

Forklift Control Valve

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 considered to be the first feedback control equipment 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 equipment was being made in a similar fashion in Baghdad when the Mongols captured the city in 1258 A.D.

Different automatic machines through history, have been used to be able to complete certain jobs. A common desing used throughout the seventeenth and eighteenth centuries in Europe, was the automata. This particular piece of equipment was an example of "open-loop" control, featuring dancing figures that would repeat the same job over and over.

Feedback or "closed-loop" automatic control equipments include the temperature regulator seen on a furnace. This was developed in 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 steam engine speed.

J.C. Maxwell, who discovered the Maxwell electromagnetic field equations, wrote a paper in the year 1868 "On Governors," which can clarify the instabilities demonstrated by the fly ball governor. He used differential equations to be able to describe the control system. This paper exhibited the importance and helpfulness of mathematical methods and models 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 analysis.

New developments in mathematical techniques and new control theories made it possible to more precisely control more dynamic systems than the original model fly ball governor. These updated techniques include various developments in optimal control in the 1950s and 1960s, followed by progress in stochastic, robust, adaptive and optimal control techniques in the 1970s and the 1980s.

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

Primarily, control engineering was carried out as a part of mechanical engineering. In addition, control theory was first studied as part of electrical engineering since electrical circuits could often be simply described with control theory methods. Nowadays, control engineering has emerged as a unique practice.

The first control partnerships had a current output that was represented with a voltage control input. As the correct technology to implement electrical control systems was unavailable at that time, designers left with the option of slow responding mechanical systems and less efficient systems. The governor is a very effective mechanical controller which is still often used by some hydro plants. In the long run, 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 hydraulic and pneumatic control machines, many of which are still being utilized nowadays.