Steam Control Solution at Medical Center

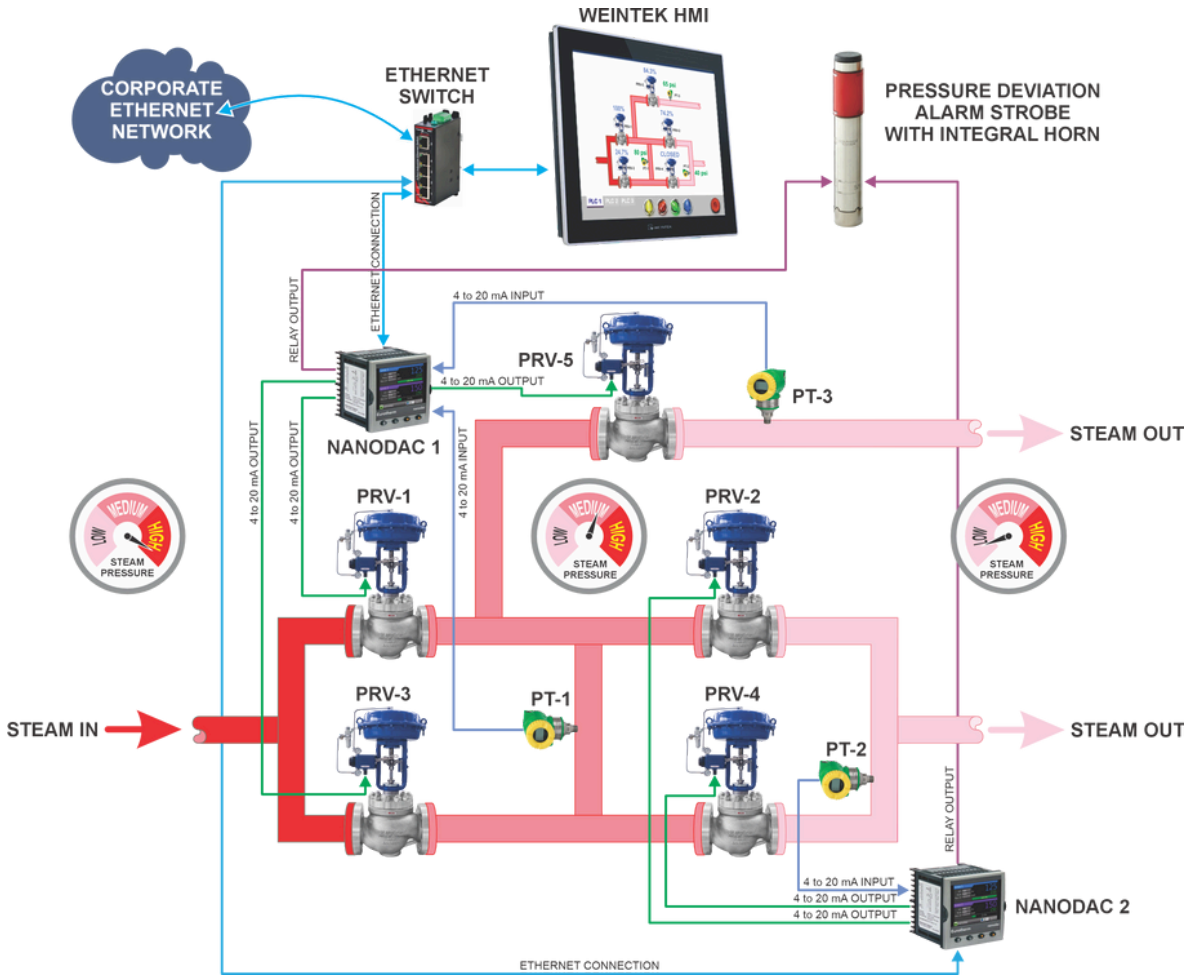
Prominent Hospital

Philadelphia, PA

Construction Costs: $10K

SERVICES PROVIDED

- Instrument Programming & Configuration
- HMI Screen Development
- On-Site Start-Up & Commissioning
- Operator Training



Neal Systems Provides Steam Distribution Control Panel to State-of-the-Art Philadelphia Medical Center

A brand new, state-of-the-art, medical center that recently opened its doors in Center City Philadelphia, PA expressed a need for control and monitoring instrumentation for its facility steam distribution system. The distribution system supplies steam to critical sub-systems within the center, including those for hot water generation, HVAC, and medical equipment sterilization.

