## Forklift Control Valves

Forklift Control Valve - The first automatic control systems were being used over two thousand years ago. In Alexandria Egypt, the ancient Ktesibios water clock built in the third century is thought to be the first feedback control machine on record. This clock kept time by way 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 manner in Baghdad when the Mongols captured the city in 1258 A.D.

All through history, different automatic machines have been utilized to accomplish specific tasks or to simply entertain. A common European design during the 17th and 18th centuries was the automata. This tool was an example of "open-loop" control, consisting dancing figures which would repeat the same job repeatedly.

Closed loop or feedback controlled tools include the temperature regulator common on furnaces. This was actually developed in 1620 and accredited to Drebbel. Another example is the centrifugal fly ball governor developed during 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 1868 "On Governors," which was able to explaining the exhibited by the fly ball governor. To be able to explain the control system, he made use of differential equations. This paper demonstrated the importance and helpfulness 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 dramatically and as convincingly as in Maxwell's study.

Within the following 100 years control theory made huge strides. New developments in mathematical techniques made it feasible to more precisely control considerably more dynamic systems compared to the original fly ball governor. These updated methods consist of various developments in optimal control during the 1950s and 1960s, followed by development in stochastic, robust, optimal and adaptive control techniques 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 practiced as just a part of mechanical engineering. Control theories were originally studied with electrical engineering as electrical circuits could simply be explained with control theory methods. Today, control engineering has emerged as a unique discipline.

The very first controls had current outputs represented with a voltage control input. So as to implement electrical control systems, the right technology was unavailable then, the designers were left with less efficient systems and the choice of slow responding mechanical systems. The governor is a really efficient mechanical controller which is still normally used by some hydro plants. Eventually, process control systems became accessible 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 equipments, many of which are still being used nowadays.