

## Forklift Control Valves

Control Valve for Forklift - 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 first feedback control tool 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 manner in Baghdad when the Mongols captured the city in 1258 A.D.

A variety of automatic devices throughout history, have been utilized to accomplish certain jobs. A popular desing used throughout the seventeenth and eighteenth centuries in Europe, was the automata. This particular tool was an example of "open-loop" control, consisting dancing figures that would repeat the same task over and over.

Closed loop or also called feedback controlled tools comprise the temperature regulator common on furnaces. This was actually developed in 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.

J.C. Maxwell, who discovered the Maxwell electromagnetic field equations, wrote a paper in the year 1868 "On Governors," which was able to clarify the instabilities exhibited by the fly ball governor. He utilized differential equations in order to describe the control system. This paper demonstrated the usefulness and importance of mathematical methods and models in relation to understanding complicated phenomena. It likewise signaled the beginning of mathematical control and systems theory. Previous elements of control theory had appeared earlier by not as convincingly and as dramatically as in Maxwell's study.

New developments in mathematical techniques and new control theories made it possible to more precisely control more dynamic systems compared to the first model fly ball governor. These updated techniques include different developments in optimal control in the 1950s and 1960s, followed by progress in stochastic, robust, adaptive and optimal 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.

In the beginning, control engineering was carried out as a part of mechanical engineering. As well, control theory was firstly studied as part of electrical engineering in view of the fact that electrical circuits could often be simply described with control theory techniques. Currently, control engineering has emerged as a unique discipline.

The very first control partnerships had a current output which was represented with a voltage control input. Because the right technology in order to implement electrical control systems was unavailable at that moment, designers left with the option of slow responding mechanical systems and less efficient systems. The governor is a very efficient mechanical controller which is still normally utilized by various hydro plants. In the long run, process control systems became obtainable previous to modern power electronics. These process controls systems were usually utilized in industrial applications and were devised by mechanical engineers using pneumatic and hydraulic control machines, lots of which are still being used today.