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MARKET REPORT:
Membrane Bioreactor Technology

Membrane bioreactor (MBR) technology is finally beginning to show some of its initial market promise and is attracting the attention of municipal and industrial facilities in search of effective wastewater recycling processes.

These are the findings of Frost & Sullivan’s new study, *The European Market for Membrane Bioreactors*.

Customer uptake of membrane bioreactors has been slow. Many potential operators were deterred by perceived drawbacks of this technology such as its complex and small-scale nature, high costs and operator skill requirements, among others.

Nevertheless, the possible applications of this technology are numerous, and can be found in both municipal and industrial facilities. Among other applications, landfill leachate is especially promising; reference plants exist in Germany, France and Holland. Anticipated regulations along with emerging and existing environmental policies is spurring the maritime industry to strongly consider MBR technology as a way of achieving zero untreated liquid discharge.

Companies looking to succeed in this market must strive to understand the needs of each industrial end user, the workings of the particular industrial sector, as well as the demands that the end users’ effluents will place on the equipment. Furthermore, building a close working relationship with the customer – for example by offering guarantees on membrane lifespans – is emerging as a key competitive factor.

Zenon and Kubota are the most important MBR participants – the main technologies in this market are largely based around Zenon’s hollow fibre configuration and Kubota’s submerged flat sheet technology. Companies such as Norit X-flow and Wehrle Werk also now offer their own proprietary membranes for use in bioreactors.

Zenon is the most ‘complete’ company active in the market, acting as a membrane supplier, original equipment manufacturer (OEM) and turnkey plant supplier. Suppliers such as Kubota and Norit X-Flow benefit from being a standard specification in the membrane component of the system.

Strict European regulations such as the Urban Wastewater Treatment Directive, which has a 2005 deadline, are expected to spur continued investment in wastewater treatment works by small- and mid-sized municipalities.

Further growth will arise mainly from the replacement and upgrading of old equipment. This is likely to be small compared with growth in the industrial wastewater market.

Although currently at the development to growth stage of its lifecycle, growing acceptance of MBR technology, escalating interest in water reuse and recycling, and increased demand for advanced wastewater treatment solutions and systems assures MBRS of a bright future, says Frost & Sullivan.

Filtiration Industry Analyst

ECONOMIC REVIEW

Severe acute respiratory syndrome (SARS) has taken its toll on Japanese companies operating in East Asia, according to a Japan External Trade Organization (JETRO) survey conducted in June.

61.2% of survey respondents felt that SARS has had a negative impact on their businesses, while 4.4% say they have experienced a positive impact and 34.4% have seen no change.

Firms in China (78.4%), Hong Kong (75.8%), Singapore (74.9%) and Taiwan (74.2%) have been most affected by SARS. The least affected companies appear to be in Thailand (29.5%) and Indonesia (27.0%).

66.6% of companies reported no progress in business talks, while 33.1% of respondents said talks concerning new business had been suspended and 32.2% of those surveyed are seeing decreased sales or profits.

Of the companies reporting a positive impact from SARS, 54.9% are experiencing increased sales or profits, 50.7% are seeing increased inquiries or orders, while 11.3% report “increased new clients.” JETRO suggests that these results may reflect the shifting of procurements from China to the ASEAN region.

Measures taken by companies to cope with SARS have included “strengthened promotion and sales” (14.2%), “increased stocking of parts, etc.” (23.9%), “use of alternative manufacturing bases” (2.6%) and “ procurements from other locations” (1.2%).

Asked about sales performance in May, 28.3% of those surveyed reported a decline from the previous month, while 6.6% saw an increase.

If SARS were to continue another two to three months, 37.2% of those surveyed would expect to see a decrease in sales, while 5.1% would expect an increase. Among firms planning future investments in China, 59.0% said they are proceeding according to schedule, 37.6% have postponed plans and 2.7% have terminated plans.