



IEI News

A House Journal of Ion Exchange (India) Ltd.

Volume 81 | July 2014

CELEBRATING

5

YEARS
OF
TRUST



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Ion Exchange



Celebrates **50** Golden Years

2014 is truly a milestone year for Ion Exchange, the Golden Jubilee of the commencement of our company's operations, on 4th August 1964. IEI News met Mr. Rajesh Sharma, Chairman & Managing Director, on this momentous occasion to look back down memory lane and forward to the road ahead. Here's what he had to say about the company's growth, strengths, successes, challenges and plans.

What would you say are the key ingredients of the Ion Exchange success?

If I had to mention just a few, I would highlight the company's visionary approach in using technology to address emerging and future challenges with cost-effective solutions. Secondly, empowerment of our people.

We have always been ahead of time in bringing to the country state-of-the-art technology through our own continuous R&D coupled with tie-ups with specialist companies worldwide. This puts us in the unique position to be able to offer solutions to all sectors – industry, homes and communities, urban and rural. The large technology base also gives us the distinction of being one of few companies worldwide to be able to offer total solutions to meet customer needs.

To back up our technology solutions we were also the first to set up a countrywide service network in the early 1990s – much before service became the mantra of industry, and were among the first also to undertake O&M contracts and BOO/T projects.

People are a company's greatest asset. Ion Exchange has always believed in empowering people through training, and by encouraging initiative and creativity. Training is a powerful aid in building and maintaining excellence. To this end we have made human resource development a focus area, and attach as much importance to training as to technology.

Ion Exchange is considered a pioneer in the Indian water treatment industry.

What are some of the company's path-breaking technology initiatives?

Right from inception, Ion Exchange led the water treatment industry in its endeavour to provide total, integrated solutions to customers.

In 1965, Ion Exchange pioneered the production of world class ion exchange resins in India. Simultaneously we commenced the design, engineering and supply of water treatment plants to India's industrial

sector. We rapidly expanded our technology base through R&D, joint ventures, acquisition of technology and representative tie-ups, continuing to break new ground by being the first in India to introduce many of these technologies.

For example, ours was the first company in India to apply reverse osmosis as a complementary process to Ion Exchange, in 1978. Again, we were among the first in India to manufacture reverse osmosis membrane elements and, in 1989, commissioned India's first reverse osmosis element plant at Halol Kalol, Gujarat – the first project of its kind outside USA and Japan.

Protection of limited fresh water resources was behind our thrust on waste water treatment to monitor and control pollution. Sensing the impending water scarcity that would assail the world much later, Ion Exchange began pointing the way ahead, as early as the mid-1980s, advocating recycle to conserve water and integrating physico-chemical, biological and membrane separation processes for optimum water recovery.



Resin factory



Inauguration of plant at Halol Kalol, Gujarat



Ours was also the first company to recognise that industry, because of the limited availability of fresh water, would have to use alternate sources of water, one of which is sea water. Thus



SWRO plant at GEB, Sikka

way back in 1997, we commissioned India's then largest sea water reverse osmosis (SWRO) plant for sea water desalination at Gujarat Electricity Board's Sikka thermal power station.

Another milestone was developing speciality ion exchange resins to remove specific contaminants from ground water as well as waste water, for purification of drinking water as well as to treat waste water and recover valuable products for reuse.

We also began manufacturing and marketing of boiler and cooling water treatment chemicals in 1981, and in 1988 opened yet another chapter, with the manufacture of polymeric flocculants.

Soon we had the distinction of being one of few companies worldwide with the entire spectrum of technologies, products and services that we were able to use synergistically to provide total water management to our customers. Our solutions span the entire water cycle - from pretreatment, through process water treatment, waste water treatment and recycle, with point-of-use, packaged, pre-engineered and custom-built plants. We manufacture ion exchange and speciality resins, membranes, polyelectrolytes, boiler/cooling water & fireside chemicals and also speciality process chemicals for sugar and paper production, oil refining & mining, metallurgy and ceramics industries.

Ion Exchange started out serving the industrial sector. What was the rationale behind its entry into domestic water purification?

Industry was and still forms the core of our business. We have supplied more than 100,000 plants worldwide including over 1,000 major installations in the core sector such as thermal &

nuclear power stations, refineries, fertiliser and steel industries. Our bouquet of home water solutions was launched in 1986 with the economical but extremely effective point-of-use Zero B tap attachment. Our entry into the domestic sector with this drinking water purifier was rooted in the company's deep conviction that everyone has a right to safe drinking water. Zero B assured safe drinking water even to homes without electricity, at a price affordable by the masses.

From this initiative, which used patented resin technology, the USP of Ion Exchange - total water management - has over the years been successfully extended to the household sector with a complete range of innovative, value adding drinking water purifiers and water conditioners.



Demonstration of our first Zero B purifier in 1987

Moreover, falling groundwater levels due to greater demand for water result in increased salinity as well as increased contamination from fluoride, iron, nitrate and arsenic content. As the leader in water treatment, we felt it incumbent to develop home water solutions for brackish water treatment as well as for removal of fluoride, iron, nitrates and arsenic.

