

Mohamad Amin Saad

Senior Consultant & Trainer
*Water Desalination and
Membrane Technologies*



Contact Information

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Career Focus ▼

Experienced consultant, technical expert, trainer and innovative developer in the areas of seawater, brackish & industrial wastewater water desalination, treatment and purification using membrane technology processes (RO, NF, UF, MF), specializing in membrane system design, startups & commissioning, plant operation & performance monitoring, evaluation, optimization and trouble-shooting, and innovating customized plant performance software solutions. Areas of expertise include conducting advanced, specialized and practical technology application training workshops and short courses (classroom and on-site), as well as designing comprehensive and long-term training programs for engineering and high-school graduates for career opportunities in the water and power industry. On-going projects include a leading role in establishing a pioneering polytechnic training institute in the Middle East in an international and local public-private collaborative effort. Also experienced in establishing and conducting business in the Middle East/Arabian Gulf markets with a wide and extensive network of key government and private sector decision makers contacts.

Career Highlights ▼

Background:

- B.S./M.Sc. Chemical Engineering – Georgia Institute of Technology, USA, 1977-78
- B.S. Chemistry – American University in Cairo, Egypt, 1975
- Lived and worked in Middle East, Europe & USA for over 30 years.
- US citizen and native Arabic speaker with fluency in 7 regional dialects and near-native speaker of American English.
- Worldwide network of key contacts (Middle East, Europe, Asia & USA).

Experience:

- 26 years of technical expertise, field experience and business development & marketing in membrane technology and water desalination, treatment & purification industry.
- On-site and classroom technology training of plant engineers and operators.
- Feasibility study, structuring, program design and partnership establishment as project director of major water desalination & power polytechnic training institute in Middle East.
- Technical and business proposal writing, presentations & coordination.
- Expert-system software development, optimization, maintenance and trouble-shooting (**Silent Alarm™** technology & **MASAR®** software).
- Well-versed in computer software & tools (MSOffice, PowerPoint, Excel, Access, Adobe Acrobat, DemoShield, Visual Basic, HTML/Java web & graphic design).
- 9 years of Arabic/English translations, interpretations & technical training.

Skills:

- Exceptional problem-solver, multi-tasker, organizational & negotiator.
- Multi-cultural diversity, client focus, prioritization and attention to detail.
- Highly innovative, Self-motivated, success-driven and results-oriented.
- World-class bilingual technical and literary writer & editor.
- Self-starter and hands-on project manager.
- Ability to work well under pressure, tight deadlines and changing environments.

Career Accomplishments**MASAR TECHNOLOGIES, INC.**

1996 – Present

Tucson, Arizona - United States

Founder, President & Chief Consultant & Trainer

- Technical consulting and business development in the area of membrane technology applications for drinking/potable and industrial water desalination & purification. Expertise includes project and proposal development, process design, performance evaluation, start-up, optimization & trouble-shooting of membrane system operations.
- Designing and conducting advanced **Membrane Desalination Technologies in Practice, Fouling & Plant Operation & Maintenance** training workshops and courses for plant operators, engineers and supervisors. Trained over 400 professionals at events held in conjunction with IDA Congresses on Desalination and Water Re-use (2002-Present), with the European Desalination Society's (EDS) EuroMed & Desalination and the Environment Conferences, with The Institute for International Research – Middle East (IIRME) Water & Wastewater Conference, and with the annual Saudi Water & Power Forum (2006-2008). Specialized organization training courses (3-5 days) were designed and conducted for Dubai Electricity & Water Authority – DEWA (2006), for the Water & Power Company of Jubail & Yanbu – MARAFIQ (2007), Middle East Desalination Research Center (MEDRC), Oman (2007), and the Ministry of Electricity & Water, Bahrain (2008).
- Recently hired by a major Independent Water & Power Projects (IWPP) company as Project Director & Training Consultant for the establishment of the first water desalination & power generation polytechnic training institute in the Middle East for high-school graduates to qualify as certified plant operators & maintenance technicians in a 2-year diploma program.
- Recent projects completed successfully in the Arabian Gulf include optimization and trouble shooting of 160,000 m³/day Al-Buraidah Brackish RO Desalination Plant for the Ministry of Water & Electricity, Al-Qassim Region, Saudi Arabia, the 91,000 m³/day Al Jubail Seawater RO Desalination Plant for the Saline Water Conversion Corp. (SWCC), Saudi Arabia, as well as evaluating, optimizing and upgrading the six 206,000 m³/day Riyadh RO Brackish Plants in Saudi Arabia for the Riyadh Water & Sewage Authority.
- Developing, testing and marketing innovative technologies and software applications such as the first real-time **Silent Alarm**[™] membrane system performance and fouling detection and measurement technology, developed exclusively by MASAR Technologies, Inc., as the basis for the **MASAR**[®] (*Membrane Alarm System and Automated Reporter*) software systems for reliable, real-time, and early-warning monitoring of plant performance and detection of fouling/scaling development in water desalination membrane systems. The innovative system has been tested at more than 20 strategic membrane desalination plants in the Middle East, USA, Malta and Australia. Custom **MASAR**[®] software systems were licensed to and are installed at SWCC and Aramco RO plants in Saudi Arabia and at a South Australia Water Corp. seawater RO plant.

