

## Forklift Control Valve

Forklift Control Valves - Automatic control systems were primarily created over 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 tool on record. This particular clock kept time by means of regulating the water level in a vessel and the water flow from the vessel. A common style, this successful machine was being made in the same fashion in Baghdad when the Mongols captured the city in 1258 A.D.

A variety of automatic machines through history, have been utilized to carry out particular jobs. A popular desing used during the seventeenth and eighteenth centuries in Europe, was the automata. This machine was an example of "open-loop" control, comprising dancing figures that will repeat the same job again and again.

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

J.C. Maxwell, who discovered the Maxwell electromagnetic field equations, wrote a paper in 1868 "On Governors," which was able to clarify the instabilities exhibited by the fly ball governor. He utilized differential equations to be able to describe the control system. This paper exhibited the usefulness and importance of mathematical methods and models in relation to understanding complex 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 control theories and new developments in mathematical techniques made it possible to more precisely control more dynamic systems as opposed to the first model fly ball governor. These updated methods consist of different developments in optimal control during the 1950s and 1960s, followed by advancement in robust, stochastic, optimal and adaptive control techniques in the 1970s and the 1980s.

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

In the beginning, control engineering was practiced as a part of mechanical engineering. Furthermore, control theory was firstly studied as part of electrical engineering in view of the fact that electrical circuits can often be simply described with control theory methods. At present, control engineering has emerged as a unique practice.

The very first control relationships had a current output which was represented with a voltage control input. Since the proper technology in order 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 usually used by some hydro factories. Ultimately, process control systems became offered prior to modern power electronics. These process controls systems were normally utilized in industrial applications and were devised by mechanical engineers utilizing pneumatic and hydraulic control machines, many of which are still being utilized at present.