Forklift Control Valve

Control Valve for Forklift - The first mechanized control systems were being utilized more that two thousand years ago. In Alexandria Egypt, the ancient Ktesibios water clock made in the third century is considered to be the first feedback control tool on record. This particular clock kept time by means of regulating the water level within a vessel and the water flow from the vessel. A common design, this successful machine was being made in the same way in Baghdad when the Mongols captured the city in 1258 A.D.

All through history, various automatic devices have been utilized to accomplish specific tasks or to simply entertain. A common European design throughout the seventeenth and eighteenth centuries was the automata. This particular device was an example of "open-loop" control, featuring dancing figures that would repeat the same job again and again.

Feedback or likewise known as "closed-loop" automatic control equipments consist of the temperature regulator found on a furnace. This was actually developed during the year 1620 and attributed to Drebbel. Another example is the centrifugal fly ball governor developed during 1788 by James Watt and utilized 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 explain the instabilities demonstrated by the fly ball governor. He utilized differential equations so as to explain the control system. This paper demonstrated the importance and helpfulness of mathematical methods and models in relation to understanding complicated phenomena. It likewise 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 analysis.

Within the next 100 years control theory made huge strides. New developments in mathematical methods made it possible to more accurately control considerably more dynamic systems than the first fly ball governor. These updated methods consist of various developments in optimal control in the 1950s and 1960s, followed by development in robust, stochastic, optimal and adaptive control methods during the 1970s and the 1980s.

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

Initially, control engineering was practiced as just a part of mechanical engineering. Control theories were initially studied with electrical engineering because electrical circuits could simply be explained with control theory techniques. Today, control engineering has emerged as a unique practice.

The very first controls had current outputs represented with a voltage control input. To implement electrical control systems, the correct 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 often utilized by several hydro factories. Ultimately, process control systems became offered previous to modern power electronics. These process controls systems were often used in industrial applications and were devised by mechanical engineers making use of hydraulic and pneumatic control equipments, a lot of which are still being used today.