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## **REDUCING ENERGY CONSUMPTION BY UPGRADING PUMPING STATIONS IN WATER DISTRIBUTION SYSTEMS**

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### **Abstract**

Adjusting the operating parameters of pumping stations equipped with fixed speed pumps is achieved by manipulating the valves from the pumps' discharge. In order to meet the requirements of the distribution networks, the pumps are being strangled at startup and they remain so throughout the entire period of operation. This paper presents a method developed to estimate the energy costs in a pumping station operation, based on an analysis using the data recorded in the register of the station operation.

*Key words:* performance, pumping stations, valve

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