

Control Valves for Forklift

Forklift Control Valves - Automatic control systems were initially created over 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 clock kept time by means of regulating the water level in a vessel and the water flow from the vessel. A common style, this successful tool was being made in a similar fashion in Baghdad when the Mongols captured the city in 1258 A.D.

Different automatic equipment through history, have been used in order to carry out certain tasks. A common desing utilized during the 17th and 18th centuries in Europe, was the automata. This device was an example of "open-loop" control, featuring dancing figures which would repeat the same task repeatedly.

Feedback or otherwise known as "closed-loop" automatic control equipments consist of the temperature regulator found on a furnace. This was actually developed in 1620 and attributed to Drebbel. One more example is the centrifugal fly ball governor developed in 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," that was able to explaining the exhibited by the fly ball governor. So as to describe the control system, he used differential equations. This paper demonstrated the usefulness and importance of mathematical models and methods in relation to comprehending complex 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 study.

Within the following one hundred years control theory made huge strides. New developments in mathematical methods made it possible to more accurately control considerably more dynamic systems compared to the first fly ball governor. These updated methods include different developments in optimal control in the 1950s and 1960s, followed by development in stochastic, robust, adaptive and optimal control techniques during the 1970s and the 1980s.

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

Initially, control engineering was practiced as just a part of mechanical engineering. Control theories were firstly studied with electrical engineering in view of the fact that electrical circuits can simply be described with control theory techniques. Now, 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 right technology was unavailable at that moment, the designers were left with less efficient systems and the alternative of slow responding mechanical systems. The governor is a really efficient mechanical controller which is still normally used by various hydro factories. In the long run, process control systems became accessible prior to modern power electronics. These process controls systems were often utilized in industrial applications and were devised by mechanical engineers making use of pneumatic and hydraulic control machines, lots of which are still being used nowadays.