Today, unique to Zero B, is a product at every price point, to suit every pocket and every need of all categories of consumers, covering both household and institutional segments. Technologies include combinations of resin, activated carbon, UV and membrane. The range includes simple inexpensive devices for rural and semi-urban consumers as well as top-of-the-line purifiers based on advanced alternative technologies such as reverse osmosis and UV, and water conditioners such as softeners and iron removal units aimed at the high end of the market.

Widest range of RO water purifiers and softeners from Asia's premier water treatment company



What about the extension of business into the municipal and public health sectors?

Increasing pollution of surface and ground water has made quality of drinking water supplies to communities a paramount concern. Simultaneously, they are faced with increasingly severe water shortages.

Our treatment processes cover flocculation, sedimentation, filtration, disinfection, iron, fluoride, nitrate and arsenic removal, softening, decarbonisation, desalination and combinations of these processes. They also comprise sullage/sewage treatment and recycle, using both centralised and decentralised systems to comply with discharge regulations, conserve water and reduce pollution.



Drinking water treatment for a municipal corporation

We also undertake developmental and infrastructural type projects for drinking water supply schemes and distribution systems, sewage treatment & disposal, sea water intake and desalination, and solid waste management including waste to energy projects for the much needed integration between energy and the environment. We are thus a strong and solid partner for turnkey, EPC and BOO/T projects in government, public health engineering, municipalities, rural and urban infrastructure development and water supply & sewerage boards.

What was the thought process behind entering the rural market?

As our Founder Mr. G. S. Ranganathan has said "Rural India needs practical, intermediate technology...the corporate sector has a very great obligation to rural India and in fulfilling this, it will increase its own business and the country's wealth."

Rural India is home to 70 per cent of India's population. Sadly, most of India's 700 million rural population in more than 1,50,000 villages suffer severe water scarcity compounded by waterborne diseases caused by microbiological contamination. In addition, excessive levels of iron, arsenic, fluoride and nitrates in water are widespread in rural India, affecting the health of about 50 million in 17 states. Only 60 per cent of our population have access to safe drinking water and very few have basic sanitation facilities.

Our outreach to rural India began way back in 1989, with our participation in the Rajiv Gandhi National Drinking Water Mission for rural drinking water supply, with contracts for desalination plants for several village clusters in Rajasthan and Pondicherry.



Continuous sand filter for surface water treatment

Thereafter, through extensive R&D and field trials, Ion Exchange has been adapting its technologies to meet rural needs in terms of appropriateness, cost, operation and maintenance. Having tested the markets and established credibility & appropriateness of its solutions through demonstration projects undertaken with NGOs and PHEDs, Ion Exchange has successfully established its presence in almost every state, through linkages with NGOs, aid donor agencies, industries and philanthropic organisations with rural outreach programmes, as well as through PHEDs.

Our water solutions address rural needs at three levels - point-of-use, community and infrastructure. They range from low cost units for homes to community-based systems and infrastructural projects for disinfection, hard and brackish water treatment, treatment of water contaminated by fluoride, iron, arsenic and nitrates, sullage and sewage recycle systems. We also leverage our countrywide service company network for O&M and operator training, critical for project success and sustainability.



Arsenic removal hand pump attachment

Ion Exchange has significantly expanded its geographical footprint too. Could you map out for us the spread of its operations beyond India?

Believing that exports would compel us to enhance quality quickly to international standards, we made a determined thrust into the fiercely competitive international market. A strategic, sustained focus on exports has enabled Ion Exchange to significantly impact the global arena.



Years ago, in 1976, we commissioned the water treatment plant we supplied, through BHEL, to Sultain Ismail Power Station of the National Electricity Board in Malaysia. This was followed by export of plants to Russia, Africa, South East Asia and the Middle East in the 80s. In 1991,

we established the international division and started setting up overseas offices in South East Asia and East Africa. Continuous benchmarking with the best

was rewarded with a breakthrough in the Japanese market in 1995. We have executed projects on global tender basis to requirements of consultants as well as EPC contractors in SE Asia, Japan, Europe, USA, the Middle East and our neighbouring countries, with exports of plants, ion exchange resins and water treatment chemicals worldwide.

We currently have overseas operations in Indonesia, Malaysia, Thailand, Singapore, Sharjah, Oman, Bahrain, Kenya, Nigeria and Tanzania, USA, Canada and Bangladesh, with a fabrication facility at Hamriyah, UAE.

Today 20 per cent of our sales are from exports.

I would like to believe that successfully establishing ourselves in overseas markets helped to prove the credentials and capability of the Indian water treatment industry and demonstrate that the industry could compete successfully with the best companies worldwide in quality, performance and service standards.

Ion Exchange is known for providing the right solution to the customer rather than pushing products. How does the company go about selecting the most suitable treatment for the need?

