

जा.क्र. / २८० / यांउसिविक्र.२चंद्र/ तांशा-१ / धा.क्र.४४ / २०१९	कार्यकारी अभियंता यांत्रिकी उपसा सिंचन विभागक्र.२, बाबुपेठ, चंद्रपुर - ४४२४०३ यांचे कार्यालय
☎ :- (०७१७२)२२७३८२	
फॅक्स :- (०७१७२)२२७३८२	
ई मेल :- mlidn2@rediffmail.com	दि. ०६ / ०२ / २०१९

प्रति,

मा. अधीक्षक अभियंता,
यांत्रिकी मंडळ ,
नागपुर

विषय :- तळोधी मोकासा उ.सिं.यो ता. चामोशी, जि.गडचिरोली येथील पंपींग यंत्रसामुग्री व संलग्न घटक भागांची निर्माती, पुरवठा, उभारणी व कार्यान्वीकरण कामांचे दर उपलब्ध करून देणेबाबत.

संदर्भ :- १. कार्यकारी अभियंता, लघु पाटबंधारे विभाग, चंद्रपुर यांचे कार्यालयीन पत्र क्र. २१०९/प्र.शा-४/ तळोधी मोकासा उ.सिं.यो / २०१८ , दिनांक २९/०६/२०१८
२. कार्यकारी अभियंता, यां.उ.सिं.वि.क्र.२, चंद्रपुर यांचे कार्यालयीन पत्र क्र. १२४९/यांउसिविक्र.२चंद्र/ तांशा-१ / धा.क्र.४४/ २०१८ , दिनांक २१/०७/२०१८
३. कार्यकारी अभियंता, यां.उ.सिं.वि.क्र.२, चंद्रपुर यांचे कार्यालयीन पत्र क्र. १७०५/यांउसिविक्र.२चंद्र/ तांशा-१ / धा.क्र.४४/ २०१८ , दिनांक १०/१०/२०१८.
४. कार्यकारी अभियंता, यां.उ.सिं.वि.क्र.२, चंद्रपुर यांचे कार्यालयीन पत्र क्र. २१७१/यांउसिविक्र.२चंद्र/ तांशा-१ / धा.क्र.४४/ २०१८ , दिनांक ३१/१२/२०१८.

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उपरोक्त संदर्भित पत्र क्र.१, २ व ३ अन्वये, विषयांकीत योजनेकरीता मान्य झालेल्या परीगणकानुसार अंदाजपत्रकीय कार्यवाही करीता आवश्यक यांत्रिकी व विद्युत घटक भागांचे दर उपलब्ध करून देणेकरीता सोबत Technical Specification चा तक्ता बजेटरी ऑफर करीता सादर करण्यात आला होता. तथापी संदर्भित पत्र क्र.२ ला प्रतिसाद व एकही दर पत्रक प्राप्त न झाल्यामुळे व संदर्भित पत्र क्र.३ ला एकच दर पत्रक प्राप्त झाल्यामुळे व संदर्भित पत्र क्र.४ ला अल्पप्रतिसाद मिळाल्यामुळे सदर कामाची बजेटरी ऑफर क्रं.१५/२०१८-१९ यांत्रिकी संघटनेच्या संकेतस्थळावर (www.mahayantriki.org) पुन्हा प्रसिध्द करण्यात यावी व दर उपलब्ध करून देण्यात यावे हि विनंती.

कार्यालय	कार्यकारी अभियंता, यांत्रिकी उपसा सिंचन विभाग क्र.२, चंद्रपुर
बजेटरी ऑफर प्रसिध्द करण्याची अंतिम तारीख	दि.०८/०२/२०१९
बजेटरी ऑफर स्विकारण्याची अंतिम तारीख	दि.२८/०२/२०१९

सबब आपले माहिती व पुढील योग्य कार्यवाहीस्तव सविनय सादर.

सहपत्र :- १. बजेटरी ऑफर क्र. १५/२०१८-१९ — १ प्रत

२. Detailed Technical Specification — १ प्रत

-स्वा-
(वि.ल.वराडे)
कार्यकारी अभियंता
यांत्रिकी उपसा सिंचन विभाग क्र. २
चंद्रपुर

Name of Work :- Design,Manufacturing,Supply,Errection,Testing and Commissioning of Forced Water Lubricated Verticle Turbine Pump - 3 No. with allied equipments at Talodhi Mokasa L.I.S Tah :- Chamorshi , Dist.:- Gadchiroli

