

## Forklift Control Valve

Control Valve for Forklift - The earliest automatic control systems were being utilized more than two thousand years ago. In Alexandria Egypt, the ancient Ktesibios water clock made in the third century is believed to be the first feedback control device on record. This clock kept time by regulating the water level within a vessel and the water flow from the vessel. A common design, this successful machine was being made in the same manner in Baghdad when the Mongols captured the city in 1258 A.D.

A variety of automatic devices throughout history, have been utilized in order to carry out specific jobs. A common style utilized in the seventeenth and eighteenth centuries in Europe, was the automata. This particular machine was an example of "open-loop" control, consisting dancing figures that would repeat the same task again and again.

Closed loop or otherwise called feedback controlled equipments include the temperature regulator common on furnaces. This was actually developed during the year 1620 and attributed to Drebbel. One more 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 1868 "On Governors," that was able to explain the exhibited by the fly ball governor. So as to describe the control system, he made use of differential equations. This paper demonstrated the importance and helpfulness of mathematical methods and models in relation to comprehending complicated phenomena. It likewise signaled the start of mathematical control and systems theory. Previous elements of control theory had appeared before but not as dramatically and as convincingly as in Maxwell's study.

New developments in mathematical techniques and new control theories made it possible to more precisely control more dynamic systems as opposed to the original model fly ball governor. These updated methods include different developments in optimal control in the 1950s and 1960s, followed by progress in robust, stochastic, adaptive and optimal control methods in the 1970s and the 1980s.

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

At first, control engineering was performed as a part of mechanical engineering. Moreover, control theory was first studied as part of electrical engineering because electrical circuits could often be simply explained with control theory methods. Now, control engineering has emerged as a unique practice.

The very first controls had current outputs represented with a voltage control input. In order to implement electrical control systems, the correct technology was unavailable then, the designers were left with less efficient systems and the option of slow responding mechanical systems. The governor is a very efficient mechanical controller that is still normally utilized by several hydro factories. Ultimately, process control systems became obtainable before modern power electronics. These process controls systems were normally utilized in industrial applications and were devised by mechanical engineers using pneumatic and hydraulic control devices, many of which are still being used nowadays.