

IEI News

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A COMPREHENSIVE SOLUTION FOR THE FOOD AND BEVERAGE SECTOR



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SPOTLIGHT

OUR ONE-STOP MENU FOR THE FOOD & BEVERAGE SECTOR

The food & beverage industry, one of the most dynamic sectors, is poised for growth around the world. The emergence of new economies & increased purchasing power in developing nations is driving this growth. Technological innovation is another key growth driver for this sector coupled with the changes in consumer food habits and preferences across the world.

In India, food & beverage is one of the largest industries and an important segment in terms of contribution to GDP. Social, political and economic factors have provided the necessary impetus to the food & beverage sector and are expected to drive the growth in the future too.

Ion Exchange, with over five decades of expertise in water & environment management, provides a range of solutions - purification, separation and concentration, to the food & beverage industry. This has helped the industry adopt efficient and sustainable practices across the value chain to reduce wastage and increase operational efficiencies.

PROPELLING GROWTH WITH A BANQUET OF SOLUTIONS

Specialisation in total water & environment management, comprehensive process technologies and an extensive service network enables Ion Exchange to present a complete, customised banquet of solutions for the food & beverage sector. We offer the widest range of advanced systems for process applications as well as complete water treatment circuit, along with chemical treatment programmes and 24 x 7 comprehensive technical support.

Single source solutions from design, through engineering, operation and maintenance up to retrofit, our customised total solutions, technical support

and comprehensive services ensure efficient system operation and optimal performance with hassle-free, single point contact and responsibility. Our solutions deliver product quality, price performance ratios and process efficiencies.

A dedicated team from our specially set-up food & beverage vertical works closely and exclusively with the food & beverage industry to understand its needs and provide innovative, integrated solutions. This is why Ion Exchange is a partner of choice for almost every prestigious brand in the food & beverage sector.



OUR BANQUET OF SOLUTIONS INCLUDE:

Comprehensive Water Treatment

As pioneers in total water management, we provide the right solutions for varied requirements of our customers. Beginning with raw water treatment, process water systems to advanced waste water treatment, recycle, zero liquid discharge (ZLD) and waste-to-energy solutions, aided by cooling & boiler water chemical

treatment programmes, supply of consumables like ion exchange resins and membranes all backed by 24 x 7 comprehensive O&M services. Complementing these value-adding solutions, we also offer value added services that include audit of existing systems and total water management consultation in India and abroad.



Pretreatment at Moon Beverages, Sahibabad, Uttar Pradesh - Bottlers for Pepsi and Coca Cola



Activated Carbon Filters at Pepsi, Bahrain



Reverse Osmosis Plant at Coca Cola, Bahrain



IDMC, Account Banas Dairy - Manufacturer of Amul, Sagar & Banas Brand of Dairy Products



Unilever, Indonesia, Asia Pacific

Complete Zero Liquid Discharge

Waste water generated in various stages of food & beverage production requires treatment to comply with ever-increasing stringent standards of various Pollution Control Boards (PCBs).

Ion Exchange not only offers advanced water & waste water solutions that comply with the standards but also provides cost-effective effluent recycle and zero liquid discharge solutions. Industries that have installed our effluent treatment

& recycle and zero liquid discharge plants have gained immensely by meeting strict compliance norms and have also gained excellent payback on their investment through assured quality of water for the process and utility needs. We offer widest range of processes and technologies – physico-chemical treatment, biological processes, membrane systems, thermal evaporators and solid waste (to energy) management systems.

BREWING IT UP FOR CARLSBERG INDIA



A 220 m³/day waste water recycle system and sea water reverse osmosis plant at Paonta Sahib, Himachal Pradesh.

TURNING A NEW LEAF FOR CARGILL



MEFSCO (Middle East Feed Solutions Company) is a JV between Cargill and ARASCO in the Kingdom of Saudi Arabia. We have installed 25 x 135 m³/h reverse osmosis plant plus a 3000 m³/day effluent treatment plant.

The treatment incorporates the latest technology – tall anaerobic reactor (upflow anaerobic sludge blanket reactor) and high loaded MBBR. This project will discharge the effluent treated water to irrigation ponds as per the high quality standards of effluent treatment and discharge norms.

