



USE OF BACK PRESSURE REGULATORS WITH PUMPS

A common factor among positive displacement pumps is continually increasing head pressure and brake horsepower when these pumps operate at low flows or against a closed discharge. A bypass valve should be installed in these systems to prevent serious over-pressure or over-temperature conditions from occurring.

Back pressure regulators are not safety devices. Rather, they are valves used to impose a pressure limit within a system. This is done by relieving excess pressure into a lower pressure vessel or directly to the atmosphere.

Reciprocating pumps are generally used for applications requiring low capacities with high head pressure. When the pump is operating under low-flow conditions, there is a continual build-up of head pressure and brake horsepower. If the discharge were closed and the pump was still running, pressure would continue to be applied to the system and build up until a rupture occurred. The insertion of a properly sized relief valve, set to open at a pressure slightly in excess of the maximum working pressure required at the pump, is recommended because of the safety it affords the system.