

## Zonal Storage Water Supply System with Hydraulic Isolation Structure (ZS-HIS)

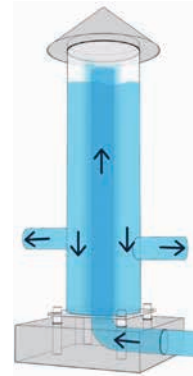
**Problem Statement:** In India, the Water Supply System (WSS) is stuck in a vicious cycle of failure. The drivers responsible for the situation are related to the design, analysis, operation, consumer satisfaction, and institutional capacity aspect of WSS. As a result, high non-revenue water (NRW), inequitable water supply, and deterioration of WSS are commonly found across India. The interventions applied to overcome the issues are generally proposed based on their performance in developed countries. However, such interventions fail to deliver in India. Moreover, the capital and operation and maintenance (O&M) costs of such interventions are higher, posing an additional challenge for improving the efficiency of WSS in India. The current research solution has addressed this issue.

**Uniqueness of the Solution:** The proposed methodology is based on rigorous surveys, field studies and using knowledge of field hydraulics. This

methodology is suitable to the Indian context and aims to provide low-cost and easy maintenance-oriented design and operation solutions to improve WSS in India.

**Current Status of Technology:** The system components have been tested in a real-life working environment. The performance of the shaft that acts as a hydraulic isolation structure was commissioned at the project site in Saphale, Palghar, Maharashtra, in December 2020. To date, the Shaft's performance is satisfactory, supplying water to consumers with adequate pressure.

**Societal Impact:** The technology has a huge societal impact as it provides low-cost and appropriate solutions for improving WSS in India. The technology helps deliver the objectives of the Jal Jeevan Mission of the Government of India, both in rural and urban areas. The Urban Local Bodies (ULBs), Public Health



Engineering Department (PHED), and other parastatal bodies responsible for planning, designing, and operating WSS in India will benefit from the proposed method.

**Patent(s):** Filed

**Relevant Industries:** Urban Local Bodies (ULBs), Public Health Engineering Department (PHED), Municipal Corporations.

**Faculty:** Prof. Pradip Kalbar, Centre for Urban Science & Engineering.