Experience and knowledge are required to select the most cost-effective and technologically suitable solution for specific needs. This is the expertise we bring to customers through our 50 years of operations.



Inauguration of export oriented unit at Rabale, Maharashtra

We are configured to deliver customer-centric solutions, through industry-specific verticals set up to address needs of various industries in the heavy, medium and light segments. Industries are clubbed into a vertical such as the pharmaceutical and electronic sectors, based on similarity in quality of water required and the industry operating practices.

Our total solutions capability and thorough knowledge of our customers' processes and needs enable our verticals to offer solutions specific to requirements and provide packages customised for complete customer benefit. Our understanding of customers' operations also enables us to gauge evolving challenges and develop innovative solutions to meet these.

Today water has become big business, with a large number of entrants including MNCs and global companies. What are some of the major strengths and differentiators of Ion Exchange?

I would list the impressive countrywide infrastructure Ion Exchange has built up - five production facilities in four states including an export-oriented unit, regional and branch sales offices in most major cities, and a national network of dealers and stockists. This is backed by the extensive after sales service network through which we are able to ensure performance of all systems supplied with prompt and efficient 24 x 7 service. Globally too, we are well represented with operations in Thailand, Indonesia, Malaysia, Singapore, Africa, USA, the Middle East and Bangladesh, complemented by an extensive network of overseas offices.

Fifty years of operations have also given us an invaluable in-depth understanding of the markets and sectors that we serve - not just in India but also neighbouring countries and South East Asia.

A great strength is our large pool of knowledgeable, trained and experienced manpower. We have the widest range of technologies and to deliver these effectively we have people trained in all aspects of our technologies, to provide the right solutions for our customers' needs. And it is precisely because of this that our people are in such high demand and our company is, in a way, the training ground for other companies!

And as I have mentioned earlier, another key strength is our capability to provide tailor-made solutions to customer needs not just for water treatment but also for their specific processes, adding value wherever possible.



What are some of the challenges that the company has faced during the past 50 years?

Ion Exchange, no doubt, has gone through a learning curve and faced many challenges. Among these I would mention the meltdown of the Indian economy in 1991, and the economic crisis in South East Asia of 1996-97.

Another challenge was to enter the international market and meet expected standards. We chose to get into the most difficult Japanese market which helped us to upgrade products and quality systems, and this helped us to establish our global presence.

Again, we, being the leader and known for the capability and knowledge of our people, there was also continuous poaching and consequent attrition of manpower; on our part focus on high quality training and development ensures that our people pipeline does not dry up.

However, during our fifty years' journey we have remained focused on building up our capability by continually investing in new technology, research and development, people and training. Top priority always has been on putting the customer first. We have successfully used our vast repertoire of knowledge and experience to offer cost-effective, total solutions to every sector of society and broadened our geographical footprint to establish a strong and growing global presence.

Water has become a critical resource in India and globally. How is Ion Exchange positioned in this scenario?

Availability of fresh water will be a major constraint to our country's growth. An increasing population will require more food production and agriculture consumes 75-80 per cent of fresh water. Industrial growth will also need more water; industry currently uses 8 per cent of fresh water availability and this is likely to double. On top of this, 50 per cent of India's population will live in urban areas, requiring an increase in domestic supplies. All this will lead to an even greater pressure on fresh water resources. Increasing the availability of fresh water and conservation of water use will be two major drivers of the water industry in the next 50 years.

Of paramount importance is a holistic plan to manage our water resources sustainably, with equal weightage to augmentation of fresh water resources and conservation of water. Watershed development

Milestones

1964-1970

- Incorporated as 60 per cent subsidiary of Permutit, UK
- Resin production & equipment assembly starts
- First major contract - Chennai Petroleum Corporation Ltd. (CPCL)

1971-1980

- All India dealer network set up
- Recognised by Department of Science & Technology, DSIR
- Listed on Bombay Stock Exchange
- First company to introduce reverse osmosis concept in India

1981-1990

- Engineering & fabrication operations set up
- First Employee Trusts formed
- Industrial chemical production starts
- Ion Exchange became a wholly owned Indian company after Permutit divestment
- Manufacture of reverse osmosis membranes starts

1991-2000

- Started SE Asian operations
- First SWRO desalination plant in India at GEB, Sikka
- 100 per cent export-oriented unit (EOU) set up
- Consumer product manufacturing starts at Goa

2001-2014

- Joint venture on waste water & environment technologies
- Manufacturing set up in Hamriyah, UAE
- Operations set up in USA
- Joint ventures in South Africa and Thailand
- US FDA compliant pharma resin facility commissioned

and rainwater harvesting will increase seepage and storage of fresh water while recycle of water will conserve vast volumes of fresh water and reduce pollution. This must be combined with development of water-efficient techniques and processes that also reduce use of resources like energy, and thus the load on the environment. This puts great responsibility on Ion Exchange, as a leader, to contribute in shaping the water industry's response by providing the most innovative, cost-effective and sustainable solutions for water management. And we shall continue to channel all our strengths and efforts into doing this.



