

Case Study

WITT safety relief valve SV 805 SMART SMART leak monitoring for district heating networks

With the help of the smart function of the SV 805 SMART safety valve from WITT, InVerTec e.V. has implemented a largely automated system for monitoring leaks in closed fluid circuits. Using helium detection, leaks - for example in district heating networks - can be detected reliably and early on. The SV 805 SMART reliably protects the helium supply from excessive pressure and feeds real-time information into a control system, for maximum safety, and this is essentially automatic.

The maintenance of district heating networks when underground leaks occur is technically demanding. Early detection of leaks is crucial in order to avoid costly and time-consuming repairs.

InVerTec's development is based on the measurement of escaping helium, which is fed into the district heating circuit via a bypass system. If the pressure in the helium supply rises above 10 bar, the WITT safety relief valve opens to blow off and closes automatically after pressure equalisation. The integrated sensors of the SV 805 SMART transmit a signal of its status (open/closed) to the process control system in real time. The valve also indicates its status visually via LEDs.

After the helium is added, water is fed back into the network. The helium escapes from potential leak points, and can be detected using hand-held detectors.

Frank Neuner from InVerTec: "Thanks to the smart WITT valve, we can fully monitor the status of the system even without personnel on site and have everything under control at all times. The system is optimally protected and the process is safe."

