Forklift Control Valves

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

Different automatic equipment through history, have been used to accomplish particular tasks. A common desing utilized in the 17th and 18th centuries in Europe, was the automata. This particular piece of equipment was an example of "open-loop" control, featuring dancing figures that will repeat the same task again and again.

Feedback or otherwise known as "closed-loop" automatic control equipments comprise the temperature regulator seen on a furnace. This was actually developed during the year 1620 and attributed to Drebbel. Another example is the centrifugal fly ball governor developed during 1788 by James Watt and utilized for regulating steam engine speed.

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

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

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

Originally, control engineering was practiced as just a part of mechanical engineering. Control theories were firstly studied with electrical engineering since electrical circuits can simply be described with control theory techniques. At present, control engineering has emerged as a unique discipline.

The first control partnerships had a current output which 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 several hydro factories. Ultimately, process control systems became available before modern power electronics. These process controls systems were often utilized in industrial applications and were devised by mechanical engineers using hydraulic and pneumatic control equipments, a lot of which are still being used today.