

Abstract of the Disclosure

METHOD FOR DETECTING MALFUNCTION OF VALVE ON THE DOWNSTREAM SIDE OF THROTTLE MECHANISM OF PRESSURE TYPE FLOW CONTROL APPARATUS

It has been found to be disadvantageous that, with a conventional pressure type flow control apparatus, it is not possible to determine the state of a valve on the downstream side of a throttle mechanism with a flow rate output signal due to the structural reason of the apparatus. To overcome the difficulty, the determination of whether a valve on the downstream side of a throttle mechanism is open is achieved at ease using the state of changes of a flow rate output signal while a pressure type flow control apparatus is in operation.

With a pressure type flow control apparatus, a valve on the downstream side of a throttle mechanism is released and a flow rate setting value Q_e to be inputted to a pressure type flow control apparatus is changed to detect the magnitude ΔV of changes of a flow rate output signal Q_o from a pressure type flow control apparatus while said flow rate setting value Q_e changes so that it is determined either that a valve on the downstream side of a throttle mechanism is opening normally in the case that the magnitude ΔV of changes of said flow rate output signal Q_o is found to be above the predetermined value, or that the releasing operations are malfunctioning in the case that the magnitude ΔV of changes is found to be below the predetermined value.

Figure 3.