GATE VALVE SEAT AND SEAT RING

Abstract

A gate valve (40) has a body (42), the body (42) having a cavity (45) and a flow passage (44) intersecting the cavity (45). A seat (50) is mounted to the body (42) at the intersection of the flow passage (44) and the cavity (45). A gate (46) is installed at the cavity (45) and has an engaging face (80) that slidingly engages the seat (50) while the gate is being moved between open and closed positions. The end faces (58,72) between a seat pocket and the seat are hard-coated (70, 74) and smooth-finished to provide sealing when mated. The hardcoated pocket and seat sealing surfaces (58,72) extend the life of the valve (40) by eliminating the need for an elastomeric seal of limited life.

Figure 3