Patent Search

Invention Title	WATER IMPURITY DETECTION USING INTERNET OF THINGS (IOT) FOR SMART CITY
Publication Number	27/2020
Publication Date	03/07/2020
Publication Type	INA
Application Number	202041025992
Application Filing Date	19/06/2020
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	COMPUTER SCIENCE
Classification (IPC)	G01N 33/00

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Abstract:

This invention provides an in-pipe water impurity detection system using IoT for smart city. With the new improvement in communication technologies, this real-time in-pipe water impurity detection is getting more extra attention. This invention is to develop an IoT based method that can examine and identify the impurities and unwanted particles present in the water. The system will be located at the origin point of every society/colony. The system can determine the hardness, alkalinity, and turbidity of the water. The system tests the water at frequent periods provided for pipelines to the customers/citizens. The real-time pieces of information are analyzed using fuzzy artificial evaluation also uploaded over the cloud. When an impurity is disclosed in the water, the system transmits an alert to the customers about the water impurity parameters. It prevents the additional flow of water in the contaminated zone in the pipe utilizing a solenoid valve. Some other area which provides quality water to the customers in the water delivery network continues flowing. The outcomes show that this invention can examine the characteristic water parameters in real-time and can successfully treat, forward data to the cloud, and suggest the consumers about the contamination in the zone.

Complete Specification

Claims:1. A water impurity detection system for observing the condition of water distributed by a water delivery system
2. valve box securely mountable on a water pipe
3. communication device mounted at a top portion of the top section
4. communication device is an antenna electrically coupled to the communication assembly
5. A water impurity detection system, further comprising a sensor unit, the measurement results obtained by the said analyzing group, said transmission unit converting the data-processed results obtained by a sensor unit to transfer water quality data to the server through communication.
6. The system will be placed at the starting point of every society/colony.
7. The system can detect the hardness, turbidity, and alkalinity of the water
8. All the details about the water will be uploaded to a centralized database, and the details will be updated in every 12 hours.
9. These details will be fetched/retrieved into a mobile application and website which can show the alarming and danger level in graphical manner and can easily use by an average smartphone user.
, Description:BRIEF DESCRIPTION OF DRAWINGS

Figure. 1 Block diagram of Smart water impurity detection system
Figure 2: Schematic representation of a water impurity detection system in a generalized representation of the presentInvention

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