The control panel Neal Systems provided was ultimately built around two Eurotherm Nanodac Controller/ Recorders and a 15-inch Weintek Touchscreen HMI.

In the control panel, the Nanodac pair governs the operation of a network of Pressure Relief Valves (PRVs) into which high pressure municipal steam is introduced; where Pressure Transmitters (PTs) measure distributed steam pressure.

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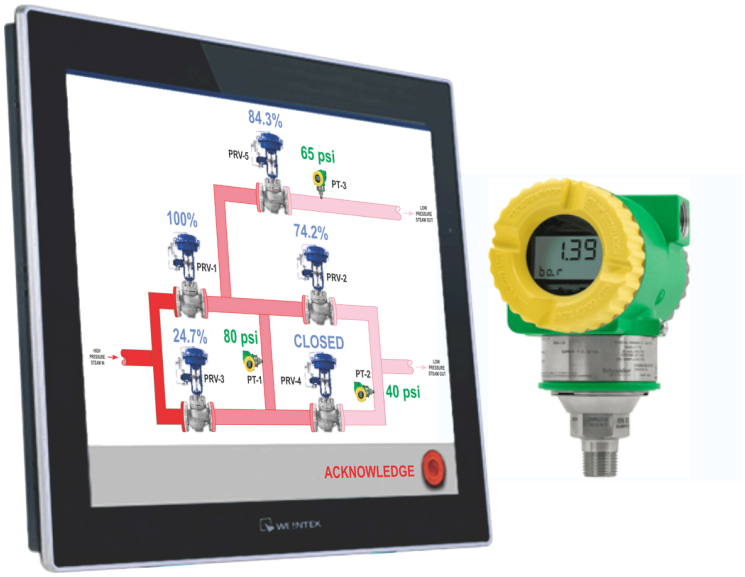
PID Pressure Control Loops set up in the Nanodacs enable the PRV network to not only step steam pressure down in stages from high to medium to low so that it's optimized for sub-system use, but also keep sub-system demand for steam fulfilled as the sub-systems repeatedly approach and back away from full capacity operation over the course of a typical workday.



The control panel's Weintek Touchscreen HMI offers building operators an interactive display of data quantifying several aspects of steam distribution system activity including valve positions, target steam pressure measurements, and pressure deviation alarms which trip whenever steam pressure within the system falls too low or runs too high. Displayed data is overlayed on custom graphics depicting steam distribution plumbing, thereby offering a physical picture by which operators can assess system operational integrity.

A local alarm strobe with horn is also fitted on the control panel that energizes each time a pressure deviation alarm goes active. A virtual "Alarm Acknowledge" button configured into the HMI Touchscreen can be pressed to silence the alarm horn once Operators are fully notified that a steam pressure deviation event has taken place.

All parameters displayed by the Touchscreen HMI are also recorded in real-time by the Nanodacs. Because the Nanodacs and HMI are Ethernet-enabled, the data they display, control, and collect can be made available to other systems, such as data historian, building management, and energy monitoring ones, via corporate Ethernet network link.

Overall, the Nanodacs and Weintek Touchscreen HMI make the medical center's steam distribution control panel an invaluable tool for managing the facility's use of a vitally important utility. Facility operators and technicians are provided a system interface that makes the day-to-day tasks of steam distribution monitoring, performance optimization, and predictive maintenance convenient and easy, while managers have at their fingertips reliable data by which to base operational, procedural, and budgetary decisions impacted by the center's steam usage.