common salt.

FEATURES

- ✓ Easy to install and maintain.
- ✓ High Capacity cation exchange resin in sodium form.
- ✓ Customised design.
- ✓ Less maintenance and operational cost.

RANGE OF PRODUCT MODEL AVAILABILITY-

Softener Plant is comprises of Mild Steel/MSEP/MSRL/FRP Pressure Vessel, Frontal piping work with manual / Automatic - multi port valve/ butterfly valve / conventional valves for easy

operation and control.

Available from 1 m³/hr. to 100 m³/hr.



Applications: -

The Softener plant is an ideal choice for removal of hardness from raw water for all applications.

- Boiler feed water
- Process water in textile mills
- Beverage manufacture
- Laundry and air conditioning plants
- Cooling tower make-up water
- Jacket cooling
- Hospitals, hotels
- Jacket cooling



➤ Demineralisation Plant

With/Without –MB or DGT

Ion secure Two Bed Deionisers consist of FRP/MSRL pressure vessels containing ion exchange resins (commonly referred to as cation and anion exchange resins). The vessels are provided with strainers at the bottom. This not only ensures the exchangers are retained within the vessels but also uniform distribution, flow of water and regenerant takes place in the unit. The unit is fitted with all the necessary piping and individual valve for carrying out the various operations like service, injection and rinse. Regenerant tanks, one each for acid and caustic soda are provided from which measured quantities of regenerant solutions are injected into the unit by means of hydraulic ejectors. A conductivity indicator with cell is provided for continuous measurement of treated water purity.

The two bed deioniser units can be supplied with optional extra equipment such as a degasser to handle certain types of raw water with high amount of alkalinity. The cation exchanger converts alkalinity present in raw water to its equivalent acid, i.e. carbonic acid. The anion exchanger absorbs this along with other acids in cation exchanger treated water. Where water has a high alkalinity the ionic load on the anion can be brought down by using another method to remove carbonic acid. Carbonic acid is unstable and readily breaks down into carbon dioxide and water. The carbon dioxide can be removed mechanically by means of a degasser.

FEATURES

- ✓ Easy to install and maintain.
- ✓ High Capacity cation exchange resin in sodium form.
- ✓ Customised design.
- ✓ Less maintenance and operational cost.

RANGE OF PRODUCT MODEL AVAILABILITY-

Demineralisation Plant is comprises of MSRL/FRP Pressure Vessel, Frontal piping wok with manual / Automatic - multi port valve/ CIEL valve / conventional valves for easy operation and control.

Available from 1 m³/hr. to 100 m³/hr.



Applications: -

The Demineralisation Plant is an ideal choice for removal of hardness from raw water for all applications.

- Boiler feed water
- Process water in textile mills
- Beverage manufacture
- Laundry and air conditioning plants
- Cooling tower make-up water
- Jacket cooling
- Hospitals, hotels
- Jacket cooling



➤ Reverse Osmosis Plant

ION SECURE RO Plants are designed for an optimized solution to customer's requirements in terms of output water quality, water efficiency, energy efficiency, maintenance costs and capital costs. While plant sizes and input water quality are the variables always, optimizing quality, efficiencies and costs is an invariably admired constant at SHMMER.

These systems remove 90-98% of total dissolved solids from brackish water and sea water.

Our RO Plants are all time retrofit ready.



FEATURES

- ✓ Easy to install and maintain.
- ✓ Product flow rate 0.2 – 40 m³/hr.
- ✓ Salt rejection ranges from 90 – 99% depending upon feed water composition.
- ✓ Product recovery ranges from 55 – 75%.
- ✓ All components are of proven quality.
- ✓ Customised design.
- ✓ Less maintenance and operational cost.

RANGE OF PRODUCT MODEL AVAILABILITY-

RO Plant is comprises of FRP/SS Pressure Tube, Skid – MS/SS, Pre filter – PP/SS, Frontal valve & piping wok – uPVC/SS for easy operation and control.

Available from 0.2 m³/hr. to 40 m³/hr.



Applications: -

The RO Plant is use for removal of dissolved salts from raw water for all applications.

