Forklift Control Valve

Forklift Control Valve - Automatic control systems were initially developed more than two thousand years ago. The ancient water clock of Ktesibios in Alexandria Egypt dating to the 3rd century B.C. is believed to be the first feedback control machine on record. This clock kept time by way of 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 way in Baghdad when the Mongols captured the city in 1258 A.D.

Throughout history, a variety of automatic equipments have been used to accomplish specific tasks or to simply entertain. A common European style in the 17th and 18th centuries was the automata. This particular tool was an example of "open-loop" control, comprising dancing figures which will repeat the same task repeatedly.

Closed loop or feedback controlled tools include the temperature regulator common on furnaces. This was developed during the year 1620 and attributed to Drebbel. Another example is the centrifugal fly ball governor developed in 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 describing the exhibited by the fly ball governor. In order to describe the control system, he made use of differential equations. This paper exhibited the importance and helpfulness of mathematical models and methods in relation to understanding complicated phenomena. It even 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 developments in mathematical techniques and new control theories made it possible to more precisely control more dynamic systems compared to the original model fly ball governor. These updated methods include different developments in optimal control during the 1950s and 1960s, followed by advancement in robust, stochastic, adaptive and optimal control methods in the 1970s and the 1980s.

New technology and applications of control methodology has helped produce cleaner engines, with cleaner and more efficient processes helped make communication satellites and even traveling in space possible.

Initially, control engineering was carried out as a part of mechanical engineering. Furthermore, control theory was first studied as part of electrical engineering as electrical circuits could often be simply explained with control theory methods. At present, control engineering has emerged as a unique practice.

The first controls had current outputs represented with a voltage control input. To implement electrical control systems, the right technology was unavailable at that moment, the designers were left with less efficient systems and the alternative of slow responding mechanical systems. The governor is a really effective mechanical controller which is still usually utilized by several hydro factories. Eventually, process control systems became accessible previous to modern power electronics. These process controls systems were often utilized in industrial applications and were devised by mechanical engineers utilizing hydraulic and pneumatic control devices, lots of which are still being utilized at present.