

# Online System for Monitoring Water Quality, Contamination and Managing Pipeline Network

**Prof. Aparna R. Kare<sup>1</sup>, Praful Rajendra Bhalerao<sup>2</sup>, Gaurav Kishor Gosavi<sup>3</sup>, Shubham Ganesh Shisode<sup>4</sup>, Amey Vinay Kamat<sup>5</sup>**

Assistant Professor, Department of Electrical Engineering, NBN SINHGAD School of Engineering, Pune<sup>1</sup>  
Student, Department of Electrical Engineering, NBN SINHGAD School of Engineering, Pune<sup>2,3,4,5</sup>

**Abstract:** *From top nations like the USA to developing nations like India, drinking water is an important need for people of all the countries. With such universal necessity, distribution of drinking water has not been streamlined. With the present manual techniques to prevent leaks, contamination, and managing pipeline network there are lots of inefficiencies in the system which leads to wastage of water. The system is meant so as to watch the standard of water using internet of things (IoT) to see its containment and confirm to eradicate its impurities. This article presents low costs system for time monitoring of water quality system. We've used Temperature, pH, Turbidity, Sensors, etc. The temperature sensor detects the degree of hotness and coldness of the water. The ESP-32 model is often used as a controller. The measured value of the sensor is processed by the controller. Finally, the sensor data are often shown on IoT based system. The information then received is employed within the purification of impure water through IoT functioning.*

**Keywords:** Internet of Things, Temperature Sensor, Turbidity Sensor, Flow Sensor, pH Sensor ESP-32 Model, etc.

## REFERENCES

- [1] A Chandana Urs, Shubha J, Sushmitha Pai B, Vaishnavi A Pikle "Design of Smart Sensors for Real-Time Water Quality Monitoring Using IOT Technology ", International Journal of Scientific Development and Research (IJS DR), 2017.
- [2] Vaishnavi V. Daigavane and Dr. M.A Gaikwad "Water Quality Monitoring System Based on IOT" Advances in Wireless and Mobile Communications. ISSN 0973-6972 Volume 10, Number 5 (2017), pp. 1107-1116, Research India.
- [3] Prasanna kumar M J, Meghana M S, Navarathna S, Kruthika D M, Sumanth Kumar B S "IoT Based Water Quality Monitoring System Using Wireless Sensor Network" 4th National Conference on Emerging Trends in Computer Science & Engineering (NCETCSE-2018).
- [4] Mohd Tarik, Md Saif Malik, Pinki Yadav, Hussain Muzzaffar, Gaurav Nagar "Smart Water Quality Monitoring System Based on IoT", journal of critical reviews, ISSN- 2394-5125 VOL 7, ISSUE 19, 2020.
- [5] Wong Jun Hong, Norazanita Shamsuddin, Emeroylariffion Abas, Rosyzie Anna Apong, Zarifi Masr, Hazwani Suhaimi, Stefan Herwig Gödeke and Muhammad Nafi Aqmal Noh, "Article Water Quality Monitoring with Arduino Based Sensors", 2021, 8, 6, <https://doi.org/10.3390/environments8010006>
- [6] M Hakimi and Z Jamil, "Development of Water Quality Monitoring Device Using Arduino UNO", IOP Conference Series: Materials Science and Engineering, 2021 IOP Conf. Ser.: Mater. Sci. Eng. 1144 012064 S.Barath Raj, P.Hari Prasad, S. Prasath, A. Moorthy, "Water Quality Monitoring System Using Arduino".