UNITED BREWERIES



200 m³/day complete zero liquid discharge plant (UF-RO-MEE) at Sahajanpur, Rajasthan.

TOTAL WATER AND WASTE WATER MANAGEMENT SOLUTIONS FOR BUNGE

300 m³/day effluent treatment plant and 500 m³/day recycle plant at
Bunge India Pvt. Ltd., Kutch, Gujarat.



500 m³/day Recycle, Ultra Filtration and Reverse Osmosis Plant



460 m³/day Demineralisation System



300 m³/day Oil Skimmer



300 m³/day Effluent Treatment & Recycle System

Purification Processes For Food & Beverage Industry

Ion Exchange has met varying needs of the food & beverage industry for purification, separation, concentration, etc. using customised system designs by utilising speciality ion exchange resins, membranes, adsorbents or media. These are used individually or in combination for applications such as:

- Liquid glucose/dextrose/sorbitol - deashing, decolourisation, deodourisation & depyrogenation. Largest number of working references including the latest state-of-the-art 30 m³/h merry-go-round system with glucose deashing at Cargill, Karnataka
- Gelatin - deashing, decolourisation, deodourisation & concentration using ion exchange and ultra filtration processes installed in leading companies
- Juice - debittering, clarification & concentration
- Refined sugar manufacturing through ion exchange resin systems along with speciality membrane systems and nano filtration for recovery of regenerant brine solution. The earliest of many systems installed in the sugar mills includes 8 x 10 m³ sugar refinery column for Dhampur Sugar Mills
- Caustic recovery from bottle wash



Gelatin Concentration Ultra filtration Unit in a Food & Beverage Industry

Sweet Solutions for the Sugar Industry

Ion Exchange continues to be the largest supplier of speciality process chemicals used during the manufacturing of refined sugar in India and other sugar producing countries. These speciality chemicals include biocide for mill sanitation, flocculants and colour precipitants used for juice scale inhibitors/antiscalants used in evaporators and viscosity reducers. We also offer special clarification enzymes and sugar enhancers (bagasse pol reducers) that improve process efficiency and recovery during the production of ethanol from bagasse and sugar respectively.



INNOVATION

INDION® Autochem Ultima

Using the power of internet artificial intelligence, INDION Autochem Ultima makes it possible to monitor and control speciality water treatment programmes round the clock combining cloud back office analytics and highly trained engineers to monitor treatment programmes 24 x 7.

The all new INDION Autochem Ultima system analyses and controls a variety of water parameters on a configured set point during the treatment programme.

Thus, it provides an online feed, monitor and control system to significantly enhance reliability of the treatment programmes,

reducing chemical costs through optimising chemical dosing, minimising water wastage. Thus, chemical treatment programmes can be remotely monitored and controlled on a smart phone or computer anywhere with historical graphs and downloadable reports apart from receiving set alerts.



COD/BOD Analyser

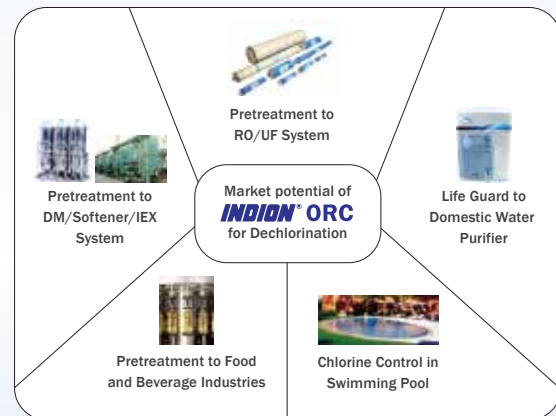
Real time COD/BOD measurement analyser is reagent-free and enables continuous effluent monitoring for regulatory compliance.



INDION® ORC

INDION ORC is a disruptive technological innovation, developed as a superior substitute to activated carbon used for dechlorination of water by industries. It is particularly suitable for super chlorinated water used by the F&B industry. Its distinguished features compared to activated carbon include reduced contact time, thereby lowering volume of media by half compared to activated carbon and also reducing the size of the pressure vessel.

