

## Further development of condition-based maintenance for natural gas metering stations

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### **Abstract**

Changes in laws in the last years force the German gas industry to review the service and maintenance of gas distribution systems concerning costs and effort. For this reason the widely used preventive maintenance for natural gas metering stations has to be called into question. The German technical rule “DVGW-Arbeitsblatt G495: Gasanlagen-Instandhaltung”, released in the year 2006, gives a basic overview of condition-based maintenance for natural gas metering stations. But the criteria, which are used in this rule, do not cover the actual situation and the development of the station, what is necessary for applied condition-based maintenance.

Against this background an extension to the rule G495 is presented in the talk, which modifies the existing criteria and upgrades the procedure of calculating the maintenance interval considering new criteria, which cover for example the functional and security relevant components of the natural gas metering station. The corresponding research project has been funded by the German Technical and Scientific Association for Gas and Water (DVGW). Additionally the options of condition monitoring for different flow metering devices are presented in more detail. A methodical way in monitoring single acting, serial or parallel connected flow metering devices is introduced.