

Shepherd Chemical R.E.D. Buildings Chilled Water *Norwood, OH*

Construction Completion: 2015
Tri-Tech Services: MES Engineering
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Project Description

This project involved analyzing the existing chilled water system serving the D and R buildings of the Norwood production facility to determine if there was sufficient capacity to add an additional process load in the E building. The chilled water system consists of primary and secondary production and process chilled water loops. We assessed the existing chillers and process loads, and determined that the existing chillers had the capacity to serve the existing loads and the additional process. We also determined which parts of the existing system needed to be replaced and which parts could remain in service. This involved removal of the existing primary pumps and tanks to allow for a new pumping layout which provided new pumps to provide redundancy and addition of Variable Frequency Drives (VFDs) to improve energy efficiency of the system operation.

Extensive field work allowed us to establish the routing of the new process piping through several different types of buildings, exterior locations and over a utility bridge. Our structural and mechanical departments worked hand in hand to determine the required pipe support conditions as well as the modifications required to be made to the existing structures to support the new piping.

Our completed design showed the phasing required to minimize the down-time to the existing processes. The project included three phases: the first phase allowed one chiller to feed both of the existing processes; the second phase removed much of the equipment that was no longer required and installation of new pumps and tanks; the final phase has the last of the equipment being removed and pumps being installed.

This job required close coordination between the owner's plant engineers, our mechanical, electrical, and structural engineers to provide a complete package.



Project Team Members

Bob Thomson
Roger Butler
Ben Florkey
Daniel Garman
Roger Grant