

Major Pharmaceutical Company Uses Water Distribution Monitoring System to Effectively Manage Resource Usage

MAVERICK created central monitoring system algorithms to distribute pure water to consumers at the exact specifications needed.

Objective

A major pharmaceutical company needed to control and direct two pure water ingredients that support a number of manufacturing operations and control overall water purity.

Results

MAVERICK installed a control and distribution management system which successfully meets each consumer's needs. Purified and injection water is readily available without a capital investment in additional generating capacity.



Solution

In pharmaceutical manufacturing, the most costly ingredient is typically the purified water used in the manufacturing processes, even if it is not an ingredient in the final product.

The pharmaceutical company planned to add three storage tanks to support new production processes, but demand patterns suggested new generating capacity might also be needed.

MAVERICK's challenge was to develop a new prioritization system to eliminate the need for new generating equipment.

The MAVERICK team met with all consumers involved to ensure the new solution addressed specific water needs.

MAVERICK developed algorithms based on priority logic to evaluate the needs of the consumers competing for the available supply. These algorithms measure current supply levels and determine if the demand is compatible with the time available to resupply a given tank.

The monitoring system considers the percentage of production flow and length of time to divert water to a tank.

The system constantly monitors the relative capacity and availability of each tank and meters out the water (in separate loops for purified and injection water) to various holding tanks, day and night.

A PLC network interface technique enables the system to interface with existing controllers and minimize downtime.

The central system monitors and controls the consumption of each water resource and provides consumers a monthly report.

New system visibility allows consumers to reduce waste, identify losses and repair problems.

The control system automatically and continuously monitors for total organic carbon (TOC) and conductivity. Out of range levels send an alarm to operators.

The flexible monitoring system allows for the addition of new elements, easy reconfiguration and adaptability to consumer priorities. Additional benefits include a solid database of consumption information, centralized water reports and realistic cost allocation.

The MAVERICK Difference

MAVERICK balanced production and demand with a complex-needs algorithm which resulted in a solution to provide efficient control and eliminated the need for more investment.



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