SAFETY VALVE, SEALING RING AND SEAL ASSEMBLY

ABSTRACT

A safety valve has a valve closure means (31), operator tube (40), rod means (90), spring (54), and sealing ring (224). The sealing ring for forming a fluid and pressure barrier or seal includes a sealing sleeve portion (228) with lips (232) to sealingly engage a hard and smooth piston rod (100) of the rod means, and a radially outwardly directed flange portion (233). The valve may comprise a rod retainer and seal means (226) with upper and lower static seats (238,236) which seal against spherical or angular undercut surfaces (243 or 239) on the rod and rod adapter respectively. A rod seal assembly (91) includes the sealing ring and the rod retainer and seal means. The rod (100) may be coated with a ceramic for hardness and smoothness. The sealing ring (224) may be made of metals, elastomers, polymers or composites and may include threaded joints for connection.

(Fig. 3)

This Sheet Has Been Replaced