

## Forklift Control Valves

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

Different automatic machines through history, have been used to be able to complete particular jobs. A common style used through the seventeenth and eighteenth centuries in Europe, was the automata. This particular piece of equipment was an example of "open-loop" control, featuring dancing figures that will repeat the same task repeatedly.

Closed loop or otherwise called feedback controlled machines include the temperature regulator common on furnaces. This was developed in 1620 and attributed to Drebbel. One more example is the centrifugal fly ball governor developed in 1788 by James Watt and used for regulating the speed of steam engines.

J.C. Maxwell, who discovered the Maxwell electromagnetic field equations, wrote a paper in 1868 "On Governors," that can explain the instabilities demonstrated by the fly ball governor. He made use of differential equations to be able to describe the control system. This paper demonstrated the usefulness and importance of mathematical models and methods in relation to comprehending 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.

In the following one hundred years control theory made huge strides. New developments in mathematical techniques made it possible to more precisely control considerably more dynamic systems than the original fly ball governor. These updated methods consist of different developments in optimal control during the 1950s and 1960s, followed by development in robust, stochastic, adaptive and optimal control techniques in 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 practiced as just a part of mechanical engineering. Control theories were originally studied with electrical engineering as electrical circuits can simply be described with control theory methods. Now, control engineering has emerged as a unique practice.

The first controls had current outputs represented with a voltage control input. To be able to implement electrical control systems, the correct 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 effective mechanical controller that is still normally used by several hydro plants. Eventually, process control systems became available before modern power electronics. These process controls systems were usually used in industrial applications and were devised by mechanical engineers using hydraulic and pneumatic control equipments, lots of which are still being utilized today.