



Introducing the RO-Spotlight™

Optimizing RO desalination by shining a "spotlight" on critical RO membranes.






Reverse osmosis (RO) and nanofiltration (NF) are the most predominant forms of desalination – making up 67% of worldwide desalination capacity. Yet, up until now, **RO plant operators have been forced to rely on indirect methods** (pressure differential and permeate flux) and retrospective techniques (membrane autopsy) to assess the condition of their filtration membranes.

Fouling and mineral scaling place inherent limitations on the membranes' useful service lifetimes. But without being able to see and directly monitor membrane health, operators must act conservatively – often discarding viable membranes years before they need to be replaced. The result: lower recovery and production, increased plant downtime, operating costs, and energy use, and an over-reliance on chemicals for pretreatment and cleaning.

Noria's RO-Spotlight™ is the only real-time membrane monitor and operator decision-support system that directly visualizes the membrane surface under operating conditions and can identify the type and rate of fouling and scaling buildup. The RO-Spotlight™ is a software and hardware system that acts as an extension of the feed and/or tail end of any RO element, mimicking plant conditions and providing operators with the real-time information they need to make smarter operational decisions.

RO-Spotlight™ identifies and flags the very first indications of fouling – allowing operators to take immediate remedial action and run RO systems continuously at optimal conditions. This extends membrane lifetime and can realize **annual operational cost savings of up to 30%**.

Benefits

-  Early fouling and scaling detection
-  Operate at maximum recovery
-  Optimize chemical use and cleaning procedures
-  Reduce plant downtime and energy use
-  Pilot RO for feasibility studies, diagnostics, and stress tests



Features

-  Real-Time Monitoring
-  Data Normalization
-  Operator Decision Support System
-  Surface Coverage and Plant State Analysis
-  Dynamic Alerting and Reporting
-  Historical Performance Data
-  SCADA Integration



Noria Water Technologies Inc is optimizing industrial processes through shining a "spotlight" on critical and hard-to-access industrial surfaces via real-time monitoring, spectral analysis and machine learning. Our team of industry experts with over 80 years of research and RO plant design experience also provides application-specific engineering services and consulting.

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