Due to significantly higher chlorination value, life of INDION ORC spans over two years. Unlike activated carbon, which alters the pH of water and contaminants of treated water with its ash content – silica, INDION ORC does not alter pH and inorganic load of treated water. INDION ORC can be sterilised using hot water which consumes less time. Due to lesser volume used for treatment process and longer life compared to activated carbon, it significantly reduces problems related to disposal, thereby making it environmentally sustainable and also reducing operation downtime.



INDION® ORC for Dechlorination of Water

EPC Capabilities For Setting-up Packaged Drinking Water & Natural Mineral Water Plants

Ion Exchange is a preferred water treatment, equipment and technology provider to the bottled water industry for more than three decades. We provide complete turnkey solutions including training, audits, operation & maintenance, environment sustainability and compliance standards as required by the industry. During the last few years, we have supplied six bottled water plants to Indian Railway Catering & Tourism Corporation (IRCTC) with a combined capacity exceeding 8,00,000 bottles per day. Apart from constructing bottled water plants through comprehensive EPC routes, we also design, build, finance, operate and transfer set-up projects on PPP basis.



Water Vending Machine

Ion Exchange bagged an opportunity to install 190 water vending machines at Chennai, through the IRCTC network. The vending machines provide refreshing

chilled, pure drinking water to passengers using the rail network, at a reasonable cost of ₹ 1 per glass of water.



Royal Chalice of Water

We were awarded a prestigious order for water purification in the Maharaja Express luxury train service, a joint venture project of Cox & Kings and IRCTC. Our units provide pure drinking water for ice-cube making in the dining car-cum-bar. Besides this, our Zero B Eco Puriline non-electric water purification systems have been installed in the deluxe and super-deluxe coaches – the first of its kind water purifier to be installed in a super-deluxe train.

INDION® Disaster Management Unit (DMU)

We are also the largest suppliers of mobile packaged water treatment units that are used to provide safe drinking water in areas affected by natural disasters – earthquakes, cyclones or chemical warfare. Specially designed systems are also used by Indian Armed Forces to meet their needs of potable water during transit/camp movement.



Speciality Water Treatment Programmes

Ion Exchange offers a complete range of specialised treatment for cooling, boiler, fireside, membrane, antiscalants and cleaners. INDION products broadly comprise:

INDION® Cooling Water Treatment Programmes

We offer a broad range of environmentally safe INDION products to treat open or closed recirculating cooling water systems. INDION Corrosion and Scale Inhibitors control corrosion, scaling and fouling over a variety of water quality and system conditions. Our various biodegradable biocides control growth of algae, fungi & bacteria.

INDION® Boiler Water Treatment Programmes

These are designed for low, medium and high pressure boilers to prevent deposits and corrosion in pre-boiler, boiler and post-boiler systems.

INDION® Fireside Treatment Programmes

These offer energy-saving fuel additives that are vital for any combustion system treatment programmes.

INDION® Coagulants & INDIFLOC® Flocculants

These are widely used in raw water treatment, effluent treatment and sugar processes.

INDION® Antiscalants & Membrane Cleaning Chemicals

These prevent scaling & fouling of reverse osmosis membranes and remove biofoulants, organics, metal oxides/hydroxides & other colloidal/particulate based foulants.

Complementing the above range of speciality chemicals is our INDION Easy Test Kit designed for on-the-spot analysis of water without any use of sophisticated equipments and analysers.

These speciality water treatment programmes have benefitted more than 1000 customers globally.

CERTIFICATION FOR F&B APPLICATIONS

The US Water Quality Association (WQA) Gold Seal, Halal and Kosher certifications, which we have acquired for several of our resins used in drinking water and food & beverage applications, is a proof of our continued commitment towards public health and safety.



Waste to Energy

Our complete environment solutions extend to converting waste into useful products that can be further used by the food & beverage industry. Our ANDICOS design takes a radically different approach using a novel combination of proven technology to manage the problems of sludge, organic waste and municipal solid waste and generate electrical power, fertiliser and steam.

Here, the sludge generated during sewage treatment is combined with organic waste from food processing or kitchen. This combined waste is pretreated for homogenising the waste followed by an anaerobic digestion process coupled with odour removal system. Focus is on simultaneously ensuring environment protection and resource recovery from waste.

