

MEMBRANE DESALINATION FOULING, ENERGY & COST MANAGEMENT

MASAR WORKSHOP AGENDA

2009 IDA WORLD CONGRESS, , Dubai, United Arab Emirates

Thursday, November 12, 2009, 0800-1700

Instructors: **Eng. Mohamad Amin Saad & Dr. Irving Moch, Jr.**

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WELCOME, INTRODUCTIONS & AGENDA/CD REVIEW	0800–0815
I. MEMBRANE PLANT FOULING MANAGEMENT	
A. FOULING POTENTIAL, TYPES & SOURCES	0815–1030
❖ OBJECTIVES OF EFFECTIVE FOULING MANAGEMENT	
❖ TYPES OF FOULING	
• BIOLOGICAL FOULING	
• ORGANIC FOULING	
• COLLOIDAL FOULING	
• METAL OXIDE FOULING	
• CHEMICAL & SILICA SCALING	
❖ SEVEN QUICK DIAGNOSTIC CHECKS	
<i>COFFEE BREAK</i>	1030–1045
B. FOULING MONITORING & DETECTION	1045–1230
❖ DATA AUTOMATION & REPORTING TECHNIQUES	
❖ RECOVERY RATIO OPTIMIZATION	
❖ OPTIMIZATION CONSIDERATIONS – HOW TO OPTIMIZE?	
❖ MEMBRANE ADDITIONS, REPLACEMENTS & CLEANING	
❖ TRENDING - ASTM STANDARD NORMALIZATION	
❖ REAL-TIME MONITORING, FOULING DETECTION & MEASUREMENT	
❖ FOULING DETECTION PRACTICAL GUIDELINES	
❖ PLANT CASE STUDIES – SURFACE SEAWATER & WELL BRACKISH	
❖ FOULING PREVENTION STRATEGIES & INNOVATIONS	
<i>LUNCH BREAK</i>	1230–1330
II. DESALINATION PLANT ENERGY MANAGEMENT	1330–1430
❖ ENERGY USAGE CRITERIA & TECHNOLOGY ADVANCES	
❖ ENERGY RECOVERY DEVICES	
❖ ENERGY CONSUMPTION COMPARISONS- <i>MEMBRANE VS. THERMAL</i>	
❖ THE FUTURE – IMPORVEMENTS ON THE HORIZON	
<i>COFFEE BREAK</i>	1500–1530
III. DESALINATION PLANT COST MANAGEMENT	1530–1630
❖ SEAWATER COST OVERVIEW	
❖ COST OF WATER COMPARISON - MEMBRANE VS. THERMAL	
❖ COSTING MEMBRANE & THERMAL PLANTS	
IV. PRACTICAL PLANT MANAGEMENT GUIDELINES	1630–1645
OPEN DISCUSSION, FEEDBACK & QUESTIONS	1645–1700
CERTIFICATE AWARDS & CONCLUSION	1700