

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 Haldipurani lift irrigation scheme. (Taluka-Chamorshi, 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 Haldipurani Lift Irrigation Scheme, Ta-Chamorshi, Dist. Gadchiroli

Estimated Qty. may be More or less	Unit	Description of work	Rate	Rs.	P.	Per	Amount	Remarks
1	2	3	4	5	6	7	8	9
3	Nos	Item No.1(A) – Vertical Turbine Pumps. 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 a) Duty point discharge 733LPS b) Duty point head 41.3m c) Maximum rpm synchronous 1000 d) Efficiency 1. Bowl efficiency 92 % 2. Pump efficiency 90 % 3. Overall efficiency 85 % e) Head range 30.98 to 45.43 m f) Lubrication system Forced water g) Discharge type Sub Surface h) No. of maximum stages Single Stage Only i) Column pipe dia. Minimum (ID) 700 mm j) Column pipe thickness minimum 10 mm k) Line shaft dia. Minimum 70 mm l) Sole plate thickness minimum 70 mm m) Diameter of shaft enclosing tube (minimum) 105 mm suitable for item (k) above. (ID)						
	Nos	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.						
3		i) Pressure Filters						
2		ii) Booster pump (As per required) (1 no.working+1 stand by)						

Estimated Qty. may be More or less	Unit	Description of work	Rate	Rs.	P.	Per	Amount	Remarks
1	2	3	4	5	6	7	8	9
3	Nos.	Item No.2 Non Return Valve 600 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 600 mm b) P.N. rating 1.0 c) Working pressure 4.13 Kg/cm2 d) Differential working pressure 4.13 Kg/cm2 e) Maximum working pressure 8.26 Kg/cm2 f) Maximum rate of flow in LPS 950 LPS						
3	Nos.	Item No. 3 : Butterfly Valve 600 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 600 mm b) P.N. rating 1.0 c) Working pressure 4.13 Kg/cm2 d) Differential working pressure 4.13 Kg/cm2 e) Maximum working pressure 8.26Kg/cm2 f) Maximum rate of flow in LPS 950 LPS						
3	Nos.	Item No. 4 : Kinetic Air Valve 150 mm Dia. Providing, installing at site of works and testing kinetic air valves of 150 mm dia. For releasing air from the delivery pipes, etc.				didkd		
75	Mtr.	Item No. 5 : Delivery pipelines 600 mm Dia. 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 (a) Diameter (NB) 600 mm (b) Wall Thickness 10 mm (c) Hydraulic test pressure 15.0 kg/cm2						

Estimated Qty. may be More or less	Unit	Description of work	Rate	Rs.	P.	Per	Amount	Remarks
1	2	3	4	5	6	7	8	9
3	Nos.	<p>Item No. 6 : Rubber Expansion Joint 600 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) 600 mm</p> <p>(b) Internal test pressure 15.0 kg/cm²</p> <p>(c) Vacuum test pressure in mm of Hg 750 mm</p>						
3	Nos.	<p>Item No. 7 : Supply, Installation and testing of Orifice plate / meter in the delivery pipe line with proper</p>						
3	Nos.	<p>Item No. 8 : H.T. Induction Motors 6.6 KV,370KW, 3 Phase, 1000 rpm, 50 Hz.</p> <p>Design,Supply,Erection,Testing and Commissioning of Vertical 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 370 KW@RPM1000 50 Hz</p>						
3	Nos.	<p>Item No 9: FCMA soft starter</p> <p>Design,Supply,Erection,Testing and Commissioning of FCMA soft starter suitable for above motor mentioned in item No.8.</p>						
3	Nos.	<p>Item No. 10 : Capacitor Cubicle 6.6 KV, 3 Phase, 50 Hz, 170 KVAR</p> <p>Design,Supply,Erection,Testing and Commissioning of 6.6 KV, 3 phase, 50 cycles per second ,170 KVAR capacitor cubicles for the motors mentioned against Item no. 8 above, to improve the power factor to 0.98. The KVAR capacity of the capacitor cubicles should not exceed the magnetizing KVAR of motor and shall be provided with earth terminals suitable for operating voltages and switching devices to isolate individual bank of capacitors. (Motor P.F. considered 0.84 lag)</p>						

