



THERMAL IMPACT GROUP LTD

STEAM SPECIALISTS

This case study was carried out at: **A
Petfood Manufacturer**
Located in Poland

Study

A large Petfood Manufacturer commissioned an independently verified study to compare the performance of a TIG's devices against that of a regular Mechanical Steam Trap. Both traps were installed on a shell and tube heat exchanger used to thaw frozen meat. The following data was collected from both the Mechanical Steam Trap and TIG's devices:

Steam Temperature, Steam Consumption Data, Production, Visual Observations, Steam Flow, Thermal Energy Recovery.

Using all the data collected above, a thermodynamic balance of the process was calculated.

Analysis of this data showed the following observations:

1. The process when using TIG's devices was much smoother with no impact on achieved temperatures.
2. There was a significant reduction of thermal energy demand (-22% observed between the Mechanical Steam Trap vs TIG's device)
3. Reduction in time to process batches; Mechanical Trap - 48 minutes per batch, TIG's device - 26 minutes per batch.

Results

Energy Usage



An overall reduction of 22% in energy consumption.

Temperatures



TIG's device had no negative effect on any process temperatures.

Process Stability



Process Stability was much smoother overall.

Batch Times



Batch times were reduced when using TIG's devices.