

Control Valve for Forklift

Control Valves for Forklift - Automatic control systems were first developed over two thousand years ago. The ancient water clock of Ktesibios in Alexandria Egypt dating to the 3rd century B.C. is thought to be the first feedback control tool on record. This clock kept time by regulating the water level in a vessel and the water flow from the vessel. A popular design, this successful equipment was being made in a similar fashion in Baghdad when the Mongols captured the city in 1258 A.D.

All through history, different automatic tools have been utilized in order to simply entertain or to accomplish specific tasks. A popular European design through the seventeenth and eighteenth centuries was the automata. This device was an example of "open-loop" control, comprising dancing figures that would repeat the same job repeatedly.

Closed loop or otherwise called feedback controlled equipments include the temperature regulator common on furnaces. This was developed during the year 1620 and attributed 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.

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. So as to explain the control system, he used differential equations. This paper exhibited the usefulness and importance of mathematical methods and models in relation to understanding complex 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 study.

New developments in mathematical techniques and new control theories made it possible to more accurately control more dynamic systems as opposed to the first model fly ball governor. These updated methods comprise various developments in optimal control in the 1950s and 1960s, followed by development in stochastic, robust, 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 processes 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 initially studied with electrical engineering for the reason that electrical circuits can simply be explained with control theory methods. Now, 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 correct technology to implement electrical control systems was unavailable then, designers left with the alternative of slow responding mechanical systems and less efficient systems. The governor is a really effective mechanical controller which is still often utilized by some hydro plants. Ultimately, process control systems became obtainable previous to modern power electronics. These process controls systems were often utilized in industrial applications and were devised by mechanical engineers using pneumatic and hydraulic control devices, lots of which are still being used at present.