Forklift Control Valve

Forklift Control Valve - Automatic control systems were primarily established more than 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 equipment on record. This particular clock kept time by regulating the water level in a vessel and the water flow from the vessel. A popular design, this successful device was being made in the same way in Baghdad when the Mongols captured the city in 1258 A.D.

Different automatic machines all through history, have been used so as to accomplish certain jobs. A popular style used during the 17th and 18th centuries in Europe, was the automata. This particular tool was an example of "open-loop" control, consisting dancing figures that will repeat the same job again and again.

Feedback or likewise known as "closed-loop" automatic control tools include the temperature regulator found on a furnace. This was developed during the year 1620 and accredited to Drebbel. One more example is the centrifugal fly ball governor developed in the year 1788 by James Watt and used for regulating steam engine speed.

The Maxwell electromagnetic field equations, discovered by J.C. Maxwell wrote a paper in the year 1868 "On Governors," which was able to explaining the exhibited by the fly ball governor. To describe the control system, he utilized differential equations. This paper exhibited the importance and helpfulness of mathematical methods and models in relation to comprehending complex phenomena. It even signaled the start 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.

Within the next one hundred years control theory made huge strides. New developments in mathematical methods made it possible to more precisely control considerably more dynamic systems compared to the original fly ball governor. These updated methods consist of various developments in optimal control in the 1950s and 1960s, followed by advancement in stochastic, robust, optimal and adaptive control methods during 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.

Initially, control engineering was carried out as a part of mechanical engineering. In addition, control theory was first studied as part of electrical engineering in view of the fact that electrical circuits could often be simply described with control theory techniques. Nowadays, control engineering has emerged as a unique practice.

The first control relationships had a current output which was represented with a voltage control input. For the reason that the proper technology in order to implement electrical control systems was unavailable then, 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 used by various hydro plants. In the long run, process control systems became offered before modern power electronics. These process controls systems were usually utilized in industrial applications and were devised by mechanical engineers utilizing pneumatic and hydraulic control machines, many of which are still being used nowadays.