Domestic sewage or sludge is enriched with organic waste (or manure) to increase the overall BOD/COD load to a level that is sufficient to maintain an anaerobic waste water treatment process. This anaerobic treatment process generates biogas, sludge and clean effluent apart from residue that is organically rich and can be used as fertiliser.

Clean effluent can be sent to a filtration stage or aerobic polishing stage to meet the most stringent discharge limits or to ensure that the effluent is of sufficient quality for reuse. However, the biggest advantage of anaerobic treatment is that it eliminates the need for expensive blowers to support an aerobic

treatment process. Hence, the power requirement for waste water treatment is reduced (by almost 60 %) whilst the investment cost is similar.

Biogas is treated and converted in a gas engine to generate electrical power and heat.

The heat from the biogas engine is used to dry the excess sludge to produce an organic fertiliser that meets the required hygiene standards for use in agriculture and landscaping.



None of the processes carry any technological risk or uncertainty since they are widely used and proven. The process innovation focuses on integration of existing technologies to provide a holistic approach to energy, waste and waste water management.

A plant to treat nearly 1000 kg of organic waste generated by a community kitchen and 2 – 6 m³ of sewage sludge per day is scheduled to be commissioned by the end of this year. It is expected to produce 20 KW/h of electricity power and about 1.35 tonnes per day of organically rich fertiliser.

24/7
service

We are India's largest service provider in the water sector providing comprehensive O&M services to industries, homes and communities. In the industrial market, we provide services through more than 30 locations.

Our services include:

- Water management consultancy • Application lab & pilot studies for new applications
- O&M and BOO/T for water systems, utilities and membrane/ion exchange systems
- Service contracts • Supply of spares and consumables • Water audits

ALTERNATE SOURCE OF WATER

WEAVING THE WAY FOR WELSPUN WITH INNOVATIVE PPP MODEL

The Welspun Group, one of India's fastest growing conglomerate has set-up a unique source of fresh water for its textile plant in Anjar, Kutch. Ion Exchange partnered with Welspun to design, erect and commission a sewage treatment and recycle plant along with operation & maintenance.

The 30 MLD sewage treatment plant is treating sewage generated from two cities – Anjar and Adipur, supplied by their respective local municipalities. This project has reduced the burden on local municipal authorities to treat sewage generated by communities

in the water scarce Kutch region. The sewage generated from Anjar and Adipur is wisely reused as an alternate source of water which would otherwise be discharged and pollute the Nakti Creek, Gulf of Kutch.

It is also a unique public-private partnership model for treating and reusing municipal sewage by the industry.



Ion Exchange was awarded with an excellence award for completing the project in record time.



30 MLD Sewage Treatment Plant



High Rate Solids Contact Clarifier

LIGHTING IT UP FOR RATAN POWER

Ion Exchange designed, engineered and commissioned a 117 MLD tertiary treatment plant comprising INDION DynaDisc and INDION DynaSand Oxy filter with contact chlorination system and sludge management. This is one of the largest tertiary sewage treatment plants in the Indian industrial sector. The treated sewage water from the plant will be source water for Ratan Power's (formerly Indiabulls Power) upcoming 5 x 270 MW

power plant in Sinnar, near Nasik, Maharashtra. Making this the first plant in India to completely use recycled sewage for power generation.

This plant is also operated and maintained by us. The technology was selected based on its lower footprint, capital and operating costs, including replacement costs and maintenance requirements when compared to competing technologies like membrane systems.



FABRICATED SOLUTIONS

Century Rayon, a division of Century Textiles & Industries Ltd. is the largest producer of Viscose Filament Yarn (VFY) in India.

Ion Exchange has successfully commissioned a 16 MLD effluent treatment and recycle plant for their manufacturing unit in Shahad, Maharashtra. Plant consists of oil skimmer, mechanical screen, fluidised media reactor, lamella clarifier, high rate solids contact clarifier, multigrade filter, ultra filtration & reverse osmosis systems. Specialised media has been used to improve the plant's efficiency.



Also commissioned more than 50 industrial effluent recycle & over 12 desalination plants.

