

GOVERNMENT OF MAHARASHTRA
Water Resources Department
Item Rate Notice
(For Estimation Purpose Only)

Executive Engineer, Mechanical Lift Irrigation Division No.2 Chandrapur invites minimum possible rates of below described items from the reputed Original Pump Manufacturers, who are registered under work Group -II Class 'C' or above for Lift Irrigation Scheme work as per Govt G.R.Misc.10.09/57/(25/09) Mechanical, Mantralaya, Mumbai dtd.29/07/2011 with mechanical Organization

The envelope with the name of work & date mentioned on it should be sent as early as possible. The rates are invited for estimation purpose only. The scope of job is at Dongargaon-Thanegeon lift irrigation scheme. (Taluka-Armori, Dist-Gadchiroli, Maharashtra). The taxes such as Vat, Service tax and other relevant taxes etc. May be mentioned separately.

Name of Work - Design, Manufacture, Supply, Erection, Testing and commissioning of Forced Water Lubricated 3 nos. With allied equipment for Dongargaon-Thanegeon Lift Irrigation Scheme, Ta-Armori, Dist. Gadchiroli

Estimated Qty. may be More or less	Unit	Description of work	Rate Rs. P.	Per	Amount
1	2	3	4	5	6
3	Nos	<p>Item No.1(A) – Vertical Turbine Pumps.</p> <p>Providing, installing at site of works and giving test to full Capacity, vertical turbine pumps non-pull out type, complete with strainer, suction bowl, column assembly, Discharge head, Motor stools. Flexible coupling, sole Plates, base frame foundation, non reversible rotation Ratchet arrangement, etc. suitable for following duties, Specification</p> <p>a) Duty point discharge 470 LPS</p> <p>b) Duty point head 40 m</p> <p>c) Maximum rpm synchronous 1000</p> <p>d) Efficiency</p> <p>1. Bowl efficiency 90 %</p> <p>2. Pump efficiency 88 %</p> <p>3. Overall efficiency 85 %</p> <p>e) Head range 30 to 44 m</p> <p>f) Lubrication system Forced water</p> <p>g) Discharge type Sub Surface</p> <p>h) No. of maximum stages Single Stage Only</p> <p>i) Column pipe dia. Minimum (ID) 550 mm</p> <p>j) Column pipe thickness minimum 5 mm</p> <p>k) Line shaft dia. Minimum 60 mm</p> <p>l) Sole plate thickness minimum 60 mm</p> <p>m) Diameter of shaft enclosing tube (minimum) 90 mm</p> <p>suitable for item (k) above. (ID)</p>		Each	

Estimated Qty. may be More or less	Unit	Description of work	Rate	Per	Amount
1	2	3	4	5	6
1	Set	Item No. 1(B) – Forced Water Lubrication and Cooling System Providing, installing at site of works and giving satisfactory test of Forced water lubrication and cooling system.		Each	
		i) Pressure Filters-3 Nos.			Please specify pressure filter capacity.
		ii) Booster pump (34 HP-each)- 2 Nos.			
3	Nos.	Item No.2 Non Return Valve 500 mm Dia. Providing, installing at site of works and testing cast iron, non slam, double flanged type non return valve with by pass arrangement complete, suitable for following duties specification a) Diameter 500 mm b) P.N. rating 1.0 c) Working pressure 4 Kg/cm2 d) Differential working pressure 4 Kg/cm2 e) Maximum working pressure 8 Kg/cm2 f) Maximum rate of flow in LPS 615 LPS		Each	
3	Nos.	Item No. 3 : Butterfly Valve 500 mm Dia. Providing, installing at site of works and testing double flanged butterfly valves conforming to relevant IS/BS 5155 with electrical actuators with 415 volts A.C. Motors D.O.L. starting etc. complete, suitable for following duties, specifications a) Diameter 500 mm b) P.N. rating 1.0 c) Working pressure 4 Kg/cm2 d) Differential working pressure 4 Kg/cm2 e) Maximum working pressure 8 Kg/cm2 f) Maximum rate of flow in LPS 615LPS		Each	

