

## Forklift Control Valves

Forklift Control Valve - Automatic control systems were first developed more than two thousand years ago. The ancient water clock of Ktesibios in Alexandria Egypt dating to the third century B.C. is considered to be the very first feedback control equipment on record. This particular clock kept time by regulating the water level within a vessel and the water flow from the vessel. A common style, this successful equipment was being made in the same fashion in Baghdad when the Mongols captured the city in 1258 A.D.

A variety of automatic machines throughout history, have been used in order to carry out particular jobs. A popular desing utilized all through the 17th and 18th centuries in Europe, was the automata. This device was an example of "open-loop" control, comprising dancing figures which will repeat the same job over and over.

Feedback or "closed-loop" automatic control devices include the temperature regulator seen on a furnace. This was developed during the year 1620 and accredited to Drebbel. Another 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 the year 1868 "On Governors," which was able to explain the instabilities demonstrated 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 models and methods in relation to comprehending complex phenomena. It likewise signaled the beginning of systems theory and mathematical control. Previous elements of control theory had appeared earlier by 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 compared to the initial model fly ball governor. These updated methods include various developments in optimal control during the 1950s and 1960s, followed by progress in stochastic, robust, optimal and adaptive control methods in the 1970s and the 1980s.

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

Initially, control engineering was practiced as just a part of mechanical engineering. Control theories were initially studied with electrical engineering since electrical circuits could simply be explained with control theory techniques. Nowadays, control engineering has emerged as a unique practice.

The very first control partnerships had a current output which was represented with a voltage control input. As the right technology to implement electrical control systems was unavailable then, designers left with the choice of slow responding mechanical systems and less efficient systems. The governor is a really efficient mechanical controller which is still usually used by several hydro factories. Ultimately, process control systems became available before modern power electronics. These process controls systems were normally used in industrial applications and were devised by mechanical engineers making use of pneumatic and hydraulic control equipments, lots of which are still being utilized nowadays.