

due regard to ease of operation, maintenance, repair, replacement and access to the various components of the plant.

1.3.2 Design

- A. Drawings show a general arrangement of the plant, providing space for a wide range of equipment. If the Contractor proposes any departures from these layouts then such alterations shall be shown separately on drawings to be submitted by the Contractor together with his tender.
- B. When designing the plant, the Contractor shall prepare his own technical calculations and plant process for all systems of the plant, which shall be subject of approval by the engineer and shall be in detail, but not limited to:
 - a. Electrical load schedule
 - b. Sizing of all electrical conductors
 - c. Illumination calculation
 - d. Sizing of all supports/trays, conduits/trunking
 - e. Lightning/earthing calculation and dimensioning
 - f. Sizing of MCC
 - g. Fire detection, protection and fire barriers
 - h. Any other documentation as required by the Engineer
- C. ACB, MCCB, MCB, Contactor, capacitor bank shall have minimum provision of 20 % extra capacity for future extension of pumps.
- D. Sufficient space shall be provided for easy maintenance and repair of plant and special care shall be taken to enable easy removal/replacement of equipment and/or part of it without using temporary supports.
- E. All instruments connected to equipment with rotating / oscillating parts or to other equipment and pipes where vibration can be expected must be isolated against vibration transfer by means of flexible connections.
- F. All the electrical equipment shall meet the requirements of electromagnetic compatibility and shall have certification CE marking
- G. All electrical cables, switches, push buttons, other electrical appliances, etc. installed in the pump rooms or exposed to splashing, immersion in water /