THERMAL IMPACT GROUP LTD
STEAM SPECIALISTS

This case study was carried out at a:
Malt Whisky Distillery
Located near Stirling, Scotland

Study

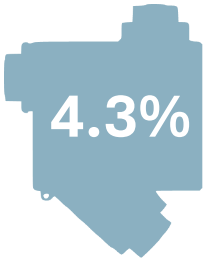
The management of a Distillery located near Stirling decided to perform a trial with TIG's devices on a liquor plate heat exchanger. The trial focused on comparing the performance of the existing mechanical steam trap with a replacement TIG device. It should be noted that the existing mechanical trap was in operation for approximately 14 months before the trial commenced.

It was found that:

1. The original mechanical trap regularly produced condensate temperatures in excess of 100°C, which is a strong indication of inefficient trap operation and excess energy leaving the process.
2. The maximum condensate temperature with TIG's device was 83°C, indicating much more sensible heat entering the process fluid

Results

% Savings



Overall reduction in steam usage.

Steam Saving

A reduction in steam usage of 49kg/h.

Yearly Savings

An estimated yearly saving of £8,592.

ROI

A return in investment of less than a year.

info@thermalimpact.co.uk
Tel: (+44) 28 93344044

Graphs

The monitoring results highlight the difference in condensate discharge behaviour between the mechanical trap and TIG's device. With the mechanical trap, condensate regularly leaves the liquor PHE at temperatures above 100°C, indicating wasted energy and unstable process control. In contrast, TIG's device consistently reduces condensate temperature, demonstrating more efficient heat transfer to the process and improved system performance.