TurbinScope® goes online:

Diagnosis of turbine gas meters via the Internet!

In parallel with Elster-Instromet's registering the brand of the TurbinScope diagnostic tool, the company also managed to successfully linking the hardware to the Internet. This saves servicing costs and shortens the data transfer chain between the gas station and the Elster-Instromet Competence Centre for meter diagnostics.

After initial experience with the TurbinScope in practice, operator friendliness of this diagnostic servicing package for Elster-Instromet turbine gas meters has now been fundamentally enhanced. The modern hardware recently implemented now allows the diagnostic tool to be operated and configured remotely. Transfer of the retrieved data is performed via an Internet link. This upgrade now allows our specialists in Silvolde (the Netherlands) direct access to the system during ongoing operation and permits them to evaluate the meter data sent continuously on an almost real-time basis.

The basic requirement for valuable and informative meter or station diagnostics is still the recording of as large a bandwidth of the permitted meter capacity as possible during TurbinScope application. Ideally, this involves subjecting the system to a Q_{min} to Q_{max} cycle in order to allow recording of a complete frequency pattern of the meter during measurement (Fig. 1). In addition, the system should allow a spin-down of the meter from approx. 50% Q_{max} through to complete standstill of the turbine wheel (Fig. 2), since this supplies important information on the working condition of the bearings of the turbine gas meter and a forecast of the measurement error at Q_{min}.

Elster-Instromet still differentiates between a low-cost basic analysis A and a convenience analysis B, subject to extra charge, which may also include valuable information on the system, besides recording the working condition of the meter.

If, looking back, we consider the TurbinScope applications including the results obtained from them over several years, the extra charge for the convenience analysis B has proven very profitable for most customers.

Fig. 1

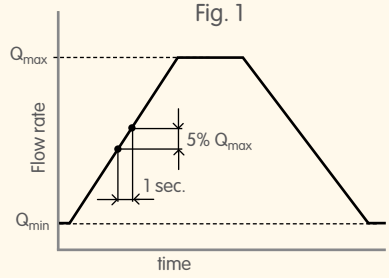
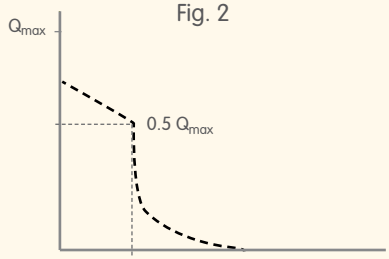


Fig. 2



Basic analysis A:

- Detection of possible deformations of the turbine wheel blades
- Detection of possible turbine wheel imbalance
- Estimation of the measurement error at Q_{min}

Convenience analysis B:

- All error analyses of the basic analysis A
- Detection of mechanical bearing damage
- Detection of system-related installation effects such as pulsating flow
- Determining of the actual flow rate (NMi-recognized)*

Elster-Instromet mainly offers the TurbinScope service for individual single projects, of course if necessary also on a fast-track basis with delivery of the hardware by courier. Equally, this service is conceivable for large-scale projects, e.g. for qualitative recording of the working condition of an existing meter pool of Elster-Instromet turbine gas meters. For this purpose, we are able to offer customers time-limited rental of our TurbinScope. In this case, the customer, of course, decides when, where and how frequently he wishes to diagnose the gas meters.

We would be more than willing to discuss with you your individual concerns and ideas so that we may find an optimum solution.

Both data evaluation and the corresponding analysis report are managed centrally by our TurbinScope specialists at the Competence Centre in Silvolde. Here, many results and a great deal of experience have been gathered over the past years. This enables a valuable, reliable statement on the working condition of our Elster-Instromet turbine gas meters and, thanks to the Internet, now very fast indeed.

Good diagnostics means safe prognostics. You can't offer more service than this!

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* Very important in the case of intermittent operation of the system.