Control Valve for Forklift

Control Valves for Forklift - Automatic control systems were initially developed over two thousand years ago. The ancient water clock of Ktesibios in Alexandria Egypt dating to the third century B.C. is believed to be the first feedback control machine on record. This particular clock kept time by regulating the water level within a vessel and the water flow from the vessel. A popular style, this successful equipment was being made in a similar way in Baghdad when the Mongols captured the city in 1258 A.D.

Different automatic tools throughout history, have been used to be able to accomplish specific jobs. A popular style used in the 17th and 18th centuries in Europe, was the automata. This particular device was an example of "open-loop" control, featuring dancing figures which will repeat the same task repeatedly.

Feedback or likewise known as "closed-loop" automatic control machines include the temperature regulator found on a furnace. This was actually developed in 1620 and attributed to Drebbel. One more example is the centrifugal fly ball governor developed in the year 1788 by James Watt and used 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 describe the instabilities exhibited by the fly ball governor. He made use of differential equations to be able to explain the control system. This paper demonstrated the usefulness and importance of mathematical methods and models in relation to comprehending complex phenomena. It even signaled the beginning of systems theory and mathematical control. Previous elements of control theory had appeared before by not as convincingly and as dramatically as in Maxwell's study.

New control theories and new developments in mathematical techniques made it possible to more accurately control more dynamic systems as opposed to the first model fly ball governor. These updated techniques include different developments in optimal control during the 1950s and 1960s, followed by progress in stochastic, robust, adaptive and optimal control techniques during the 1970s and the 1980s.

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

At first, control engineering was performed as just a part of mechanical engineering. Control theories were originally studied with electrical engineering as electrical circuits can simply be described with control theory techniques. Today, control engineering has emerged as a unique discipline.

The very first control partnerships had a current output that was represented with a voltage control input. In view of the fact that the right technology to be able to implement electrical control systems was unavailable at that moment, designers left with the alternative of slow responding mechanical systems and less efficient systems. The governor is a really efficient mechanical controller that is still usually used by some hydro plants. In the long run, process control systems became available previous to modern power electronics. These process controls systems were usually utilized in industrial applications and were devised by mechanical engineers making use of hydraulic and pneumatic control machines, many of which are still being utilized these days.