Control Valve for Forklift

Forklift Control Valve - Automatic control systems were first created 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 very first feedback control equipment on record. This particular clock kept time by means of regulating the water level inside a vessel and the water flow from the vessel. A popular style, this successful tool was being made in a similar manner in Baghdad when the Mongols captured the city in 1258 A.D.

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

Feedback or "closed-loop" automatic control tools consist of the temperature regulator found on a furnace. This was developed in 1620 and accredited to Drebbel. One more example is the centrifugal fly ball governor developed during the year 1788 by James Watt and used for regulating the speed of steam engines.

The Maxwell electromagnetic field equations, discovered by J.C. Maxwell wrote a paper in 1868 "On Governors," which was able to explaining the exhibited by the fly ball governor. In order to describe the control system, he made use of differential equations. This paper exhibited the importance and helpfulness of mathematical methods and models in relation to understanding complex phenomena. It likewise signaled the start of mathematical control and systems theory. Previous elements of control theory had appeared earlier by not as convincingly and as dramatically as in Maxwell's study.

In the following one hundred years control theory made huge strides. New developments in mathematical techniques made it possible to more precisely control considerably more dynamic systems than the first fly ball governor. These updated techniques include various developments in optimal control during the 1950s and 1960s, followed by advancement in robust, stochastic, optimal and adaptive control techniques in the 1970s and the 1980s.

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

In the beginning, control engineering was practiced as just a part of mechanical engineering. Control theories were at first studied with electrical engineering as electrical circuits could simply be described with control theory techniques. Currently, control engineering has emerged as a unique practice.

The very first controls had current outputs represented with a voltage control input. To be able to implement electrical control systems, the correct technology was unavailable then, the designers were left with less efficient systems and the option of slow responding mechanical systems. The governor is a very efficient mechanical controller that is still often utilized by some hydro factories. Ultimately, process control systems became offered before modern power electronics. These process controls systems were usually used in industrial applications and were devised by mechanical engineers making use of hydraulic and pneumatic control machines, lots of which are still being utilized today.