

CONTROL VALVE AND FLOW REGULATING SYSTEM

ABSTRACT

The present disclosure relates to a control valve and a flow regulating system, which belongs to the field of hydraulic control valves. The control valve includes: a valve body, a valve seat, a valve core, a throttling element, an actuator cylinder, a positioner cylinder, a driving device, and a position detector, where the valve seat and the throttling element are mounted in the valve body; a cylinder body of the actuator cylinder is connected to the throttling element; the valve core is connected to an actuating piston rod of the actuator cylinder; a chamber of the positioner cylinder correspondingly communicates with a chamber of the actuator cylinder; the driving device is connected to a positioning piston rod of the positioner cylinder; the position detector interacts with the positioning piston rod of the positioner cylinder; and chamber volumes, chamber lengths, and piston rod strokes of the positioner cylinder and the actuator cylinder are coordinated with each other. According to the present disclosure, the chamber of the positioner cylinder is allowed to correspondingly communicate with the chamber of the actuator cylinder, such that positioning of the piston rod of the positioner cylinder accurately represents positioning of the valve core, that is, an extent of valve opening, thereby solving the problem in the prior art that the extent of valve opening is uncertain.

FIG. 1