Effluent treatment plant at a steel complex





Zero discharge plant at a refinery

It has been our endeavour, right from the company's inception fifty years ago, to introduce state-of-the-art technologies for total water and environment management, to conserve our precious water resource by pioneering the concept of water recycle and to promote the use of alternate sources of water supply such as sea water and sewage. I see Ion Exchange playing a dominant role

particularly in bringing cost-effective, user-friendly solutions for waste water treatment and re-use, in introducing state-of-the-art, environment technologies that require less energy and use of less chemicals. Our R&D and technology divisions are working on the introduction of products that reduce chemical consumption and are more efficient in energy use.

As an industry we have a huge responsibility in ensuring that customers are always given the correct advice and the right solutions. Industry must create the standards to ensure that consumers get the right products and solutions for their needs. It is such integrity and honesty of approach that will help build up the industry as well as its reputation. I see Ion Exchange playing a leading role here too.

I would also like to increasingly apply our expertise and knowledge to grow our business outside India too and a goal will be to see 50 per cent of our business come from overseas markets.

Tell us something about your career journey in Ion Exchange.

I joined Ion Exchange way back in 1976 as a young trainee. Right then I realised how fortunate I was to work in a culture of employee empowerment as well as one which emphasised values of customer satisfaction, service and quality. Varied experience and exposure to different technologies and operations of the company - whether as a field engineer at site, branch and then regional manager,



With Mr. G S Ranganathan, our late Founder & Chairman Emeritus

or heading the company's export thrust, stood me in very good stead for my role as Dy. Managing Director in 1996, and then Managing Director. So that, in a nutshell, is my journey from trainee to my current position of Chairman and Managing Director. And I am very blessed indeed that from quite early on in my career I had the privilege of working very closely with such a great visionary and mentor as Mr. Ranganathan from whom I have learnt so very much.

What would your advice be to young water professionals who wish to make their mark in the industry?

The changes taking place in the outside world are opening up wide vistas in water and environment management, providing ample opportunity for sustained growth. The opportunities for the water industry are truly enormous. Focus on building up long term relationships with customers based on trust, by providing the right solutions and advice as an expert. The customer looks to you for the most suitable solution and you must always live up to this trust.

What do you personally find most satisfying about the corporate enterprise of Ion Exchange?

Ion Exchange is guided by powerful vision that Mr. Ranganathan, our Founder, had for the company, "To be the leader in our business which is so vital to people's lives and the environment".

Like all who work at Ion Exchange, I feel fortunate, proud and honoured that our business is, by its very nature, so essential to society and the environment. It is indeed a privilege to use technology to improve the quality of people's lives and the environment, to help manage our planet's precious resource of water judiciously and responsibly, to ensure its availability and protection for future generations.

For fifty years now, Ion Exchange has been healing the planet with sustainable environmental solutions. We must build upon our 50 years of progress and achievements, and carry forward our rich heritage, guided by this compelling vision that has, at its heart, sustainable development and service to society and the environment. In the coming years, as efforts to nurse the planet back to health intensify, Ion Exchange is poised to lead the water and environment industry and to partner our customers, to be change-makers for a better world and a better quality of life.



Engineering Contracts

Total Water System for JSW steel



The contract for JSW Steel's bar and rod mill #2 project at Toranagallu, Bellary includes a 4000 m³/h direct cooling water system (DCW) and a 3640 m³/h indirect cooling water system along with reverse osmosis plant.

Blow down water from the indirect cooling water system will be used for partial make up of DCW system along with fresh filter water. The blow down of the DCW system will be treated in a 55 m³/h reverse osmosis plant and the permeate water will be used as make up for the indirect cooling water system.



Ion Exchange was awarded a series of prestigious contracts in the power sector

Total Water Treatment for NTPC Gadawara

Ion Exchange won the contract for total water treatment plant for NTPC's 2 x 800 MW Gadawara thermal power station. The plant comprises:

- High rate solids contact clarifier, 3 x 2000 m³/h, producing clarified water for cooling water and other water circuits in the power plant
- High rate solids contact clarifier, 300 m³/h, followed by gravity filter which will provide feed to the 2 x 60 m³/h demineralisation plant
- Ultra filtration system followed by reverse osmosis and mixed bed
- Effluent treatment plant with lamella clarifier and coal slurry settling pond for liquid waste treatment

Our scope includes electromechanical, civil design and construction work.

Water Treatment for Singareni Thermal Power Project

Contract for total water treatment plant for the 2 x 600 MW Singareni thermal power project in Andhra Pradesh in consortium partnership with McNally Bharat, Kolkata. Our scope includes pretreatment, demineralisation, side stream filtration and cooling water treatment. The contract includes five cooling water supply pumps, each of 36,000 m³/h capacity.