ENGINEERING CONTRACTS

EMPOWERING TATA POWER SOLAR

Tata Power Solar is India's largest integrated solar company, operating in three segments – manufacturing, EPC services for solar power projects and manufacturing solar products. For their production



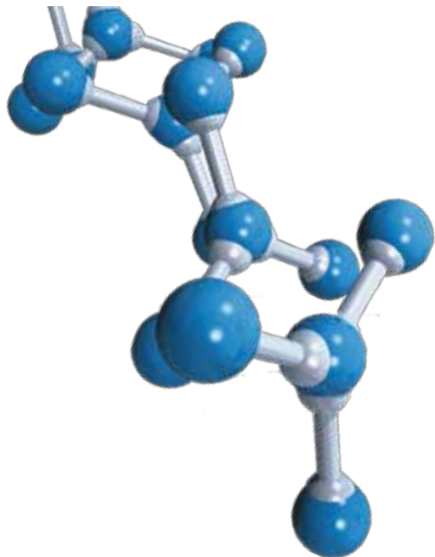
facility in Bengaluru, they outsource disposal and treatment of concentrated chemicals and acid rinse with high fluoride content in waste water. With a goal to implement an in-house zero liquid discharge facility, they entrusted Ion Exchange with the responsibility to treat and reuse effluent and waste water. Ion Exchange has designed a 182 m³/day effluent treatment, sewage treatment and recycling plant consisting HRSCC-MMF-UF-RO and sludge treatment. For sewage treatment, a state-of-the-art 100 m³/day sewage treatment & recycle plant was designed to help Tata Power Solar comply with Karnataka Pollution Control Board Environmental norms.

GOOD CHEMISTRY

Chiripal Poly Films is India's leading manufacturer of flexible packaging solutions, producing Biaxially-Oriented Poly Propylene (BOPP) films, Biaxially-Oriented Poly Ethylene Terephthalate (BOPET) films, and PET resin chips. It is a part of Chiripal Group, a multi-faceted business conglomerate. The manufacturing process involves Mono-Ethylene Glycol (MEG) and Ethyl Acetate (EA) as the main constituents. The presence of these organic compounds are responsible for higher toxicity as well as BOD and COD values of the polyfilm effluent. To treat this effluent, Ion Exchange is supplying



a 200 m³/day ETP with primary, secondary & tertiary treatment systems. The primary treatment comprises of bar screen – oil skimmer – equalisation cum neutralisation tank – guard pond. Secondary treatment includes anaerobic process followed by clarification and extended aeration system, whereas tertiary treatment involves chlorine contact tank and sludge treatment system.



CHEMICAL BONDING

Deepak Phenolics Ltd. is a wholly owned subsidiary of Deepak Nitrite Ltd. The company is setting-up an integrated Phenol-Cumene plant located at Dahej, Gujarat. The EPCM contractor is ThyssenKrupp Industrial Solutions India Pvt. Ltd.



Ion Exchange is supplying a three stage treatment system to treat and recycle complex chemical waste water. At the primary stage, the scheme comprises of a collection tank for trapping oil, reaction tank, clarifier, and equalisation tank. The secondary stage involves using a two stage extended aeration followed by clarification process and a tertiary treatment to recycle and reuse the water for process & utility applications and sludge treatment system.

PARTNERING ON A DAIRY BASIS

IDMC is a leading manufacturer and supplier of equipments for the dairy industry. Their clients include Amul, Banas Dairy and Sagar.



In order to take care of refrigeration, boiler, process, tanker flushing, etc., Ion Exchange is installing water treatment plants comprising pretreatment, softener, RO and UF at IDMC's ten locations in Uttar Pradesh and one in Maharashtra. Another plant comprising pretreatment and softener was installed in Andhra Pradesh.

TREATING IT RIGHT

Patanjali Ayurved Ltd. is an Indian FMCG company. Ion Exchange is installing a 210 m³/h waste water treatment & recycle plant that ensures zero liquid discharge at Patanjali's manufacturing unit in Haridwar. This unit manufactures wellness, food and cosmetic products.



GLOBAL ORDERS

Ion Exchange supplied 4 x 360 m³/h condensate polishing units to Indokarya Bangun Bersama, Riau, Indonesia.

