



BRITISH SUGAR

Newark, Nottinghamshire



Benefits

- Eliminated cost of replacing failed traps
- 9 % annual fuel savings
- CO₂ emissions reduced by 104 tonnes a year
- Removed unnecessary parts from the system
- Significantly reduced condensate temperature

GEM® Traps Retrofitted in Sugar Processing Factory

The company's Newark factory is on course to make savings of over £152,000 over ten years after replacing many of its mechanical traps with GEM Traps. In addition to the plant saving over 9 % in fuel costs, it is also saving on replacement traps, maintenance and downtime, and has decreased its CO₂ emissions by 104 tonnes a year. British Sugar has seen a payback on their investment in around 10 months based on fuel and maintenance savings alone. GEM steam traps are being fitted on other applications throughout the site when downtime permits.

Steam generation plays an important role in processing the finished products. The factory has a Combined Heat & Power (CHP) plant that uses high-pressure steam to drive the turbines, which in turn produce electrical power and creates the low-pressure steam needed by the process. Steam traps contribute to the overall efficiency of the steam transfer process by removing air and condensate from the steam lines without loss of steam. Following a survey by TEI it was calculated that around £9,000 p.a. was being wasted in lost steam each year based on fuel expenditures of £13 per tonne of steam produced.

Management at the facility decided to conduct a trial by installing GEM steam traps on an animal feed dryer. Convinced that the GEM traps were working effectively, additional GEM Traps were installed in the power plant, and energy savings was monitored.

"It was apparent from the thermal imaging that the GEM steam traps were providing us with energy savings as the amount of live steam escaping from the orifice was negligible. My observations were confirmed by our Energy Consultant who has stated that savings quoted by Thermal Energy International are in fact fairly conservative and he anticipates they will be considerably higher."

- Combustion Area Manager