

CHEMICAL MANUFACTURER

Runcorn, United Kingdom



PROJECT BENEFITS

- ▶ Eliminated cost of replacing failed traps
- ▶ 20% Steam Savings
- ▶ Highly reliable - 10 year no fail guarantee
- ▶ Removal of unnecessary parts from system
- ▶ Improved condensate return volume



GEM™ Selected as Chemical Manufacturer's Preferred Steam Trap

The customer is a global leader in the mining, development, manufacture, and supply of fluorspar and fluorine-based products, technologies and services. Their products are used across a number of major industries from car manufacturing, pharmaceuticals and refrigeration. The company has manufacturing plants around the world including Runcorn (UK), Louisiana (USA), Matamoros (Mexico) and Mihara (Japan).

Following a technical appraisal, GEM™ Steam Traps were selected for trial to establish if a reduction in steam consumption could be made without negative effects on plant performance and final product specification. For the purpose of the trial a small area of the facility was selected for steam metering in order to measure and quantify potential benefits.

Plagued by Failing Mechanical Traps

While deciding on the location of the trial, it was noted that a large number of mechanical traps had failed in a particular area.

Of the 39 traps surveyed there, a total of 28 were found to have failed. Of these, 11 traps were observed to have failed open, 6 had failed closed, and 11 had failed partially open. It was calculated that these failed traps were costing the facility in excess of \$96,000/year in lost steam alone.

GEM™ Traps Drastically Outperform

During a three-month trial, the performance of the GEM Traps was monitored. The findings clearly demonstrated that a 20% savings in steam had been achieved utilizing GEM Traps which were also found to be efficient in both steady state and variable load conditions. In addition, they drastically reduced the potential heat loss via radiation and convection.

Since the initial trial, TEI has installed 90 GEM Traps throughout the Runcorn facility. This has resulted in an early payback on energy costs and a significant reduction in carbon dioxide emissions.

"I decided to investigate the different steam traps available on the market. The trial was so successful that [our company] has made GEM its preferred choice of steam trap."

- Processing Engineer



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