



Automatic measured data validation applied on hydraulic and water quality parameters in sewer systems

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ABSTRACT

Poor quality of data provided from automatic measuring stations installed in sewer systems is usually related to hostile conditions the measuring equipment is exposed to. Therefore, data quality has to be kept on required level either by constant maintenance of the measuring equipment or by post-processing data validation. This paper presents an automatic measured data validation framework, applied on hydraulic and water quality parameters in sewer systems. Presented robust algorithm, based on mathematical models and statistical relations, provides not only the validation grading system that may be used for data quality assessment, but also the level of uncertainty of the validation system and the range in which the accurate data value is expected to be. The validation system is developed for and tested on measured depth, velocity and electro-conductivity in Belgrade sewage system.

KEYWORDS

Measured data in sewer systems; Measured data quality; Measured data validation