

SCALEBLASTER[®]

WATER CONDITIONER

Sustainable Solutions to Hard Water Problems

APPLICATIONS

CLM-547

Power Generation



NOTICE
NO TRESPASSING

Power Generation Applications

Cooling Towers - ScaleBlaster will control lime scale deposits on tower fill, sump tank, spray headers, valves, pumps and pipes.

Condensers - ScaleBlaster will control lime scale deposits on heat exchange surfaces.

Chillers - ScaleBlaster will control lime scale deposits on heat exchange surfaces.

Boilers - ScaleBlaster will control lime scale deposits on boiler fire tubes, condensation tank, pumps, pipes, and valves.

Compressors - ScaleBlaster will control lime scale deposits on cooling surfaces.

Waste Water Treatment - ScaleBlaster will control lime scale deposits in tanks, pumps, pipes, valves and sensors.

U.S. industry spends billions of dollars each year to control and remove limescale build-up in industrial spray driers, reactors, pumps, heat exchangers, mixers, blenders, chemical sewers, scales, sensors, valves, coaters, drumming liners, lagoons, fractionators, stills, evaporative coolers, boilers, chillers, and other water-fed equipment. Oil wells also face significant scaling problems from the highly mineralized water that's extracted with the oil. Limescale increases downtime, maintenance costs, and energy consumption, and leads to the early renewal of capital equipment. Scale-prevention can benefit industrial water users by minimizing or eliminating unexpected production shutdowns and generating substantial savings through water conservation.

The problems limescale formation can cause are:

- Reduced efficiency of heat exchangers
- Accelerated stress fatiguing of metal
- Increased flow resistance of circuits
- Accelerated corrosion

Reasons for concern - Deposits create an insulating layer on heat-transfer surfaces. It is estimated that 40% or more energy is needed to heat water in a system fouled with ¼" of limescale. This leads to more power consumption or the installation of heavier-duty, more expensive heat exchangers to compensate. Scaled boiler tubes mechanically fail as a result of overheating and cooling tower plates can collapse due to the weight of scale deposits. Erosion damage can occur as a result of scale particles breaking loose and subsequently impinging upon other surfaces. Pipework scale reduces the available cross-section area and fluids are affected by increased pipewall friction. A larger, more power-consuming pump will be required to maintain throughput volumes, which may only be a temporary solution. A plant that needs to be shut down for cleaning costs money.

Chemical Reduction - ScaleBlaster can significantly reduce the need to use chemicals for the prevention of corrosion and scale. No more handling & storage of hazardous chemicals.

Reduces Corrosion - ScaleBlaster allows for increased cycles of concentration which naturally and gently elevates the pH of the re-circulating water, thereby rendering the water less corrosive. ScaleBlaster controls scaling potentials, which lessens troublesome corrosive cell formations of calcium/iron deposits on the metal surfaces. ScaleBlaster helps control biofilm formation where bacteria can actively attack all metal surfaces.

Increases Cycles of Concentration = Water Savings - By allowing the conductivity levels to go higher, you may be able to raise the cycles of concentration – which will result in huge water savings.

Improves Efficiency - ScaleBlaster keeps heat transfer surfaces free from scale allowing systems to operate under optimal design conditions.

Prevents Scale Accumulation - ScaleBlaster will modify the scale-forming ions so they do not adhere to each other, the pipe walls, tubes, jets and heat transfer surfaces.

Reduces Maintenance and Downtime - ScaleBlaster will significantly reduce overall maintenance and downtime. Adding chemicals, balancing water chemistry and cleaning shutdowns will be greatly reduced.

Controls Algae and Bacteria - ScaleBlaster helps control algae and bacteria by eliminating their breeding ground – limescale deposits. The modified calcium crystals and higher cycles of concentration help to retard algae and biofilm formations.

Huge Energy Savings - The primary energy savings are a result of a decrease in energy consumption in heating or cooling applications. These savings are associated with the removal of scale formation. Just a 1/4" of scale buildup can increase energy consumption 40%.

Removes Existing Scale - Any existing scale within the system is removed within weeks and never returns. Contact us for more information on how we can prove this to you when ScaleBlaster is installed.

Extends Life of Capital Equipment - ScaleBlaster will extend equipment life dramatically, maximizing the return on capital investment.

Decrease Operating Costs - ScaleBlaster allows you to significantly lower your cost of operation by using less chemicals and less water, as well as reducing labor costs.

Environmentally Friendly - Discharge water regulations have made the disposal of chemically treated water a regulatory concern. ScaleBlaster is non-invasive and adds nothing to the water, simplifying your compliance measures.



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ScaleBlaster.com
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