SEALS

Abstract

A gate valve (10) is disclosed comprising: a body (11) with a chamber (18); a flow passage (12) having an axis and extending through and having a counterbore intersecting the chamber; an annular seat (20) carried in the counterbore, the seat having an outward facing seal face; a gate (14) in the chamber having an engaging face that slidingly engages the seal face on the seat while being moved between open and closed positions of the valve; a stem (40) operably connected to the gate to move the gate between open and closed positions of the valve; a housing (32) having an internal wall (36) and enclosing at least a portion of the stem; and a fluid filled seal chamber (44, 54) enclosing at least a portion of the stem and located within the housing, wherein a volume (64) comprising a volume between the seal chamber and the stem remains constant during operation.

(Fig. 2)