Pressure Transmitter PT 1

A. Measurement and control of water pressure shall be effected by means of one pressure sensor per pump (piezo resistive type or membrane capacitor type). Sensor with housing shall be fully submersible. The pressure instrument shall provide pressure alarms, pressure indication, analog signal transfer to indicator / PLC / RTU-telemetry/ SCADA.

B. The supply shall include pipe connection, indicators and all cables, accessories and fixing, amplifier, transducer / transmitter, power supply unit installed in the MCC panel. Protection class (sensor) shall be IP 68, explosion proof ,the accuracy =/-0,25 % of calibrated span and the output signal 4 to 20 mA. And suitable for 24 volts D.C, the indicator shall have 4 Nos. minimum programmable relay contacts with barograph and digital displays

1.3.28.3 Temperature Measurements & Control

Temperature Transmitter TT1

A. TT1 shall be a compact sized temperature transducer with vapour pressure sensor and diaphragm piston system, including switch unit shall be provided for over-temperature protection of lubrication systems. The bulb material shall be stainless steel 316. Functions to be performed are temperature alarm, over temperature shutdown, analogue signal to RTU/telemetry system. Protection shall conform to class IP 67 and the accuracy shall be 0.5 to 2.0 x C

Temperature Transmitter TT 2

A. This transmitter shall be the resistant type temperature transmitter Pt 100, protection class IP 65, three wire system, output 4-20 mA, temperature proportional, for wet installation and come complete with measuring tube, flange and housing. Material shall be stainless steel 316L for parts exposed to water and cast aluminium or cast iron for the transmitter housing. Functions to be performed are temperature control, high/low alarm and high/low shut down. The accuracy shall be +/- 0.1 % of the calibrated range including hysterese and the linearity +/- 0.1 % of the calibrated range.

1.3.28.4 Conductivity Measurement

A. Measurement of the water conductivity shall be effected by means of conductivity sensor (magnetic inductive type) including temperature compensation, fixed with flange complete with isolating and drain valves to the force main pipe line,