Forklift Control Valve

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 3rd century B.C. is thought to be the first feedback control machine on record. This clock kept time by regulating the water level inside a vessel and the water flow from the vessel. A common design, this successful machine was being made in the same manner in Baghdad when the Mongols captured the city in 1258 A.D.

Various automatic equipment through history, have been used to be able to complete certain jobs. A popular desing used through the seventeenth and eighteenth centuries in Europe, was the automata. This tool was an example of "open-loop" control, comprising dancing figures which would repeat the same job over and over.

Closed loop or feedback controlled equipments comprise the temperature regulator common on furnaces. This was developed during 1620 and attributed to Drebbel. Another example is the centrifugal fly ball governor developed during 1788 by James Watt and used for regulating steam engine speed.

The Maxwell electromagnetic field equations, discovered by J.C. Maxwell wrote a paper in 1868 "On Governors," that was able to describing the exhibited by the fly ball governor. In order to describe the control system, he made use of differential equations. This paper demonstrated the importance and helpfulness of mathematical models and methods in relation to comprehending complicated phenomena. It likewise signaled the start 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 accurately control more dynamic systems as opposed to the first model fly ball governor. These updated techniques consist of various developments in optimal control in the 1950s and 1960s, followed by development in robust, stochastic, adaptive and optimal control techniques during the 1970s and the 1980s.

New applications and technology of control methodology have helped make cleaner auto engines, more efficient and cleaner chemical methods and have helped make communication and space travel satellites possible.

Originally, control engineering was performed as just a part of mechanical engineering. Control theories were originally studied with electrical engineering because electrical circuits can 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. In view of the fact that the correct technology in order to implement electrical control systems was unavailable then, designers left with the alternative of slow responding mechanical systems and less efficient systems. The governor is a really effective mechanical controller which is still often used by some hydro factories. In the long run, process control systems became accessible prior to 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 devices, many of which are still being used today.