



Water Technologies & Solutions customer benefits

now that you have the best membranes, optimize their performance and life with the best membrane service solutions from the industry leader

- A complete chemical pretreatment offering, engineering tools, laboratory capabilities, and technical expertise to improve membrane separation processes
- Optimized operating costs
- Maximum water recovery (less wastewater)
- Highest permeate quality
- Minimal chemical usage
- Extended membrane life
- Superior local support
- Environmental compliance
- A comprehensive solution from the leading manufacturer and technology integrator of water and wastewater membrane element systems



solution benefits at the membrane element plants

Membrane element plants are significant investments that can face early degradation and performance loss as a result of an inadequate service program. Due to small pore sizes, concentration factors, membrane roughness, chemical compatibilities, and other factors, such as fouling, scaling, and premature membrane

deterioration can all significantly affect system performance. This can result in loss of flux, lower rejection rates, higher pressure drops, shorter membrane life, and high operation costs.

Combining complete chemical treatment offering, engineering tools, laboratory capabilities, and technical expertise to improve membrane separation processes can help achieve optimized membrane element asset performance and results.

SUEZ can optimize membrane element performance

SUEZ's MemChem line offer a wide array of products to help you improve the performance of your membranes with **Hypersperse***, scale inhibitors, and anti-foulants for reverse osmosis (RO) and nanofiltration (NF) membrane systems, **SoliSep***, coagulants for pretreatment, **Kleen***, cleaners for RO, NF and other selected membranes (UF, MF) as well as ancillary products such as de-chlorination agents and **BioMate***, approved biocides.

Several industry leading tools are also available to optimize membrane element performance at membrane plants. These include **Argo Analyzer Software** used to determine the scaling potential in RO systems and **Winflows Software** used to determine best operation conditions for different membrane types. These tools combine with an array of superior analytical services such as water analysis, element autopsy, deposit analysis, cleaning test, SEPA pilot test, and microbiological examination to provide excellent system monitoring, and troubleshooting. These tools will allow you to achieve the highest return on your investment.

Find a contact near you by visiting www.suezwatertechnologies.com and clicking on "Contact Us."

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SUEZ's total service support covers both technical expertise and current technology

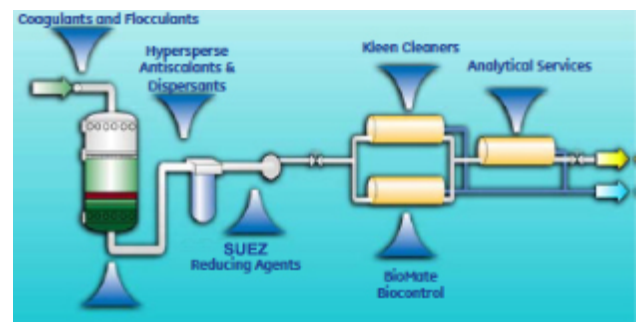
In achieving the optimum, experience counts. That's why SUEZ sets such high standards for its field service personnel. Every one of its technicians is thoroughly trained in all aspects of water treatment. When called upon, SUEZ technical field representatives working at customers sites, armed with several monitoring tools such as **Data Normalization**, **SDI measurement**, **ATP BioScan* Monitoring** and on site **Analytical Kits**, can help customers achieve best unit performance by implementing a comprehensive membrane chemical solution program.

SUEZ offers membrane element autopsy service

Loss of membrane performance can be attributed to several potential reasons such as biological fouling, iron and silt fouling, scaling, organic fouling and chemical or physical membrane degradation. When other tools and techniques fail to satisfactorily identify the problem or when confirmation of a particular root cause is needed, a membrane element autopsy can give an insight into the causes of the loss of membrane performance. The destructive standard procedures include tests ranging from visual inspections, microbiological examinations, scanning electron microscopy to oxidation testing, deposit weight density, and FTIR analysis.

SUEZ Membrane Element Autopsy Labs are equipped to carry out a number of tests that can help identify the root causes of the loss of performance of particular membrane elements. Interpreting autopsy results in the light of a good understanding of the membrane

plant system operating conditions can lead to corrective actions ensuring the restoration of the performance and life of the asset.



Complete membrane system water management solutions

partnering with SUEZ

For decades, SUEZ has been a strategic partner to companies around the world, delivering complete water, and process tools, and technologies that help meet the industry's greatest business challenges. Today, SUEZ is just as committed to developing proven solutions that will help you meet your business objectives cost-effectively, efficiently, and responsibly. SUEZ is fully committed to all aspects of both service and Environment, Health & Safety.

Each contract is unique. Let SUEZ present the service and contract that works best for you in reliably and cost-effectively meeting your needs.

If you would like more information about how SUEZ can help you optimize your operations, contact your local SUEZ representative, visit us at www.suezwatertechnologies.com.