## Forklift Control Valves

Forklift Control Valve - The earliest mechanized control systems were being used over two thousand years ago. In Alexandria Egypt, the ancient Ktesibios water clock made in the third century is believed to be the very first feedback control machine on record. This particular clock kept time by regulating the water level inside a vessel and the water flow from the vessel. A popular style, this successful tool was being made in a similar manner in Baghdad when the Mongols captured the city in 1258 A.D.

All through history, a variety of automatic equipments have been used in order to simply entertain or to accomplish specific tasks. A common European style throughout the 17th and 18th centuries was the automata. This particular tool was an example of "open-loop" control, featuring dancing figures which would repeat the same job repeatedly.

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

The Maxwell electromagnetic field equations, discovered by J.C. Maxwell wrote a paper in the year 1868 "On Governors," that was able to describing the exhibited by the fly ball governor. So as to describe the control system, he used differential equations. This paper exhibited the usefulness and importance of mathematical models and methods in relation to comprehending complicated phenomena. It even signaled the start of systems theory and mathematical control. Previous elements of control theory had appeared before by not as convincingly and as dramatically as in Maxwell's analysis.

In the next 100 years control theory made huge strides. New developments in mathematical techniques made it possible to more accurately control considerably more dynamic systems than the first fly ball governor. These updated methods comprise 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 applications and technology of control methodology have helped produce cleaner auto engines, more efficient and cleaner chemical processes and have helped make communication and space travel satellites possible.

At first, control engineering was practiced as just a part of mechanical engineering. Control theories were firstly studied with electrical engineering for the reason that electrical circuits can simply be described with control theory techniques. At present, control engineering has emerged as a unique discipline.

The first controls had current outputs represented with a voltage control input. To be able to implement electrical control systems, the proper technology was unavailable at that time, the designers were left with less efficient systems and the choice of slow responding mechanical systems. The governor is a really efficient mechanical controller which is still usually used by some hydro factories. Eventually, 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 making use of hydraulic and pneumatic control machines, a lot of which are still being utilized nowadays.