

ABSTRACT OF THE DISCLOSURE

METHOD OF DETECTING ABNORMALITIES IN FLOW RATE IN PRESSURE-TYPE FLOW CONTROLLER

A method checks the flow rate for abnormalities while
5 controlling the flow rate of fluid in a pressure-type flow controller
FCS using an orifice – the pressure-type flow controller wherein
with the upstream pressure P_1 maintained about two or more times
higher than the downstream pressure P_2 , the downstream flow rate
 Q_C is calculated by the equation $Q_C = KP_1$ (K: constant) and
10 wherein the control valve CV is controlled on the basis of the
difference signal Q_Y between the calculated flow rate Q_C and the
set flow rate Q_S . The method comprises, outputting a testing signal
 ΔQ_S having a testing amplitude V_0 from a testing circuit provided
separately or a flow rate setting circuit to the control valve CV,
15 measuring the pressure amplitude V of the variable pressure ΔP_1 of

the pressure P_1 on the upstream side of the orifice that arises in response to actuation of the control valve CV and setting off an alarm for the clogging of the orifice when the pressure amplitude V is smaller than a limit amplitude V_t . If the testing signal ΔQ_s is
5 superimposed on a steady-state set flow rate signal Q_{so} and outputted to control the valve CV from the testing circuit or the flow rate setting circuit, the flow rate can be checked for abnormalities while controlling the flow rate by the steady-state set flow rate signal Q_{so} .