Total Water Treatment for 2 x 250 MW Barauni Thermal Power Station

We were awarded the water treatment package consisting of pretreatment - 2 x 1500 m³/h high rate solids contact clarifier, 2 x 278 m³/h rapid gravity filter, 3 x 60 m³/h demineraliser (with strong acid cation, degasser tower, strong base anion, mixed bed units), ultra filtration, effluent treatment plant - 50 m³/h lamella clarifier, cooling water treatment comprising sulphuric acid, scale inhibitor, corrosion inhibitor, biocide & bio-dispersant dosing system, and 20 m³/day sewage treatment with conventional aeration system.

Condensate Polishing Units

Six condensate polishing units, 3 x 650 m³/h for each unit of West Bengal Power Development Corporation's 2 x 500 MW Sagardighi super thermal power project through BHEL, Kolkata.

From L&T Vadodara for Rajasthan Rajya Vidyut Utpadan Nigam's Chhabra power plant - 2 x 655 m³/h condensate polishing units for each of the two 660 MW units along with pre-filter and external regeneration systems.



SWRO for Bunge India



Demonstrating their confidence in Ion Exchange, Bunge India Pvt. Ltd., Gandhidham, Gujarat awarded us another order for a 7 m³/h capacity sea water reverse osmosis plant; this is an extension to the existing water and waste water management plant—raw water treatment, effluent treatment and recycle, and sludge management, supplied by us earlier.

United Breweries

Order for a water treatment plant comprising 50 m³/h multi grade filter and activated carbon filter, 30 m³/h softener and 20 m³/h reverse osmosis from United Breweries Ltd., Bengaluru.



The Complete Package for Maruti Suzuki

This contract from Maruti Suzuki India Ltd., Gurgaon is for a 20 m³/h automated centralised water treatment plant, 400 l/h reverse osmosis system, 34,500 l/day new generation packaged sewage treatment plant, and car wash effluent treatment and recycle with our EcoServe 2000 l/h unit.

Recycle System for Max Car Care



Our EcoServe 500 vehicle wash recycle system was installed at Max Car Care Engineering, Kerala. This is saving the client the expense on a water tanker daily.

Sewage Treatment for Gujarat Urban Development Corporation Projects

Ion Exchange was the choice of Gujarat Urban Development Corporation, for sewage treatment at a number of its projects. We were awarded the contracts for design, build and commissioning, with operation and maintenance, of sewage treatment plants based on conventional activated sludge process.

At District Mehsana

Kadi Underground Drainage Project, Phase II - 16 MLD sewage treatment plant; our scope includes construction of house connection chamber, cleaning of existing sewer collecting system of Gamtal and repairing of existing oxidation pond at Kadi.

Nagalpur & Kasba Projects - 23.18 MLD sewage treatment plant at Nagalpur and 18.46 MLD sewage treatment plant at Kasba, construction of staff quarters and compound wall.

Visinagar Project - 22.42 MLD sewage treatment plant including construction of office building, laboratory and wire fencing.

At District Bhavnagar

Mahuva Project - 21.72 MLD sewage treatment plant, construction of staff quarters, cleaning of existing sewer line, replacing blockage line and jetting machinery.



Commissioned

For Mangalore Chemicals and Fertilisers



Ultra filtration plant

After a comprehensive study of all the waste water streams generated at Mangalore Chemicals and Fertilisers, our customer for many decades, we offered the following treatment systems:

- Membrane bio-reactor, 270 m³/day to treat the sewage generated in the factory.
- Lampak unit, 300 m³/day, to treat the filter backwash and storm water.
- High rate solids contact clarifier, ultra filtration and reverse osmosis systems, capacity 600 m³/day, to treat the cooling tower blow down and demineraliser waste water.

- Resin based oil coalescer system, capacity 150 m³/day, to treat the effluent generated from the compressor unit. This stream is contaminated with emulsified oil of upto 100 ppm.



Oil coalescer

The operation of these treatment systems are also monitored by our supervisors. The customer receives around 1,200 m³/day of fresh water which is reused as cooling water make up enabling a reduction in fresh water supplies from the municipal corporation.



High rate solids contact clarifier



Multi effect evaporator

For Indian Synthetic Rubber

Contract for 3 MLD effluent treatment plant with zero liquid discharge system from Toyo Engineering India Ltd., Mumbai for the petrochemical-styrene butadiene rubber project of Indian Synthetic Rubber Ltd. (ISRL), Panipat, Punjab. ISRL is a joint venture of Indian Oil Corporation, Marubeni Corporation, Japan and TSRC Corporation, South Korea. This is the first zero liquid discharge project in the downstream petrochemical segment, further strengthening our credentials to treat and recycle complex liquid waste.



Activated carbon filters

Nava Bharat Ventures



Nava Bharat Ventures Ltd., Khammam where we have been doing cooling water management for more than fifteen years, awarded us the recycle of cooling tower blowdown, capacity 50 m³/h. Treatment comprises high rate solids contact clarifier for silica removal followed by ultra filtration and reverse osmosis to recover 41 m³/h as fresh water.

