



Food & Beverage



BENEFITS

- ▶ Eliminated cost of replacing failed traps
- ▶ Short pay back in energy savings
- ▶ Highly reliable - 10 year no fail guarantee
- ▶ Minimized steam loss
- ▶ Significantly lower condensate temperature

GEM® Traps Retrofitted to Feedwater Heat Exchangers

The site boasts the world's largest soluble coffee facility, manufacturing coffee for the global business as well as UK household brands. It produces some 11 billion cups of coffee a year and also houses the company's leading research and development facility.

Fitted to feedwater heat exchangers, air heater batteries and distribution lines, the GEM venturi orifice steam traps are operating over variable loads with a turndown ratio on the heat exchangers of 3:1. The company raises some 40 tonnes of steam an hour costing around £6.3 million a year. Although steam is utilized throughout the site, it is principally used in feedwater heat exchangers feeding the extraction sets. The site operates banks of heat exchangers which handle a total of between 6,000 and 45,000 litres of water per hour. A total of 120 steam traps are used throughout the site with the majority of mechanical steam traps having now been replaced by the GEM Trap.

Conscious that existing mechanical traps were failing, resulting in lost steam and reduced plant performance, the Utilities Manager at the site decided to investigate GEM steam traps from Thermal Energy International (TEI) and asked the company to carry out a site survey. The report from TEI explained that by replacing the existing traps with the venturi orifice design, blocked steam traps could be prevented from impacting on production. Moreover, by efficiently returning condensate back to the boilers, energy savings would be made.

"The GEM Traps perform well over a wide range of loads. In addition to saving downtime with maintenance and replacement traps, GEM Traps have provided us with a short term payback through energy savings from steam wastage."

- Utilities Manager

