



WITHINGTON HOSPITAL Manchester, United Kingdom



Benefits

- £10,325/year in energy savings
- Short payback under 2.4 years
- Disappearance of unsightly plume
- Elimination of water hammer, underperformance and steam leakages
- 19% reduction in Greenhouse Gas (CO₂) and other combustion emissions

GEM® Traps Retrofitted for Hospital Laundry Facility

Withington Hospital has benefited from significant energy and maintenance savings from installing the patented GEM Trap. Thermal Energy International has installed 86 GEM Traps at the hospital's laundry facility which consists of two continuous batch washers, six tumble dryers, three ironing machines, and a tunnel dryer.

Prior to the steam trap retrofit, Withington Hospital was suffering from trap failures from traditional mechanical traps. To worsen the problem, budgetary and human resource constraints placed steam and condensate system maintenance at a low priority. As a result, 545.5 kg/h of steam was being discharged from the vent pipe on the condensate receiver, causing an unsightly plume and associated energy losses.

As soon as GEM Traps were installed, the result was an immediate and dramatic reduction in the steam plume from the condensate receiver vent. In addition, the trap retrofit caused no interference to the laundry equipment operation. Steam consumption at the facility been cut by 19%, or 545.5 kg/h, and maintenance requirements have been subsequently reduced. In addition, there have been no problems due to water hammer, underperformance, or steam leakages. An added bonus to the GEM Trap installation is that carbon dioxide and other combustion emissions have decreased by 19%.

"The laundry, which is a major user of steam, had suffered from a lack of maintenance to the steam traps due to various operational difficulties. As a result it was decided to install 86 low maintenance traps. These have successfully reduced the laundry's maintenance requirement which in turn has resulted in energy savings worth over £10,325/year."

- Estates Manager, SMUH NHS Trust



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