- Purified Water (PW) for pharmaceuticals
- Water for electrical conductor circuits
- Process Water for manufacturing units
- Drinking & Mineral Water
- Dialysis
- Boiler feed water
- Process water in textile mills
- Bio-technology
- Food and Beverage processing industry
- Cooling tower make-up water
- Hospitals, hotels



➤ Purified Water Generation Systems

ION SECURE Purified Water Generation system is custom made and designed considering all the parameters in minute details and with the same passion and dedication, whether its capacity is 200 l/h or over 20m³/h. All PW systems meet EP, USP and other regulatory guidelines and ensure the production process, product quality and profitability. The systems are GMP-compliant and conform to FDA and ISPE requirements. All **ION SECURE** PW systems are pre-tested, validated, compact and ready-to-use. The compact, package unit designed on a stainless-steel skid, are specifically adapted to the high TDS water and offers all purification technologies, such as:

- Sand and Activated carbon filters.
- Dosing Systems.
- Softening units with optional hot water sanitization.
- Demineralization systems.
- Ultrafiltration units with 6000 Daltons cut-off.
- Hot water subitizable electro deionisation units.
- UV Disinfectant (TOC reduction and Germicidal).
- Single or Two-Pass Reverse Osmosis.
- ORBITAL welded SS316L tubes.
- Compliant control panels.

FEATURES

- ✓ Frequency controlled and sanitary distribution pump
- ✓ Optional dual pump station
- ✓ High efficiency UV disinfection
- ✓ Temperature controllers
- ✓ Conductivity meter
- ✓ Flow meter
- ✓ Ozonation
- ✓ Sterile sampling valves.

RANGE OF PRODUCT MODEL AVAILABILITY-

The entire Purified Water Generation system is made of SS-316L stainless steel tubes, Pressure Tube, Skid – SS-316, Pre filter – SS-316, Frontal valve & piping work – SS-316 for easy operation and control.

Available from 0.2 m³/hr. to 20 m³/hr.



Applications: -

The Purified Water Generation system is used for production of purified water and high purified water from raw water for all applications.

- Purified Water (PW) for pharmaceuticals.
- Water for electronic and Semi-conductor.
- Process Water for manufacturing units
- Bio-technology.
- Food industries
- Beverage industry.
- Cosmetic



➤ Waste Water Treatment Plants

➤ EFFLUENT TREATMENT PLANT (ETP)

ION SECURE Effluent Treatment covers the mechanisms and processes used to treat water that have been contaminated in some way by anthropogenic industrial or commercial activities prior to its release into the environment or its reuse. Effluent treatment plants may also be utilized effectively for a cluster of small-scale industrial units. ETPs can be based on physio-chemical or biological treatment, in presence of air (aerobic) or in the absence of air (anaerobic). ION SECURE provides solutions on a turnkey basis right from conceptualization to commissioning. Our solutions related to ETP include:

- ❖ Primary Treatment (Coagulation, flocculation and clarification)
- ❖ Secondary Treatment for aeration, clarification and disinfections
- ❖ Tertiary Treatment for colour removal and reduction of TDS
- ❖ Recycling of water

We also manufacture ETP based on anaerobic biological treatment which utilize the concept of Up flow Anaerobic Sludge Reactor (UASBR). The sludge blanket is comprised of microbial granules (0.5-2.0 mm diameter), that, because of its weight, resist being washed out in up flow stream. The microorganisms in the sludge layer degrade organic compounds. as a result, gases such as methane and carbon di oxide are released which after purification can be used as energy (biogas).

APPLICATIONS

- | | |
|-------------------------|--------------------|
| ✓ Food Processing Units | ✓ Distilleries |
| ✓ Mining | ✓ Textile Houses |
| ✓ Pharmaceutical Units | ✓ Fisheries |
| ✓ Electroplating Units | ✓ Laundries |
| ✓ Refineries | ✓ Slaughter Houses |



➤ SEWAGE TREATMENT PLANT (STP)

ION SECURE Sewage treatment is the process of removing contaminants from wastewater generated from industrial or domestic sewage using physical, chemical, and biological processes. Its objective is to produce an environmentally safe fluid waste stream and a solid waste (or treated sludge) suitable for disposal or reuse usually as manure. The treated water after tertiary treatment can be used for cooling towers, horticulture, flushing and washing.