The Sri Lankan Governmental Authority, viz., National Water Supply & Drainage Board (NWSDB) has awarded Ion Exchange with a prestigious integrated water supply project. The order comprises designing, engineering, execution and O&M to help improve water supply in the remote areas of Aluthgama, Matugama & Agalawatte in the Kalutara district. The project will be executed over a period of three years. The scope of work includes setting-up of new water treatment plants & rehabilitation of old plants, refurbishment of old intake, construction of reservoirs, transmission pipelines from reservoir to towers and distribution pipelines from the towers to the identified villages. The work also includes training and O&M, setting-up of offices/workshops & staff quarters for the Water Board. The scheme will be completely automated with remote controlling and SCADA.

Golden Readymix (GRM) is a part of the fast growing Dubai Construction Industry, manufacturing various types of ready mix concrete. Ion Exchange supplied a 2 x 150 m³/day waste water treatment plant.

An order for 180 m³/day and 250 m³/day sewage treatment plant along with 500 m³/day RO was received from Hyundai Engineering, Abu Dhabi.

2 x 60 m³/day sea water reverse osmosis plant, filtration plant and pumping system was supplied to Lucky Exports, Maldives.

Black & Veatch International, Jakarta, Indonesia awarded Ion Exchange an order for a 1200 m³/day waste water treatment plant.

RURAL REACH

SOLUTIONS FOR RURAL INDIA

Ion Exchange has constantly endeavoured to provide innovative solutions to the rural population, which suffers from severe water scarcity as well as problems due to contamination of Fluoride, Nitrate, Iron, Arsenic, etc. in drinking water.

To remove Fluoride from ground water, we have supplied:

- 203 units of INDION Fluoride Removal Hand Pump Attachment (FRHPA) to Drinking Water Supply & Sanitation (DWSS) department, Ranchi, Jharkhand
- 200 units of INDION FRHPA to Rural Water Supply & Sanitation (RWSS) department, Bhubaneswar, Odisha
- 20 units of INDION FRHPA to Public Health Engineering Department (PHED), Jagdalpur, Chhattisgarh

Furthermore, to remove Iron and Fluoride from ground water, we have supplied 27 units of INDION Iron Removal Hand Pump Attachment (IRHPA) and 19 units of INDION FRHPA to World Vision India, which is an international NGO.

To treat surface water contamination, Ion Exchange has supplied a 150 m³/h INDION Lamella Clarifier to Rural Water Supply, Bengaluru, Karnataka.

In order to take care of the sewage generated in the remote area of Keonjhar district in Odisha, we have installed 2 x 150 m³/day INDION Fluidised Media Reactors (FMR) through Tata Steel Rural Development Society. These INDION FMRs treat 3,00,000 litres of sewage per day. We have also installed



A Section of Fluidised Media Reactor in Keonjhar District Installed for Tata Steel Rural Development Society

a 400 m³/day INDION FMR for PHED, Sundargarh, Odisha. We have supplied 2 x 2 m³/h INDION Disaster Management Units (DMUs) to PHED, Kolkata, West Bengal and two units to RWSS department, Bhubaneswar, Odisha.



Disaster Management Unit in Odisha



Fluoride Removal Hand Pump Attachment in Jharkhand

PRODUCT LAUNCH

INDION® IPC-MBR

INDION IPC-MBR is a new generation membrane bio-reactor successfully introduced and commissioned recently. This new generation technology was piloted extensively in an existing sewage treatment plant belonging to a progressive municipal corporation. The treated sewage characteristics [BOD < 5 ppm, COD < 20 ppm, phosphorous < 2 ppm, ammoniacal nitrogen < 2 ppm and nil turbidity] make it suitable for use as an alternate source of water by industries & institutions. The technology's distinctive features include:

- Robust chemical resistant back washable flat sheet, PVDF membranes
- Twice the flux rate compared to other conventional flat sheet MBRs
- Transmembrane pressure up to 2 bars as compared to maximum 0.2 bar for other MBR configurations (hollow fibre flat sheet)
- Lower sludge production



Sewage Recycle Plant using INDION IPC-MBR at Navi Mumbai Municipal Corporation

Based on the above features, INDION IPC-MBR reduces the unit cost of water, making it affordable for use by municipal corporations & industries to treat effluent/sewage/contaminated water, making it an alternate source of water. INDION IPC-MBR is available as standard modules to treat varied flow rates and can be customised for various applications.

