



CONTROLLING ACCUMULATOR PRESSURE IN WELLHEAD CONTROL PANELS

Overview

Wellhead control panels are used in the Oil & Gas industry to provide safe start-up and shutdown of production wells. A series of safety valves are controlled through the control panel. For example, a Surface Safety Valve (SSV) is used to quickly shut-in the well upstream of the choke manifold in the event of overpressure or other well emergencies requiring immediate shut-in. These types of valves are typically driven by pneumatic or hydraulic actuators.



Application

In control panel applications that use hydraulics as a power source, Barksdale 9692X explosion proof switches are used to control the accumulators. A hydraulic pump is used to fill the accumulators with hydraulic fluid and pressurize them. The 9692X pressure switches shut down the pump when maximum pressure has been reached. In addition, a 425X explosion proof transducer provides a signal to a PLC to continuously monitor pressure level.

Two 9692X switches are used to control hydraulic cylinder pressure; one for high pressure and another for low pressure. Finally, a low-pressure 9681X switch is used to monitor pilot system pressure. If system pressure falls below a certain level the pilot valve will fail to actuate the main control valves. The 9681X sends an alarm to the operator to warn him/her of this condition.

Features & Benefits

The incorporation of mechanical switches in Wellhead control panels within the Oil & Gas industry is crucial for the following reasons: facilitating straightforward field adjustments, guaranteeing fail-safe operation, and accommodating remote locations devoid of a power supply.

Need	Feature	Benefit
Easy field adjustment	Accessible adjustment nut with six points to engage adjustment screw	Quickly, easily change set point in the field
Fail Safe operation	Single Pole Double Throw (SPDT) contact	Wired normally open or normally closed to make or break circuit based on rising or falling temperature.
Remote locations without power source	Does not require power source to operate	Cost savings with less wiring and no power requirements. Safety of isolating operators from live control circuits.