ION SECURE offers various advance technologies with low foot print as per customer requirement. The prefabricated STPs from 10 KLD to 100 KLD are ideal for applications where time and area are the essence of the project. Higher capacity STPs require civil construction.

- ✓ We also offer the Packaged/compact STP.
- ✓ Technologies offered for STP's are FAB, MBBR, SBR, Constructed Wetland, MBR etc. or others as per client requirement/ site conditions.
- ✓ Design of recycling and reuse concepts by providing tertiary polishing treatment to treated sewage water for plant reuse applications of gardening/ flushing/ reuse in COLLING tower makeup/ floor washing etc.

- | | |
|-------------------------|------------------|
| ✓ Industrial Sanitation | ✓ Hospitals |
| ✓ Housing complexes | ✓ Shopping Malls |
| ✓ Townships | ✓ Colleges |



WTP SPARE RANGE

IONSECURE also deals in all type of Water treatment chemicals, spares, Media, Carbon, Membrane, Dosing pump and Ion Exchange Resin.

➤ Ion Exchange Resin

- Softener Plant Resin
- DM Plant Resin
 - ✓ Cation
 - ✓ Anion
- Mixed Bed Plant Resin



➤ RO Membrane – 4” / 8”



➤ Distribution Strainers



➤ CIEL & PP



-PVC



➤ Filter Sand Media



➤ Activated Carbon – 450-1200IV



➤ Multiport Valve – Manual/Auto



➤ Chemical Dosing Pump



➤ CI, CIEL & PP



WTP SPARE RANGE

➤ Rotameter



➤ Pressure Gauge



➤ FRP Vessel



➤ FRP & SS Housing & Endcap



➤ PP & SS Filter Housing Size - 2.5" – 4.5"



➤ Pall Wring Media: - PE, PP & PVC



➤ MBBR (FAB)



➤ FINE BUBBLE



➤ UV Lamps & Endcap



➤ RO Control Panel



➤ Cartridge Filter



➤ SS Sampling Valve & Spares



WTP SPARE RANGE

➤ SDI



➤ Turbidity Test Kit



PUMPS

➤ Raw Water Pump



➤ SS Pump



➤ SS High Pressure Pump



INSTRUMENTS LIST

➤ Low/High Pressure Switch



➤ Online ORP Meter & Sensor



➤ Online pH Meter & Sensor



➤ Conductivity Meter & Sensor



➤ Online Flow Meter & Sensor



➤ Pen Type pH, TDS/Conductivity & ORP-Meter



WATER TESTING KITS

WATER TESTING KITS FOR EVERY APPLICATION



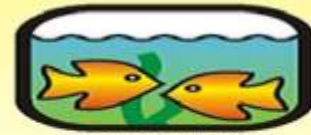
Boiler Water



Drinking Water



Water Treatment



Aquaculture



Cooling Water



Swimming Pool



Process Water



Waste Water



Model
Acidity - 0 to 500
Alkalinity (Caustic) - LC- 5 & 10 ppm
Alkalinity (P & Total) - LC- 5 & 10 ppm or 5 to 50 ppm
Arsenic - 10, 50, 100, 300 and 500 ppb
Calcium - 0 to 500
Carbon Dioxide - 0 to 500
Chemical Oxygen Demand (C.O.D.) - 0 to 1000
Chlorides - LC 5 or 25
Chlorine Dioxide - 0 to 6 ppm
CHLOROSCOPE (Residual Chlorine) - D and U
Copper - 0 to 2.0
Fluorides
Free Chlorine - DPD Tablets
Free Residual Chlorine - A, B and C
Hardness - LC- 5 & 1 ppm or 5 & 25 ppm
Hardness Tablets (TH-5)
Hydrazine - 0 to 1.0
Hydrogen Peroxide - 0 to 100
Iron (Fe++) - A
Iron (Total) - A, B, C and D
Nitrates - 0 to 50
Nitrites HR and LR
Ozone (with DPD Tablets) - 0 to 1
pH - 4 - 10
pH (6.8 to 7.6)
Phosphates - A, B, C and LR
Phosphonates - 0 to 50
Silica - A, B, C, LR and ppb
Sulphates - 0 to 150
Sulphides - 0 to 2.0
Sulphites - 0 to 200
Turbidity Scale - 0 to 2000 NTU
Zinc

