

PERISTALTIC METERING PUMPS HELP PREVENT BOILER SCALE BUILD-UP

THE CHALLENGE

The customer was using a solenoid-activated diaphragm metering pump to inject an anti-scaling chemical into their boiler. The company that supplied the pump and monitored the water reported high quantities of scale build-up in the boiler regardless of the amount of anti-scaling solution they used.

The problem was that the check valves on the pump's head were clogging and causing the pump to lose its prime and ability to provide a suction lift of the chemical out of its container. This in turn, prevented the proper amount of antiscalant from being injected into the boiler water. Without enough of an antiscalant dose in the water, significant amounts of scale began to build up over time within the boiler. This scale & rust build-up decreased the boiler's efficiency, increased the companies operating and maintenance costs, and had the potential to become a dangerous situation had the scale began to plug some of the boiler tubes.

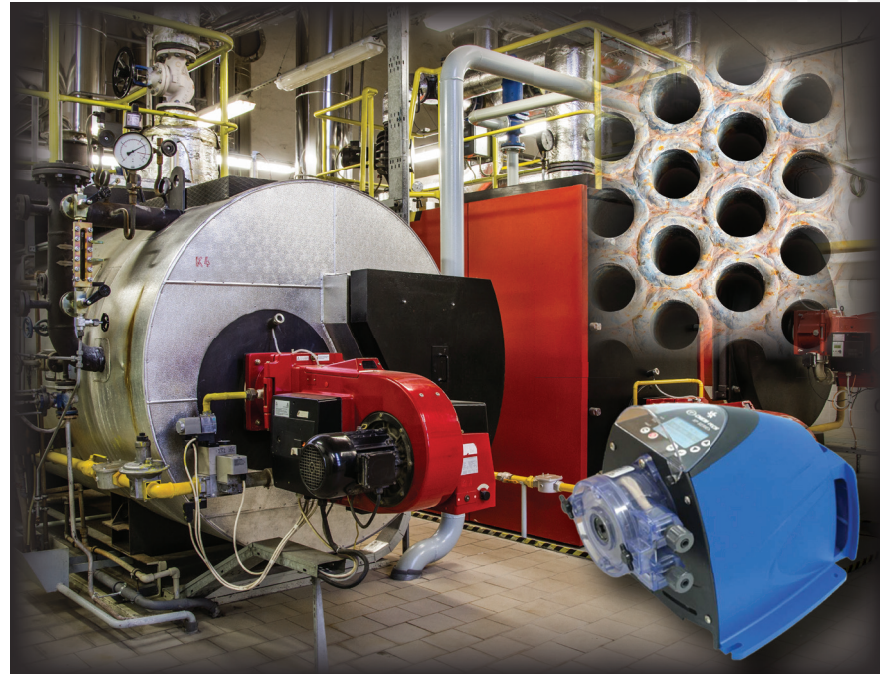
THE SOLUTION

Our application expert—Joe Marotta—talked with the customer about their pump issues and offered up peristaltic pumps as a solution. He recommended a peristaltic pump because of its seal-less design and its ability to operate without check valves in the pump head. Why this type of pump: the valves can't clog up if there aren't any valves! A peristaltic pump, like the Pulsafeeder Chem-Tech XP model that was recommended in this case comes with a meagre maintenance cost because it only has one tube, which a serviceperson can change out very quickly and easily. The pump also has the added benefits of dry-run capabilities and is, of course, self-priming.

THE RESULTS

- ▶ Optimal Chemical Injection
- ▶ Reduced Downtime
- ▶ Increased Boiler Efficiency & Energy Savings
- ▶ Reduced Service & Maintenance Costs
- ▶ Increased Safety

For more information on this solution or if you have a fluid handling challenge of your own - Contact a John Brooks Company Application Expert today!



BOILER WATER TREATMENT | CHEMICAL METERING PULSAFEEDER PERISTALTIC PUMP FOR CHEMICAL METERING

TECHNOLOGY UTILIZED

Pulsafeeder Chem-Tech XP Series Peristaltic Metering Pump

- ▶ Flow: 4-80 GPD (0.60 to 12.6 LPH)
- ▶ Pressure: 125 PSI (8.6 bar)
- ▶ Turn Down: 20:1
- ▶ Viscosity: 300 cps
- ▶ Inherently Degassing
- ▶ Self-Priming
- ▶ Self-Priming
- ▶ Pulse Input
- ▶ Flow Switch Activated
- ▶ 7 Day/8 Event Electronic Timer
- ▶ Chemical Resistant Materials

HOW IT WORKS

- ① A rotating shoe passes along the length of the hose, creating a seal between the suction and discharge side of the pump.
- ② As the rotor turns, the sealing pressure moves along the tube and pushes the product into the discharge line.
- ③ When the pressure releases, the hose recovers, creating a vacuum that draws the product into the suction side.