



### **BENEFITS**

- ▶ Savings of £41,000 per year in fuel and maintenance costs
- ▶ Rapid payback of less than 2 years
- ▶ 10% overall reduction in fuel usage
- ▶ 16% decrease in fuel costs
- ▶ Annual savings of £5,400 in Carbon Offsetting Value

## **GEM® Trap Retrofit in Hospital**

The hospital anticipates it will save £41,000 per year in fuel and maintenance costs following the installation of 157 GEM Traps. The retrofit has an expected payback of less than two years.

Steam is used for a wide range of services including the various plant rooms' heating & hot water heat exchangers, space heating, AHU batteries and humidification.

Prior to the installation of the GEM Traps, the hospital knew that some of its steam traps were failing each year. With an infrared thermometer, Thermal Energy International conducted a survey which revealed:

- two percent of the traps had failed open, allowing large amounts of expensive steam to be wasted
- one percent had failed partially open, allowing smaller amounts of steam to pass; and
- two percent had failed close, causing the condensate to backup and create wet steam, corrosion problems and water hammer.

It was calculated that the hospital was losing a total of over 200,000 kWh per year from steam loss alone.

The GEM Traps are helping the hospital to reduce its carbon emissions. Under the Government's CRC Carbon Reduction Scheme, large energy users such as hospitals have had to buy allowances for each tonne of carbon dioxide at a rate of £10 per tonne per year. Calculations show that following the installation of the GEM Traps, the hospital is on track to save £5,400 per annum in Carbon Offsetting Value.

***"Our first quarter calculations show a 16% decrease in fuel costs following the conversion to GEM Traps. Calculating the load using degree day analysis, which takes into consideration the warm weather, we are enjoying a 10% overall reduction of fuel usage."***

- Energy Environment Manager

