

## C A S E   S T U D Y

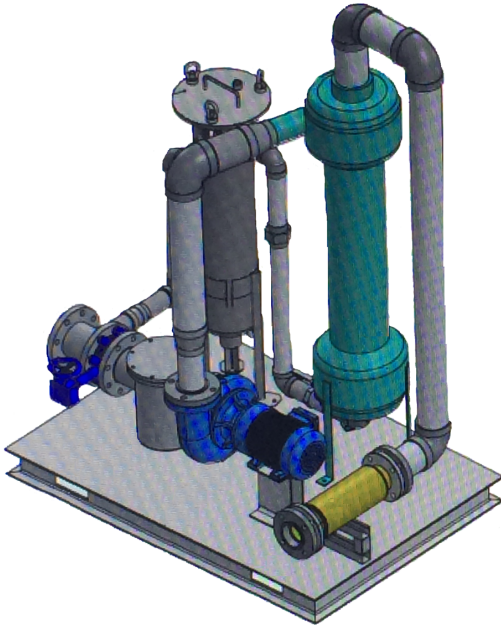
### Process Equipment Protection Against Corrosion and Scaling

#### OVERVIEW

Chemical and Maintenance Free Water Conditioning and hardness reduction.

#### WATER SYSTEM CHALLENGES

Originally, the plant had operated water softener (ion exchange technology) however had faced 2 problems: new local by-law had prevented draining brine (regeneration by-product) into sewage and the high cost of repairs required for the softening system. Due to the high cost of downtime and maintenance periods, the Plant Engineering Manager started looking for technologies which could reduce downtime and allow operation with water (after hardness reduction). After examining some membrane-based solutions (with high CapEx and very high OpEx) they had chosen the hardness reduction solution based on **ScaleBuster®** technology (salt-free and with relatively lower CapEx and very low OpEx).



#### SOLUTION

**ScaleBuster** conditioner was installed in a recirculating circuit, conditioning the water and physically removing precipitated hardness. The water was used to feed 2 processes instead of softened water. The two first pilots were in a stainless steel system and a copper and bronze system.

#### RESULTS

Following over 6 months of continuous operation the 2 process water systems were decommissioned to be tested for scale and corrosion. Following the very good results the **ScaleBuster** technology was implemented in all process circuits. PPM (*Planned Preventive Maintenance*) has been reduced from monthly to annually (downtime reduced dramatically by over 85%).

#### ABOUT THE TECHNOLOGY

The patented **ScaleBuster®** technology completely replaces traditional chemical treatment; providing control of scale and corrosion in various water process systems to create an exceptionally clean system. This dramatically reduces energy and water consumption, while reducing or, in certain cases, eliminating toxic water discharge to the environment.