Model
pH 4.5 - 9.0 BX
Hardness - 25 BX, 100 BX and 500 BX
Calcium - 25 BX, 100 BX, 500 BX and 1000 BX
Alkalinity - 25 BX, 100 BX, 500 BX and 1000 BX
Chloride - 25 BX, 100 BX and 2000 BX
Free Residual Chlorine (FRC) - 2 BX, and 4 BX
Chlorine Dioxide - 2 BX
Deha - 0.35 BX
Bromine - 5 BX
Fluoride - 2.5 BX
Hypochlorite - 12.5 BX
Hydrazine - 2 BX
Nitrate - 100 BX
Nitrite - 250 BX and 2500 BX
Ortho Phosphate - 10 BX and 50 BX
Phosphonate - 5 BX
Silica - 0.25 BX, 3 BX, 80 BX and 200 BX
Sulfite - 100 BX
Zinc - 5 BX
E-Coli Test Kit
Copper - 0.5 BX

Model
pH - AE-306 (4 - 10)
Acidity - AE-264
Alkalinity - AE-204 and AE-214
Amine (For Boiler Water only) - AE-402 and AE-412
Bromine - AE-404
Calcium - AE-202 and AE-212
Chemical Oxygen Demand (COD) - AE-407
Chloride - AE-213 and AE-213L
Chlorine Dioxide - AE-405
Copper - AE-310*
Deha - 0.35 BX
Dissolved Oxygen - AE-DO8
Fluoride - AE-210
Free Residual Chlorine (FRC) - AE-205, 215 and AE-403
Hardness - AE-201, 211, 221, 231, 241, 501 511, 521, 531 and AE-541
Hydrazine - AE-304*
Hypochlorite - 12.5 BX
Iodine - AE-406
Iron (Dissolved) - AE-303* and AE-313*
Nitrate - AE-308*
Nitrite - AE-207 and AE-217*
Ortho Phosphate - AE-301* and AE-311*
Ozone - AE-OZ3 and AE-OZ3H
Phosphonate - AE-401 and AE-411
Silica - AE-302, 312, 322 and AE-332
Sulfite - AE-206
Sulphate - AE-209
Turbidity - AE-300*
Zinc - AE-305*



Complete Water Solution

**INDUSTRIAL TREATMENT
SOLUTIONS**

RO CHEMICALS

COOLING TOWER

CHEMICALS

BOILER

CHEMICALS

CHILLER CHEMICALS

FIRESIDE ADDITIVES

SPECIALITY

SHIMMER is recognized for distributing a wide assortment of Water Treatment Chemical Products. We have in our repertoire a basket full of speciality and customised Chemical Treatment programmes to complete engineered water treatment for various applications. Our high-performance chemical treatment products are used successfully in many of the industrial process environments where they help to reduce cost by improving the productivity & optimizing performance. Our range of water treatment chemicals covers diverse applications such as cooling & boiler water treatment, RO, ETP/STP water treatment and fire side treatment programme.

Our highly trained engineers conduct in depth surveys of your plant and system requirements, closely monitor the treatment programmes and regularly evaluate results to make required changes for optimum benefit.

COOLING WATER TREATMENT

Industrial cooling systems are required to function smoothly. Therefore it is essential that correct cooling water conditions are established and maintained at all times. To ensure cooling systems are correctly maintained and operate at optimum efficiency it is essential to carefully select cooling water treatment chemicals. Our comprehensive range of high-performance cooling water treatment chemicals have been scientifically formulated to deliver significant operational benefits and performance improvements to cooling systems that use water as a primary coolant. Our wider range of formulations help to minimize scale, corrosion, fouling and biofouling to ensure trouble-free operation of the system.



