



PACKAGE SEAWATER DESALINATION PLANTS – PLANNING, DESIGN AND OPERATION

This course focuses on the implementation and operation of package seawater reverse osmosis (SWRO) desalination plants with fresh water production capacity of 4,000 m³/d or less. The program is useful for water treatment plant designers and operators.

2-DAY COURSE

Leading Lecturer:

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PROGRAM OUTLINE

Day 1: Package Plants – Planning and Design

09.00 – 10:30 Overview of Desalination Technologies

- Introduction to Desalination
- Alternative Desalination Technologies

10.30 – 10:45 Coffee Break

10.45 – 12.00 Reverse Osmosis Fundamentals

- RO Separation – Basic Principles
- Key Performance and Design Parameters
- RO System Components

12.00 – 13.00 Lunch Break

13.00 – 14.30 Package Plants - Configuration

- Key Components of Small Desalination Plants
- Intakes
- Pretreatment
- RO System
- Concentrate Disposal

14.30 – 14.45 Coffee Break

14.45 – 16.00 Package Plants - Equipment Selection & Sizing

- Intakes & Pretreatment Facilities
- Reverse Osmosis Trains
- Energy Recovery Systems
- Sizing of Key Components of Small Seawater RO System

16.00 – 17.00 Questions & Discussions

Day 2: Package Plants – Implementation and Operation

09.00 – 10.30 Package RO Plants - Procurement & Costs

- RO System Suppliers – Selection & Procurement
- Selection of Equipment & Materials
- Small/Package Plant Costs

10.30 – 10.45 Coffee Break

10.45 – 12.00 Operation and Monitoring of Package Plants

- Operations Monitoring Methods and Equipment
- RO System Operation and Troubleshooting

12.00 – 13.00 Lunch Break

13.00 – 14.00 Example of Package RO Plant – Planning and Design

- Selection of Plant Components
- Sizing of Key Equipment

14.00 – 14.15 Coffee Break

14.15 – 15.30 Example of Small RO Plant - Cost Estimate

- Assessment of Construction Installation Costs
- Estimate of O&M Costs
- Cost of Water Production

15.30 – 16.00 Questions & Discussions

16.00 – 17:00 Multiple Choice Test and Adjourn
