



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. The CEELOC was 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. The CEELOC 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, the CEELOC could push the condensate up the 10-meter head.
3. By using the Ceeloc, the need for the pumpset was removed, simplifying 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

£800

Removal of pump
reduces maintenance
cost and time.

ROI

9

Months

9-month payback with
permanent savings
thereafter.

Yearly Savings

£6,100

per year

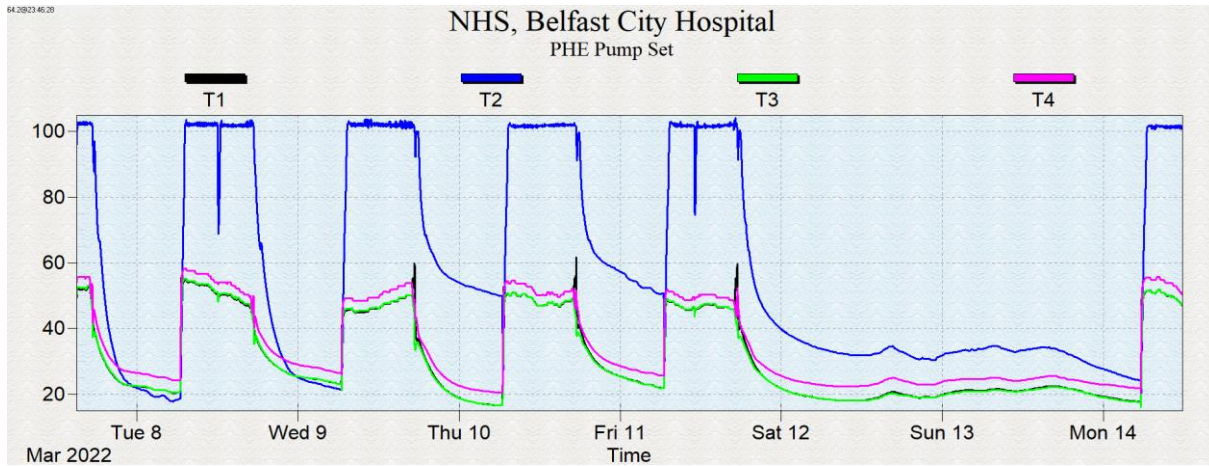
An estimated yearly
saving of £6,100.

CO2 Savings

18.4

Reduction of 18.4
tonnes of CO2 per
year.

PHE with pump set



Ceeloc

