

## Forklift Control Valves

Forklift Control Valve - The first mechanized control systems were being used over two thousand years ago. In Alexandria Egypt, the ancient Ktesibios water clock built in the 3rd century is thought to be the first feedback control device on record. This clock kept time by 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 manner in Baghdad when the Mongols captured the city in 1258 A.D.

All through history, different automatic tools have been utilized in order to accomplish specific tasks or to simply entertain. A common European style in the seventeenth and eighteenth centuries was the automata. This machine was an example of "open-loop" control, consisting dancing figures which will repeat the same task repeatedly.

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

The Maxwell electromagnetic field equations, discovered by J.C. Maxwell wrote a paper in 1868 "On Governors," which was able to explaining the exhibited by the fly ball governor. So as to explain the control system, he utilized differential equations. This paper demonstrated the usefulness and importance of mathematical methods and models in relation to comprehending complicated phenomena. It also 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 compared to the original model fly ball governor. These updated techniques comprise different developments in optimal control during the 1950s and 1960s, followed by advancement in stochastic, robust, optimal and adaptive control methods in the 1970s and the 1980s.

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

In the beginning, control engineering was practiced as just a part of mechanical engineering. Control theories were firstly studied with electrical engineering in view of the fact that electrical circuits could simply be explained with control theory methods. 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. Since the correct technology to be able to implement electrical control systems was unavailable then, designers left with the alternative of slow responding mechanical systems and less efficient systems. The governor is a really effective mechanical controller that is still often used by various hydro factories. Eventually, process control systems became accessible prior to modern power electronics. These process controls systems were usually used in industrial applications and were devised by mechanical engineers making use of pneumatic and hydraulic control machines, lots of which are still being used nowadays.