

Schedule - I

Name of Work : Design, manufacture, supply ,erection, testing and commissioning of pumping machinery 4 Nos. 495 HP each (tentatively) and allied equipments for **Hanbarwadi** Lift Irrigation Scheme Tal.Karad, Dist. Satara, Maharashtra state.

Item No.	Description	Qty.	Unit	Rate	Amount in Rs.
1	Submerged Centrifugal Pump- 495 HP (SCF- Vertical Mounting) Submerged Centrifugal Pumpset with Water Immersed, Dry Air filled, Class "F" insulated, inverter duty induction motor, Vacuum pressure impregnation treatment, non-driven end insulated bearing, TEWC Motor Integrally mounted on Volute type Casing pumpset for handling Raw Water application for 3 phase, 50 Hz +/- 3%, 0.415 kV +/-10% along with suitable size copper PVC/EPR flexible round cables and PVC Copper control cable having 10 m length or as per site requirement (from motor terminals to Junction box/ Starter), Strainer & installation device having material of construction: Impeller- CF8M, Casing (Volute) - C.I., Wearing Rings - S.S.-CF8M as per the detailed tender specifications to draw Raw Water from bottom of the RW Sump near canal Suitable for following duties: a) Duty point discharge per pump = 0.3178 M3/sec. b) Duty point head = 92.25 Mtr. c) Maximum rpm synchronous = 1500 d) Type of Delivery – Above Ground e) No. of maximum stage = 2 stage f) Max. No of pumps working in parallel = 4	4	Nos.		0
2	Non – Return Valves (NRV) Providing installing at site of works and testing cast iron Cast Steel (WCB), non slam, double flanged type NRV with bypass arrangements complete suitable for following duties as per IS- 5312 A] Diameter - 450 mm B] P.N. Rating - 1.6	4	Nos.		0
3	Butterfly Valves (BFV) Providing installing at site of works and testing double flanged butterfly valves conforming to relevant IS/BS 5155 with electric actuators with 415 volt A.C. motors D.O.L. starting etc. complete Suitable for following duties and Specification & in Cast Steel (WCB) material of construction. A] Diameter - 450 mm B] P.N. Rating – 1.6	4	Nos.		0
4	Kinetic Air Valve Providing installing at site of works and testing Kinetic Air Valves of 100 mm dia. For releasing air from the delivery pipe etc. suitable for PN rating of 1.6 for above as per IS- C512-92 & in Cast Steel (WCB) material of construction.	4	Nos.		0

Item No.	Description	Qty.	Unit	Rate	Amount in Rs.
5	Delivery Pipe line Providing and jointing at site of works and testing delivery pipe lines including jointing of all in between valves and up to rising main / manifold complete, suitable for following specifications as per IS-1239/5822 a. Diameter - 450 mm b. Wall thickness - 6 to 8 mm c. Length - 15 mtr. For each pump.	60	Mtr.		0
6	Dismantling Joints Providing, installing at site of works and testing M.S. Dismantling joints in pump delivery pipe line complete, suitable for following Specifications. Diameter – 450 mm a. Wall thickness – 6 mm (min) b. PN – 1.6	4	Nos.		0
7	Soft starter Soft starter suitable for motor to control the starting current.	4	Nos.		
8	Capacitors Providing installing at site of works and testing of 0.415 KV, 3 phase, 50 Hz. Suitable capacity Capacitor cubicles for the motors to improve the power factor to 0.95. The KVAR capacity of the capacitors should not exceed the magnetizing KVAR of motor. (Common panel for all 4 nos motors)	1	No.		0
9	L.T. Panel / Motor Control Panel Providing installing at site of works L.T. distribution Panel suitable for 4 Nos x 435 kW motors in sheet metal enclosure incorporating ACB, MCCB, CT,PT, MF meter, Ameters, Voltmeters, selector switches, phase indicating lamps,switch fuse units with necessary duly painted, type tested.	1	No.		0
10	Preparation of cable schedule and supply, Installation, Termination, testing of cables etc. complete. Providing installing at site of works & testing suitable cables & wires complete as required for the pumping and auxiliry equipments.	1	Job		0
11	Earthing Providing, installing at site of works earthling comprising of adequate No. of earth stations, earth bars & individual double earthing to all electrical equipments as per detailed specifications.	1	Job		0
12	Water Level Indicators Providing installing at site of works & testing of water level indicators as per detailed specifications and operating on 230 volts, 50 Hz, A.C. Supply Operating range of level = 20 mtr. min. (Note: Quoted for Ultrasonic type Level Measurement System)	1	Set		0

Item No.	Description	Qty.	Unit	Rate	Amount in Rs.
13	Temperature scanner panels Providing installing and testing of temperature scanner panels comprising of 3 Nos. microprocessor temperature scanners (one each stand by) having 12 point each to monitor L. T. and H T Motor windings and bearing temperature complete as per detailed specifications Temperature Range = 0°C to 200° C Display Details = 6 digit parameter (4 digit function, 2 digit channel)	1	Set		0
14	Testing, Commissioning, Trials and Operation Testing, Commissioning, Trials and Operations of the complete equipments for one year after performance tests and training to Departmental staff.	1	Job		
15	Spares & Tools Spares & tools required for running and maintenances of the scheme. Prices should be item wise and total. (Note: Please attach separate Annexure for details of Spares and Tools)	1	Set		
16	Complete Electrification Electrification to Pump House and control room and outside of Pump house (only inside of MCC Panel Room and peripheral lighting of pump house is considered).	1	Job		0
17	Monorail with structure Providing Installing at site of works and testing of Monorail with structure Suitable for following specifications and conforming to detailed specifications as per (Note: Chain Pulley Block of 7.5 T capacity along with suitable mono rail is considered against this item) – Fabricated super-structure of pump house suitable for mounting chain pulley block / crane is not considered in this item. Same to be considered in pump house civil work estimate.	1	No.		
				Total	0

(P.B.Bhosale)

Executive Engineer,
Mechanical Division, Satara