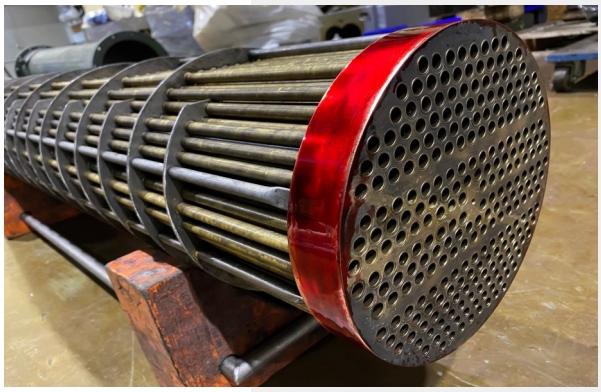
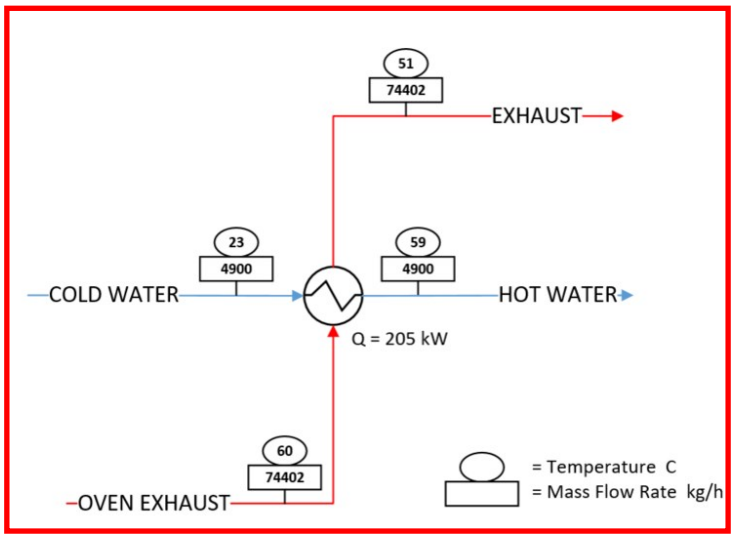
Heat Recovery

Pet food odour treatment plant..

A **Pet Food Processing** site had an issue with odour complaints from the local residents and were looking at a new odour treatment system across all the process lines. EnerTherm Engineering investigated the use of incineration, combined with heat recovery, to access the suitability and viability of this method for site.

The odour issue had been an ongoing problem, electrostatic precipitation and de-odourising chemicals were trialled alongside the original absorption column but ultimately a new treatment system was needed to fix the problem. Incineration of the waste gases was one of the methods investigated. Incineration gives a very effective odour removal however was not used at this site.





EnerTherm Engineering was given data from a previous site survey on the waste gas. From this information the incinerator was sized and analysis undertaken to maximise the **heat recovery**.

The combined foul gases flowrate was **circa 300,000 m3/h**, the gases need to be incinerated to **820 °C for 2 seconds to ensure full incineration**. This lead to a large flowrate of natural gas being required although this was minimised by pre-heating the waste gases and combustion air from the incineration exhaust. Even after this there was scope to implement another heat exchanger to further recover heat to another process. The best payback came from recovering **500 kW** of waste energy to **13,000 kg/h** hot water production.

Francois Pierrel

15 Minute Meeting

15 min

"EnerTherm Engineering– Thrive to Optimise"

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