Our Products Range is:

- Corrosion Inhibitors
- Scale Inhibitors/Dispersants
- Bio-Dispersants
- Silica Dispersants
- Iron Dispersants
- Oxidising Biocides
- Non-Oxidising Biocides/Algaecides
- Multi-Functional Products



Action

• Protects Against Corrosion

Our range of cooling water chemicals contains a synergistic blend of corrosion inhibitors. Regular and correct use of this keeps the corrosion rate under control to eliminate corrosion related failure and unscheduled shutdowns.

• Flexible Dosage Control

Our cooling water chemicals are formulated to suit the requirement of makeup water quality. This formulation provides wide flexibility in dosage levels giving you sufficient room for operational fluctuations.

• Cleans Existing Deposits

Our range of cooling water chemicals contains powerful dispersants and penetrants that loosen and remove existing deposits from the system keeping the cooling water circuit clean.

Benefits

• Easy to Use Liquid

All Our cooling water chemical formulations are available as easy to use liquids which enable easy dosing.

• Easy to Monitor

Since this cooling water chemicals offer flexibility of dosage, it is easy to monitor. All the required active ingredients are available in one form, enabling ease of monitoring.

• Technical Service

Our range of cooling water chemicals is backed by Shimmer Engineering technical service to ensure optimum performance.

BOILER WATER TREATMENT

Primary function of a boiler is to transfer heat into water until it becomes hot or turns to steam. Boiler feed water often contains impurities, which impair boiler operation and efficiency. Therefore, to improve feed water quality and steam purity pretreatment and chemical treatment of the water are very important. To ensure boiler systems are correctly maintained and operate at optimum efficiency it is essential to carefully select the formulations. Our comprehensive range of high-performance formulations have been scientifically formulated to deliver significant operational benefits and performance improvements. Our extensive range of formulated boiler water treatment chemicals help to minimize scale formation, metallic corrosion and sludge deposition. This helps to increase efficiency, reduce fuel consumption, decrease operating and maintenance costs and extend equipment life.



Our Products Range is:

- Phosphate treatment
- Carbonate treatment
- Sludge conditioners
- Anti-foamers
- Oxygen scavengers
- pH booster
- Closed system treatment
- Multipurpose – Scale, corrosion inhibitors and sludge conditioners

Action & Benefits

• Protects Oxygen Pitting

Catalysed oxygen scavengers remove oxygen instantly thereby controlling oxygen related corrosion.

• Corrosion Inhibition

Powerful corrosion inhibitors help protect against acidic corrosion to reduce coil tube failures and unscheduled shutdowns.

• Scale Prevention

Highly effective anti-scalants prevent scale formation improving heat transfer, reducing failures and unscheduled shutdowns.

• Energy Saving

The anti-scalant and dispersant action of chemicals keeps your boiler clean and at the peak of heat transfer efficiency thereby reducing energy losses.

• Easy to Use

The range of Boiler Water Chemicals is easy to dose liquids which provide wide flexibility with regards to dosage levels and sufficient room for operational errors.

• De-Scaling

The de-scaling compounds are useful in removal of hardness and corrosion products from boilers, heat exchangers and cooling systems, etc

FUEL

ADDITIVES



The primary aim of combustion is to obtain maximum amount of steam from each unit of fuel. But impurities in fuels and operational problems are limitations to achieve maximum output from burned fuel. The impurities in fuel can lead to formation of slag in boiler furnace, clinkers on the fuel bed and the presence of sulphur can lead to the cold end corrosion.

A fireside additive plays an important role in complete combustion of fuel along with a control on corrosion deposits, slagging clinker formation, reduction in air borne pollution emission as well as inhibition of fouling.

CLOSED CIRCUIT SCALE & CORROSION INHIBITORS

Closed loop systems are used to heat and cool HVAC, commercial and industrial systems by re-circulating the same water over and over again. There are a wide variety of system types, but the operational configuration that they typically have in common is isolation from the source of heating or cooling through a secondary heat exchanger.

Chemical treatment (or dosing): Proprietary or generic chemicals (like Sodium Silicate, Sodium **Nitrite**, and Sodium Sulfite) compositions are used to prevent the chiller system from **corrosion**, scaling, fouling and microbiological growth.

