



SiO₂Tech

Zero Blowdown Silica Based Technology

www.sio2tech.com

Advantages of WCTI Process

- Reduces water usage and cost 20-40% versus traditional (chemical) treatment. May permit site operation or expansion where fresh water supply is in limited.

Water conservation Water savings
- Discharge is reduced or eliminated (zero blowdown), typically by 20-40% of total tower makeup; makeup treatment discharge is 1% of total tower makeup (HES softening waste). This reduced discharge volume permits sites to meet limited sewer discharge capacity and avoid major capital and operating expense for discharge treatment to remove regulated contaminants (heavy metals, fluoride, phosphates, organics or toxicants).

Water conservation Water savings
 Environmental stewardship Environment – Low Carbon Footprint
- Permits use of recycled waste water without performance or cost penalties encountered with traditional chemical treatment. Other waste waters, such as process RO reject and boiler blow down may also be used as tower makeup, eliminating their discharges.

Water use alternatives Environment/Water Savings
- Corrosion of metals is virtually eliminated, with corrosion rates less than 0.2 mpy for steel, galvanized steel, copper and aluminum.

Extension of asset life performance Energy savings
- Avoids unreliability (scale and corrosion issues), high capital cost, energy consumption and deposit removal maintenance with non-chemical treatment devices.

Extension of asset life performance Energy savings
- Soft water makeup eliminates scale and associated heat removal efficiency losses. Program chemistry will actually remove prior scale deposits from failed treatments.

Extension of asset life performance Energy savings
- Natural biostatic chemistry permits use of either recycled water (organic nutrients) or fresh water without biological growth or fouling that inhibits heat transfer, and minimizes or eliminates use of biocide toxicants.

A conduit for nature to provide the results Environment – Natural chemistry – no chemicals
- High hardness, silica and TDS containing waters can be used without associated high blowdown wastage and treatment cost penalties with traditional chemical treatment.

Environmental stewardship Environment – Low Carbon Footprint
 A conduit for nature to provide the results Environment – Natural chemistry – no chemicals
- Eliminates purchase, storage & handling of water treatment scale and corrosion inhibitor chemicals, biocides and acid. Eliminates discharge of organic chemicals and pesticides to sewers or waste treatment plants.

Workspace improvement LEAN
 Environmental stewardship Environment – Low Carbon Footprint
- Green chemistry that can qualify for 5 LEED categories, LEAN process (sustainable and recyclable natural resources) and low carbon footprint process.

More LEED application points LEED
- Simple and reliable control chemistry, with minimal variables and risk for site operators and service providers that provide performance oversight.

Reduced variables LEAN - Quality Improvement
 Employee safety improvement Safety