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World Membrane Separation Technologies

Industry Study with Forecasts for 2017 & 2022

Study #3006 | May 2013 | \$6300 | 499 pages



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Economic recovery from a global recession in 2009, coupled with rising environmental regulations and standards in many parts of the world with high population growth, will spur gains.

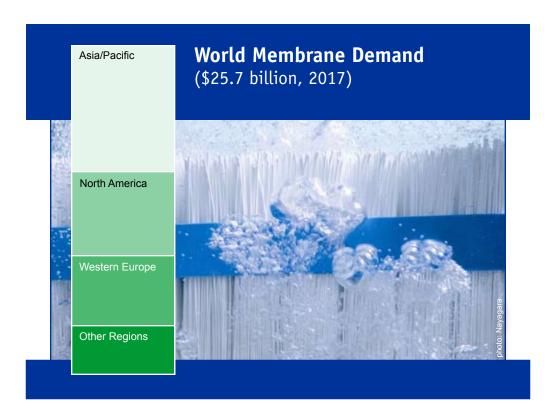
Global demand to jump over 9% yearly thru 2017

Global demand for membranes is projected to increase a healthy 9.2 percent yearly to \$25.7 billion in 2017. Ongoing economic improvement in several key geographic markets through 2017 will boost gains as the global recession of 2009 and subsequent slow recovery restrained manufacturing activity and capital investments through 2012. Rising environmental standards and regulations in many parts of the world and high population growth, particularly in waterstressed areas, will further drive investment in membrane-based water and wastewater treatment systems.

The countries expected to see the fastest growth include the BRIC (Brazil, Russia, India, and China) countries and others with large, developing industrial bases and stressed local water resources. Combined, the US and China, the two largest national markets for membranes in 2012, are expected to account for 43 percent of all market growth between 2012 and 2017.

China to be fastest growing national market

By 2012, the Asia/Pacific region had surpassed North America to become the largest regional market, with 36 percent of global membrane sales. This region is led by the rapidly developing Chinese market, which represented 15 percent of global demand in 2012 and is projected to post the fastest growth rate through the forecast period. North America accounted for 27 percent of membrane sales worldwide in 2012. Demand growth in North America is expected to



accelerate through 2017 from the more modest gains of the 2007-2012 period. Advances will be aided by the ongoing development of improved membranes to accommodate newer water quality regulations, the use of low-quality water in water-stressed regions, and rising interest in the more efficient use of water. In developing countries, gains will be based on the continued growth of water-intensive industries, and rising investment in modernizing water and waste infrastructure, particularly in areas that need to tap brackish or otherwise poor quality water resources.

Water treatment, drug & medical to be key markets

Treatment of seawater and brackish water sources is a key use for membranes in certain regions. For instance,

much of the Middle East, North Africa, and the Caribbean have invested in membrane-based systems to ensure a sufficient supply of water for drinking, agriculture, and industry use. Historically, thermal distillation plants were more common, but even oil-rich nations are switching to more efficient reverse osmosis and other membrane-based desalination technologies.

Water treatment, the largest market for membranes, will also benefit from expansions or upgrades of water treatment infrastructures and a projected rebound in manufacturing activity in key geographic markets. However, the most rapid growth will emerge in the pharmaceutical and medical market, and other smaller markets such as chemical processing and environmental applications.

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Industry Study with Forecasts for 2017 & 2022



Sample Text, Table & Chart

TABLE VI-10

INDIA: MEMBRANE DEMAND BY TYPE (million dollars)

Item

2002 2007 2012 2017 2022

Manufacturing Value Added (bil 2011\$) \$ membrane/000\$ MVA

India Membrane Demand Microfiltration Reverse Osmosis Ultrafiltration Other

% India Asia/Pacific Membrane Demand SAMPLE TABLE

ASIA/PACIFIC

India: Membrane Demand by Type

Demand per year to \$\footnote{y} world over the particularly \$\footnote{y} beverages, plerations in gradients and the properties of the pr

SAMPLE TEXT expected to grow rth fastest growth overall manufacting industries suc als, will propel ga red to the 2007-2 acement sales will

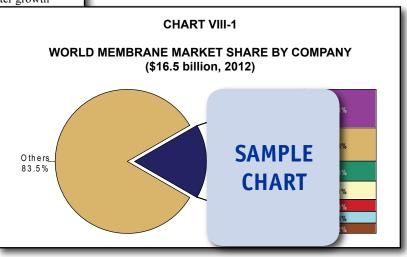
by the installation of a rising number of membrane-based general terms, advances will be driven by ongoing efforts to improve and extend the country's water and wastewater infrastructure, which is inefficient and incomplete. Many of these systems will involve the use of membranes since the country has insufficient fresh water resources and increasingly needs to tap into lower quality water supplies, including seawater, to accommodate the projected population growth and increasing industrialization. However, unlike many areas in which regulatory requirements are driving more widespread membrane use, India's drinking water quality standards are primarily voluntary. Further gains will also be restrained to a certain degree by the difficulty in financing projects, meaning that many installations that are announced are not completed.

