ABSTRACT OF THE DISCLOSURE

ANNULAR SEAL

A seal assembly capable of low temperature service is disclosed. It features upper and lower metallic backup rings that are specially shaped to act as a spring to keep the sidewalls of such rings in contact with the inside and outside surfaces to be sealed to prevent extrusion of the seal material even in low temperature situations. Inner and outer grooves are provided. O-ring seals, used for the ID of the seal, are manufactured to have a slightly greater diameter than the groove into which they will be installed. The greater length provides stored energy to promote sealing functionality in cold temperature situations. The O-rings used for the OD of the seal are manufactured to have a slightly smaller diameter than the groove into which they will be installed. The shorter length provides stored energy to promote sealing functionality in cold temperature situations.

Fig. 1