engineered at a higher level

FLOW-TECH

WATER TREATMENT SYSTEM

A REVOLUTIONARY BREAKTHROUGH IN WATER MANAGEMENT - - using technology derived from years of research and development by a team of PETROCHEMICAL ENGINEERS AND SCIENTISTS, Flow-Tech Systems has created the most technologically advanced chemical-free water treatment system available on the market today. THE FLOW-TECH SYSTEM is more reliable, efficient, powerful and COST EFFECTIVE than other physical and chemical water treatment systems.

BENEFITS

FLOW-TECH SYSTEMS IS A GREEN SOLUTION FOR MINERAL SCALE, BIO FOULING AND CORROSION CONTROL. IT GENERATES A RADIO FREQUENCY SIGNAL IN THE 140KHZ RANGE THAT IS CONDUCTED INTO THE WATER OF THE ENTIRE PLUMBING SYSTEM AND CREATES A DIMINISHING SINE WAVE THAT RANDOMLY SWITCHES ON AND OFF UP TO 40,000 TIMES PER SECOND - - RESULTING IN THE FOLLOWING BENEFITS THROUGHOUT YOUR SYSTEMS.

Prevents lime scale and biofilm formation

Promotes a less corrosive environment

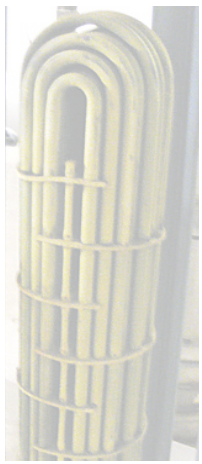
Prevents and removes mineral scale

Discharge water can be reused/ reclaimed

Reduces liability from handling hazardous chemicals

Safe on all types of towers and chemical free

Facilitates eligibility for LEED accrediatation



Maintains system heat transfer efficiency

Measurable energy savings from reduced pump horse-power and improved chiller efficiency

TEST PROVEN RESULTS

IN 2009, ASHRAE COMMISSIONED A STUDY THROUGH THE UNIVERSITY OF PITTSBURGH DEPARTMENT OF CIVIL AND ENVIRONMENTAL ENGINEERING. THE TWO PARTIES COLLECTIVELY ESTABLISHED A PROTOCOL TO TEST NON-CHEMICAL WATER TREATMENT SYSTEMS AND EVALUATE THEIR EFFICACY OF CONTROLLING BILOGICAL FOULING IN COOLING WATER SYSTEMS. AFTER AN 8 MONTH COMPREHENSIVE EVALUATION IT WAS CONCLUDED THAT NONE OF THE 5 DIFFERENT CHEMICAL FREE SYSTEMS SHOWED ANY ABILITY TO CONTROL SESSILE MICROBIAL GROWTH RATES COMPARED WITH THE CONTROL.

In laboratory testing, the Flow-Tech treated tower realized a 98% reduction in biofilm (sessile bacteria).

THE COSTS OF SCALE IN BOILER SYSTEMS							
Scale Thickness mm inches	.5 1/64"	1 1/32"	1.5 1/16"	3 1/8"	5 3/16"	6.5 1/4"	13 1/2"
Average Efficiency Loss	4%	7%	11%	18%	27%	38%	60%

THE COSTS OF SCALE IN COOLING SYSTEMS						
Scale Thickness mm inches	.5 1/64"	1 1/32"	2 5/64"	4 5/32"	6 1/4"	13 1/2"
Average Efficiency Loss	5.8%	12%	20%	30%	35%	76%

FLOW-TECH PROVES UNIQUE RESULT

In 2012, the Flow-Tech System underwent the same test. The test duration was just under 2 months Biofilm coupon samples were pulled and sent to a Special Pathogens Laboratory for culture and counts.

The Flow-Tech system reduced sessile bacterial growth by between 1-3 log. On average, sessile heterotrophic plate count concentrations were approximately 50 times higher in T1 (Control) than in T2 (Device). The Flow-Tech treated tower realized a 98% reduction in biofilm growth.

