

Case study

Section I Liquid Overpressure Protection for Economizers and Thermal Fluid Heaters

Faster Start-Up

30%

Faster Ramp & 1st pass yield⁽¹⁾

Cost of Ownership

\$2K - \$6K

Per PRV Repair⁽¹⁾

Operating Cost Savings

\$50K

Per PRV Repair⁽¹⁾

⁽¹⁾ Savings vary by application and start-up process.

Until 2017, ASME B&PVC only addressed steam as the relief media in Section I applications. However, valves installed on economizers and thermal fluid heaters are known to relieve on water as the process fluid.

THE CHALLENGE

Steam valves are not designed to relieve in liquid applications, resulting in a rapid opening/closing known as **'chatter', which induces premature wear and seat leakage.**

Without the proper trim, each overpressure event can yield **valve damage**, and invoke **interrupted start-up down time for service repair.**

THE SOLUTION

The 2017 Edition of ASME B&PVC Section I expanded coverage to allow overpressure protection of economizers and thermal fluid heaters using **liquid-certified valves** sized at **10% accumulation.**

The **Consolidated™ 1900 spring-loaded and 2900 pilot-operated safety relief valves** are now Section I certified for these liquid applications. Upgrade your 1900/P, 2900-40 or, in many cases, competitor steam valves with drop in replacement of the 1900 LA1 or 2900 LA1 **without piping modification.**

In addition, the **2900 LA1 and 2900-40 valves now feature a heavier inconel main valve spring for closing force stability** during low pressure start-up conditions, and a **pilot line snubber to dampen rapid pressure transients**, such as water hammer, that often occur during start-up.

The Right Valve for the Right Application

Contact your local *Green Tag™* Center to upgrade to a 1900 LA1 or 2900 LA1.

valves.bakerhughes.com

Consolidated
1900/P Series



Consolidated
1900 LA1 Series

Consolidated
2900 LA1 Series