REVERSE OSMOSIS – THE STATE OF THE ART OF WATER TREATMENT

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ABSTRACT

Water scarcity is one of the most serious global challenges of our time. Desalination and water reuse are effective and reliable means to provide new water resources. Among the many methods available to treat water, reverse osmosis has widely demonstrated superior reliability and cost-effectiveness at removing dissolved species such as salts and trace contaminants. This paper reviews the development and state of the art of reverse osmosis for industrial water treatment, wastewater treatment and drinking water production. Technological advances that have improved process performance, reliability and reduced cost are reviewed, currently-available components and methods are described, and the prospects for future advances are considered.