

**Project: Darlipalli Aux**

**Sub: BFP - Motor C&I Check list**

- a) LT Motor is rated for 415V , 3 Ph , 50 Hz.
- b) Motor shall be High Efficiency Motor ( IE2 ) as per IEC 60034-30
- c) Cable glands and lugs are included in motor vendor scope. Cable details for the same shall be furnished to the finalised Pump vendor. Refer Cl. No. 20.3 of Motor specification for tentative cable size. The terminal box of motor shall be suitable for selected cable size, easy termination and maintenance of cables.
- d) Motor shall be suitable for frequency of 50 Hz with variation of +5% and -5%
- e) Combined Voltage and Frequency variation shall be limited to 10 %
- f) Paint shade : RAL 5012 ( Blue )
- g) Degree of protection : IP 55
- h) Noise level limitation : 85 dB(A)
- i) Motor Fault level shall be limited to 45 kA , RMS , one second .
- j) Instruments as per clause 4.17 of pump specification to be supplied (Reproduced below)

*4.17.1 Instrument rack with all indicating instruments mounted on it to be located on the base of the unit.*

- i) *Pressure gauges: - Balance leak off pressure of BFP (if applicable)*
- ii) *Temperature gauge            - Suction temperature of BFP*  
*- Discharge temperature of BFP*

*4.17.2 The following shall be wired up to junction box (JB) in instrument rack*

- i) *RTD (Duplex)        - For any one of the following bearings*
  - DE Bearing of Pump*
  - NDE Bearing of Pump*
  - DE Bearing of Motor*
  - NDE Bearing of Motor*

*4.17.3 All instruments shall be completed with root valves, impulse lines & required mounting accessories.*

k) Motor ***kW rating and full load current*** shall be furnished.

l) Selected motor kW rating shall be with 15% margin over the duty point input or 10% over the maximum demand of the driven equipment, whichever is higher.

m) **MOTOR MAKES:** M/s KEC (upto 90 kW only) / CGL / Marathon / Jyoti / BBL (upto 160 kW only) / LHP (upto 120 kW only) / ABB Bangalore / Siemens

n) Vendor shall submit "duly filled in" motor data sheets, in the attached format in an event of order (Format Attached)

o) Documents of finalised vendor are subject to BHEL/NTPC approval .