THERMAL IMPACT GROUP LTD
STEAM SPECIALISTS

This case study was carried out at a:
NHS Hospital
Located in Belfast, Northern Ireland

Study

Thermal Impact Group surveyed an NHS Hospital; it was noticed there was steam/water hammer coming from a steam pump set. Performance data from the existing mechanical steam trap and its condensate setup was initially collected over a few days. TIG's technologies were then installed, and the operational data was collected and compared.

We found that:

1. The Plate Heat Exchanger was heating water to a target maximum temperature of 49°C – the pump set was pumping the condensate up a 10-meter head and back to the hotwell at over 103°C.
2. TIG's devices could achieve the target temperature of 49°C as required while returning the condensate to the hotwell at approximately 40°C. With the pump set removed, TIG's devices could push the condensate up the 10-meter head.
3. By using TIG's devices, the need for the pumpset was removed, simplfying the condensate return setup and removing future maintenance requirements of the pumpset.

Additionally, it was noticed that there was no steam hammer and a reduction in failed mechanical traps (and associated maintenance requirements).

Results

Maintenance

Removal of pump reduces maintenance cost and time.

ROI

9-month payback with permanent savings thereafter.

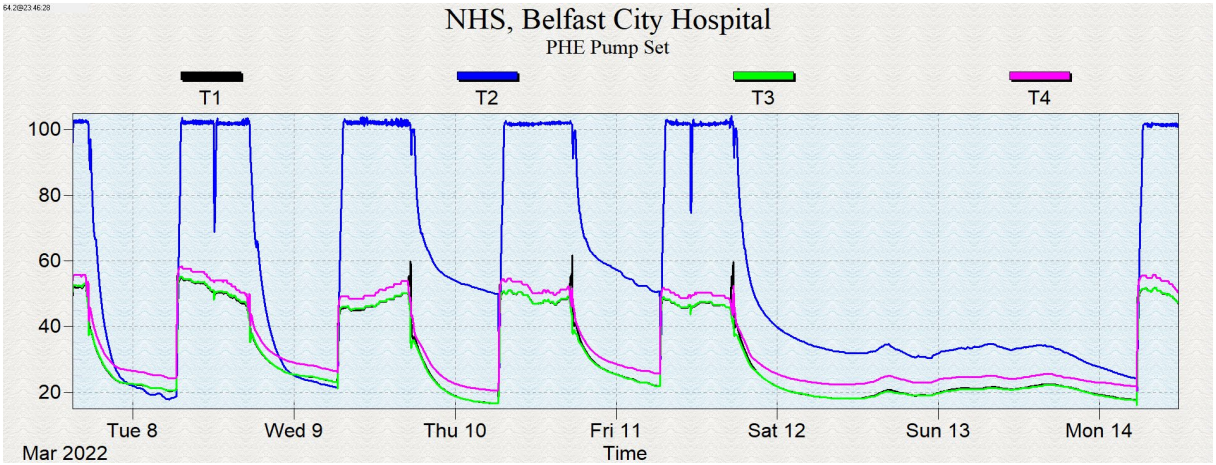
Yearly Savings

An estimated yearly saving of £6,100.

CO2 Savings

Reduction of 18.4 tonnes of CO2 per year.

PHE with pump set



TIG's Device