At Sundaram Fasteners

At Sundaram Fasteners facility for manufacture of fasteners in Pondicherry, our 10 m³/h system (high rate solids contact clarifier, multigrade filter, ultra filtration and reverse osmosis) treats and recycles effluent from the phosphating unit, with 85 per cent water recovery.



For Grasim

For Grasim's power plant at the Polyfibre Division, Harihar, Karnataka, demineralisation plant of capacity 2 x 100 m³/h; the treatment scheme was designed to reduce the overall chemical consumption.



For BPCL

Fluidised media reactor, 150 m³/day followed by multigrade and activated carbon filters, supplied to Bharat Petroleum Corporation Ltd. (BPCL), Kochi treats the sewage generated in the Central Industrial Security Force (CISF) township of BPCL. The treated water is used for gardening.



At Chettinad Cement

Ultra filtration, reverse osmosis and mixed bed plants, capacity 30 m³/h, supplied for the 3 x 15 MW power plant to be put up by Chettinad Cement at Ariyalur near Trichy. Avant Garde, Chennai was the client's consultant.

Meeting Rural Needs

We made significant inroads into the rural hinterland with a number of orders –

Fifty-four units of fluoride removal hand pump attachments for PHED, Dewas, Madhya Pradesh.

Three units of continuous sand filters each from PHED, Haryana and PHED, Punjab.

Zero B Suraksha Plus drinking water purifier supplied to Fullerton India Credit Company for distribution through their 19 centres in Gujarat and 10 centres in Maharashtra.

An 800 l/h reverse osmosis system was supplied to Vana Gram Panchayat, Vana, Gujarat.

Hundred units of fluoride removal hand pump attachments for PHED, Jabalpur, Madhya Pradesh.

For PHED, Chhattisgarh 175 units of iron removal hand pump attachments.

A fluoride removal tubewell attachment, of 1 m³/h, was installed as a pilot plant in Jhabua, Madhya Pradesh. It uses our newly developed fluoride removal resin.



Under our franchisee scheme, water treatment plants were installed at 75 Brigade in Delhi cantonment and 5 Raj Rifles, Udaipur, Rajasthan; each supplies water to around 400 people.

Sixty-six units of iron removal hand pump attachment units supplied to PHED, Umaria, Madhya Pradesh.



Ms. Hutoxi Batliwala, Associate Vice President, Rural Marketing was presented the '25 Most Talented Rural Marketing Professionals of India' award at the Rural marketing Forum and Awards in Mumbai, which was hosted by the World Brand Congress and CMO Council.





GCC Countries

UAE

SWIFT Plus demineraliser, 5 m³/h, along with a fully automatic filtration system, to Global Pharma, Dubai.

For Archirodon Constructions, Sarb Island, Abu Dhabi a 350 m³/day fully containerised sea water reverse osmosis plant with energy recovery turbine, and a 2 x 125 m³/day fluidised



media reactor for sewage treatment, meeting stringent parameters for treated water marine discharge and also designed for nutrient removal.

Successfully commissioned 150 m³/day membrane bio-reactor based sewage treatment plant for Emvess General Trading LLC at Mina Al Arab Project, UAE.



A breakthrough order from the Arcelor Mittal Group for total water management at the 600,000 tonnes/year seamless pipe factory of Arcelor Mittal Tubular Products, Jubail. Our reputation in India as well as internationally helped win this contract against competition from several large global players.



We successfully commissioned a 2 x 550 m³/day brackish water reverse osmosis plant for this new project of JK Cements, Fujairah. The RO skid and cleaning system are containerised with an external

common pretreatment plant. The contract includes operation and maintenance of the plant.

Contract for design and supply of waste water treatment plant from Gulf Fluor LLC, for their fluorine complex project at ICAD-2 plant, Abu Dhabi. The plant is designed for zero liquid discharge, 24 hours' operation in automatic mode, for 23.2 m³/h flow rate of hazardous waste from four different streams including HF and H₂SO₄.



Membrane bio-reactor (MBR) based sewage treatment plants, supplied through Discovery General Contracting, the main contractor for National Drilling Company (NDC), for two of their accommodation facilities in the Western Region of Abu Dhabi. Each plant consists of an MBR aeration tank with flat sheet membranes. The equalisation tank along with pumps, blowers, suction pumps and cleaning systems will be placed inside a 40 foot container. Hence the plant will entail minimum site work and can be commissioned in a very short period.

Sultanate of Oman

Under execution for Simplex Contracting are two membrane bio-reactor plants, 150 m³/day and 200 m³/day. We also received an additional order for carbon based odour control units. The blowers, suction pumps and cleaning systems are skid mounted, thus making for minimum site work and quick commissioning.

Kuwait

Successful commissioning of several contracts and many more in the pipeline are cementing our position in waste water treatment, in Kuwait.

Fluidised media reactor, 250 m³/day sewage treatment plant for the main support emergency & operation centre, to Oil Sector Services Company (a subsidiary of Kuwait Petroleum Corporation). Al Jazeera, Kuwait is the consultant for this project. The plant will be installed underground.

