

TWT® PATENTED CHEMICAL-FREE DEPOSIT CONTROL TECHNOLOGY FOR THE LAUNDRY & DRY CLEANING INDUSTRIES

Versatile fluid management systems to effectively meet the needs of any application

Reduce Hot Water Heater & Boiler Blow Down and Improve Start Up Time

Improve Equipment Heat Transfer

Save on Energy & Water Consumption

Reduce Soap & Detergent Consumption

Efficient Use of Detergent/Cleaner Clothes

Pressing Pads Lasts longer

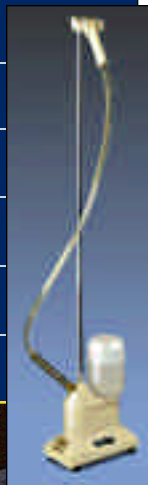
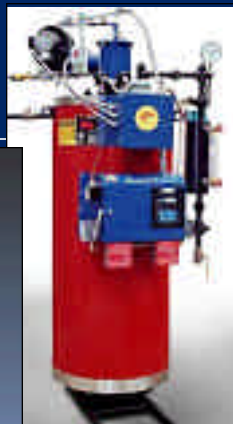
Steamers Operate More Efficiently



Eliminate The Need For Chemicals

Reduce Maintenance & Operating Costs

Reduce Equipment Downtime



HARD WATER PROBLEMS SOLVED EASILY!

Enhance water quality, and improve operating efficiency and life cycle of equipment

Triangular Wave Technologies systems use state-of-the-art technology to restore and maintain a clean, corrosion-free delivery system in an environmentally safe and chemical-free manner...The result is clean pipes, tubing and equipment with no bio-film and reduced bacterial contamination.

**Control Scale Deposits
Bio-film • Corrosion
Algae and Colloids In Your
Fluid-Fed Equipment**

The build up of scale deposits is a common and costly problem in the Cleaning industry.

The higher costs of maintaining and cleaning heaters and boilers can be attributed to the continuous cleaning of scaled surfaces or to the increased energy and operating costs due to the poor conductivity of the fluid pipe. For example, a 2.0 mm scale layer can induce a 47% decrease in overall heat transfer.

Moreover, scale deposits narrow the inner diameter of piping, increasing the amount of energy required to pump the water through the system.

TWT® Is Your Simple and Safe Solution!



Application Examples:

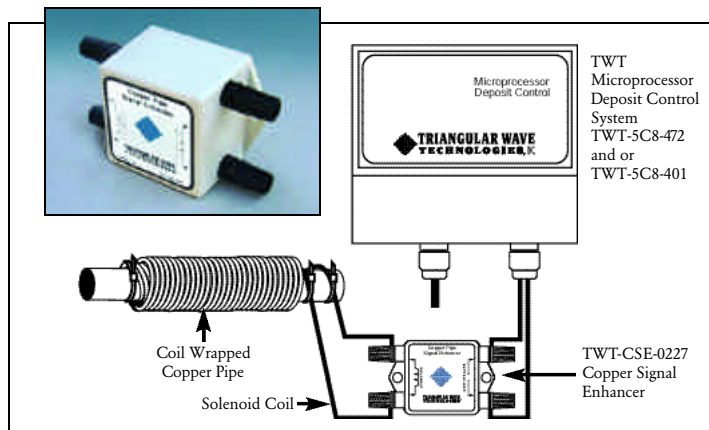
TRIANGULAR WAVE TECHNOLOGIES REACTION CHAMBERS

To use in conjunction with the TWT Deposit Control Systems when required, Triangular Wave Technologies, Inc. has developed a line of factory-wrapped wire coil Reaction Chambers to address magnetic pipe environments. Typically, wire coil cannot be installed on any magnetic pipe, such as steel, galvanized steel, ductile iron, or cast iron. When the coil is applied to a magnetic material, the pipe becomes a shield and prevents the wave energy from entering the fluid path. The TWT Reaction Chambers provide an easily installed section of non-magnetic pipe to provide the proper pipe material for the Deposit Control System to work as designed.

The TWT Reaction Chambers are fully sealed, protecting their layers of factor wrapped coil. The PVC, Stainless Steel and the Industrial Reaction Chamber systems are designed and manufactured to meet the highest quality specifications.



THE TWT COPPER PIPE SIGNAL ENHANCER (For copper pipes only)



Schematic rendering of the TWT-CSE-0227 hookup

Copper pipes, although acceptable, are one of the more difficult of materials to work with. To overcome this difficulty...

Triangular Wave Technologies has designed its Copper Pipe Signal Enhancer. This unit is placed between the controller and the copper pipe solenoid. The function of the signal enhancer is to provide a proper impedance match and to ensure maximum energy transfer between the controller and the solenoid, which ensures enhanced treatment of the fluid. The Copper Pipe Signal Enhancer must be used in all copper pipe applications to maximize the performance, and provide a boost to your application. (Teflon wire recommended for hot water applications)

The copper signal enhancer is a passive signal / impedance matching circuit. This device provides a power boost to the conditioning signal in copper pipes.

Owners of laundries and dry cleaning establishments typically work long hours and hard days, in part because they must allow enough time for their cleaning and steam equipment to start up, heat up, and then shut down properly. They also must spend a great deal of time on maintenance of this equipment.

TYPICAL PROBLEMS

- Scale and corrosion build up in the fluid pipe and boiler
- High energy costs (gas, oil, electric)
- Heavy soap consumption
- Boiler blow down time
- Boiler start up time
- Shut down and maintenance time

CURRENT TREATMENT METHODS INCLUDE

Chemicals such as Bed Slabs and Indigo (toxic) and other Corrosion Inhibitors (Note: oxygen scavengers must be continued regardless of treatment method, including TWT).

TWT CONTROLS ALGAE, BACTERIA AND CORROSION

- Bacteria and algae must attach to something before they can feed and reproduce. The Triangular Wave System keeps the bacteria, algae, and their food dispersed in the water, off of surfaces, and away from their bio-film breeding ground
- Reduces bio-corrosion by preventing the formation of bio-growth on vessel surfaces where bacteria can attack the metal
- Eventually the bio-film is eliminated and bacteria die

SOLUTION: TWT Patented Deposit Control Technology

TWT Chemical Free Deposit Control Systems: Install one or two depending on facility, boiler size and hardness conditions.

- **First Deposit Control System:** on cold water feed line to hot water heater and/or boiler
- **Second Deposit Control System:** on hot water line out of heater/boiler to facility (if steel pipe, use stainless steel Reaction Chamber, if copper pipe, use Copper Signal Enhancer)
- Startup time is reduced because steam buildup time is reduced
- Blowdown and bleed time are reduced
- Reduce water consumption because hard water inefficiency problems are reduced
- Even moderately hard water conditions cause the use of more soap, detergent, perc, and other formulas than would otherwise be necessary. Reduced consumption means savings on your cleaning agents and fewer discharge concerns.
- Maintenance costs are reduced, and equipment life cycle is extended
- Manpower can be directed away from maintenance and towards revenue generation

BENEFITS

- Water and energy savings
- Soap consumption reduction
- Steam build-up / start-up time reduced
- With no chemicals being added, the requirements for pretreatment of blow down are significantly reduced.
- Labor costs for maintaining the heater/boiler systems and related equipment will be reduced.
- Labor costs to clean the vessel surfaces will be reduced.
- Costs to replace corroded parts will be reduced
- The Triangular Wave System requires little or no maintenance
- Extends life cycle of boiler/heater and related equipment

ELIMINATES TOXIC CHEMICALS

- No recurring chemical expense
- No handling and storage of hazardous chemicals on site