

GATE VALVE ASSEMBLY WITH AN AXIALLY FLEXIBLE SEAT

ABSTRACT

A gate valve assembly (40) having metallic valve seats (48, 52) that are axially resilient and maintain a static sealing interface between the valve seat (48, 52) and a body pocket (46, 50) and a sliding dynamic sealing interface between the valve seat (48, 52) and a gate (54) in the valve assembly (40). The valve seats (48, 52) are annular members having slots (70, 72, 75, 76) formed radially through the valve seats (48, 52) from the inner and outer circumferences. Sleeves (63, 67, 96, 98) may be provided that are coaxial to the valve seats (48, 52); the sleeves may be on the inner surface of the valve seats (48, 52), outer surface of the valve seats (48, 52), or both. Shims (100, 102) may optionally be set in the slots (70, 72, 75, 76).

Figure 3