We have successfully commissioned a 500 m³/day fluidised media reactor for Ministry of Defence in Kuwait, at the Maghaveer Camp Project.

Saudi Arabia



Arab Steel, with 1.4 MT/year billet producing capacity through the electric arc furnace (EAF) route, is a part of Al Tuwairqi Group, a leading private integrated steel producer in the GCC Region and Kingdom of Saudi Arabia. The group is engaged in the steel and power sectors.

We received two contracts from this client - the first is for a 50 m³/h reverse osmosis plant to treat borewell water as feed to the cooling tower as make up water; a 100 m³/h reverse osmosis (RO) plant for recycle and reuse of cooling tower blowdown water and RO reject water RO plant; and augmentation of existing 50 m³/h RO plant to treat borewell water as feed to the cooling tower as make up water.

The second contract was for two-year supply, treatment and monitoring of cooling water chemicals, with borewell and reverse osmosis make up, for the complex cooling systems of the billet production plant. Treatment has been successfully implemented for the past six months as per guaranteed parameters, to the client's complete satisfaction.

Africa

Membrane bio-reactor based sewage treatment plant, 200 m³/day, with flat sheet membranes for a new project, Radisson Blue Hotel, in Kenya. Skid mounted blowers, suction pumps and cleaning systems will minimise site work for quick erection and commissioning.

Asian & Pacific Regions

From PT Tripatra Engineering for the Senoro gas project being put up jointly by PT Pertamina and PT Medco, 2 x 9.5 m³/h of sea water reverse osmosis plant and 2 x 3.18 m³/h demineraliser. This is our first contract for a state oil company in Indonesia.

A 26 m³/h demineraliser for Maju Integrated Sdn Bhd, Malaysia EPC contractor for their power plant in industrial estate.

2 x 50 m³/h reverse osmosis units for S. Alam Refined Sugar Industries, Chittagong, Bangladesh. This modification project is for both process water application as well as boiler feed water with <1 conductivity.

Turnkey contract for 85 m³/h sewage & waste water treatment plant, including civil work, for Kumudini Medical College and Hospital Complex, Mirzapore, Bangladesh. Besides the medical college and hospital, this complex also houses hostels and canteens.

From Unilever Pakistan, against international and local competition, for their Rahim Yar Khan factory, in Pakistan 5 m³/h ultra filtration,



5 m³/h reverse osmosis and 16 m³/h ultra filtration-reverse osmosis units for effluent recycle - these were executed with strict adherence to quality standards of Unilever and in just nine weeks.

INDION® Laboratory Water Maker

Pathological, clinical and bio-medical laboratories require distilled or equivalent quality water that consistently meets stringent purified water standards; analysers are traditionally fed by water stills or bottled water.

The 10 l/h INDION Laboratory Water Maker uses a combination of purification technologies to produce continuous water for analysers and other general laboratory uses; the cost-effective, robust, easy to install & effortless operating system makes it ideal for laboratories.



- Compact, counter top model ensures optimal use of space
- User-friendly operation requiring little maintenance
- Economical system allows substantial cost savings
- Provides an efficient alternative to buying and storing bottled water

ZERO B® eco SMART



The eco Smart reverse osmosis drinking water purifier comes with many special features that makes it the perfect choice.

- Upto 60 per cent pure water recovery
- Three times higher pure water recovery than with conventional RO purifiers
- Reduces water wastage substantially
- Prevents germ build-up by automatic cleaning of the purifier
- Automatic power flush enhances membrane life
- Sanitizes water storage tank 24 x 7 to prevent germ build-up
- Interactive panel that displays water quantity

The purifier is available in capacities of 50 / 100 / 150 l/h

ZERO B® UV GRANDE

The world's first UV water purifier with ESS technology, the UV Grande has been launched in Mumbai.



- Six stage UV water purification system paralyses diseases causing bacteria and viruses by disrupting genetic cells
- Hexapure technology purification process ensures pure and safe water
- ESS technology sanitises the tank water & prevents germ build-up 24 x 7 by ruling out re-contamination and slime build-up of bacterial growth
- Detachable storage tank ensures availability of four litres of water ready for use always, with the extra advantage of easy cleaning of the tank
- Wall mounted model saves counter space
- Intelligent Auto Fill ensures that the purifier never runs out of purified drinking water
- Energy stimulating water for a healthy and energetic life

ZERO B® Suraksha Plus Pro



This storage type water purifier uses iodinated resin technology to permanently kill bacteria & viruses faster than any other purification process, and bacteriostatic activated carbon to remove excess iodine, chlorine, organics, colour and foul taste from the water. Physical impurities are removed and turbidity reduced by 70 per cent. It produces 3,000 litres of pure drinking water. The transparent tank made from food grade material allows the water level in the purifier to be seen.

www.zerobonline.com

Our Zero B website has a new look with improved navigation and much more product information. It features a powerful and easy way to sift through our product portfolio, to better understand our wide range of products and services.