EVAPORATORS

Realising the need for reliable, efficient, well-designed and engineered thermal evaporation system, particularly as a terminal unit to minimise waste and maximise water recovery in zero liquid discharge applications, we have successfully introduced and commercialised multi-effect evaporator (MEE) system based on thermal evaporation and mechanical vapour compression. These systems are available as standard modules or as integral part of a complete zero liquid discharge system, with a choice of metallurgy [SS 316L & SS 316L(TD)]. We have received several orders which have been successfully executed by our competent team of service engineers.



Effluent Treatment & Zero Liquid Discharge Plant at Kevin Enterprises, Maharashtra



Multi-effect Evaporator at Bosch, Rajasthan



Multi-effect Evaporator at ISRL, Haryana



Multiple-effect Evaporator & Zero Liquid Discharge Plant at Holcim, Punjab

ASTOM

We have introduced ASTOM Corporation's range of Electrodialyzers (ED), Diffusion Dialyzers (DD), Electrodialysis Reversal (EDR), Bipolar Membrane Electrodialysis (BPED) systems with NEOSEPTA ion exchange membranes (cation, anion and bipolar membranes).



Major applications of ED in food/pharmaceutical/chemical industry are cheese whey demineralisation, wine stabilisation, desalination of amino/organic acids, plum vinegar/seasoning liquid, oligo saccharide to name a few. EDR process is used for brackish water treatment and for zero liquid discharge applications. The DD process is used for acid recovery from stainless steel and aluminium plate/foil pickling process and BPED is used for production of organic acids (lactic acid, formic acid, tartaric acid, citric acid & salisalic acid) from organic acid salt and also for the production of alkali and acid from inorganic/organic salt and waste solution with salt.



ZERO B™ AUTO SOFT WITH PROPRIETARY INDION PURPLE SOFT RESIN

Zero B Auto Soft is an innovative softener. It is an automatic softener with a built-in digital display that indicates operating status of the unit. It uses proprietary INDION Purple Soft food grade resin to provide soft water.



Zero B Auto Soft uses:



- Proprietary INDION 'Purple Soft' food grade resin, which does not leach out harmful chemicals
- State-of-the-art robust multiport valve, which controls media recharging and reduces human intervention

- Unique user-friendly digital display, which communicates the operating status of the softener

The above features make Zero B Auto Soft stand apart from other softeners. The product provides an enhanced customer satisfaction by removing hardness causing ions, preventing fabrics from losing their natural look, reducing cooking time, increasing life span of kitchen appliances as well as bathroom fittings, reducing hair fall, etc. Zero B Auto Soft is available in two models – 3AS (for normal water usage) and 6AS (for higher water usage).



ZERO B™ ICY HOT WATER DISPENSER

The elegant Zero B Icy Hot water dispenser provides twin benefits of purified hot and cold water. Zero B Icy Hot features our patented Electrolytic Sanitising System (ESS) technology that sanitises the complete system against germ & slime build-up.

Zero B Icy Hot is available as three variants:



- **Zero B Icy Hot RO+ESS** – It is a high recovery RO purifier comprising the ESS technology and a nine stage purification system that ensures the removal of excess salts, thus improving the taste of water, beverages, etc.

- **Zero B Icy Hot UV+ESS** – Deactivates bacteria and viruses with a five stage purification system and ESS technology
- **Zero B Icy Hot ESS** – Designed especially for bubble top dispensers, where the ESS technology keeps the water purified before being dispensed

All the three models are available as free standing and counter top.



EXPANSIONS

MEMBRANE MANUFACTURING UNIT IN GOA

Ion Exchange pioneered membrane manufacturing in India in the year 1987. Our recent milestone is the setting-up of the first state-of-the-art integrated reverse osmosis membrane manufacturing facility in India at Verna, Goa. The plant will meet the demand of the Indian water treatment industry and also cater to the overseas markets.



Inauguration of the Membrane Manufacturing Facility by the Hon'ble Chief Minister of Goa, Mr. Manohar Parrikar

CHEMICAL BLENDING UNIT IN BAHRAIN

We launched a chemical blending facility in Bahrain to improve the products and services we offer to the wider Gulf Cooperation Council (GCC) region. The new facility will serve as a chemical export hub for the GCC region and Northern Arab states.



