Control Valves for Forklift

Forklift Control Valve - Automatic control systems were primarily developed more than two thousand years ago. The ancient water clock of Ktesibios in Alexandria Egypt dating to the third century B.C. is thought to be the first feedback control equipment on record. This clock kept time by way of regulating the water level inside a vessel and the water flow from the vessel. A popular style, this successful machine was being made in a similar fashion in Baghdad when the Mongols captured the city in 1258 A.D.

All through history, various automatic tools have been utilized so as to accomplish specific tasks or to simply entertain. A common European design through the seventeenth and eighteenth centuries was the automata. This particular machine was an example of "open-loop" control, featuring dancing figures that would repeat the same job over and over.

Closed loop or otherwise called feedback controlled equipments include the temperature regulator common on furnaces. This was developed during the year 1620 and attributed to Drebbel. One more example is the centrifugal fly ball governor developed during the year 1788 by James Watt and utilized for regulating the speed of steam engines.

The Maxwell electromagnetic field equations, discovered by J.C. Maxwell wrote a paper in 1868 "On Governors," which was able to explaining the exhibited by the fly ball governor. So as to explain the control system, he utilized differential equations. This paper demonstrated the usefulness and importance of mathematical methods and models in relation to comprehending complex phenomena. It even signaled the beginning of systems theory and mathematical control. Previous elements of control theory had appeared before by not as dramatically and as convincingly as in Maxwell's study.

New control theories and new developments in mathematical techniques made it possible to more precisely control more dynamic systems than the initial model fly ball governor. These updated techniques consist of various developments in optimal control during the 1950s and 1960s, followed by progress in robust, stochastic, adaptive and optimal control methods in the 1970s and the 1980s.

New applications and technology of control methodology have helped make cleaner auto engines, cleaner and more efficient chemical processes and have helped make space travel and communication satellites possible.

Primarily, control engineering was practiced as a part of mechanical engineering. Also, control theory was initially studied as part of electrical engineering as electrical circuits can often be simply described with control theory techniques. Today, control engineering has emerged as a unique discipline.

The very first control relationships had a current output which was represented with a voltage control input. Since the correct technology so as to implement electrical control systems was unavailable at that time, designers left with the choice of slow responding mechanical systems and less efficient systems. The governor is a very effective mechanical controller which is still usually utilized by some hydro plants. In the long run, process control systems became accessible previous to modern power electronics. These process controls systems were often used in industrial applications and were devised by mechanical engineers utilizing hydraulic and pneumatic control machines, a lot of which are still being used these days.