

GENERAL ABSTRACT

Jal Jeevan Mission (JJM)-WSS to Arakkulam and Velliyamattom (part) panchayath-Part II-
Package IV-Supplying,erecting,testing and commissioning of Clear water pump sets and allied
works in various pump houses of Arakkulam Velliyamattom Part II-General Civil Work

SI No	Head Description	Amount	
1	Supply, Erection, Testing and commissioning of VT type RW Pumpsets from well to WTP Discharge 42 lps, Head 15m	1053093.26	
2	Supply, Erection, Testing and commissioning of CF type CW Pumpsets from WTP to Alanickal estate Discharge 9 lps, Head 124m	1780459.54	
3	Supply, Erection, Testing and commissioning of CF type CW Pumpsets from WTP to Intermediate Discharge 6 lps, Head 132m	1391613.94	
4	Supply, Erection, Testing and commissioning of CF type CW Pumpsets from WTP to Kavumpady Discharge 6 lps, Head 45m	620644.86	
5	Supply, Erection, Testing and commissioning of CF type CW Pumpsets from WTP to KSEB filter house Discharge 24 lps, Head 164m	5023112.10	
6	Supply, Erection, Testing and commissioning of CF type CW Pumpsets from Intermediate to Audit road Discharge 6 lps, Head 139m	1402415.90	
7	Supply, Erection of 250 KVA Indoor Transformer with panel board and required accessories at WTP	2559265.77	
Total Estimation PAC		13830605.37	
SI No	Description	Percentage/LS	Amount
L Lumsum Heading			
L.001	Connection charges - KSEB		
		@LS	300000.00
Total Lumsum Amount			300000.00
C Extra Charges			
C.001	Provision for GST		
	13830605.37	18.00%	2489508.97
Grand Total			16620114.34
Round off			9885.66
Rounded Total(Rs)			16630000.00
Rupees One Crore Sixty Six Lakh Thirty Thousand			

Approved By
Praveen K S
(PEN:G10554), Superintending Engineer

DETAILED ESTIMATE

Jal Jeevan Mission (JJM)-WSS to Arakkulam and Velliyamattom (part) panchayath-Part II-
Package IV-Supplying,erecting,testing and commissioning of Clear water pump sets and allied
works in various pump houses of Arakkulam Velliyamattom Part II-General Civil Work

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
1	Supply, Erection, Testing and commissioning of VT type RW Pumpsets from well to WTP Discharge 42 lps, Head 15m						
1.001	OD286735/2023-2024						



SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	<p>Supply, erection, testing and commissioning of VT Pump sets at RAW water pump house- 42 lps discharge and 15m head from well to 12th mile. Size of pumping main:250 DI K9, Length of pumping main:180 m, Maximum length of column pipe: below 1.5m, Casing: Cast iron, Speed: below 1500 rpm ; ;Supply, Erection and Commissioning of Raw Water ;pump sets at Well cum pump house for Pumping Raw water to WTP ; ;The hydraulic parameters Discharge : Discharge ;42lps, Total head : 15m, Size of pumping main:250 DI K9, Length of pumping main:180 m, ; Casing: Cast iron, Speed: below 1500 rpm ;Supply, ;erection, testing and commissioning of KWA approved make ISI marked high efficiency type , self water ;lubricated above floor discharge type vertical turbine pump with bronze impeller , SS shaft , MS fabricated (minimum 8 mm) flanged column assembly with strainer and all accessories conforming to IS 1710. The pump shall be coupled with suitable vertical hollow motor specified in item No. 2. Casing: Cast ;iron ;Speed: below 1500 rpm ;Impeller : Enclosed type Bronze LTB 2 dynamically balanced as per ;ISO1940 grade 3 standards ;Sleeve: SS 304 ;Colum shaft - SS 410 ; Pump shaft - SS 316 ; Bowl Casing ring: Bronze LTB 2Epoxy painted MS Column pipe 10 mm Thick flanged ends each having length below 1.5 Meter. Strainer fabricated with SS 304 Bearings for spider and bowl synthetic Rubber with outer brass/CI shell ;Discharge Head Bearing - Thrust / angular roller ;Ratchet ;assembly unlocking Centrifugally action ; ;Minimum Efficiency: suitable to achieve minimum 70% efficiency for pump & ;amp; ; motor ;(Vibrations should be limited as per HIS 9.6.4.3 standards. ;Pump performance tolerance should be subject to Hydrate Institute standard class A - No negative ;tolerance is applicable in efficiency and no positive tolerance in power). ;Supply, erection, testing and commissioning of suitable rating high efficiency Kirlosker/crompton/BHEL/Marthon/Alstom or equivalent KWA approved make EF1 squirrel cage Induction,SPDP,Vertical hollow shaft motor suitable for direct ;coupling with the above pump having RPM below 1500 or nearest capable to operate on voltage of ;415V(+/-10%)50 hz(+/-3%)AC 3 phase,50 degree Ambient temp.rise. conforming to relevant IS. Motor ;shall be energy efficient and supporting certificates to prove IE2/IE3 as per IS 12615-2018. ;Design, supply, erection, testing and commissioning of medium voltage sheet steel clad, totally enclosed, dust tight and vermin proof, indoor floor mounted cubicle type switch board fabricated out of 16 swg. Mild steel sheet for operation 3 phase, 415 volts 50 Hz, AC supply system. The panel board for one working a a time with 500 A SFU as incomer, change over switch for pumpsets, incoming main and 2 nos 250 Amps TPN SFU with HRC fuse as outgoing. The panel board consisting of voltmeter with selector switch, Ammeter CTS with selector switch, indication lamps necessary control ;fuse base with HRC fuse and Nutral link etc.also one year Warrantee and Supply of ELCB/RCCB to be added at panel for safety. The switch board surface treated after degreasing, pickling, phospatng etc anti-rust primer coating followed by two coats of spray paint of approved shade as standard construction practice approved by the Kerala Electrical Inspectorate standard and as standard practice. ;Supply and fitting of suitable rating metalized heavy duty poly propylene (MDXL)power ;capacitor with capacitor fixing stand, connecting copper cables, termination etc. suitable for the above motor as per CEA regulation 2010. KVAR shall be provided for enhancing existing power factor to unity. ;Supply and installation of suitable size,CI Double Flanged heavy duty Sluice Valve with cap PN 2.0, conforming to IS 14846 - 2000. The size shall not be less than the size of pump delivery ;Supply and installation ;of suitable size best quality, ISI marked heavy duty cast iron, double flanged reflux non return valve (PN2) as per IS: 5312, The size shall not be less than the size of pump delivery ;Starter ;Supplying ;a complete integrated soft starter panel capable of operating the motor having a protection level of IP 40 or more with integrated bypass contactor in the panel and motor protection relay having parameters as per CEA regulation 2010 with a power control MCB and line power</p>						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	<p>contactor and the starting current shall be 2.50- 3.50 times the normal full load current of motor with ammeter, voltmeter and phase indicators, space heaters, floor mounting type and having an insulation level of 1100 V. The standard is to be IEC 60947- 4.2. ;Supply and installation of 150mm dia, Glycerence filled pressure gauge with stop cock/ valve to be fitted in a stand or wall visible while operating the valves with copper tube connections suitable for the above pumps. ;Supply of all materials and providing suitable plate earthing with 200x1200x12mm CI plate buried in ground at a depth of 3m from ground level with alternate layers of charcoal and salt including the supply and fixing of 32mm dia perforated GI pipe, funnel for watering purposes, with MS/CI cover etc. as per IE standards conforming of IS 3043/87. ;Supply, laying and giving earthing connections to motors, starters, capacitors, panel boards etc. using suitable size copper flat as per CEA regulation 2010. ;Supply, laying, termination and connecting of (Suitable size) (AYFY/XLPE) insulated armoured Copper cable for working voltage up to 1100 volt confirming to relevant IS specification to lead cable from panel board to starter and starter to motor and starter to capacitor including terminations materials such as gland, socket, gland earth etc. as per CEA regulation 2010. ;Erecting the above motor pump set in suitable concrete foundation including fixing the starter, motor, cubical panel board including cost of all materials etc...Installing the electrical items, wiring and earthing, giving connection etc.as directed by the departmental officers as per CEA regulations and ISI specifications, fitting suction and delivery pipes and specials, Sluice valve, Reflux valve, Gauges etc. including clamping wherever necessary etc. complete and trial run for a period of one week to the satisfaction of the authority officers.;Including cost of all ; the components specified above including 2year warranteeefl</p>						
	Supply, erection, testing and commissioning of VT Pump sets at RAW water pump house- 42 lps discharge and 15m head from well to 12th mile						
	12 HP pump set	2.000					2.000
	Total						2.000
	Total Quantity in no						2.000
1.002	OD299470/2023-2024						
	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. DSR(E&M) 2018 ITEM 5.4						
	PLATE EARTHING						
		2.000					2.000
	Total						2.000
	Total Quantity in each						2.000
1.003	OD286792/2023-2024						
	Preparation of Electrical drawings, giving completion report at KSEBL and getting Electrical connections from KSEB						
	Preparation of Electrical drawings, giving completion report at KSEBL and getting Electrical connections from KSEB						
		1.000					1.000
	Total						1.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total Quantity in set						1.000
1.004	OD286795/2023-2024						
	Providing and fixing 3.15mm(10 SWG) copper conductor in 40mm GI pipe from earth electrode including connection with brass nut, bolt, etc (10M).						
	Earthing conductor of size 10 SWG						
		2.000					2.000
	Total						2.000
	Total Quantity in set						2.000
2	Supply, Erection, Testing and commissioning of CF type CW Pumpsets from WTP to Alanickal estate Discharge 9 lps, Head 124m						
2.001	OD286736/2023-2024						



SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	<p>Supply erection, testing and commissioning of CF pumpset having a discharge of 9lps for a head of 124 m from WTP to Alanickal estate. Supply and erection of CF pump set with the following specification&lt;br&gt;1. Pump&lt;br&gt;Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal pump sets with Bronze/SS impeller, SS shaft and CI pump casing with suitable type base plate with coupling, coupling guard foundation bolts & nts etc. complete suitable for coupling the pump and motor above the base plate etc. complete including providing suitable concrete foundation including cost of cement sand and metal etc. complete&lt;br&gt;The duty condition is as follows&lt;br&gt;Discharge - 9lps&lt;br&gt;Total head - 124 mtrs&lt;br&gt;&lt;br&gt;Size of pumping main pipe - 100 mm GI, Length-4000 m&lt;br&gt;Speed- Less than 1500 rpm. 2. Motor&lt;br&gt;Supply, erection, testing and commissioning of KWA pre qualified reputed make horizontal solid shaft foot mounted TEFC squirrel cage induction motor suitable for the above pump working 3 phase 50 Hz AC supply, working voltage 415 V/3300V (select the suitable). The motor shall confirm to IE2/IE3 as per IS 12615-2018 including providing suitable concrete foundation including cost of cement sand and metal etc. complete For 3300v motors digital motor protection relay shall be included in starter as per CEA regulation 2010. Flexible coupling shall be used for coupling of pumps and motors.&lt;br&gt;3. Starter&lt;br&gt;Supply, erection, testing and commissioning of suitable rating (Fully Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) starter suitable for the above motor with over voltage and under voltage protection, single phase preventer, over load relay with motor protection relay with main contactor and bypass contactor as per CEA regulation 2010 and code of practice etc. complete.&lt;br&gt;&lt;br&gt;4. Panel board (suitable for operating two pump sets but one pump set at a time)&lt;br&gt;Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (the two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per CEA regulation 2010 and code of practice. The panel shall be fitted on a common base frame on suitable foundation. (Specification may be modified if there is only one)&lt;br&gt;pump set by changing 2 Nos of out going as one out going and the provision of interlocking may be avoided)&lt;br&gt;5. Cabling work&lt;br&gt;Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor. considering energy conservation.&lt;br&gt;6. Earthing&lt;br&gt;Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.&lt;br&gt;7. Capacitor&lt;br&gt;Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834&lt;br&gt;8. Valves&lt;br&gt;Supply of suitable size best quality heavy duty ISI marked CI double flanged sluice valve and Non return valve with suitable pressure rating. Fitting of valves shall include proper RCC support especially for Non return valves. In case of positive suction pump set sluice valve should be in suction as well as delivery sides for easy repair works.&lt;br&gt;9. Suction and delivery pipe connections&lt;br&gt;Supply and fitting of suitable size best quality GI/MS pipe of thickness not less than 8mm for a total length of 10 m. suitable for the above pump set and suitable size foot valve and connecting the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connecting the delivery side of the</p>						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	pump with the valves and suitable specials to connect with the pumping main. If the dia of suction pipe is above 80 mm CI pipes & specials shall be provided. .Also two year Warrantee and Supply of ELCB/RCCB to be added at panel for safety.						
	Supply erection,testing and commissioning of CF pumpset having a discharge of 9lps for a head of 124 m from WTP to Alanickal estate.						
	22HP PUMP SET	2.000					2.000
	Total						2.000
	Total Quantity in no						2.000
2.002	OD299476/2023-2024						
	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. DSR(E&M) 2018 ITEM 5.4						
	PLATE EARTHING						
		2.000					2.000
	Total						2.000
	Total Quantity in each						2.000
2.003	OD286761/2023-2024						
	Providing and fixing 4.75 mm (6 SWG)copper strip from earth electrode including connection with brass nut, bolt, sprn3g in 40mm GI pipe (10M).						
	Earthing conductor of size 6 SWG						
		2.000					2.000
	Total						2.000
	Total Quantity in set						2.000