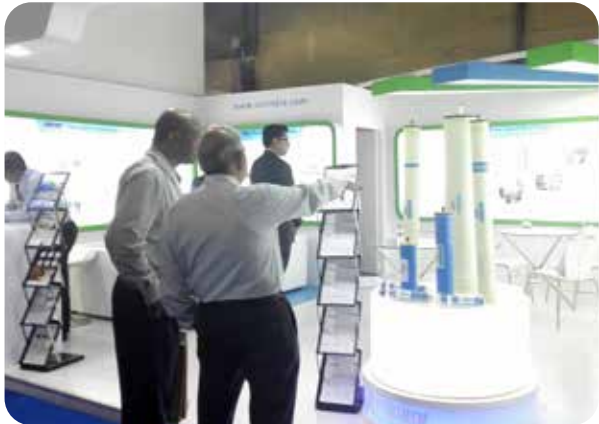
CERAMIC BINDER UNIT IN MORBI, GUJARAT

We started operating our new ceramic binder unit in Morbi, which is the ceramic capital of India. The unit will cater to the ceramic tile producers in the area.

ON DISPLAY

In order to showcase our total water and environment management solutions and our innovations, we participated in a number of exhibitions such as the Defence Expo in Goa; IFAT, CPhI, Chemspec & Chemtech in Mumbai; Chemcon & Water Today in Chennai; Greenco Summit in Pune; International Engineering & Technology Fair in Delhi; ET Acetech in Bengaluru, Mumbai & Delhi; Global Water Conference in Myanmar and Annual Conference & Exposition (ACE) in the USA.

Highlight
Grand Stand Award for our 100 sq. ft. stall at ET Acetech in Mumbai.



CSR INITIATIVES



INDION Lampak in Chandanpur, Odisha



Running for a Cause at Standard Chartered Mumbai Marathon 2017



Sanitation Project at Chafewadi Ashram School, Karjat, Maharashtra



Health Camp at BESSO, Hosur



Vocational Training at Jeevan Asha Community Centre, Karjat, Maharashtra



Aanganwadi Playschool, Lakdaram, Patancheru



INDRO 403 installed at Family of Disabled in Najafgarh, New Delhi



Iron Removal Unit at Government Primary School in Reshalpur, Madhya Pradesh



Magic Bus Foundation, Chennai, Tamil Nadu

Ion Foundation continues its CSR activities in the field of education, health & hygiene and environment.



EMPLOYEE ENGAGEMENTS

Jal Tarang

Ion Exchange India's (IEI) annual family get-together, Jal Tarang, was filled with fun, laughter and bags of entertainment. Amidst the spectacular dance performances, melodic songs and skits by the talented employees and their families, IEI was privileged to have on board Chetna Group, supported by Ion Foundation, who delivered two special performances that added excitement to the evening. IEI's employee newsletter, iConnect, that bonds employees across various locations was launched during the event. Employees, who have dedicated long years of service towards the organisation, were felicitated.

Jal Tarang 2017 showcased the spirit of Ion Exchange and it proved to be a joyous occasion as all the attendees went home with a smile on their face.



Ion Exchange Cricket Premiere League (IECPL) 2016-17

IECPL was held at MET Ground, Mumbai. In the women's tournament, three teams (Head Office, Vashi and Rabale) participated, of which Head Office won the final and laid their hands on Ion Exchange's first women cricket trophy.

In the men's tournament, thrilling matches were played between six teams during the playoffs. Final match was played between Rabale 1 and Vashi 1, where Rabale 1 emerged victorious.



AWARDS

- Ion Exchange was awarded the prestigious Porter Prize in recognition of its role in 'Shaping the industry, creating unique positioning and altering the basis of competition for electricity, gas, water and power'.



Water Digest, in association with UNESCO, bestowed upon us three prestigious awards:

- Best Water Company
- Best Complete Domestic Water Management Solutions Provider – Domestic & Institutional
- Best Water Treatment – Water Treatment Chemicals



 **ION EXCHANGE**
Refreshing the Planet

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