Control Valve for Forklift

Forklift Control Valve - The first mechanized control systems were being used over two thousand years ago. In Alexandria Egypt, the ancient Ktesibios water clock built in the third century is believed to be the very first feedback control tool on record. This particular clock kept time by means of regulating the water level in a vessel and the water flow from the vessel. A common design, this successful tool was being made in a similar fashion in Baghdad when the Mongols captured the city in 1258 A.D.

Different automatic devices all through history, have been used in order to accomplish particular jobs. A popular style utilized during the 17th and 18th centuries in Europe, was the automata. This particular piece of equipment was an example of "open-loop" control, comprising dancing figures which would repeat the same task over and over.

Closed loop or otherwise called feedback controlled tools comprise the temperature regulator common on furnaces. This was actually developed during the year 1620 and accredited to Drebbel. One more example is the centrifugal fly ball governor developed in the year 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 1868 "On Governors," that can clarify the instabilities exhibited by the fly ball governor. He used differential equations to be able to explain the control system. This paper exhibited the usefulness and importance of mathematical methods and models in relation to comprehending complex phenomena. It also signaled the start 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 precisely control more dynamic systems than the original model fly ball governor. These updated techniques include different developments in optimal control in the 1950s and 1960s, followed by advancement 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, more efficient and cleaner chemical processes and have helped make space travel and communication satellites possible.

In the beginning, control engineering was performed as a part of mechanical engineering. Also, control theory was first studied as part of electrical engineering for the reason that electrical circuits could often be simply explained with control theory techniques. Today, control engineering has emerged as a unique discipline.

The very first controls had current outputs represented with a voltage control input. So as to implement electrical control systems, the right technology was unavailable then, the designers were left with less efficient systems and the choice of slow responding mechanical systems. The governor is a really efficient mechanical controller which is still normally utilized by some hydro factories. Eventually, process control systems became obtainable previous to modern power electronics. These process controls systems were often used in industrial applications and were devised by mechanical engineers making use of pneumatic and hydraulic control devices, a lot of which are still being used today.