3	Supply, Erection, Testing and commissioning of CF type CW Pumpsets from WTP to Intermediate Discharge 6 lps, Head 132m						
3.001	OD286800/2023-2024						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	<p>Supply erection, testing and commissioning of CF pumpset having a discharge of 6 lps for a head of 132 m from WTP to Intermediate. Supply and erection of CF pump set with the following specification&lt;br&gt;1. Pump&lt;br&gt;Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal pump sets with Bronze/SS impeller, SS shaft and CI pump casing with suitable type base plate with coupling, coupling guard foundation bolts & nts etc. complete suitable for coupling the pump and motor above the base plate etc. complete including providing suitable concrete foundation including cost of cement sand and metal etc. complete&lt;br&gt;The duty condition is as follows&lt;br&gt;Discharge - 6 lps&lt;br&gt;Total head - 132 mtrs&lt;br&gt;&lt;br&gt;Size of pumping main pipe - 100 mm GI, Length-2400 m&lt;br&gt;Speed- Less than 1500 rpm. 2. Motor&lt;br&gt;Supply, erection, testing and commissioning of KWA pre qualified reputed make horizontal solid shaft foot mounted TEFC squirrel cage induction motor suitable for the above pump working 3 phase 50 Hz AC supply, working voltage 415 V/3300V (select the suitable). The motor shall confirm to IE2/IE3 as per IS 12615-2018 including providing suitable concrete foundation including cost of cement sand and metal etc. complete For 3300v motors digital motor protection relay shall be included in starter as per CEA regulation 2010. Flexible coupling shall be used for coupling of pumps and motors.&lt;br&gt;3. Starter&lt;br&gt;Supply, erection, testing and commissioning of suitable rating (Fully Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) starter suitable for the above motor with over voltage and under voltage protection, single phase preventer, over load relay with motor protection relay with main contactor and bypass contactor as per CEA regulation 2010 and code of practice etc. complete.&lt;br&gt;&lt;br&gt;4. Panel board (suitable for operating two pump sets but one pump set at a time)&lt;br&gt;Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (the two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per CEA regulation 2010 and code of practice. The panel shall be fitted on a common base frame on suitable foundation. (Specification may be modified if there is only one)&lt;br&gt;pump set by changing 2 Nos of out going as one out going and the provision of interlocking may be avoided)&lt;br&gt;5. Cabling work&lt;br&gt;Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor. considering energy conservation.&lt;br&gt;6. Earthing&lt;br&gt;Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.&lt;br&gt;7. Capacitor&lt;br&gt;Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834&lt;br&gt;8. Valves&lt;br&gt;Supply of suitable size best quality heavy duty ISI marked CI double flanged sluice valve and Non return valve with suitable pressure rating. Fitting of valves shall include proper RCC support especially for Non return valves. In case of positive suction pump set sluice valve should be in suction as well as delivery sides for easy repair works.&lt;br&gt;9. Suction and delivery pipe connections&lt;br&gt;Supply and fitting of suitable size best quality GI/MS pipe of thickness not less than 8mm for a total length of 10 m. suitable for the above pump set and suitable size foot valve and connecting the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connecting the delivery side of the</p>						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	pump with the valves and suitable specials to connect with the pumping main.
If the dia of suction pipe is above 80 mm CI pipes & special shall be provided.
. Also two year Warrantee and Supply of ELCB/RCCB to be added at panel for safety.						
	Supply erection, testing and commissioning of CF pumpset having a discharge of 6 lps for a head of 132 m from WTP to Intermediate.						
	16 HP Pumpset	2.000					2.000
	Total						2.000
	Total Quantity in no						2.000
3.002	OD299478/2023-2024						
	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. DSR(E&M) 2018 ITEM 5.4						
	PLATE EARTHING						
		2.000					2.000
	Total						2.000
	Total Quantity in each						2.000
3.003	OD286806/2023-2024						
	Providing and fixing 4.75 mm (6 SWG) copper conductor from earth electrode including connection with brass nut, bolt, spring washer in 40mm GI pipe (10M).						