BIOSPHERE 2® PROJECT - DECISION INVESTMENTS

1993 - 1996

Oracle, Arizona - United States

Director of Technical Marketing

- Development and optimization of innovative environmental technologies and products, such as air and water purification and management of commercial testing and healthcare laboratory information. Also involved in monitoring, upgrading, optimizing and trouble-shooting Biosphere2® 's water treatment & CO₂ chemical systems, as well as designing and implementing environmental waste management compliance.

AQUA-CHEM, INC.

1991 - 1993

Milwaukee, Wisconsin – U.S.

Development Manager, Membranes

- Key leadership in introduction, development and marketing of RO membrane process technology as a new strategic business direction for the company to integrate with other established technologies in order to maximize the company's technical and commercial competitive position in the industry.
- Pursued opportunities for large-scale commercial applications of membrane processes in the U.S., South America, Europe and the Middle East, especially in non-traditional and difficult areas such as industrial wastewater treatment.

E.I. DUPONT CO. - PERMASEP® PRODUCTS

1983 - 1990

Senior Technical Marketing Specialist

- Leading responsibilities for providing technical and marketing leadership in applying DuPont's hollow fine-fiber membrane technology in water desalination and industrial treatment systems.
- Provided detailed process design reviews, plant startup assistance and performance monitoring and evaluation of strategic RO systems employing polyamide HFF membranes in the Middle East, which constituted about 70% of DuPont's RO membrane business worldwide. Major customers included government agencies, oil companies and the process industry.
- Spearheaded the technology marketing effort to establish new markets in highly competitive and challenging environments utilizing strategic business partnerships with international licensees, consultants and end users.
- Played a vital role in establishing and supporting marketing strategies to maintain DuPont's leading market presence and continually increase market share through a diverse network of international licensees, especially in the Middle East, Indian Sub-continent, Mediterranean and Europe. Major objectives were establishing new markets for traditional technology applications as well as finding new applications in current markets.

Professional Associations ▼

1. Arab Science & Technology Foundation (ASTF) – *First Arab Forum on Water Desalination and Purification for the Arab World.*
2. International Desalination Association (IDA).
3. European Desalination Society (EDS).
4. Middle East Desalination Research Center (MDRC) - *Project Advisory Committee.*

5. Arab Water World Magazine (AWW) – *Member, Editorial Consultants Board*.
6. Arab Healthy Water Association - *Executive Board; Editorial Board of Publication*.