Qty.	Unit	Description of Items/Work	Rate Rs./Item
3	Nos	Item No.1 (A) – Vertical Turbine Pumps	
		Providing & installing at site of works and giving test to full load Capacity, vertical turbine pumps non-pull out type, complete with strainer, suction bowl, complete column pipe assembly,Discharge head/discharge Tee ,Motor stools, Flexible coupling, sole Plates of required size , base frame foundation, non reversible rotation Ratchet arrangement, etc. suitable for following duties, Specification and conforming to the details specification.	
		a) Duty point discharge 1000 LPS	
		b) Duty point head 37.81 m	
		c) Maximum rpm synchronous 750 rpm	
		d) Efficiency	
		1. Bowl efficiency 92 %	
		2. Pump efficiency 90 %	
		3. Overall efficiency 86 %	
		e) Head range 28 m to 42 m	
		f) Lubrication system Forced water Lubricated	
		g) Discharge type Sub-Surface	
		h) No. of stages One Stage	
		i) Column pipe dia. Minimum (ID) 800 mm	
		j) Levels	
		I) Motor floor level 197.50 m	
		iI) Valve floor level 192.50 m	
		II) Sump Bottom Level 176.00 m	
		K) Column pipe thickness minimum 10 mm	
		l) Line shaft dia. Minimum 85 mm	
		m) Sole plate thickness minimum 70 mm	
		n) Diameter of shaft enclosing tube (minimum) 130 mm suitable for item (l) above.	
1	Job	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 with all piping arrangments & necessary fittings as per requirment Specification and conforming to the details specification.	
		i) Pressure Filters (As per required) - 3 nos.	
		ii) Booster pumps (As per required) - 1working + 1 stand by	
3	Nos.	Item No.2 Non Return Valve 750 mm Dia.	
		Providing, installing at site of works and testing cast steel , non slam, double flanged type non return valve with by pass arrangement complete, suitable for following duties specification and confirming to detailed specification.	

		a) Diameter	750 mm	
		b) P.N. rating	1.6	
		c) Working Pressure	4 Kg./cm ²	
		d) Differential Working Pressure	8 Kg./cm ²	
		e) Maximum flow rate in lps	1300 lps	
3	Nos.	Item No.3 : Butterfly Valve 750 mm Dia.		
		Providing, installing at site of works and testing cast steel 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 and conforming to detailed specification.		
		a) Diameter	750 mm	
		b) P.N. rating	1.6	
		c) Working Pressure	4 Kg./cm ²	
		d) Differential Working Pressure	8 Kg./cm ²	
		e) Maximum flow rate in lps	1300 lps	
3	Nos.	Item No.4 : Dismantle Joint 750 mm Dia.		
		Providing & installing at site of works & testing of dismantling joint in delivery pipe line complete suitable for following specification.		
		i) Diameter	750 mm	
		ii) Internal test pressure	15 kg./cm ²	
		iii) Vacuum test pressure in mm of Hg 750 mm		
3	Nos.	Item No. 5 : Kinetic Air Valve 200 mm Dia.		
		Providing, installing at site of works and testing cast steel kinetic air valves with isolating sluice valve For releasing air from the delivery pipes, etc. complete as per detailed specification. i) Diameter = 150 mm , ii) P.N = 1.6		
75	Mtr.	Item No. 6 : Delivery pipelines 750 mm Dia.		
		Manufacturing ,Providing,Supply,erection ,testing and joining at site of works and testing of delivery pipe line including jointing in between pump and up to rising main/manifold complete. Suitable for following duties, specification and conforming to detailed specification.		
		(a) Diameter (NB)	750 mm	
		(b) Thickness	10 mm	
		(c) Hydraulic test pressure	15 Kg./cm ²	
1	Job	Item No. 7 : Sump Model Test		
		Sump Model Test to ensure the vortex free and cavitation free operation of 3 no. V.T pump.		
1	Job	Item No. - 8 Providing & Supplying Spares & Tools.		
		i) Head line shaft- 1 no.		
		ii) Impeller line shaft - 1 no.		
		iii) Bottom line shaft - 1 no.		
		iv) Line shaft of standard length - 5 no.		
		v) Radial ball bearing (TBH) = 2 nos.		
		vi) Spherical roller thrust bearing (TBH)= 2 nos.		
		vii) Guide Spider = 4 nos.		
		viii) Oil indicator = 2 nos.		
		ix) Ratchet Plates = 2 nos.		

