



The Lifeline for the Industrial Gas Industry

Solutions for Air Separation and Hydrogen Gas Operations

NALCO  Water
An Ecolab Company

**WATER MANAGEMENT**

- ✓ One Global Service Model
- ✓ Create and Maintain Value Process
- ✓ ECOLAB 3D Digital Dashboard and Alarms
- ✓ Customized Water Treatment Plans

NALCO WATER

DEFINING INDUSTRY STANDARDS OF OPERATIONS

Digitally standardize information gathering to quickly unveil actionable insights

Enable enterprise views across multiple sites

Focus on reliability of critical assets - main air compressors, heat exchangers and boilers

Help exceed sustainability goals such as water and energy savings

Deliver consistent service and exponential value across all plant operation types

PRE & POST TREATMENT

TROUBLESHOOTING AT THE SOURCE AND OUTFALL

Prevent scale buildup and corrosion

Minimize downtime and chemical consumption

Increase potential to use alternative water sources

**RECOMMENDED PRODUCTS AND SERVICES**

- ✓ PARETO™ Mixing Technology
- ✓ Raw Water Biocontrol
- ✓ Ion Exchange and Membrane Services

**RECOMMENDED PRODUCTS AND SERVICES**

- ✓ OMNI™ Powered by ECOLAB 3D

DIGITAL SOLUTIONS

TAKING DATA TO ACTION WITH CRITICAL ASSETS



Capture critical inputs and outputs to identify troubleshooting actions

Calculate return on investment on capital and operating budgets

Roll-up site-level data for enterprise dashboard

Avoid downtime with proactive monitoring and control

COOLING TOWER

ENSURE OPERATIONAL EXCELLENCE

Meet regulatory compliance

Ensure enhanced cooling tower performance

Reduce maintenance costs

**RECOMMENDED PRODUCTS AND SERVICES**

- ✓ 3D TRASAR™ Technology for Cooling Water
- ✓ High Performance Cooling Water Chemistry
- ✓ Cooling Water Dashboard
- ✓ PURATE™ Technology for Microbial Control
- ✓ Water Safety Solutions

STEAM

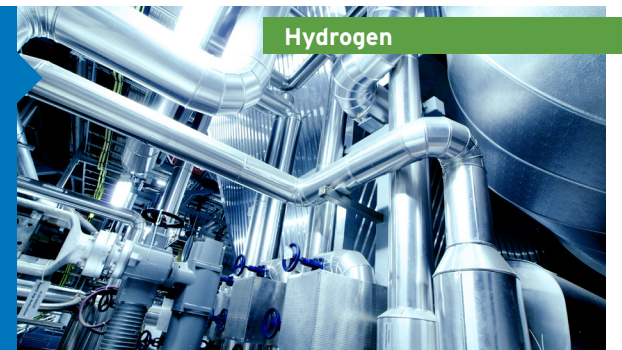
MAINTAIN RELIABILITY

Recover process condensate

Minimize water footprint

Optimize energy balance

Monetize steam export

**RECOMMENDED PRODUCTS AND SERVICES**

- ✓ 3D TRASAR™ Technology for Boilers
- ✓ Ion Exchange and Membrane Services
- ✓ 3D TRASAR™ Technology for Membranes
- ✓ Nalco Water Corrosion Scale Monitor (NCSM)

The standard of reliability

Nalco Water's unmatched service is paired with innovative products designed to deliver exceptional plant reliability. As part of our holistic approach, expert service specialists will help you choose the solution best suited to protect your most critical assets, extend turnaround time and reduce variability with your systems.



PURATE™ CHLORINE DIOXIDE SYSTEM



INNOVATIVE CHEMISTRY

Unique stabilized solution of sodium chlorate and hydrogen peroxide

UNIQUE DESIGN

High-efficiency generator is a two-chemical feed system that can be easily piped at application point

COST EFFECTIVE

Effective treatment program in wide range of pH and various constituents in system

ENGINEERED FOR RELIABLE AND EFFICIENT OPERATION

>95% generation efficiency with design safety interlocks

REDUCED CORROSION POTENTIAL

Does not contribute potentially corrosive chlorides like traditional halogen treatments

Experience
PURATE
in Virtual
Reality at

www.ecolab.com/purate



OMNI™ Powered by ECOLAB 3D

ADVANCED MONITORING FOR RELIABILITY AND PROFITABILITY

- A first-of-its-kind program guaranteed to maximize operational efficiency and improve your business outcomes sustainably
- Provides enterprise and plant visibility of overall operational health
 - Communicates notifications and actionable insights
 - Identifies and quantifies most critical key performance indicators



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