Estimated Qty. may be More or less	Unit	Description of work	Rate	Per	Amount
1	2	3	4	5	6
3	Nos.	<p>Item No. 4 : Kinetic Air Valve 100 mm Dia.(Tamper proof)</p> <p>Providing, installing at site of works and testing kinetic air valves of 100 mm dia. For releasing air from the delivery pipes, etc.</p>		Each	
75	Mtr.	<p>Item No. 5 : Delivery pipelines 500 mm Dia.</p> <p>Providing and joining 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 duties, specification</p> <p>(a) Diameter (NB) 500 mm</p> <p>(b) Wall Thickness 5 mm</p> <p>(c) Hydraulic test pressure 15.0 kg/cm2</p>		Mtr.	
3	Nos.	<p>Item No. 6 : Rubber Expansion Joint 500 mm</p> <p>Providing, installing at site of works and testing of rubber expansion joints in pump delivery pipe line complete, suitable for following duties, specification</p> <p>(a) Diameter (NB) 500 mm</p> <p>(b) Internal test pressure 15.0 kg/cm2</p> <p>(c) Vacuum test pressure in mm of Hg 760 mm</p>		Each	
3	Nos.	<p>Item No. 7 : Supply, Installation and testing of Orifice plate / meter in the delivery pipe line with proper calibration</p>		Each	
3	Nos.	<p>Item No. 8 : H.T. Induction Motors 6.6 KV,(O/P) 230KW, 3 Phase, 1000 rpm, 50 Hz.</p> <p>Providing, installing at site of works and testing to full capacity, solid shaft squirrel cage induction motors, CACW type, F Class insulation, suitable for operation on voltage mentioned below, 3 phase, 50 cycles per second with voltage variation of +/- 6% and frequency of +/-3%, suitable for direct coupling with pumps under Item no. 1(A) as per the latest revision of IS 325, IS 4722 and other relevant IS specification to meet the power requirement of pumps with 5% additional capacity over entire operating range suitable for following duties, specification</p> <p>(a) Operating voltage 6.6 KV</p> <p>(b) Minimum BHP (KW) rating of motor (O/P)230KW</p>		Each	
3	Nos.	<p>Item No 9: FCMA soft starter</p> <p>Providing and installing at site of work and testing of FCMA soft starter suitable for above motor mentioned in item No.8</p>		Nos	
3	Nos.	<p>Item No. 10 : Capacitor Cubicle 6.6 KV, 3 Phase, 50 Hz, 80 KVAR</p> <p>Providing, installing at site of works and testing of 6.6 KV, 3 phase, 50 cycles per second capacitor cubicles for the motors mentioned against Item no. 8 above, to improve the power factor to 0.95. The KVAR capacity of the capacitor cubicles should not exceed the magnetizing KVAR of motor.</p>		Each	

Estimated Qty. may be More or less	Unit	Description of work	Rate	Per	Amount
1	2	3	4	5	6
1	Set	<p>Item No. 11 : H.T. Panel 6.6 KV, 3 Phase, 630Amps</p> <p>Providing, installing at site of works and testing of sheet steel, dust and vermin proof, indoor floor mounting type H.T. Panel, completely assembled, wired tested, painted, conforming to relevant ISS, complete suitable for following duties, specification</p> <p>(a) Electrical System 6.6 KV, 3 Phase, 50 Hz, A.C. with fault level of 25KA</p> <p>(b) Capacity 630Amps.</p> <p>(c) Panel shall comprise of the following</p> <p>(i) 2 Nos. incoming breakers with following rating</p> <p>Current 630 Amps</p> <p>Minimum rupturing capacity 250 MVA</p> <p>(ii) 1 No. Bus coupler breaker with following rating</p> <p>Current 630 Amps</p> <p>Minimum rupturing capacity 250 MVA</p> <p>(iii) 4 nos. outgoing breakers with following rating</p> <p>Current 630 Amps</p> <p>Minimum rupturing capacity 250 MVA</p> <p>(1) Breakers for outgoing feeders for motors (3+1)</p> <p>with the following ratings.</p> <p>Current 630 Amps</p> <p>Minimum rupturing capacity 250 MVA</p>		Set	
1	Set	<p>Item No. 12 : L.T. distribution Panel 415 V, 3 Phase, 630Amps.</p> <p>Providing, installing at site of work and testing of 415 volts, 3 phase, 50 c/s 630 amps. L.T. distribution panels comprising of following</p> <p>(i) 415 Volt, 630 amps. A.C.B. for auxiliary transformer incoming feeder 1 no.</p> <p>(ii) 415 Volt, 100 amps. H.R.C. switch fuses unit 3 nos.</p> <p>(iii) 415 Volt, 63 amps. H.R.C. switch fuses unit 4 nos.</p> <p>(iv) 415 Volt, 32 amps. H.R.C. switch fuses unit 4 nos.</p> <p>(v) 415 Volt, 16 amps. H.R.C. switch fuses unit 5 nos.</p> <p>3+1 nos. electrical motor starter D.O.L. type reversible push button operated suitable for B.F. valves under Item no. 3 above.</p>		Set	

