Control Valves for Forklift

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 believed 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 design, this successful machine was being made in the same manner in Baghdad when the Mongols captured the city in 1258 A.D.

Different automatic tools through history, have been utilized so as to complete certain tasks. A popular style used all through the seventeenth and eighteenth centuries in Europe, was the automata. This particular device was an example of "open-loop" control, comprising dancing figures that will repeat the same job over and over.

Feedback or also known as "closed-loop" automatic control tools consist of the temperature regulator seen on a furnace. This was actually developed in the year 1620 and accredited to Drebbel. Another 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 the year 1868 "On Governors," which was able to describing the exhibited by the fly ball governor. To be able to describe the control system, he used differential equations. This paper exhibited the usefulness and importance of mathematical models and methods in relation to comprehending complex phenomena. It also signaled the beginning of systems theory and mathematical control. Previous elements of control theory had appeared before 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 compared to the original model fly ball governor. These updated techniques comprise different developments in optimal control in the 1950s and 1960s, followed by progress in stochastic, robust, optimal and adaptive control techniques during the 1970s and the 1980s.

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

At first, control engineering was carried out as a part of mechanical engineering. Moreover, control theory was first studied as part of electrical engineering since electrical circuits can often be simply described with control theory techniques. Nowadays, control engineering has emerged as a unique practice.

The first controls had current outputs represented with a voltage control input. To implement electrical control systems, the right technology was unavailable at that moment, the designers were left with less efficient systems and the option of slow responding mechanical systems. The governor is a really efficient mechanical controller that is still often utilized by several hydro plants. In the long run, process control systems became accessible 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 equipments, many of which are still being used these days.