- Abrasive-wear resistance;
- Cavitation resistance;
- High machining properties;
- Free passage capacity not less than 75 mm
- Low cost and selection of the materials complying with applicable BS EN and ANSI standard.

F. The impeller vanes design shall be based on manufacture experience to ensure hydraulic balance during all operating conditions.

G. The proposed Impeller diameter shall not exceed 95% of the maximum impeller diameter. Pumps impeller shall be one machined piece, where practicable, and made as smooth as possible.

H. The impeller shall be keyed to the shaft such as it will not loosen or become detached when the pump is rotating in the wrong direction. The impellers together with shaft shall be statically and dynamically balanced. Impellers shall not be trimmed unless approved by the Engineer.

I. The pump shaft shall be metallic satisfying following criteria as a minimum:

J. High tensile strength;

- Endurance limit;
- Corrosion resistance;
- Notch sensitivity;
- Low cost and selection of the materials complying with applicable BS EN and ANSI standard.

The shaft shall be turned, round and polished and shall be key-seated for securing the impeller.

K. The shaft shall rotate on grease lubricated bearings. The support bearing, provided for radial forces, shall be a rolling bearing. The main bearings shall consist of at least one roller bearing for radial forces and one angular contact ball bearing for axial thrust. Bearings shall be sized to offer a minimum L10 life of 100,000 hours with service intervals at 20,000 hours when operating at any flow rate as per BS ISO 281 standard requirements.