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
**Zero Liquid Blowdown**

**Cooling Water Technology**

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**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

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**Typical Operating Savings with ZLB***

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>Make-up Cost per 1,000 Gallons</td>
<td>$1.75</td>
</tr>
<tr>
<td>Blowdown Cost per 1,000 Gallons</td>
<td>$3.50</td>
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<tr>
<td>Load Operation Hours (Avg)</td>
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*Average evaporation 60 GPM, Current Tower COC 3.1 vs 50 for ZLB

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**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

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**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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