

LEAK DETECTION DEVICE

A leak detection device for efficiently estimating leak distribution in a water-distribution block, which constitutes a distribution pipe network, and identifying individual leaks in the water-distribution block.

The leak detection device for monitoring the status of a water-distribution block includes: a data collection unit for collecting flow rate values of pipes at an inlet of the water-distribution block and pressure values of a plurality of nodes of a trunk main for the water-distribution block; a pipe network calculation unit for estimating the pressure values of the nodes of the entire water-distribution block and the flow rate values of the pipes; and a trunk main leak estimation unit for estimating virtual leak amounts of the plurality of nodes of the trunk main based on a leak amount of the entire water-distribution block, the pressure values of the plurality of nodes of the trunk main as collected by the data collection unit, and the pressure values of the plurality of nodes of the trunk main as estimated by the pipe network calculation unit.

Figure 1