

A New Method for Leakage Detection and Localization in Water Distribution Network

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Water network has complex structures in cities with high population density. Damage to the water pipe has a form of leak or rupture, and the early detection of occurrence and the accurate determination of the location are required. This paper proposes a novel method capable of detecting leakage of water supply network using pressure data. The mean value of the normal state pressure is calculated and the deviation from the average value is obtained. The cumulative integration of pre-processed data and applying floor function to that can be used to detect leakage. Then time data recorded by detection algorithm is used to find the leak position applying a statistical estimation method. This work is supported by the Korea Ministry of Environment as a Project for Developing Eco-Innovation Technologies (GT-11-G-02-001-3).