Control Valve for Forklift

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

Through history, various automatic devices have been used to be able to accomplish specific tasks or to simply entertain. A popular European design in the seventeenth and eighteenth centuries was the automata. This device was an example of "open-loop" control, featuring dancing figures which would repeat the same task again and again.

Closed loop or otherwise called feedback controlled tools consist of the temperature regulator common on furnaces. This was developed during 1620 and attributed to Drebbel. One more example is the centrifugal fly ball governor developed during the year 1788 by James Watt and utilized for regulating steam engine speed.

J.C. Maxwell, who discovered the Maxwell electromagnetic field equations, wrote a paper in 1868 "On Governors," that can describe the instabilities exhibited by the fly ball governor. He utilized differential equations to explain the control system. This paper demonstrated the usefulness and importance of mathematical methods and models in relation to understanding complex phenomena. It even signaled the start of mathematical control and systems theory. Previous elements of control theory had appeared before by not as convincingly and as dramatically as in Maxwell's study.

In the next one hundred years control theory made huge strides. New developments in mathematical techniques made it possible to more precisely control significantly more dynamic systems compared to the original fly ball governor. These updated techniques include different developments in optimal control in the 1950s and 1960s, followed by development in robust, stochastic, optimal and adaptive control methods during 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.

Initially, control engineering was performed as a part of mechanical engineering. Moreover, control theory was first studied as part of electrical engineering for the reason that electrical circuits can often be simply explained with control theory techniques. Now, control engineering has emerged as a unique practice.

The very first control partnerships had a current output that was represented with a voltage control input. Because the correct technology so as to implement electrical control systems was unavailable at that time, designers left with the alternative of slow responding mechanical systems and less efficient systems. The governor is a really efficient mechanical controller that is still normally utilized by various hydro plants. Eventually, process control systems became available before modern power electronics. These process controls systems were often 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 utilized these days.