

## Control Valve for Forklift

Control Valve 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 thought to be the very first feedback control device on record. This particular 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 tool was being made in the same fashion in Baghdad when the Mongols captured the city in 1258 A.D.

Various automatic equipment through history, have been utilized to be able to carry out specific jobs. A common desing utilized in the 17th and 18th centuries in Europe, was the automata. This piece of equipment was an example of "open-loop" control, featuring dancing figures that would repeat the same task over and over.

Feedback or likewise known as "closed-loop" automatic control machines consist of the temperature regulator found on a furnace. This was actually developed in 1620 and accredited to Drebbel. One more example is the centrifugal fly ball governor developed during 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 1868 "On Governors," that was able to describe the instabilities exhibited by the fly ball governor. He made use of differential equations in order to describe the control system. This paper demonstrated the importance and helpfulness 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 dramatically and as convincingly 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 techniques comprise different developments in optimal control during the 1950s and 1960s, followed by development in robust, stochastic, optimal and adaptive control techniques in the 1970s and the 1980s.

New technology and applications of control methodology have helped make cleaner auto engines, cleaner and more efficient chemical processes and have helped make space travel and communication satellites possible.

At first, control engineering was practiced as a part of mechanical engineering. Moreover, control theory was first studied as part of electrical engineering as electrical circuits can often be simply explained with control theory methods. Currently, control engineering has emerged as a unique practice.

The very first controls had current outputs represented with a voltage control input. To implement electrical control systems, the right technology was unavailable then, 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 used by several hydro plants. In the long run, process control systems became obtainable prior to modern power electronics. These process controls systems were usually used in industrial applications and were devised by mechanical engineers utilizing hydraulic and pneumatic control machines, many of which are still being used today.