In 2012, microfiltration membranes accounted for the largest share of Indian membrane demand, with 35 percent of sales. However, reverse osmosis and ultrafiltration membranes -- which accounted for 21 and 19 percent of sales, respectively -- are forecast to achieve faster growth

over the forecast period. This trend will largely be aided by t investment in desalination technology to treat very low-qual brackish water, or seawater for use in producing municipal p or in a variety of industrial applications.

Membrane-based desalination systems are the most wid technology because of lower capital and energy costs compa

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Industry Study with Forecasts for 2017 & 2022



Sample Profile, Table & Forecast

TABLE VI-11

INDIA: MEMBRANE DEMAND BY MARKET (million dollars)

Item

2002 2007 2012 2017 2022

Water Use (bil cubic meters) \$ membrane/000 cubic m water use

India Membrane Demand
Water Treatment
Wastewater Treatment
Food & Beverage Processing
Pharmaceutical & Medical
Other

SAMPLE TABLE

COMPANY PROFILES

Vontron Technology Company Limited

Room 1108, T1, Xihuan Guangchang No. 1 Xizhimenwai Street

Xicheng Distric' China 86-10-5830-18

http://www.voi

Annual Sales: Employment:

SAMPLE PROFILE

Key Products:

Vontron Technology specializes in the design, manufacture, and sale of reverse osmosis (RO) membranes sold under the VONTRON brand name for use in potable water, seawater desalination, sewage treatment, power generation, electronics, pharmaceutical, beverage, and other markets. The Company is privately held.

VONTRON RO membranes include general purpose, fouling resistant, seawater desalination, oxidation resistant, and residential types. For example, VONTRON general purpose RO membranes include the LP series. VONTRON LP membranes feature high permeated flow and enhanced desalination performance, among other benefits. These membranes are used in brackish water desalination processes, as well as the preparation of high purity water for the electronics and electrical power sectors. Other RO membranes in the VONTRON line include the ULP, XLP, SW, FR, and HOR series.

Vontron Technology manufactures RO membranes at facilities in Guiyang and Beijing, China. The Company also maintains sales and service centers in such major Chinese cities as Shanghai, Guangzhou,

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"Additionally, membrane demand will benefit from rising interest in water reuse to protect existing water supplies that are already stressed. For instance, one goal of the government's Jawaharlal Nehru National Urban Renewal Mission is to promote the recycling of at least 25 percent of water for use in applications such as construction, cooling towers, irrigation, and toilet flushing."

--Section VI, pq. 235

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OTHER STUDIES

World Consumer Water Treatment Systems

World Geosynthetics

Water Treatment Equipment

Demand for water treatment equipment in the US is forecast to grow 5.9 percent per year to \$13.0 billion in 2017. The resource extraction market will post the most rapid gains, followed by the recovering commercial and residential markets. Disinfection and membrane equipment will be the fastest growing product segments. This study analyzes the \$9.8 billion US market for water treatment equipment, with forecasts for 2017 and 2022 by product, market, and application. The study also evaluates company market share and profiles industry players.

#3052 July 2013 \$5100

Consumer Water & Air Treatment Systems

US demand for consumer water and air treatment systems will rise 6.9 percent yearly to \$2.3 billion in 2017. Whole-house air treatment systems will be the fastest growing segment, while point-of-use water treatment systems will remain the largest. Water filters and membranes will remain the largest consumables category. This study analyzes the \$1.6 billion US consumer market for water and air treatment systems, with forecasts for 2017 and 2022 by technology, product, and region. The study also evaluates company market share and profiles industry players.

#3032 \$5300

World Water Disinfection Products

World demand for water disinfection products will rise 5.5 percent annually to \$7.7 billion in 2016. China and the Asia/Pacific and Africa/Mideast regions will be the fastest growing markets. A shift in the product mix from elemental chlorine towards higher value chemicals and advanced technologies will continue. This study analyzes the \$5.9 billion world water disinfection product industry, with forecasts for 2016 and 2021 by product, market, world region and for 16 countries. The study also evaluates company market share and profiles industry participants.

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