

accuracy of the detection criterion can be further improved.

[0015] Fig. 2 illustrates an example of the monitoring target device 5 to be monitored by the abnormality detection device 10 according to the embodiment. A valve 6, which is an example of the monitoring target device 5, is opened and closed to control the flow rate of a fluid flowing through a pipe 7. The opening degree of the valve 6 is controlled by a flow controller FC which is an example of the control device 4. The flow controller FC acquires the flow rate of the fluid flowing through the pipe 7 as a process value (PV), calculates a command value (OP) of the opening degree of the valve 6 by PID control or the like so that the flow rate becomes a set point (~~SV~~SP), and transmits the command value (OP) to the valve 6.

[0016] Fig. 3 illustrates an example of temporal changes of the process value (PV) and the command value (OP). In Fig. 3, a solid line indicates the PV, and a broken line indicates the OP. In a period until t_1 , the PV is maintained substantially constant because the flow controller FC continues to change the OP by feedback control. When the opening degree of the valve 6 reaches 100% at t_1 , since the opening degree of the valve 6 cannot be changed any more, the PV starts to take an abnormal value. In this example, the abnormality of the PV is detected after t_1 , but a sign of the abnormality can be seen before t_1 in consideration of not only the fluctuation of the PV but also the fluctuation of