Biofilm has 5 times the insulative value of lime scale.

98%

reduction in the concentration of sessile bacteria (biofilm) on surfaces

PREVENTS BIOFILM. THE PROPAGATING FLOW-TECH SIGNAL CONTROLS BIOLOGICAL FOULING BY DIRECT CONTACT WITH THE INTERIOR PIPE SURFACES. THIS PREVENTS BIOFILM FORMATION AND EVENTUALLY REMOVES EXISTING BIOFILM ACCUMULATION. IN ADDITION, THE FLOW-TECH SYSTEM CAUSES HETEROTROPHIC BACTERIA TO FORM FLOCKS, MAKING IT MUCH EASIER TO FILTER OUT. IN MOST CASES THIS WILL KEEP HETEROTROPHIC BACTERIA COUNTS WITHIN ACCEPTABLE LEVELS.

ELIMINATES MINERAL SCALE. When the Flow-Tech System is installed, it disrupts the layer of water molecules around the calcium and carbonate ions. This allows the positive calcium ion (cation) to join with the negative carbonate ion (anion) to form a calcium carbonate particle that acts as a "seed crystal". When heat or pressure changes occur and the solution becomes super saturated these seed crystals start to join and form clusters (Homogeneous Scale) that continue to grow in suspension, instead of forming Heterogeneous Scale inside the tower, chiller or on pipe surfaces. These suspended clusters eventually settle out in the tower basin or sump and are disposed of through the normal blow down.

REDUCES CORROSION. The Flow-Tech System reduces corrosion by allowing the system to operate in a more alkaline environment beyond the normal concentration of calcium carbonate. These operating parameters allow calcium carbonate to act as a natural corrosion inhibitor. Corrosion is also reduced when using the Flow-Tech System by eliminating the need of feeding corrosive oxidizing biocides into the cooling loop.

HEATING SYSTEMS

Steam Boiler Systems
Gas/Electric Hot Water Heaters
Hot Water Heat Exchangers

COOLING SYSTEMS

Cooling Towers
Free Cooling Heat Exchangers
Ammonia Cooling Systems
River/Lake/Ocean Water Cooling Loops
Water Cooled Air Compressors/Chillers

PUMP SYSTEMS

Wells
Fountains
Natural Gas Wells
Oil Wells

Increase equipment life and lower system energy cost by 10 to 30%.

SIMPLE INSTALLATION

RAPID RETURN ON INVESTMENT (1 TO 2 YEARS).
NO INTERRUPTION TO YOUR OPERATIONS.
NO MAINTENANCE REQUIRED.
NO PLUMBING REQUIRED.
FITS UP TO 54" PIPES AND LARGER.

COST SAVINGS

REDUCES ENERGY CONSUMPTION.
LOWERS OPERATING/MAINTENANCE COSTS.
EXTENDS CHILLER/TOWER OPERATING LIFE.
REDUCES WATER USE BY DECREASING BLOW DOWNS.
ELIMINATES COST ASSOCIATED WITH CHEMICALS/SOFTENERS.

Unlike other chemical and physical water treatment systems on the market, Flow-Tech Systems has invented a proprietary method of treating all of the water throughout your plumbing system - - whether the water is moving or not.

The system conducts a low frequency signal that is pulsed several thousand times per second and propagated throughout your entire system. The alternating charges of this electromagnetic field allows the minerals to form crystals that remain in suspension and are harmlessly washed away with the waste water. Flow-Tech is the only system on the market that maintains measurable signal strength throughout your entire plumbing system, regardless of flow.

Chemical free. Easy to Install. Environmentally friendly. Flow-Tech Systems.

Flow-Tech Systems has created the most technologically advanced chemical free water treatment system in the market place.

MINERAL AND BIOLOGICAL FOULING CAUSES EQUIPMENT OPERATIONAL ISSUES AND DECREASES SYSTEM EFFICIENCY BY AS MUCH AS 50%. DURING THE PATH FOR CONTINUOUS PRODUCTIVITY AND COST REDUCTION, EFFICIENCY IS KEY.

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