## Forklift Control Valve

Forklift Control Valve - Automatic control systems were first established more than 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 machine 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 machine was being made in the same manner in Baghdad when the Mongols captured the city in 1258 A.D.

All through history, different automatic equipments have been used to simply entertain or to accomplish specific tasks. A popular European design in the 17th and 18th centuries was the automata. This particular piece of equipment was an example of "open-loop" control, consisting dancing figures that will repeat the same task over and over.

Closed loop or otherwise called feedback controlled devices consist of the temperature regulator common on furnaces. This was actually developed in 1620 and accredited 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.

J.C. Maxwell, who discovered the Maxwell electromagnetic field equations, wrote a paper in 1868 "On Governors," which was able to clarify the instabilities demonstrated by the fly ball governor. He made use of differential equations in order to explain 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 study.

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

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

At first, control engineering was carried out as a part of mechanical engineering. As well, control theory was firstly studied as part of electrical engineering as electrical circuits could often be simply described with control theory techniques. At present, control engineering has emerged as a unique practice.

The very first control relationships had a current output which was represented with a voltage control input. As the right technology to be able to implement electrical control systems was unavailable at that moment, designers left with the alternative of slow responding mechanical systems and less efficient systems. The governor is a very efficient mechanical controller that is still often utilized by some hydro factories. Eventually, process control systems became available prior to modern power electronics. These process controls systems were often used in industrial applications and were devised by mechanical engineers utilizing pneumatic and hydraulic control equipments, a lot of which are still being utilized at present.