Forklift Control Valve

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

Throughout history, various automatic machines have been utilized so as to simply entertain or to accomplish specific tasks. A common European style throughout the seventeenth and eighteenth centuries was the automata. This particular device was an example of "open-loop" control, consisting dancing figures that will repeat the same job again and again.

Closed loop or likewise called feedback controlled machines comprise the temperature regulator common on furnaces. This was developed during 1620 and accredited to Drebbel. Another example is the centrifugal fly ball governor developed in the year 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 1868 "On Governors," which was able to describing the exhibited by the fly ball governor. In order to describe the control system, he used differential equations. This paper exhibited the importance and helpfulness of mathematical methods and models in relation to comprehending complicated phenomena. It even signaled the start 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 study.

New developments in mathematical techniques and new control theories made it possible to more precisely control more dynamic systems as opposed to 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 techniques in the 1970s and the 1980s.

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

In the beginning, control engineering was performed as a part of mechanical engineering. Also, control theory was first studied as part of electrical engineering in view of the fact that electrical circuits can often be simply explained with control theory methods. Nowadays, control engineering has emerged as a unique discipline.

The very first controls had current outputs represented with a voltage control input. In order to implement electrical control systems, the correct technology was unavailable at that time, the designers were left with less efficient systems and the alternative of slow responding mechanical systems. The governor is a very efficient mechanical controller that is still usually used by various hydro factories. In the long run, process control systems became accessible prior to modern power electronics. These process controls systems were often used in industrial applications and were devised by mechanical engineers using hydraulic and pneumatic control equipments, many of which are still being used at present.