

Forklift Control Valves

Forklift Control Valve - Automatic control systems were first created over two thousand years ago. The ancient water clock of Ktesibios in Alexandria Egypt dating to the 3rd century B.C. is thought to be the first feedback control device on record. This clock kept time by means of regulating the water level inside a vessel and the water flow from the vessel. A common style, this successful tool was being made in a similar way in Baghdad when the Mongols captured the city in 1258 A.D.

Different automatic equipment all through history, have been used to carry out specific tasks. A common style used during the seventeenth and eighteenth centuries in Europe, was the automata. This particular machine was an example of "open-loop" control, comprising dancing figures which will repeat the same task over and over.

Closed loop or otherwise called feedback controlled equipments comprise the temperature regulator common on furnaces. This was actually developed during the year 1620 and accredited to Drebbel. Another example is the centrifugal fly ball governor developed during the year 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 describe the instabilities exhibited by the fly ball governor. He utilized differential equations so as to describe the control system. This paper demonstrated the importance and helpfulness 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 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 original model fly ball governor. These updated techniques include various developments in optimal control in the 1950s and 1960s, followed by development in robust, stochastic, optimal and adaptive control methods during the 1970s and the 1980s.

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

At first, control engineering was practiced as just a part of mechanical engineering. Control theories were firstly studied with electrical engineering as electrical circuits can simply be explained with control theory methods. Today, control engineering has emerged as a unique practice.

The first control relationships had a current output which was represented with a voltage control input. As the correct technology to implement electrical control systems was unavailable at that moment, designers left with the option of slow responding mechanical systems and less efficient systems. The governor is a very efficient mechanical controller that is still often utilized by various hydro plants. In the long run, process control systems became offered previous to modern power electronics. These process controls systems were normally utilized in industrial applications and were devised by mechanical engineers using pneumatic and hydraulic control equipments, lots of which are still being utilized at present.