Control Valve for Forklift

Control Valve for Forklift - Automatic control systems were initially developed more than two thousand years ago. The ancient water clock of Ktesibios in Alexandria Egypt dating to the third century B.C. is thought to be the first feedback control device on record. This particular clock kept time by 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 way in Baghdad when the Mongols captured the city in 1258 A.D.

Different automatic equipment all through history, have been utilized to be able to accomplish specific tasks. A popular desing used throughout the 17th and 18th centuries in Europe, was the automata. This particular tool was an example of "open-loop" control, featuring dancing figures which would repeat the same job repeatedly.

Feedback or otherwise known as "closed-loop" automatic control devices consist of the temperature regulator seen on a furnace. This was developed during the year 1620 and accredited to Drebbel. Another example is the centrifugal fly ball governor developed in the year 1788 by James Watt and utilized 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," which could clarify the instabilities demonstrated by the fly ball governor. He made use of differential equations in order to describe the control system. This paper demonstrated the usefulness and importance of mathematical methods and models in relation to comprehending complicated phenomena. It also signaled the start of mathematical control and systems theory. Previous elements of control theory had appeared before by not as convincingly and as dramatically 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 first model fly ball governor. These updated methods consist of various developments in optimal control during the 1950s and 1960s, followed by development in robust, stochastic, optimal and adaptive control methods during the 1970s and the 1980s.

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

Initially, control engineering was performed as a part of mechanical engineering. Additionally, control theory was initially studied as part of electrical engineering for the reason that electrical circuits can often be simply explained with control theory methods. Today, control engineering has emerged as a unique discipline.

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