You have two main considerations when determining your closed loop chemicals:

1. Corrosion Protection
2. Bacteria Prevention

First corrosion, there are two popular closed loop corrosion inhibitor chemicals:

1. Nitrite based
2. Molybdate based

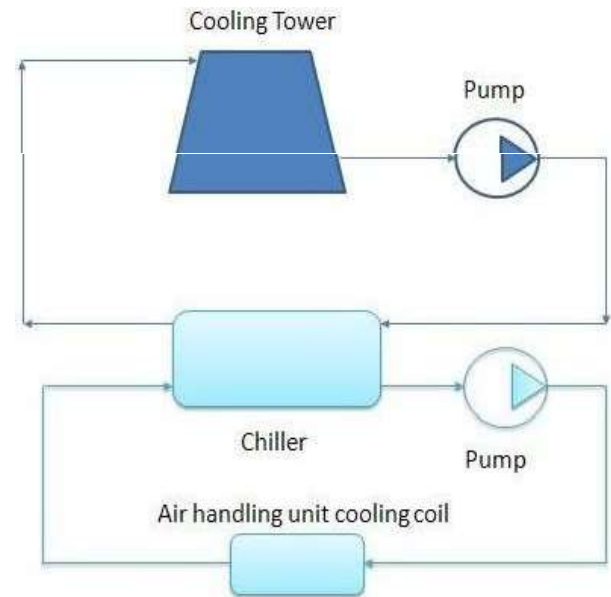


Fig.1: A Simplified Circuit Diagram for Chiller

Our film forming inhibitors provide excellent corrosion rate protection as recommended by the Association of Water Technologies (AWT).

- Mild steel corrosion rates <0.50 mpy
- Copper corrosion rates <0.10 mpy

DE-FOAMERS

Defoamers, also known as antifoams, are additives used in manufacturing processes that require stable water conditions for optimum production efficiency.

Antifoams and defoamers are commonly found in two formats (organic and silicone-based) and are used in a wide range of applications where the creation of foam during a process is undesirable. Processes include those that entail the use of detergents, food processing, wastewater treatment, wood pulp manufacturing, as well as widespread use within the pharmaceutical industry.

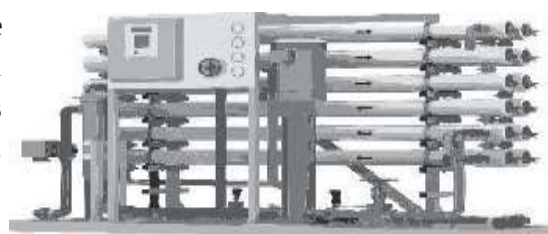
We provide a complete range of defoamers for different industries such as Adhesive, Agriculture, and Bitumen, Construction, Dyes & Pigments, Emulsion polymerization, Oilfield and Petroleum, Paper & Pulp Sugar, Soaps & Detergents, Waste water Treatment. Our Silicon based defoamer is found to be powerful and highly effective due to its unique properties & can be used in practically all industrial applications where unwanted foam creates problems in manufacturing.



REVERSE OSMOSIS CHEMICALS



Reverse Osmosis (R.O.) is commonly used for desalination (demineralization) and purification of water as it proves economical in the long run. The performance of a R.O. system gets hampered due to impurities that build up on the membrane surface during operations. Suspended solids, microorganisms and mineral scale can foul membrane elements. These deposits can cause loss in output and/or rejection levels and reduce total system performance. Our formulations based on modern polymers help to greatly reduce deposits, impurities, and scale in your system's membranes. Our NSF Certified (NSF/ANSI 60) range of formulated Antiscalants, Antifoulants and Cleaners are specially designed chemicals that keep these contaminants from attaching to the membrane surface. They also prove economical in the long run.



