



Case Study

FLOW CONTROL



Industry sector:
PRIMARY INDUSTRY (STEEL)

Application:
STEAM TRAPS

Actual saving:
£50,000

Payback period:
IMMEDIATE



REDUCED loss of
steam resulting in
COST SAVINGS



INCREASED
employee safety
by **REDUCING RISK**



IMPROVED
overall plant
efficiency

ERIKS goes full steam ahead at steel manufacturing facility

Steam loss has a significant bearing on the bottom line of your business. Without doubt, lost steam equals lost money.

More shockingly, a large percentage of companies aren't aware of the effects that leaking pipework and ineffective steam traps have on their business, resulting in increasing costs, health and safety risks, and environmental impacts.



UK Steel Mill

THE ISSUE

A large steel manufacturer was experiencing issues due to excessive steam loss and non-operational steam traps.

Financial loss was hitting an all-time high, employees were put at continuous risk of injury, and impact on the environment was increasing.

Following a site visit and consultation from ERIKS Flow Control Specialists, a Steam Trap Survey was conducted across a section of the steel manufacturing plant to identify non-operational steam traps and pinpoint the source(s) of energy loss.

Following the comprehensive survey, the report highlighted that out of 248 steam traps examined, a staggering 140 weren't working.

To put that into perspective, that's a failure rate of 57%, compared to the standard failure rate of between 10 and 20%.

“ A failure rate of 57% ”

3,701,031kg of steam was lost p.a. and 604,305kg of CO₂ emissions were omitted equalling a financial loss of £55,516 p.a.

On top of this, the increased risk of incident was causing hazardous situations for onsite engineers, and unnecessary damage was being inflicted to the environment.

THE SOLUTION

A section of the steam line was comprehensively reviewed, with all high-risk areas identified. An action plan was then agreed with the customer and conversations were held with one of our partner suppliers to devise a solution that would offer significant benefits.

In order to deliver a solution with minimal disruption, it was decided that the new steam trap assemblies would be delivered complete, ready-to-install and could be retrofitted into the current pipework system.

“ Ordered 36 assemblies for their superheated and saturated steam requirements ”

The newly designed package included PN40 piston valves with carbon steel bodies able to operate to a maximum working pressure of 25 bar; 3/4" 20mm 'Y' Type carbon steel strainers; and 3/4" 20mm PN40 stainless steel traps, suitable for superheated steam.



Pre-assembled steam traps, delivered to the customer ready for installation

“ Delivered complete, ready-to-install and could be retrofitted ”

The new assemblies were prefabricated, assembled, tagged, tested and certified prior to the installation - with all new assemblies adhering to the latest health and safety Pressure Equipment Directive (PED) and Pressure Systems Safety Regulations (PSSR) 2000.

The new assembly also provides double proven isolation to allow maintenance of the strainer and trap without engineers having to shut down the steam system.

Following the success of the new assemblies, the customer has ordered 36 for superheated steam and saturated steam requirements, with another 20 to be ordered in the near future.

OUTCOME AND BENEFITS

- Savings of over £50,000 were made through reduced steam loss
- Onsite employee health and safety significantly increased due to less potential hazards such as burns from leaking pipework and slips from condensate forming puddles
- Improved plant efficiency with newly operational steam traps
- Reduction of CO2 emissions, benefiting the environment