CASE STUDY

Incident Report:

Central heating leak lands police in hot water

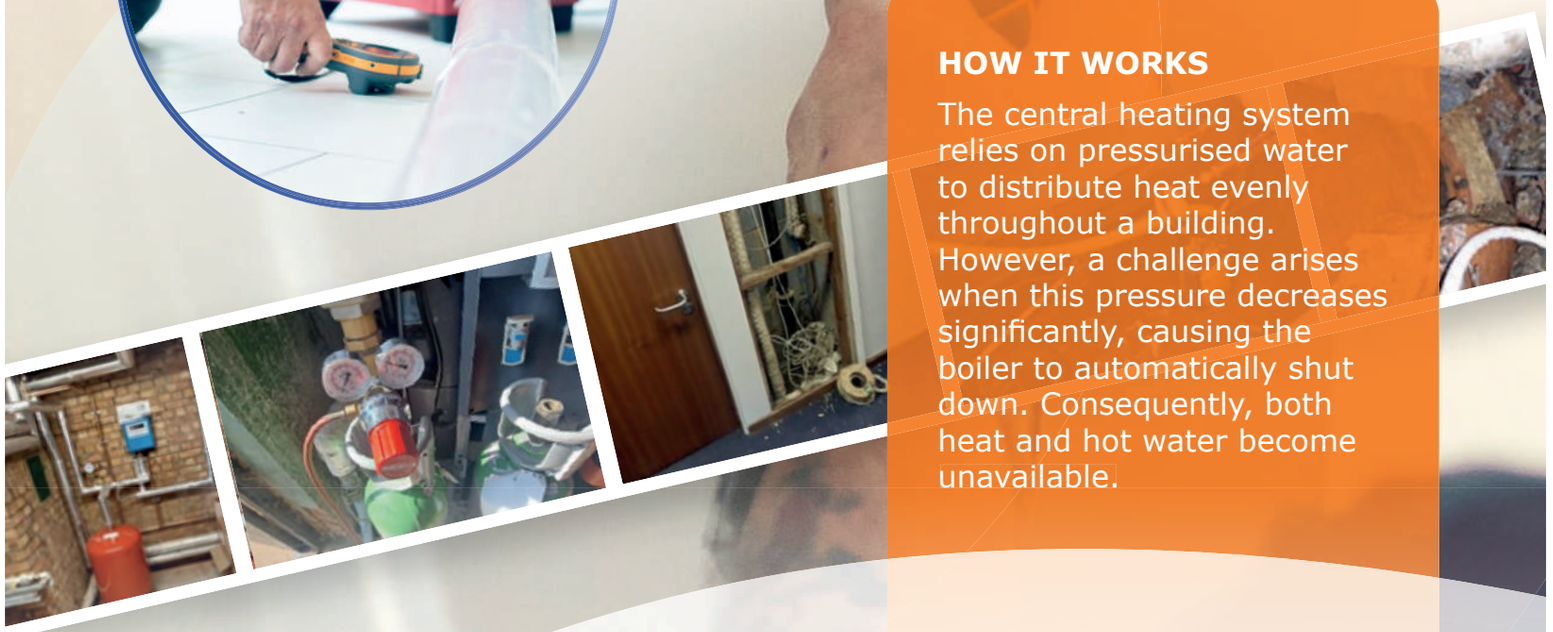
PROBLEM

The central heating system in a 1950s police station in southeast-central England was discovered to be losing pressure. The SOS Leak Detection team was appointed to quickly and accurately identify the problem.

The property manager explained how the central heating system had been changed to a pressurised one. Since the changeover, they had been experiencing a loss of pressure, but they were unsure how quickly the loss had happened.

FOR THIS JOB, WE NEEDED

- Thermal Camera
- Moisture Meter
- Tracer Gas Technology



HOW IT WORKS

The central heating system relies on pressurised water to distribute heat evenly throughout a building. However, a challenge arises when this pressure decreases significantly, causing the boiler to automatically shut down. Consequently, both heat and hot water become unavailable.

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National Service: **0800 046 3492**

SOS leak detection

SOLUTION

SOS Leak Detection provides a non-invasive solution to finding hidden water leaks. The team uses a combination of appropriate technology to locate hidden water leaks within a property's structure.

In this case, as a first step, the engineer drained the remaining water within the system using drain values, which were installed within the hallway duct at the engineer's request.

Tracer gas was then introduced to the system at a pressure of 0.7 bar to push the remaining water out, a process known as purging. The pressure of the tracer gas was then increased to 1 bar, and the pipework was placed under these test conditions for 30 minutes. A drop in pressure was recorded, which confirmed that there was a leak in the system.

Carrying out a further tracer gas detector survey revealed a significant volume of tracer gas (0.75%VOL) was escaping from an access cupboard on the first floor of the building.

Pipework boxing led the engineer to the ground floor, and with permission from the maintenance contractor, the boxing was opened. The sound of escaping water and further tracer gas readings could be detected. The engineer identified the leak in the central heating pipework within the boxing. The system was then drained again, allowing the tracer gas to escape from the building and dissipate.

The engineer returned to the site the following day and began reinstating the tracer gas system to continue the investigation of the rest of the building. No other sufficient escapes of tracer gas to indicate a leak were present but a small leak in an incoming water supply was detected.

RESULT

The use of the tracer gas technology enabled us to confidently conclude that the cause of the pressure loss was the pipe leak in the central heating system.

We recommended to the property manager that qualified professionals replace or permanently repair the central heating pipework and the incoming water supply.

We also advised that the property manager monitor the heating system for any further loss in pressure. If the problem persists, the SOS team will return to the site to help further.

BENEFITS

- The SOS team quickly identified the leak and provided a full report supported by images.
- The non-destructive tracer gas technology increased detection speed while minimising disruption and associated costs.
- An expert response with registered, certified and skilled plumbing and heating engineers.

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SOS leak detection