		x) Ratchet roller/pin - 20 no. xi) Upper half & lower half coupling set with locking arrangement - 1 set xii) Coupler Cap = 5 nos. xiii) Connector Bearings with nuts = 5 nos. Xiv) Rubber bearing - 6 no. xv) Dismantling,removing,assembling & reerection tools - 1 complete set	
1	Job	Item No. 9 : Testing, Commissioning, Trial operation & Training to Department staff Testing, Commissioning, Trial, operation of the complete equipment and performance tests and training to department staff as per detailed specification.	
3	Nos.	Item No. 10 :H.T. Induction Motors (CACW): Providing,instaling 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 mention below,3 phase,50 cycles per second with voltage variation of +/- 6 % and frequency of +/- 3 %,suitable for direct coupling withs 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 with 5% additional capacity over entire operating range suitable for following duties,specification and confirming to detailed specification. (a) Operating voltage 6.6 KV (b)Minimum BHP(KW) rating of motor 460 KW	
3	Nos.	Item No. 11 –FCMA soft Starter Providing and Installing at site of work and testing of FCMA soft starter suitable for above motor mentioned in item no.8 and confirming to detailes specification	
3	Nos.	Item No.12 –Capacitor Cubical 6.6 KV,3 Phase,50 Hz,150 KVAR Providing,instaling at site of works and testing of 6.6 KV,3 phase,50 Hz. 150 KVAR capacitor cubicle for the motors mentiod against item no.8 above,to improve the power factor to 0.95. The KVAR capacity of the capacitor cubicles should not exceed the magnetising KVAR of motor.	
1	Set	Item No.13 :H.T. Pannel 6.6 KV,3 Phase, 630A Providing,Installing at site of work & testing of sheet steel,dust and vermin proof,indoor floor mounting type H.T. pannel,completely assembled,wire tested,pained,confirming to relevent IS, complate suitable for following duties,specification and confirming to detailed specification (a) Electrical system 6.6 KV,3 Phase,50 Hz,A.C. with fault level of 25 KA (c) panel shall comprise of the following (i) 2 Nos. incoming breakers & 1No. Bus coupler breaker with following rating current 630 Amps Minimum rupturing capacity 250 MVA (1) Breakers for out going feeders for motors 3+1 with the following ratings. current 630 Amps Minimum rupturing capacity 250 MVA	

1	Set	Item No.14 –L.T. Distribution panel 415 V, 3 Phase, 250 Amps.
		providing installing at site of work and testing of 415 volts,3 phase,50 c/s 250 amps.L.T. distribution panels comprising of following detailed specification
		(i) 415 volt,250 amps.A.C.B.for auxiliary transformer incoming feeder 1 no.
		(ii) 415 volt,100 amps. H.R.C switch fuses unit 3 nos.
		(iii) 415 volt,63 amps. H.R.C switch fuses unit 4 nos.
		(iv) 415 volt,32 amps. H.R.C switch fuses unit 4 nos.
		(v) 415 volt,16 amps. H.R.C switch fuses unit 5 nos.
		(vi) 3 nos. electrical motor starter D.O.L. type reversible push button operated suitable for B.F.valves
1	Set	Item No.15 –Batteries,Battery Charger & D.C.D.B.
		providing installing at site of work and testing Batteries,Battery charger & D.C.D.B. complete unit comprising of following & as under detailed specification
		i) Batteries 2x55 cell 110 volts D.C 200 Ah hour Capacity VRLA among with all accessories.
		ii) Battery charger 110 volts,30 Amp. For above Batteries comprising of Two flot cum boost charger complete with protective relay,etc.
1	Set	iii) D.C.D.B comprising of two incoming double pole miniature circuit breaker (MCB) 80 amps,2 nos., 10 amps.,13 nos. outgoing feeder with MCB or switch fuse unit,complete will all accessories.,etc
		Item No. 16 :Temperature Scanner Pannel
		Providing,Installing at site of work & testing of Temperature Scanner pannel comprising of 3+1=4 no. microprocessor temp. Scanner having 10 points each to monitor bearing temperature as per detailed specificationas .
		Item No.17 : Preparation of cable schedule & supply,instalation & testing of cable as below. (including cable tray)
		Providing,installing at site of work & testing of suitable cables & wires complete as per requirement of pump house as given below as per detailed specification
175	Mtr.	a) 50 sqmmx3 core,6.6 Kv X.L.P.E.Al armored earthed cable
300	Mtr.	b) 35 sqmmx3 core,6.6 Kv armored PVC insulated AL cable
175	Mtr.	c) 185 sqmmx3.5 core,1.1 Kv armored PVC insulated AL cable
		control cable
175	Mtr.	d) 6 sqmmx4 core 1.1 Kv armored Pvc Ins. Copper Conductor Cable.
250	Mtr.	e) 1.5 sqmmx4 core 1.1 Kv Pvc Ins. Copper Conductor Cable.
175	Mtr.	f) 2.5 sqmmx7 core 1.1 Kv Pvc Ins. Copper Conductor Cable.
125	Mtr.	g) 1.5 sqmmx27 core 1.1 Kv Pvc Ins. Copper Conductor Cable.

1	LS	Item No.18 : Earthing	
		Providing, installing at site of works earthing comprising of adequate no. of earth station, earth bars & individual double earthing to all electrical equipment as per detailed specification	
1	Set	Item No.19 :Remote Control Panel	
		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 suitable for following items and confirming to detailed specification	
		a) incoming breaker/Bus coupler 3 Nos.	
		b) pump motor breaker 3+1 nos.	
		d) Booster pumps 2 nos.	
		e) Butterfly valves 3 nos.	
		f) Water level indicators 1 nos.	
		h) Capacitors 3 nos.	
		i) cooling system 3 nos.	

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(V. L. Varade)

Executive Engineer

**Mechanical Lift Irrigation Div. No.2,
Chandrapur**