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R&D steps for new membranes

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R&D steps for new membranes



Rank: 9
Segment: BioSupplier-Distributor
Organization: Permionics Membranes

MD: Mr Satyajai Mayor
Bioscience Revenue: Rs 25 crore

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Permionics is the first and only company in India to indigenously manufacture Reverse-Osmosis (RO), Ultra-Filtration (UF), and Nano-Filtration (NF) membranes for various process specific applications. It custom-designs and engineers complete membrane-based systems from pilot to commercial scale to suit the specific requirements of petrochemical, biotech, biochemical, pharmaceutical, food & beverage, dairy, chemical and other sectors.

Permionics is also a pioneer in manufacturing of Reverse-Osmosis, Ultra-Filtration, Nano-Filtration Membranes and Technology for the application of Water Treatment, Effluent Recycling, Sewage Recycling and Special Process Applications. Today, Permionics has the most extensive range of membranes to suit any process parameters with having more than 2500 installations since last 30 years in India, the UK, Syria, Jordan, Ethiopia, Kuwait, Vietnam, Pakistan and Dubai. Permionics is exploring R&D initiatives for developing new membranes as well as applications for solvent recovery, chemical and biochemical processes, and water and waste segments.

Its key strategies includes integration of membrane technology in the upstream of the processes to foster product recovery and reuse, which finally reduces the load on the downstream effluent. Permionics had, since early 1980s, installed membrane systems for product recovery from MLs and purification of solvents. This made it possible to constantly develop and install applications for the biotech and pharmaceutical sectors as well as the main stream biotech applications such as fermentation broth clarification, concentration.

The wide range of membranes with the various cut offs is unique and helps the company to handle wide types of applications for MF, UF, NF and RO processes. The company witnessed the development of new membranes during the year. It also expanded product recovery areas, both for biotech, and pharma. Better facilities for characterization of existing as well as upcoming membranes were developed during the year.

Permionics was conceived and pioneered by Mr S P Mayor, a hydraulic engineer from Imperial College, London, with a bachelor's degree from Oxford University. A 5 years' experience in building hydroelectric power stations for The English Electric Company led Mr Mayor towards developing a passionate interest in water - its availability and conservation - and thereby a concern about the rapid desecration and depletion of waterresources.

The progressive demonstration of cellulose acetate membranes for desalination of sea water by Dr S Sourirajan (University of Ottawa) synergized with Mr Mayor's ideology and evolved a quest in him to develop the Cellulose Acetate Reverse Osmosis membrane indigenously.