

OptiSpense* HTP73306/ HTP73616

internal treatment (high purity systems)

Water Technologies & Solutions fact sheet

- Matched products with specific (low/high) sodium:phosphate ratios
- Designed and field proven for high pressure boilers
- Advanced boiler polymer patented treatment
- Cost-effective program cuts downtime and maintenance
- Provides optimal pH/PO₄ control

description and use

OptiSpense HTP73306 and OptiSpense HTP73616 are aqueous blends of phosphate and polymeric dispersants. They contain the patented, phosphonated polymer HTP-2, which has superior iron and metal oxide dispersion properties.

OptiSpense HTP73306 and HTP73616 may be used alone or in combination, depending on the feedwater quality, to provide optimal pH/phosphate control in high pressure boilers.

typical applications

Hardness is a minor constituent in water of high purity. The major contaminants are typically iron and copper oxides. Iron deposits are very porous; this porosity makes the road to caustic corrosion possible.

As steam escapes through the chimney-shaped deposits, dissolved solids concentrate under the deposit. Hydroxide is the predominant anion. As such, sodium hydroxide can concentrate under the deposit to produce caustic levels of 10% or more. This results in caustic gouging of boiler metal.

OptiSpense HTP73306 and HTP73616 fight the problem on two fronts. First, its exclusive polymers control metal oxide deposition. Second, its built-in phosphate

buffer neutralizes any free caustic in the boiler water. SUEZ formulates the sodium-to-phosphate ratio required to keep your system within control limits. This combination of chemical mechanisms provides the most effective coordinated phosphate/ pH control program available. This treatment buffers the boiler water, preventing localized pH excursions that lead to corrosion of boiler metal (Figure 1). Caustic corrosion is prevented by maintaining a phosphate buffer with coordinated control.

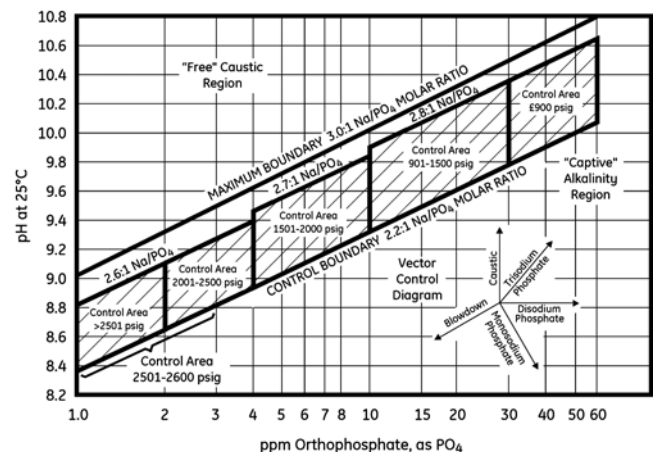


Figure 1: Control diagram for a coordinated phosphate/pH program.

treatment and feeding requirements

Feed Point - Boiler steam drum via separate chemical feedline.

Feedrate - Sufficient OptiSpere HTP73306 and HTP73616 should be fed to maintain the recommended boiler phosphate residual. The products are formulated for specific operating conditions and the type service required. Feedrates depend upon operating pressure, heat transfer rate, feedwater quality, and type of fuel burned.

Dilution - Use good quality condensate, demineralized water, or deaerated boiler feedwater to make a convenient feeding strength. The material may be fed neat or diluted in any proportion. If diluted, mild agitation should be provided.

Equipment - OptiSpere HTP73306/73616 can be fed using polyolefin tanks with stainless steel piping, pump internals, fittings, and shut-off valves. Relief valves, agitator shaft and propeller should be stainless steel. Consult your SUEZ representative for specific information.

general properties

Physical properties of the products are shown on the Material Safety Data Sheet, a copy of which is available on request.

packaging information

OptiSpere HTP73306 and HTP73616 are liquid blends, available in a wide variety of customized containers and delivery methods. Contact your SUEZ representative for details.

safety precautions

A Material Safety Data Sheet containing detailed information about this product is available on request.

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