

Fully electronic data chain makes the job of energy suppliers easier

The transparent gas transfer station

Nowadays, we are near to implementing a fully electronic data chain that makes available all data in accordance with individual requirements at the press of a button. The gas transfer station has now become transparent.

One could sometimes think that data accuracy is considered less important than data availability. But that is by no means the case. A lot of data can be procured today with far higher accuracy than was the case a few years ago thanks to modern sensor systems.

For example, gases can be analysed far more precisely in our chromatographs with MEMS technology*. We could only dream of this years ago. Our modern volume correctors, with their highly precise pressure sensors, supply measured values lying well below the permitted error limit. On its gas meters, Elster-Instromet has achieved substantial improvements to reduce measurement inaccuracy by further developing the mechanical systems and thanks to its know-how in test bench technology.

The principle of ultrasonic flow measurement was discovered as early as the 1930s. At the time, the fact that computers had not yet been invented prevented the principle being used technically. Nowadays, the computing power of modern computers allows complex evaluation algorithms that are able to include specific flow parameters. As a result, it is possible to substantially boost accuracy.

Continuous monitoring of measurement-relevant parts by diagnostic systems equipped with modern sensor technology is possible not only in the case of safety-relevant assemblies such as aircraft engines but also on turbine gas meters.

This now allows wear and changes in measurement response to be detected at an early point, consequently allowing faults to be prevented in good time.

Maintenance and servicing intervals on measuring instruments and regulators are adapted to real requirements by process monitoring. The maintenance technician no longer needs to physically go to the station in order to lubricate the gas meters. This is done by an automatic oil pump controlled proportionally on the basis of volume.

Modern data transmission makes gas transfer stations transparent. Such data transfer systems constantly transfer information on the system status, such as pressure, temperature, flow rate, gas quality and safety devices. It is possible to derive measures for maintenance and repair on the basis of this data. Power flow for cities with millions of inhabitants can be controlled and monitored using process control systems. Nothing is now left to chance.

Nowadays, all data from the gas transfer station, relevant to the decision-making process, can be accessed online on the PC by the measurement and control engineer. The engineer can make use of extensive software modules for editing

and evaluation. Our experts at the Elster-Instromet hotline offer competent assistance should questions arise.

Elster-Instromet boosted the clarity of data transmission for example with its ENCODER and DSfG technology and the series of data loggers. The process data chain today ensures complete traceability making the gas transfer station crystal clear.

*MEMS = silicon-based microelectromechanical systems

