Forklift Control Valve

Forklift Control Valves - Automatic control systems were first created over two thousand years ago. The ancient water clock of Ktesibios in Alexandria Egypt dating to the 3rd century B.C. is considered to be the very first feedback control device on record. This particular clock kept time by regulating the water level inside a vessel and the water flow from the vessel. A common design, this successful device was being made in a similar fashion in Baghdad when the Mongols captured the city in 1258 A.D.

All through history, a variety of automatic devices have been used to simply entertain or to accomplish specific tasks. A popular European style all through the seventeenth and eighteenth centuries was the automata. This machine was an example of "open-loop" control, consisting dancing figures that will repeat the same task again and again.

Closed loop or also called feedback controlled equipments comprise the temperature regulator common on furnaces. This was actually developed during 1620 and accredited to Drebbel. One more example is the centrifugal fly ball governor developed in 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 describing the exhibited by the fly ball governor. To be able to describe the control system, he used differential equations. This paper demonstrated the importance and helpfulness of mathematical models and methods in relation to comprehending complex phenomena. It also signaled the start of systems theory and mathematical control. Previous elements of control theory had appeared before by not as convincingly and as dramatically as in Maxwell's analysis.

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

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

At first, control engineering was carried out as just a part of mechanical engineering. Control theories were firstly studied with electrical engineering for the reason that electrical circuits could simply be described with control theory methods. Now, control engineering has emerged as a unique discipline.

The first control partnerships had a current output that was represented with a voltage control input. In view of the fact that the proper 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 efficient mechanical controller which is still usually utilized by various hydro factories. In the long run, process control systems became accessible prior to modern power electronics. These process controls systems were normally used in industrial applications and were devised by mechanical engineers making use of pneumatic and hydraulic control machines, a lot of which are still being used these days.