

WATER TREATMENT TECHNOLOGY FOR INDUSTRIAL, COMMERCIAL & ENVIRONMENTAL APPLICATIONS

JANUARY 2013 - WATER TREATMENT NEWSLETTER

RO CIP (Clean in Place) – One Key to Sustainable, Successful Operation

Avista Technologies has published an article “Cleaning Spiral Wound Membrane Elements.” This article outlines the importance of proper and timely cleaning of membrane elements. The article discusses the following:

1. The types of typical foulants.
2. The advantages of specialized packaged cleaning formulations.
3. Typical CIP Equipment.
4. Cleaning Procedures – Routine and/or Customized.
5. Cleaner Selection.
6. Design Considerations – Flowrate, Temperature, Pressure, Filtration, Etc. A useful chart for flowrate and volume estimation is included.

For critical and difficult CIP applications Avista provides laboratory studies to optimize CIP procedures. For the full text of this article visit our website at kansaswatertech.com

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RO CIP Tank Heater



Polymer Technology Continues to Advance Water Treatment Practice

Polymer Technology continues to improve water treatment practice in many segments. Modern boiler water, cooling water, groundwater remediation, reverse osmosis, waste water treatment relies heavily on organic polymers. Attached is a presentation of the science and practice behind the development and selection of various polymers for water treatment applications. Included are the definitions of the terms often used to describe polymer functionality. There are often subtle but important differences in the use of the terms such as dispersancy, crystal modification, sequestration, chelation, stabilization and inhibition.

The presentation discusses the uses of polymers that are derived from carboxylic acid, sulfonated and non-ionic monomers. The landscape of the variety of water soluble polymer is reviewed. The targeted use of specific polymers and specialized copolymers and terpolymers is discussed. [CLICK HERE](#) for this full presentation.

Non Oxidizing Biocide Selection Matrix

Biocide application is an important aspect of many water treatment systems. Cooling water and RO operation are particularly susceptible to microbiological fouling and MIC (microbiologically influenced corrosion). Knowing, finding and applying the properties of the myriad of non-oxidizing biocides is made easier with the Biocide Matrix published by AWT (Association of Water Technologists). The excel spreadsheet provides information on the application of non-oxidizing biocides including effectiveness, dosages, mode of action, chemical structure and commercial sources and tradenames for these important chemicals. [CLICK HERE](#) to check out the Biocide Matrix.



Interconnected Polymer Terminology and Functionality

Kansas Water Technologies provides advanced mechanical and chemical water treatments designed to meet our customers' requirements.



Blended Products for Prevention of Calcium Carbonate Deposits

The formation of calcium carbonate (calcite) deposits is one of the most common and important problems in water treatment. The prevention of this deposit has long been studied. Ph control and or softening are traditional approaches. Polyphosphates have been effective in certain instances. Phosphonates (ie HEDP), polyacrylates and polymaleic acid (PMA) are known deposit control additives (DCA's) for calcium carbonate. Remediation Services uses a proprietary blend of HEDP and PMA in preventing calcite deposits in air strippers and other remediation equipment in once through groundwater applications. This has been accomplished without the requirement for pH adjustment or softening.

Combining the effectiveness of HEDP as a crystal modifier and PMA with both properties as a crystal modifier and a dispersant has been an effective calcium carbonate DCA. Lubrizol, a manufacturer and supplier of water treatment polymers has published a graph showing the effectiveness of various calcium control DCAs. Note the relative effectiveness of both HEDP and PMA in this study. The other products in the graph are other polycarboxylic acid and sulfonated and non-ionic based polymers, copolymers and terpolymers.

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