

POWER ASSISTED MANUAL VALVE SYSTEM

ABSTRACT

A gate valve includes a gate and a drive train. The drive train includes a gate rod for linearly moving the gate, a translator operatively coupled to the gate rod for moving the gate rod linearly in response to rotational motion, and a coupling device connected to the translator for providing rotational motion. The gate valve also includes a fluid cylinder cooperatively coupled to the drive train for providing an assisting force to move the gate rod linearly and a rotary valve cooperatively connected to the coupling device and in a fluid flow path between the cylinder and a fluid pressure source. Torque applied to the coupling device moves the rotary valve to an open position to supply fluid pressure to the fluid cylinder.

Figure 1