

Forklift Control Valve

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

Throughout history, different automatic devices have been utilized in order to simply entertain or to accomplish specific tasks. A common European design throughout the 17th and 18th centuries was the automata. This machine was an example of "open-loop" control, comprising dancing figures which will repeat the same task again and again.

Closed loop or otherwise called feedback controlled tools include the temperature regulator common on furnaces. This was actually developed in 1620 and accredited to Drebbel. One more 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," that can explain the instabilities demonstrated by the fly ball governor. He made use of differential equations so as to explain the control system. This paper exhibited the usefulness and importance of mathematical models and methods in relation to comprehending complicated phenomena. It also signaled the start of mathematical control and systems theory. Previous elements of control theory had appeared earlier by not as convincingly and as dramatically as in Maxwell's analysis.

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

New technology and applications of control methodology has helped make cleaner engines, with cleaner and more efficient processes helped make communication satellites and even traveling in space possible.

At first, control engineering was carried out as just a part of mechanical engineering. Control theories were firstly studied with electrical engineering because electrical circuits can simply be described with control theory techniques. Currently, control engineering has emerged as a unique practice.

The very first controls had current outputs represented with a voltage control input. To be able to implement electrical control systems, the right technology was unavailable at that time, the designers were left with less efficient systems and the alternative of slow responding mechanical systems. The governor is a really effective mechanical controller that is still usually used by several hydro factories. In the long run, process control systems became obtainable prior to modern power electronics. These process controls systems were often used in industrial applications and were devised by mechanical engineers using hydraulic and pneumatic control machines, many of which are still being used at present.