Estimated Qty. may be More or less	Unit	Description of work	Rate	Per	Amount
1	2	3	4	5	6
1	Set	Item No. 13 : Batteries, Battery charger & D.C.D.B. Providing, installing at site of work & testing Batteries, battery chargers & D.C.D.B. complete unit comprising of following		Set	
		i) Batteries 2 X 55 cell 110 volts D.C. 200 AH Hour capacity along with all accessories.			
		(ii) Battery charger 110 volts, 30 Amp. For above batteries comprising of one float charger and one boost charger respectively complete with protective relays, etc.			
		(iii) D.C.D.B. comprising of two incoming double pole miniature circuit breakers (MCB) 50 Amps. 2 Nos., 55 amps., & 13 nos. 10 amp. outgoing feeder with MCB or switch fuse unit, complete will all accessories, etc			
1	1 Set	Item No. 14 : Temperature Scanner Panel Providing, installing at site of work & testing of temperature scanner panel comprising of 4 nos. microprocessor temperature scanners having 10 points each to monitor H.T. motor winding and bearings temperature.		Each	
		Item No. 15 : Preparation of cable schedule and Supply, Installation and Testing of cable as below. Providing, installing at site of work & testing of suitable cables & wires complete as per requirement of pump house as given below			
400	Mtr.	a) 50 sq.mm X 3 core, 6.6 KV X.L. P.E. AL armored earthed cable H.T. Panel to H.T. Motor		Mtr	
250	Mtr.	b) 35 sq.mm X 3 core, 6.6 KV AL XLPE armored cable, 250 meter (From H.T Panel to Capacitor)		Mtr	
300	Mtr.	c) 50 sq.mm X 3.5 core, 1.1 KV armored PVC insulated AL cable L.T. Panel to E.O.T. and LT Panel to Booster Pump, 300 m.		Mtr	
300	Mtr.	d) 6 sq.mm x 4 core, 1.1KV PVC armored Insulated AL cable L.T.Panel to BFV actuator, 300 m.		Mtr	
		Control Cable			
150	Mtr.	i) 4 sq.mm X 3 core, 1.1 PVC Insulated copper conductor cable		Mtr	
150	Mtr.	j) 6 sq.mm X 4 core, 1.1 KV PVC Insulated copper conductor cable		Mtr	
300	Mtr.	k) 1.5 sq.mm X 4 core, 1.1 KV PVC Insulated copper conductor cable		Mtr	
375	Mtr.	l) 2.5 sq.mm X 7 core, 1.1 KV PVC Insulated copper conductor cable		Mtr	
225	Mtr.	m) 1.5 sq.mm X 30 core, 1.1 KV PVC Insulated copper conductor cable		Mtr	

Estimated Qty. may be More or less	Unit	Description of work	Rate	Per	Amount
1	2	3	4	5	6
1	LS.	Item No. 16 : Earthing Providing, installing at site of work earthing comprising of adequate no. of earth sttions, earth bard and individual double earthing to all electrical equipment		LS.	
1	No.	Item No. 17 : Water Level Indicator Providing, installing at site of work & testing of water level indicator, operating on 230 volts, 50 C/s.AC supply		Each	
1	Set	Item No. 18 : Remote Control Panel Providing, Installing at site of work & testing of sheet steel floor mounted vermin proof and powder coated and tropicaillized remote control panels with control switches, ammeter, annunciation facia windows, indication lamps etc. for control & monitoring of breakers, pump/motor ancillary equipment/panels, etc. (a) Incoming breakers/Bus couplers 3 nos. (b) Pump motor breakers 3 nos. (c) Booster pumps 2 nos. (d) Butterfly valves 3 nos. (e) Water level indicators 2 nos. (f) Capacitors 3 nos. (g) Cooling system 3 nos.		Set	
1	Lot	Item No. 19: Spares & tools Providing at site of works tools and spares complete as per list attached		Please specify the list of items required along with rates of each item.	
1	Job	Item No. 20 : Testing, Commissioning, Trial operation & Training to Department staff Testing, Commissioning, Trial operation of the complete equipment and performance tests and training to department staff		Job	

sd/-
Executive Engineer
Mech. Lift Irrigation Div No.2
chandrapur