MECHANICALLY OPERATED HYDRAULIC VALVE ACTUATOR

ABSTRACT

[0036] A wellhead assembly (10, 40) includes a valve with a valve actuator (70). The valve actuator (70) linearly moves a valve stem (84) and valve member (85) assembly to selectively open and close the valve. The valve actuator (70) moves the valve stem (84) by reciprocatingly moving a piston (76) that is attached to the valve stem (84). The piston (76) is moved by applying pressurized hydraulic fluid to a piston (76) surface. Piston direction is controlled by a selector valve (142) that selectively diverts a hydraulic flow to either side of the piston (76). The valve actuator (70) further includes a piston assembly (106) for pressurizing a hydraulic flow, where the piston assembly (106) reciprocates in response to engagement by a profiled rotating cam member (91).

[Fig. 3A]