The "Add to Cart" feature has been integrated with a payment gateway, transforming the website into an e-commerce one.



On Display



At the pharma meet, organised in Mumbai, we showcased our US FDA compliant resin manufacturing facility at Ankleshwar, high purity water generation & distribution systems

and zero liquid discharge solutions for the pharmaceutical industry.



Our total water and environment management solutions for the industrial and residential sectors were exhibited at Aquatech Amsterdam.



Our spectrum of solutions offered to the chemical and allied industries were on display at Chemtech South, Chennai.

Our total water and environment capabilities - water treatment, municipal sewage and industrial effluent treatment, zero liquid discharge and waste to energy solutions, along with comprehensive service support, were displayed at IFAT, Mumbai.



CPhI, Mumbai proved an excellent platform to exhibit our resins for water and non-water applications in the pharma industry. We also showcased our laboratory water maker unit, high purity water generation and distribution systems and zero liquid discharge solutions.



The IEI Cricket Premiere League 2014 Season X, was held at MET Ground, Mumbai. Matches were played between eight teams during the knock-out sessions, and the final match was between Rabale - 2 and, Vashi - A with Vashi - A emerging the winner.



Solutions for the sugar industry - condensate recovery, cane sugar remelt, process chemicals, water & waste water treatment and zero liquid discharge, were showcased at the exhibition of the South Indian Sugarcane & Sugar Technologists' Association (SISSTA), Chennai.



Mission - Go Green

Our campaign to spread the eco-word continued through a series of internal and external communication - e-cards, e-tips, desktop screens, posters and message boards. The thrust was on promoting awareness of environmental issues and on practical "green living" tips - on conservation of water and energy, opportunities to reduce, recycle and re-use, and paper-less initiatives.



Valentine's Day

A message board that overflowed with expressions of gratitude for the bounties of nature.

Diwali

Eco-friendly gift wrapping ideas for a bright and green celebration.



Earth Day

Poster highlighting the urgent need to control the rampant pollution of our planet.



World Water Day

The emphasis was on protecting and conserving our precious water resource.



Environment Day

Plant-a-tree programmes at our various locations were showcased.



E-mailer Series

Fortnightly e-mailers on environmentally responsible "how-tos".



Water Digest Water Awards 2013-14

Ion Exchange was the proud recipient of several Water Awards, presented by Water Digest in conjunction with UNESCO and PHD Chambers.

- Best Water Company
- Best Water Treatment Project - Industrial
- Best Complete Water Management Solutions Provider - Domestic & Institutional

L to R: Mr. Dheeraj Kohli, Mr. Ashok Olla, Mr. Manish Gandhi and Mr. Rajesh Sharma with Mr. Pankaj Jain, Secretary, Ministry of Drinking Water & Sanitation, Govt. of India

Extending a Helping Hand

Our Ion Foundation implemented a number of initiatives in the areas of education, health and hygiene.



Ion Foundation, with a team of Ion Exchange Mumbai employees, participated in the Dream Run for a cause, supporting 'Project Muktangan' at the Standard Chartered Mumbai Marathon. Project Muktangan is an initiative of Paragon Charitable Trust which imparts education to the underprivileged.



Eight units of eco⁺-Puriline 4L were installed in schools in Uttar Pradesh & Madhya Pradesh. These units provide safe drinking water to around 3,350 students.



Educational support to 72 children at Kid's Centre, Kolkata.



Sixty students of the Chetna Learning Centre, Mumbai celebrated Diwali at the get-together organised by NGO 'Salaam Mumbai'.



At Chitkul Primary School, Andhra Pradesh Ion Foundation provided educational assistance and a gardener, and constructed an overhead water tank.

Ion Foundation extended its support to SOCARE (Society's Care for the Indigent), Bengaluru by providing educational assistance - school fees, tuitions, books and stationery, group health insurance and an INDRO 401 drinking water treatment plant for their new hostel (above).



Continuing our support to Timbaktu Collective Prakruti Badi, Anantpur, Andhra Pradesh we have replaced membranes in the INDRO 405 plant (supplied in December 2011), provided health care (medical expenses, doctor's fees, personal care items) and educational assistance through skill training - in arts and crafts.



Ion Foundation identified three schools in Chennai for installation of six units of eco-Puriline 4L through World Vision, Kodambakkam, Chennai. Approximately 3,000 students are provided with safe drinking water.



Ion Foundation is supporting Bethesda Life Centre, Goa at three of their projects by providing educational assistance - school bags, notebooks, stationery, medicines (tonics, iron, vitamins, de-worming medicine, personal care items) and a doctor's monthly visit.



With the focus on improving sanitation facilities, Ion Foundation constructed a new ladies toilet and reconstructed a gents toilet at PNP Madhyamik Shala, Pashti, Mhasla Block, Raigad Dist. through Society to Heal, Aid, Restore, Educate. (SHARE)



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