International Publications ▼

1. Saad, M.A., "Real-Time Monitoring of Membrane Fouling", *Waste & Energy Thailand*, March-April 2008, TechnoBiz Communications Ltd., Bangkok, Thailand.
2. Saad, M.A., "Quenching a Thirst for Desalinated Water Technology", *The IDA World Congress on Desalination & Water Reuse, Maspalomas, Canary Islands, Spain, Water & Wastewater International Journal*, Vol. 22, Issue 6, December 2007-January 2008, PennWell, Oklahoma, USA.
3. Saad, M.A., "*Word of the Expert: Water Privatization in the Arab World – Issues & Solutions*", *Arab Water World Journal*, Part 1: January 2007, Vol. XXXI No. 1, 96; Part 2: February 2007, Vol. XXXI No. 2, 96, Chatila Publishing House, Beirut, Lebanon.
4. Saad, M.A., "*Event Review: Jeddah Water & Power Forum 2006 – Opportunities & Solutions*", *Arab Water World Journal*, February 2007, Vol. XXXI No. 2, 80, Chatila Publishing House, Beirut, Lebanon.
5. Saad, M.A., "*Pushing The Limits: Optimizing Membrane Plants Via Correlating Fouling with Critical Flux*", presented at and published in the proceedings of the *International Desalination Association's Congress on Desalination & Water Re-use*, Singapore, September 2005, IDA, USA.
6. Saad, M.A., "Membrane Desalination for the Arab World – *Overview & Outlook*", presented at the *First Forum on Water Desalination and Purification Technology Outlook for the Arab World* held by the Arab Science & Technology Foundation, Marrakech, Morocco, May 29-30, 2004. *Arab Water World Journal*, January-February 2005, Vol. XXIX No. 1, 29, Chatila Publishing House, Beirut, Lebanon.
7. Saad, M.A., "Early Discovery of RO Membrane Fouling and Real-Time Monitoring of Plant Performance for Optimizing Cost of Water", presented at and published in the proceedings of *EuroMed 2004 Conference on Desalination in Southern Mediterranean Countries*, Marrakech, Morocco, May 30-June 2, 2004. *Desalination 165* (183-191), February 2004, Elsevier Science Publishers, Amsterdam, The Netherlands.
8. Saad, M.A., "*Manufacturer's Case Study: Smart Software Optimizes Membrane Plants*", *International Desalination & Water Reuse Quarterly*, August/September 2003, Vol. 13/2, pp. 45-49, Faversham House Group, UK.
9. Saad, M.A., "*Fresh Water for All: Status, Impact & Future Of Desalination In The Middle East & Mediterranean Countries*", *Arab Water World Journal*, July-August 2003, Vol. XXVII No. 4, 65, Chatila Publishing House, Beirut, Lebanon.
10. Saad, M.A., "*Desalination for a Better Future: The Technologies & The Innovations*", *Arab Water World Journal*, May/June 2002, Vol. XXVI No. 3, 33-35, Chatila Publishing House, Beirut, Lebanon.
11. Saad, M.A., "New Innovations in the Global Desalination Market", *Water Conditioning and Purification Magazine*, 1997, 60-64, Publicom, Inc., Tucson, Arizona, USA.
12. Saad, M.A., Joseph Richardson, "Real-time Membrane Fouling Monitoring – *A Case History*", *proceedings of the World of Water Conference*, Las Vegas, Nevada, USA, December 10-12, 2001. Also excerpted in *Industrial WaterWorld™ Journal*, Case Studies, January 2002, PennWell, Oklahoma, USA.

13. Saad, M.A., "Waters from Another World", *International Desalination Association News*, Volume 8, Issue 11-12, Nov./Dec. 1999, IDA, Mass., USA.
14. Saad, M.A., "Optimize Water Cost by Early Prediction of Membrane System Fouling Trends", proceedings of the *International Desalination Association's 1999 World Congress on Desalination and Water-Reuse*, August 30-September 2, 1999, San Diego, California, USA, IDA, Massachusetts, USA.
15. Saad, M.A., "Biofouling Prevention in RO Polymeric Membrane Systems", proceedings of *NWSIA's 1992 Biennial Conference on Desalting and Recycling*, August 1992, Newport Beach, California. Also published in *Desalination*, 88 (1992) 85-105, Elsevier Science Publishers, Amsterdam, The Netherlands. Reprinted for *Water Quality Association* credit in *Water Conditioning & Purification Magazine*, 36 (1995) 58-68, Publicom, Inc., Tucson, Arizona, USA.
16. Saad, M.A., "Pretreatment Requirements for Industrial Wastewater RO/Evaporator Systems in Zero Liquid Discharge Applications", proceedings of *Watertech '91 Conference*, San Jose, California, November 1991. Also published in *Industrial Water Treatment*, 24 (1992) 18-28, and abstract published in *UltraPure Water*, Nov. 1991, Tall Oakes Publishing, Colorado, USA.
17. Saad, M.A., M. Al-Arrayedh, B. Erickson, H. Yoshioka, "Reverse Osmosis Desalination Plant, Ras Abu Jarjur, State of Bahrain - Two Years Operational Experience for the 46,000 m³/day RO Plant", the *International Desalination Association's World Congress on Desalination and Water Reuse*, Cannes, France, 1987, IDA, Massachusetts, USA. Also published in *Desalination*, 65 (1987) 197-230, Elsevier Science Publishers, Amsterdam, The Netherlands.
18. Saad, M.A., "Permasep[®] RO Plant Operating and Performance Experience in the Middle East", proceedings of the *Fourth Arab Water Technology Conference*, Dubai, United Arab Emirates, October 1986.
19. Reviewed, Edited and provided photography for an internationally-distributed advertising brochure published by E. I. DuPont de Nemours, Wilmington, Delaware, 1986, entitled "Potable Water for Bahrain", on Ras Abu Jarjur RO Desalination Plant.