



- Press information -

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Membrane technology for drinking water and wastewater

**- Innovative technologies at the 12th European
Water, Sewage and Solid Waste Symposium -**

"New approaches in water, wastewater and solid waste" is the motto of the 12th European Water, Sewage and Solid Waste Symposium which will take place from 13 to 15 May 2002 in Munich on the occasion of IFAT. New approaches are only another way of reaching a classical target: To ensure a high quality of the product water while efficiently using resources and protecting the environment.

Membrane technology promises to meet all these requirements. It is thus topic of the first session which will open on 13 May 2002 the water and wastewater part of the Symposium, organised by the European Water Association (EWA) in co-operation with the German Association for Water, Wastewater and Waste (ATV-DVWK). Membrane filtration is already used for some time, both in the drinking water and the wastewater sector. It allows the elimination of problematic substances like bacteria and viruses, improves the degradation of organic matters and thus the quality of the treated wastewater respectively the drinking water.



A further expansion of this technique is however hindered by the costs on one hand (especially energy costs) and limited experiences from the operation on the other side. The lectures at the symposium will present know-how and insights concerning these two problems.

Membrane Technologies and Alternative Water Systems

Membrane technologies play an important role with the so-called Alternative Water Systems. These are used where the centralised system of drinking water supply and wastewater disposal are no longer technologically and economically feasible. Prof. Dr. Karl-Ulrich Rudolph (University Witten-Herdecke, Germany) and Dr. Takuji Nakazato (Japan Institute of Wastewater Engineering Technology) will present results of an international study that gives 60 examples from all over the world where the use of Alternative Water Systems and the role of membrane technology therein.

Experiences with different membrane technologies

Dr. Hendrik Walther and Dipl.-Chem. Simone Stein from the municipal waterworks of the City of Leipzig (Germany) will compare the two membrane techniques ZeeWeed® and VRM®. They will present the dimensioning/ design of two recently constructed medium-sized wastewater treatment plants that use these technologies. The lecture is completed by a detailed description of the two technologies as well as of the first experiences concerning the parameters energy consumption, amount of sludge produced and costs.



Nitrification Membrane Assisted Bioreactors

Sebastian Żabczyński of the Technical University Gliwice (Poland) presents a study about the treatment of ammonia-rich wastewater in membrane assisted bioreactors. The research focused on the effects on nitrification of the wastewater at different sludge retention times. The results show how the problematic nitrification inhibition of ammonia-rich wastewater can be prevented.

Alpha Values in Membrane Bioreactors

The dissemination of membrane technology is hindered fundamentally by high energy costs, which are especially influenced by the oxygen transfer in the aeration tanks. Dipl.-Ing. Stefan Krause, Prof. Peter Cornel and Dr.-Ing. Martin Wagner from the Institute WAR of the Technical University of Darmstadt (Germany) present the first measurements of α -values in large scale in two German wastewater treatment plants operating with membranes. As the respective measurement processes have so far only been used in conventional activated sludge systems, the lecturers show how they have to be adapted for the use in membrane systems.

Membrane Filtration and Trickling Filter

Dr. Werner Fuchs from the Department of Environmental Biotechnology of the Institute for Agrobiotechnology in Tulln (Austria) presents a two-year project where the combination of trickling filters with dead-end membrane filtration was examined. The advantage of this mode of membrane operation is the low energy consumption. The lecturer will present important factors to be considered concerning flocculation and backflush of the membrane.

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In addition to the session "Membrane technology" there is a session "TV inspection for operation and maintenance" on 14 May and on 15 May a session " Finances, Charges and Cost Reduction Potential". The 12th European Water, Sewage and Solid Waste Symposium will take place from 13 to 15 May 2002 on the premises of the New Munich Trade Fair Centre on the occasion of IFAT, the international fair for waste disposal and the environment. We will regularly keep you informed about current developments until the beginning of the Symposium in May 2002.

Further information:

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The European Water Association (EWA) is an independent non-governmental and non-profit making organisation dealing with the management and improvement of the water environment. It is one of the major technical and scientific associations in Europe that covers the whole water sector, wastewater as well as drinking water and water related waste. With member associations from nearly all Central and Eastern European Countries, it not only includes the current European Union member states, Norway, and Switzerland, but also most of the candidate countries and Russia.

Besides the information of its members on EU legislation and standardisation, the aim of the association is to provide a forum for the discussion of key technical and policy issues. This is done by international conferences, workshops and meetings, special working group for experts and also by the publication of an own journal, the "European Water Management". Through this ex-

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change of knowledge the association intends to contribute to a sustainable water management: a safe water supply and the protection of water and soil.

The EWA has established close contacts to the European Commission (DG Environment), the European Committee for Standardization (CEN), the European Environment Agency (EEA) and the European Parliament.

The EWA consists today of nearly 30 European national associations representing professionals and technicians for wastewater and water utilities as well as consultants, and about 10 firms and enterprises as corporate members. The association thus represents about 55,000 professional individuals working in their national associations in a broad field of water management.