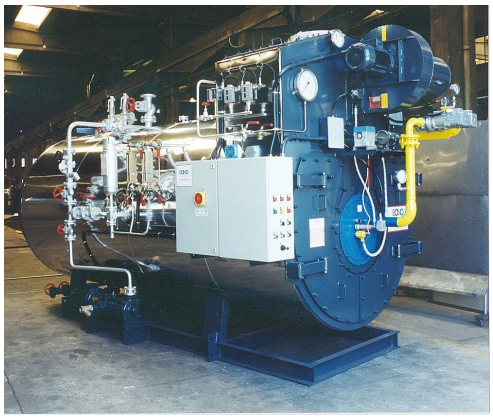
Fuel and Water Reduction using Purified Tannin

by Martin Myers, CWT



Introduction

According to Energy and Environmental Analyses Inc. (USA), boiler energy consumption represents 40% of the total energy costs in the industrial and commercial sectors. Source: *Characterization of the U.S Industrial Commercial Boiler Population, May 2005.*

Commercial and Industrial Concerns continue to search for ways to reduce operating costs, as wall as, minimize their environmental impact. Purified Tannins can provide an immediate reduction in fuel and water – without capital expenditure.

Traditional Treatment

A Central PA Feed Mill had employed a traditional water treatment program for over 20 years – with good results. This consisted of:
Sulfite – Oxygen Scavenger
Polymer/Dispersant – Internal Scale and Corrosion Inhibitor
Neutralizing Amine – Condensate Return Corrosion Inhibitor

Typical parameters maintained:

Boiler

6000 µmhos Conductivity / 4000 µmhos Neutralized Conductivity
600 ppm P Alkalinity
40 ppm Sulfite
6.5% Blowdown

Condensate

5-20 µmhos Conductivity
8.0 – 9.0 pH

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Purified Tannin Treatment
On February 1st, 2012, the customer changed over to our PT2700 Purified Tannin Program. No additional equipment was required.

Current parameters maintained:

Boiler
19,500 µmhos Conductivity
> 2000 ppm P Alkalinity
11.0 – 12.0 pH
2% Blowdown

Condensate
5-20 µmhos Conductivity
8.0 – 9.0 pH

Savings

February – September 2011	February – September 2012	Reduction
MCF / Ton = 0.174445	MCF / Ton = 0.166548	4.5%
Sewer = 19,700 gallons	Sewer = 12,230 gallons	38%

Program Cost
The Purified Tanning Program cost is approx. 25% higher than the Traditional Program. However, the fuel and water savings dwarfed the increase in water treatment cost.
ROI was immediate – from day one.

Summary
Why should Manufacturing Concerns that use process steam consider this program?…

1. Immediate reduction in Fuel.
2. Immediate reduction in Water.
3. Plant Employee safety – HMIS 0 / 0 / 0
4. Green / Organic Technology. Safer for the environment.