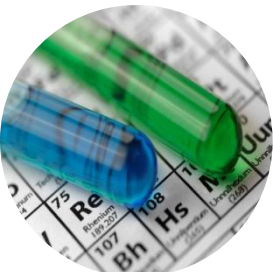


About Us

Crown Solutions is a full-service water treatment company dedicated to creating and implementing objective, integrated, customer-specific water solutions that reduce the overall cost of operation and compliance.

Crown Solutions is a business unit of Veolia Water Solutions & Technologies (VWS), the technology subsidiary of Veolia Water. VWS is a design and build company and world leader in differentiating solutions in water treatment for industrial companies and municipal authorities.



Revolutionary Cooling Water Technology

Zero Liquid Blowdown (ZLB) is a patented cooling water technology that allows for high TDS water by incorporating the use of **natural chemistry** to achieve **superior corrosion, scale and microbiological control**. This natural chemistry approach enables companies to reduce their water, environmental, and carbon footprints versus the traditional cooling water treatment options.



The ZLB Water Treatment Process

ZLB technology uses a High Efficiency Softening system (HES) to remove scale forming minerals from the make-up water.

- › Permits unlimited makeup water concentrations (10-200 COC)
- › Silica concentrates without deposition (200 - 1000 ppm soluble silica)
- › Silica chemistry protects metals from high TDS corrosion
- › High TDS and pH inhibits bio and pathogen growth (biostatic tower water)

The HES includes:

- › Ion Exchange System
- › HES Regeneration Performance Analyzer
- › Hardness Monitor
- › Remote Monitoring Capabilities

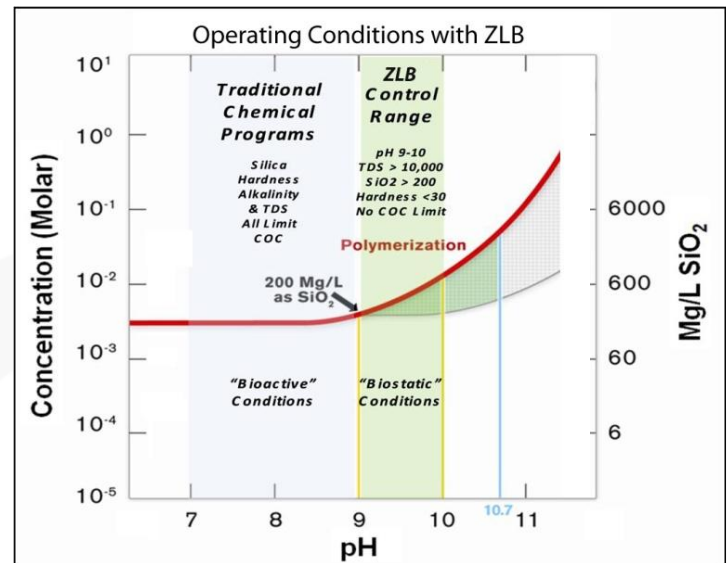
Reduce Your Water, Carbon and Environmental Footprint With ZLB Technology

- › 20-40% less water use
- › No energy robbing deposits
- › 95% discharge reduction
- › LEED credit potential
- › Zero cooling water blowdown
- › Sustain scarce fresh water
- › Capable of operating with recycled municipal or industrial wastewater

Typical Operating Savings with ZLB*

Make-up Cost per 1,000 Gallons	Current Make-up	\$ 1.75
Blowdown Cost per 1,000 Gallons	Sewer or WWT	\$ 3.50
Load Operation Hours (Avg)	Hours/Day	24
Load Operation Days (Avg)	Days/Year	365
Make-up Water Reduction	Gallons/Day	41,437
Blowdown Water Reduction	Gallons/Day	41,437
Current Annual Water Use	Gallons	47,304,000
ZLB Annual Water Use	Gallons	32,179,592
Annual Blowdown Water Saved	Gallons	15,124,408
Make-up Water Cost Savings	\$/Year	\$ 26,467.71
Blowdown Water Cost Savings	\$/Year	\$ 52,935.43
Lower Cost Source Water Savings	\$/Year	\$ 48,880.80
Total Water & Sewer Cost Savings	\$/Year	\$ 128,283.94
Regeneration Wastewater Cost	\$/Year	\$ 3,847.12
Net Operating Savings (excluding salt cost)	\$/Year	\$ 124,436.82

*Average evaporation 60 GPM, Current Tower COC 3.1 vs 50 for ZLB



US and International Patent Protection

- › US 6,929,749 / Scale Inhibition
- › US 6,949,193 / Scale Inhibition
- › US 6,998,193 / Corrosion Inhibition
- › US 7,122,148 / Corrosion Inhibition
- › US 7,517,493 / Corrosion Inhibition
- › EP 1704123 / Scale & Corrosion Inhibition

ZLB Benefits

- › Reduces total operating cost by approximately 50%
- › Superior corrosion protection (<0.2 MPY) for steel, copper, and galvanized
- › Low toxicity program
- › Significant reduction in discharge volume
- › Significant reduction in chemical handling and storage
- › Reduced testing and operator time
- › Eliminates "bleed and feed" chemistry
- › Remote monitoring capabilities

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