Our Products Range is:

- R.O. ANTISCALANT (CERTIFIED TO NSF/ANSI 60)
- PH BOOSTER (CERTIFIED TO NSF/ANSI 60)
- R.O. CLEANER (CERTIFIED TO NSF/ANSI 60)
- BIOFOULING CLEANER (CERTIFIED TO NSF/ANSI 60)

C. CLEANER (CERTIFIED TO NSF/ANSI 60)



Regular chemical cleaning of RO membranes will help to increase its performance and will extend its useful life. The main concern with cleaning is that it should be done before the situation gets too bad as then the membrane may foul and will have to be replaced. Cleaning should be undertaken whenever the permeate flux, differential pressure or conductivity changes to undesirable values. However, it is better to clean the membrane regularly after a predetermined interval. Each type of fouling requires a different cleaning strategy depending on the water supply, membrane fouling may be inorganic, organic, microbiological or a combination. Our NSF Certified (NSF/ANSI 60) range of Antifoulants and Cleaners are specially designed chemicals that keep these contaminants from attaching to the membrane surface. They also prove economical in the long run.

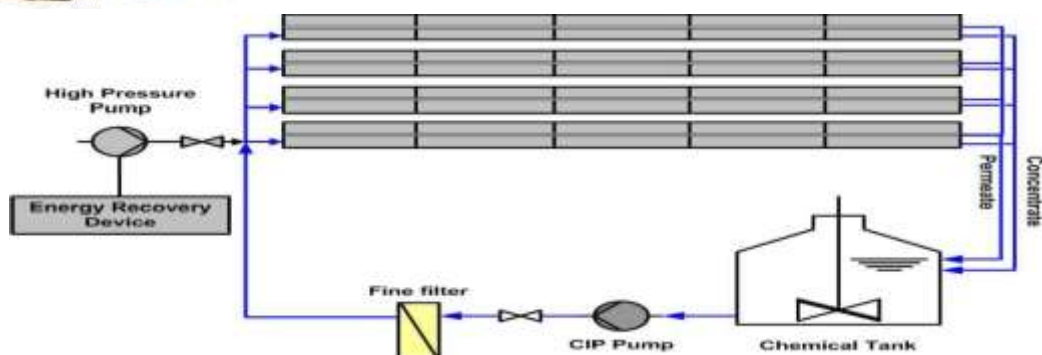


➤ R O ACIDIC CLEANER (CERTIFIED TO NSF/ANSI 60)

Our Acidic Cleaner is highly effective multipurpose cleaning chemical which very effectively removes deposits including carbonate, silicate, sulphate, phosphate of Calcium, Barium, Strontium and Iron scales.

➤ RO ALKALINE CLEANER (CERTIFIED TO NSF/ANSI 60)

RO Alkaline Cleaner is highly effective in removing deposits including colloids and organic bio-foulants. It is a combination of Alkaline cleaner and a novel surfactant.



SPECIALITY CHEMICALS

We have a wide range of specialty chemicals designed for specific cleaning processes.

AHU (Air Handling Unit) CLEANER

AHU if not cleaned regularly and properly consume more electricity which drastically reduces its cooling efficiency. To prevent this problem, it is important to clean the AHU regularly. An effective cleaner would keep the AHU, free of muck, dust and running efficiently, thereby keeping the electricity consumption low. Our inhibited alkaline cleaner is useful in cleaning of Air Handling Units (AHU), Aluminium piston and Radiators. Also, it has exceptionally long tank life and does not produce any objectionable odour, so it can be used for heavy duty cleaning at a economical price.



Sr No	Product Code	Product Description
1	WT - AHU CLN	For Aluminium Cleaning

RESIN CLEANER

Ion exchange resins can become polluted or contaminated with suspended solids, slime, bacteria, and numerous organic matters over time. Fouling of the resin by iron and organic build up cannot be removed by normal regeneration procedures and can cause gradual performance losses. Our resin cleaner is especially designed to remove bound iron from iron fouled resins and prevent accumulation of fouling conditions to extend the resin life significantly. It will ensure optimum exchange capacity and also keep the softener components clean when used on a regular basis.



Sr No	Product Code	Product Description
1	WT - Resclean	For Ion Exchange Resin

SWIMMING POOL CHEMICALS

Generally, a swimming pool uses chlorine for disinfection, but it has lots of disadvantages as it chemically changes and becomes chloramine. This is the reason that chlorine pools often have a distinctive smell, cause skin/eye irritation, create a unpleasant odour. Our new Nano Silver based disinfectant has ability to kill the entire bacteria in swimming pool's water and to create a self- antiseptic mechanism in the pool despite introduction of new bacteria. A regular dosage of our formulation not only helps to disinfect the pool but also save water and reduce the frequency of water change. It is absolutely safe for human health, environment friendly and does not create any unpleasant odour.

