

Water Monitoring System for Legionnaire's Disease

Legionnaire's disease is a severe lung infection caused by LP (*Legionella Pneumophila*) bacteria which exist in fresh water. In nature, this bacterium exists in such low concentrations that infections are rare. However, large plumbing systems, such as those found in hospitals, retirement homes, hotels, and cruise ships can provide a favorable environment for LP bacteria to grow. Past Legionnaire's disease outbreaks in the US have occurred in hospitals and retirement homes that are frequented by people with compromised immune systems who are susceptible to contracting the disease. According to the CDC (Centers for Disease Control), approximately 10,000 cases of Legionnaires disease are reported each year in the US.

GDS (Global Data Specialists), a leading control systems integrator focused on the water industry has created an automated WMS (Water Monitoring System) to monitor, test, track, and report conditions that are conducive for LP bacteria to grow. WMS does not test for LP bacteria directly; instead it tests for six parameters (Temperature, pH, Chlorine Dioxide, Free Chlorine, Conductivity, and Water Pressure) that are considered environmental markers, when falling within our outside indicated ranges, conducive for LP bacterial growth.

WMS can be designed to monitor water flowing through a plumbing system continuously or on-demand. WMS can be designed to monitor both hot and cold water. In a continuous monitoring system, WMS is integrated into a building's plumbing systems and installed permanently at specified locations throughout a building. In the on-demand monitoring model, WMS is a portable solution with quick disconnects that can be taken from one place to another for ad hoc sampling. In a continuous monitoring model, WMS can integrate with an existing Building Management System (BMS) to automatically collect and report data. In a stand-alone implementation, data provided by WMS is depicted in the graphical display of an OIT (Operator Interface Terminal). GDS can customize WMS to meet customer's specific needs.