Bearings shall be capable of taking the static weight of the rotating parts and any thrust generated by the operation of the pump.

L. Each pump shall be provided with a positively driven dual, tandem mechanical shaft seal system consisting of two seals, each having an independent spring system. The seal material shall consist of wolfram carbide WCCR (Corrosion resistant tungsten carbide), silicon carbide (Sic) or approved equivalent. The seals shall require neither maintenance nor adjustment and shall be capable of operating in either clockwise or counter clockwise direction of rotation without damage or loss of seal function. Each pump shall be provided with a lubricant chamber for the shaft sealing system. The lubricant chamber shall be designed to prevent overfilling and shall provide capacity for lubricant expansion. The seal lubricant chamber shall have one drain and one inspection plug that are accessible from the exterior of the motor unit. The seal system shall not rely upon the pumped media for lubrication.

M. Removable wear rings shall be provided at pump casing and impeller, except where not applicable and shall satisfy following criteria as a minimum:

- Corrosion resistance
- Abrasive wear resistance
- Galling characteristics
- Casting and machining properties
- Suitability for coating
- Low cost and selection of materials complying with applicable BS EN and ANSI standard.

Clearance within the rings shall be acceptable and according to manufacturer standard or other approved standards. Casing ring hardness shall exceed impeller ring hardness at least for 50 points of the Brinell scale.

1.2.4.3 Submersible Axial (Propeller) Pumps

A. The pump shall be automatically and firmly installed in a discharge column. The entire weight of the pump/motor unit shall be borne by the pump seat at the bottom of the discharge column. Sealing of the pumping unit to the seat of the discharge column to prevent back-flow shall be accomplished by an O-ring between the bell mouth and the pump seat.