Sr No	Product Code	Product Description
1	WT - B710	Nano Silver & Hydrogen Peroxide Based Disinfectant



POLYELECTROLYTESCHEMICALS



Water, a valuable natural resource, plays a vital role in the day to day life and industrial water treatment operations. Our water and waste water chemical solutions are specifically aimed to meet the challenges of raw water and effluent water in industrial, municipal and institutional segments. Our wide range of polyelectrolytes (coagulants and flocculants), both liquid and solid powder. We offer low, medium and high molecular weight cationic, anionic and non - ionic polyelectrolytes.

- **Coagulation & flocculation**

Solid liquid separations with faster sedimentation.

- **Dewatering**

Reduces moisture from centrifuge, RVDF & Belt press.

- **Faster separation**

Use of Polyelectrolytes results in faster separation of a solid from liquid & oil from liquid as a result of denser floc formation.

- **Cost effective**

Polyelectrolytes requirement is lower as compared to conventional coagulants like Alum, PAC etc and hence work out to be economical alternatives to conventional treatment.

- **Easy to use**

Polyelectrolytes are easier to dose. Custom made dosing equipment's are available from SHIMMER. Solid, liquid varieties are available to suit your needs.

- Low to ultra-high molecular weight solid, liquid & emulsion polyelectrolytes are available to suit your needs.

DEFOAMER

We provide a complete range of defoamers for different industries such as Adhesive, Agriculture, and Bitumen, Construction, Dyes & Pigments, Emulsion polymerization, Oilfield and Petroleum, Paper & Pulp Sugar, Soaps & Detergents, Waste water Treatment. Our Silicon based defoamer is found to be powerful and highly effective due to its unique properties & can be used in practically all industrial applications where unwanted foam creates problems in manufacturing.



TCCA90GRANULAR

TCCA is an outstanding source of chlorine for controlling of befouling in swimming pools. This chemical has been proved to be a superior and more economical substitute to sodium hypochlorite and bleaching powder for chlorination. Easy to handle, ship, store and apply, the chemical is helpful in saving the cost of dosing equipment. The chemical is used for the disinfection of swimming pools and oxidizing micro biocide for cooling water systems.



OUR SERVICES



Our integrated services cover every aspect of your performance and give you a complete package of

benefits.

Identifying and preventing problems before they occur.

Suggesting measures to enhance efficiency, save on capital costs & reduce operating costs.

- > Eliminating the expense & hassles of in-house supervision, manpower and maintenance.
- > Modifying plants to improve efficiency & handle changes in influent quality, capacity & treated quality.
- > Troubleshooting problems & tackling emergencies to eliminate downtime.
- > Genuine spares and quality consumables you can rely on.

AMC

The Annual Maintenance Contract (AMC) takes care of preventive maintenance.

A service package which covers your water & waste water equipment for efficient performance and zero downtime. Regular features include scheduled inspection visits and scheduled maintenance and services.

MODIFICATION

Upgradation: - The ideal solution to your expansion worries, upgradation through retrofitting takes care of changing influent characteristics, increased flow rates, enhanced capacity requirements. All of this is planned and supervised by qualified, experienced and executed by experienced technicians.

Automation: - We provides comprehensive support to their customers in automating conventional water treatment equipment, particularly softeners and DM plants, to achieve consistent operation of equipment with less human error and very low maintenance cost.

O&M CONTRACT

Operation and Maintenance Contracts (O&M) in this comprehensive Contract, we undertake the complete responsibility of the Plant to produce the treated water of the designed quality & quantity. We provide the required Manpower, spares & consumables for trouble free operation of the Plant.

OTHERS SERVICES

- ✓ **On Call Services:** Service at your doorstep on demand, be it a troubleshooting call or seasonal service requirement.
- ✓ Boiler & Cooling Water Treatment Programs
- ✓ Consultancy & Surveys



We care for water



Thank You

