Control Valve for Forklift

Forklift Control Valve - Automatic control systems were initially 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 very first feedback control machine on record. This particular clock kept time by way of regulating the water level within 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.

A variety of automatic devices all through history, have been used in order to complete particular jobs. A popular style used throughout the 17th and 18th centuries in Europe, was the automata. This machine was an example of "open-loop" control, consisting dancing figures which would repeat the same task repeatedly.

Closed loop or likewise called feedback controlled devices include the temperature regulator common on furnaces. This was actually developed in 1620 and attributed to Drebbel. One more example is the centrifugal fly ball governor developed in 1788 by James Watt and used for regulating the speed of steam engines.

J.C. Maxwell, who discovered the Maxwell electromagnetic field equations, wrote a paper in the year 1868 "On Governors," that can clarify the instabilities demonstrated by the fly ball governor. He utilized differential equations to describe the control system. This paper demonstrated the importance and helpfulness of mathematical models and methods in relation to understanding complicated phenomena. It also 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 precisely control more dynamic systems compared to the original model fly ball governor. These updated techniques include various developments in optimal control during the 1950s and 1960s, followed by progress in robust, stochastic, adaptive and optimal control methods in the 1970s and the 1980s.

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

Initially, control engineering was carried out as just a part of mechanical engineering. Control theories were at first studied with electrical engineering because electrical circuits could simply be described with control theory methods. Currently, control engineering has emerged as a unique practice.

The very first controls had current outputs represented with a voltage control input. In order to implement electrical control systems, the proper technology was unavailable at that time, the designers were left with less efficient systems and the alternative of slow responding mechanical systems. The governor is a really efficient mechanical controller that is still usually utilized by some hydro plants. Ultimately, process control systems became offered before 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 machines, a lot of which are still being utilized these days.