

GREENEX™ COOLING SYSTEM DETOX GREEN TECHNOLOGY vs CONVENTIONAL PHOSPHATE TREATMENT

HEADINGS

GREENEX COOLING SYSTEM DETOX

PHOSPHATE-TYPE TREATMENT

COMPOSITION

- # plant extracts (ALKYL POLYGLYCOSIDE)
- # contains biodegradable solubilizing agents for crystal modification

- # Phosphates, polymeric dispersant' & biocides
- # No crystal modifying agent for ON-LINE descaling; will precipitate and create more sludge to form scale

- # Single product approach for ease of application and does not contain harsh chemicals
- # readily biodegradable

- # multiple products use - corrosion & scale inhibitor; dispersant and biocides. Some are hazardous to user and environment
- # Non-biodegradable

CONCEPT

- # uses APG & organic solubilizing agents for crystal modification, corrosion protection, sludge conditioning and algae/slime control as ONE single product treatment
- # provides ON-LINE cleaning of dirty system
- # specially designed for simplicity and ease of application, lack of manpower and other testing facilities
- # Greenex is designed as user & environmental friendly

- # uses phosphate as corrosion and anti-scalant inhibitors, polymeric dispersant for sludge conditioning; and two biocides (oxidising and non oxidising)
- # does not have ON-LINE descaling ability
- # applicable for big systems where trained chemists required to test and monitor cooling water every shift
- # not user friendly, requires additional skill manpower to look after

APPLICATION & CONTROLS

- # dose neat into cooling sump once per week or use existing metering pumps if available
- # lower manpower requirement to administer treatment
- # only requires weekly blow-downs
- # very little electrical components used
- # does not require frequent water testing

- # must prepare separate tanks of different chemicals with metering pumps
- # requires dedicated skilled manpower for dosing, testing and making adjustments on chemical dosages
- # requires constant bleed-off to control parameters as specified by vendor
- # relies on electrical metering pumps and automatic bleed-off valves
- # must maintain frequent testing in order to keep control

allows system to run on higher Cycle of Concentration, meaning less blow-down and saving on water

parameters within the recommended 'window'

all phosphate treatment allows system to operate within 6-8 cycles. This means constant bleed-off and use more make-up water

Greenex` Detox can handle both Soft & Hard water without using external softeners

suitable for soft water. For hard water, will create a lot of sludge, requires additional sludge conditioner. Some plants may need external softeners before using as feed water

ability to handle hard water and sludge volume without causing scaling or sludge deposition

unable to handle hard water - produces large volume of sludge, causes scaling

ability to perform ON-LINE descaling of old system

not designed to do ON-LINE descaling, only maintenance prevention

BENEFITS

can handle and condition "rust" or corrosion products in system

unable to handle rust (corrosion products); causes phosphate to form very sticky sludge for more sludge to bake on, forming scale

easy treatment to administer and look after

requires trained operators with commitment to ensure testing dosing and monitoring are done correctly daily

with cleaner tubes, improves heat transfer & approach temperature

unable to perform on-line cleaning, affects heat transfer and approach temperature

with less blow-down, saves water especially critical in dry areas with water shortage

due to maintaining lower cycles, with more bleed-off, high make-up water consumption

better heat transfer, lower Approach Temperature (AT) means energy savings

most probably will consume more energy due to poor heat transfer and higher operating AT

