

WATER TREATMENT TECHNOLOGY FOR INDUSTRIAL, COMMERCIAL & ENVIRONMENTAL APPLICATIONS

SEPTEMBER 2012 - WATER TREATMENT NEWSLETTER

NEW SAFETY TRAINING VIDEO

The Association of Water Technologies has produced a safety training video specifically for those who handle water treatment chemicals. The hazards of these types of chemicals is explained and safe handling procedures, use of SDS's and first aid is emphasized. If you want to use this in your OSHA Hazcom training or want to review this video contact Eric Fraser and we can get you a copy. eric@kansaswatertech.com

RO MONITORING - A PROBING QUESTION

If you are getting unexplained high conductivity from your RO it might be time to profile and probe the pressure vessels. The probing assembly schematic shown in the diagram to the right has been provided us by Ken Robinson, Avista Technologies. KWT and Avista are supporting RO system operators in Kansas. Click Here for a download of the schematic visit www.kansaswatertech.com



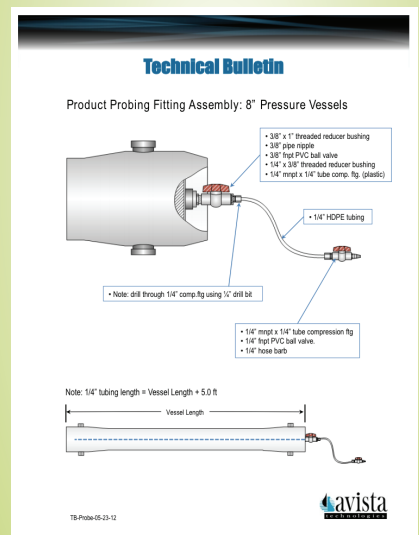
FOR MORE INFO:



Kansas Water Tech
kansaswatertech.com



Remediation Services Co.
remediation-services.com



Schematic for design of a
"RO Probing Assembly"

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REMEDIATING WATERS WITH HIGH IRON CONTENT

Remediation Services Company a sister company of Kansas Water Technologies has developed treatment options for treating groundwater with high iron content in remediation systems. Modified jar test equipment has been used to simulate the effects of air stripping or other remediation processes on iron in groundwater. Treatment options have been determined and optimized with this procedure. A powerpoint regarding the use of specialty chemicals to prevent mineral deposition (including iron) in remediation systems can be found at our website www.remediation-services.com

BOILER SYSTEM PRETREATMENT MATRIX

If you deal with boilers you know the importance of boiler feedwater pretreatment equipment. A useful 4 page matrix identifying various boiler pretreatment options and operating guidelines is included at our website www.kansaswatertech.com

CAST ALUMINUM "BOILERS" - A SPECIAL SITUATION

Cast aluminum generators require special treatment due to the nature of the chemistry of aluminum alloys. Successful treatment of these typically closed loop systems must address the manufacturer's guidelines for the treatment of the generators but also the other metallurgy found in the systems. Some systems also contain glycol for freeze protection. Unique vapor phase corrosion inhibitor formulations have been successfully used.



Modified Jar testing for testing ground waters with high iron

AWT Boiler Pretreatment Matrix page 1

Issue	Effect on Water	Control Treat	Service Chemistry	Design Flow	Scale of Operation	Comments
Sulfide Oxidation Boiler	Hydrogen sulfide (H ₂ S) in the feed water can cause corrosion and odor. It can also cause a white precipitate (FeS) to form in the boiler.	1. Aeration to oxidize H ₂ S to sulfate. 2. Chlorination to oxidize H ₂ S to sulfate. 3. Sulfide oxidizing bacteria (SOB) to oxidize H ₂ S to sulfate.	1. Chlorine (bleach) to oxidize H ₂ S to sulfate. 2. Sulfide oxidizing bacteria (SOB) to oxidize H ₂ S to sulfate.	2-8 gpm/ft ²	Small to medium size boilers.	1. High H ₂ S content can cause corrosion and odor. 2. Chlorination can cause corrosion. 3. SOB can cause odor and require aeration.
Sulfide Oxidation Outleter	Hydrogen sulfide (H ₂ S) in the feed water can cause corrosion and odor. It can also cause a white precipitate (FeS) to form in the boiler.	1. Aeration to oxidize H ₂ S to sulfate. 2. Chlorination to oxidize H ₂ S to sulfate. 3. Sulfide oxidizing bacteria (SOB) to oxidize H ₂ S to sulfate.	1. Chlorine (bleach) to oxidize H ₂ S to sulfate. 2. Sulfide oxidizing bacteria (SOB) to oxidize H ₂ S to sulfate.	2-8 gpm/ft ²	Small to medium size boilers.	1. High H ₂ S content can cause corrosion and odor. 2. Chlorination can cause corrosion. 3. SOB can cause odor and require aeration.
Acid Dissociation Disinfectant	Acid dissociation of disinfectants can cause corrosion and odor. It can also cause a white precipitate (FeS) to form in the boiler.	1. Aeration to oxidize H ₂ S to sulfate. 2. Chlorination to oxidize H ₂ S to sulfate. 3. Sulfide oxidizing bacteria (SOB) to oxidize H ₂ S to sulfate.	1. Chlorine (bleach) to oxidize H ₂ S to sulfate. 2. Sulfide oxidizing bacteria (SOB) to oxidize H ₂ S to sulfate.	2-8 gpm/ft ²	Small to medium size boilers.	1. High H ₂ S content can cause corrosion and odor. 2. Chlorination can cause corrosion. 3. SOB can cause odor and require aeration.
Weak Acid Ion Exchange	Weak acid ion exchange can cause corrosion and odor. It can also cause a white precipitate (FeS) to form in the boiler.	1. Aeration to oxidize H ₂ S to sulfate. 2. Chlorination to oxidize H ₂ S to sulfate. 3. Sulfide oxidizing bacteria (SOB) to oxidize H ₂ S to sulfate.	1. Chlorine (bleach) to oxidize H ₂ S to sulfate. 2. Sulfide oxidizing bacteria (SOB) to oxidize H ₂ S to sulfate.	2-8 gpm/ft ²	Small to medium size boilers.	1. High H ₂ S content can cause corrosion and odor. 2. Chlorination can cause corrosion. 3. SOB can cause odor and require aeration.
Soft Water Softening	Soft water can cause corrosion and odor. It can also cause a white precipitate (FeS) to form in the boiler.	1. Aeration to oxidize H ₂ S to sulfate. 2. Chlorination to oxidize H ₂ S to sulfate. 3. Sulfide oxidizing bacteria (SOB) to oxidize H ₂ S to sulfate.	1. Chlorine (bleach) to oxidize H ₂ S to sulfate. 2. Sulfide oxidizing bacteria (SOB) to oxidize H ₂ S to sulfate.	2-8 gpm/ft ²	Small to medium size boilers.	1. High H ₂ S content can cause corrosion and odor. 2. Chlorination can cause corrosion. 3. SOB can cause odor and require aeration.

Boiler Pretreatment Matrix available at Kansas Water Technologies website



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