

## ***Temperature Control Units Used in Rubber Process***

This temperature control unit (TCU) was designed to provide heating and cooling to process rolls that vulcanize rubber sleeves onto drums. The representative worked closely with Fulton and the end user to ensure that the customer's process requirements would be met, and that the unit was designed to include the capability for future expansion. This TCU replaced existing equipment that could not support the required heating and cooling demands.

The new system was designed to reduce the heating and cooling cycle times, while utilizing their existing utilities. The number of threaded connections were kept at a minimum to eliminate leakage, and eliminate the need for make-up water.

Water or Glycol is the single fluid media and will be circulated using a Dean high temperature hot water pump. Shell & tube heat exchangers were provided for both indirect heating and cooling. Heating was accomplished using 125 psig steam, cooling utilized 85°F cooling tower water. The skid was designed for 150 psi @ 350°F, and included ASME code expansion tank. Fisher / Baumann control valves were used to control the rate of cooling and heating.

All skid mounted devices were wired into a NEMA 4 control panel. A Yokogawa UP550 temperature control was provided to allow batch ramp and soak temperature control for the customers many batches. The panel also included motor starter, disconnect, and all required operating light and switches. The temperature control also allowed for remote monitoring through the customers Yokogawa chart recorder.