Estimated Qty. may be More or less	Unit	Description of work	Rate	Rs.	P.	Per	Amount	Remarks
1	2	3	4	5	6	7	8	9
1	Set	<p>Item No. 11 : H.T. Panel 6.6 KV, 3 Phase, 630 Amps</p> <p>Design,Supply,Erection,Testing and Commissioning of sheet steel, dust and vermin proof, indoor floor mounting type H.T. Panel, completely assembled, wired tested, painted, conforming to relevant IS, 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 630 Amps.</p> <p>(c) Panel shall comprise of the following</p> <p>(i) 2 No. incoming breakers with following rating (for transformer feeder)</p> <p>Current 630Amps</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 No. outgoing breaker 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 with the following ratings.</p> <p>Current 630Amps</p> <p>Minimum rupturing capacity 250 MVA</p>						
1	Set	<p>Item No. 12 : L.T. distribution Panel 415 V, 3 Phase, 630 Amps.</p> <p>Providing, installing at site of work and testing of 415 volts, 3 phase, 50 c/s 630 amps. L.T. distribution panels complete as given below.</p> <p>(i) 415 Volt, 630 amps. A.C.B. for auxiliary transformer incoming feeder 1 no.</p> <p>(ii) 415 Volt, 100 amps. Change over switch -01 No.</p> <p>(ii) 415 Volt, 100 amps. H.R.C. switch fuses unit -03 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 6 nos.</p> <p>3 nos. electrical motor starter D.O.L. type reversible push button operated suitable for B.F. valves under Item no. 3 above.</p>						
1	Set	<p>Item No. 13 : Batteries, Battery charger & D.C.D.B.</p> <p>Providing, installing at site of work & testing Batteries, battery chargers & D.C.D.B. complete unit .</p> <p>i) Batteries 2 X 55 cell 110 volts D.C. 200 AH Hour capacity along with all accessories.</p> <p>(ii) Battery charger 110 volts, 50 Amp. For above batteries comprising of one float charger and one boost charger respectively complete with protective relays, etc.</p> <p>(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 with all accessories, etc</p>						
1	1 Set	<p>Item No. 14 : Temperature Scanner Panel</p> <p>Design,Supply,Erection,Testing and Commissioning of temperature scanner panel comprising of 3+1 nos. microprocessor temperature scanners having 12 points each to monitor H.T. motor winding and bearings temperature, complete</p>						

Estimated Qty. may be More or less	Unit	Description of work	Rate	Rs.	P.	Per	Amount	Remarks
1	2	3	4			5	6	7
		<p>Item No. 15 : Preparation of cable schedule and Supply, Installation and Testing of cable as below.</p> <p>Providing, installing at site of work & testing of suitable cables & wires complete as per requirement of pump house as given below .</p>						
250	Mtr.	a) 70 sq.mm X 3 core, 6.6 KV X.L. P.E. AL armored earthed cable H.T. Panel to H.T. Motor and Capacitor.						
300	Mtr.	b) 50 sq.mm X 3.5 core, 1.1 KV armoured PVC insulated AL cable , L.T.Panel to E.O.T. and L.T Panel to Booster Pump,300 m.						
200	Mtr.	c) 6 sq.mm X 4 core, 1.1 KV PVC armoured insulated AL cable LT Panel to BFV actuator,200m						
		Control Cable						
200	Mtr.	i) 4 sq.mm X 3 core, 1.1 PVC Insulated copper conductor cable						
200	Mtr.	i) 6 sq.mm X 4 core, 1.1 KV PVC Insulated copper conductor cable						
300	Mtr.	j) 1.5 sq.mm X 4 core, 1.1 KV PVC Insulated copper conductor cable						
400	Mtr.	k) 2.5 sq.mm X 7 core, 1.1 KV PVC Insulated copper conductor cable						
300	Mtr.	l) 1.5 sq.mm X 27 core, 1.1 KV PVC Insulated copper conductor cable						
		<p>Item No. 16 : Earthing</p> <p>Providing, installing at site of work earthing comprising of adequate no. of earth stations, earth bars and individual double earthing to all electrical equipment</p>						
1	LS.							
		<p>Item No. 17 : Water Level Indicator (Probe type)</p> <p>Providing, installing at site of work & testing of water level indicator, operating on 230 volts, 50 C/s.AC supply</p>						
1	No.							
		<p>Item No. 18 : Remote Control Panel</p> <p>Providing, Installing at site of work & testing of sheet steel floor mounted vermin proof and powder coated and tropicalized remote control panels with control switches, ammeter, annunciation facia windows, indication lamps etc. for control & monitoring of breakers, pump/motor axilliary equipment/panels, etc. suitable for following items</p> <p>(a) Incoming breakers 1 nos.</p> <p>(b) Pump motor breakers 3 nos.</p> <p>(c) Booster pumps 2 nos.</p> <p>(d) Butterfly valves 3 nos.</p> <p>(e) Water level indicators 1 nos.</p> <p>(f) Capacitors 3 nos.</p> <p>(g) Cooling system 3 nos.</p>						
1	Set							
		<p>Item No. 19: Spares & tools</p> <p>Providing at site of works tools and spares complete .</p>						Please provide the list with break
1	Lot							
		<p>Item No. 21 : Testing, Commissioning, Trial operation & Training to Department staff</p> <p>Testing, Commissioning, Trial operation of the complete equipment and performance tests and training to departmental staff</p>						
1	Job							

Executive Engineer
Mech.Lift Irrigation Div No.2,
Chandrapur.