	Earthing conductor of size 10 SWG						
		2.000					2.000
	Total						2.000
	Total Quantity in set						2.000
4	Supply, Erection, Testing and commissioning of CF type CW Pumpsets from WTP to Kavumpady Discharge 6 lps, Head 45m						
4.001	OD286824/2023-2024						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	<p>Supply erection, testing and commissioning of CF pumpset having a discharge of 6 lps for a head of 45 m from WTP to Kavumpady. Supply and erection of CF pump set with the following specification&lt;br&gt;1. Pump&lt;br&gt;Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal pump sets with Bronze/SS impeller, SS shaft and CI pump casing with suitable type base plate with coupling, coupling guard foundation bolts & nts etc. complete suitable for coupling the pump and motor above the base plate etc. complete including providing suitable concrete foundation including cost of cement sand and metal etc. complete&lt;br&gt;The duty condition is as follows&lt;br&gt;Discharge - 6 lps&lt;br&gt;Total head - 45 mtrs&lt;br&gt;&lt;br&gt;Size of pumping main pipe - 100 mm GI, Length- 700m&lt;br&gt;Speed- Less than 1500 rpm. 2. Motor&lt;br&gt;Supply, erection, testing and commissioning of KWA pre qualified reputed make horizontal solid shaft foot mounted TEFC squirrel cage induction motor suitable for the above pump working 3 phase 50 Hz AC supply, working voltage 415 V/3300V (select the suitable). The motor shall confirm to IE2/IE3 as per IS 12615-2018 including providing suitable concrete foundation including cost of cement sand and metal etc. complete For 3300v motors digital motor protection relay shall be included in starter as per CEA regulation 2010. Flexible coupling shall be used for coupling of pumps and motors.&lt;br&gt;3. Starter&lt;br&gt;Supply, erection, testing and commissioning of suitable rating (Fully Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) starter suitable for the above motor with over voltage and under voltage protection, single phase preventer, over load relay with motor protection relay with main contactor and bypass contactor as per CEA regulation 2010 and code of practice etc. complete.&lt;br&gt;&lt;br&gt;4. Panel board (suitable for operating two pump sets but one pump set at a time)&lt;br&gt;Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (the two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per CEA regulation 2010 and code of practice. The panel shall be fitted on a common base frame on suitable foundation. (Specification may be modified if there is only one)&lt;br&gt;pump set by changing 2 Nos of out going as one out going and the provision of interlocking may be avoided)&lt;br&gt;5. Cabling work&lt;br&gt;Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor. considering energy conservation.&lt;br&gt;6. Earthing&lt;br&gt;Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.&lt;br&gt;7. Capacitor&lt;br&gt;Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834&lt;br&gt;8. Valves&lt;br&gt;Supply of suitable size best quality heavy duty ISI marked CI double flanged sluice valve and Non return valve with suitable pressure rating. Fitting of valves shall include proper RCC support especially for Non return valves. In case of positive suction pump set sluice valve should be in suction as well as delivery sides for easy repair works.&lt;br&gt;9. Suction and delivery pipe connections&lt;br&gt;Supply and fitting of suitable size best quality GI/MS pipe of thickness not less than 8mm for a total length of 10 m. suitable for the above pump set and suitable size foot valve and connecting the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connecting the delivery side of the</p>						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	pump with the valves and suitable specials to connect with the pumping main. If the dia of suction pipe is above 80 mm CI pipes & specials shall be provided. .Also two year Warrantee and Supply of ELCB/RCCB to be added at panel for safety.						
	Supply erection,testing and commissioning of CF pumpset having a discharge of 6 lps for a head of 45 m from WTP to Kavumpady.						
	6HP PUMP SET	2.000					2.000
	Total						2.000
	Total Quantity in no						2.000
4.002	OD299523/2023-2024						
	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. DSR(E&M) 2018 ITEM 5.4						
	PLATE EARTHING						
		2.000					2.000
	Total						2.000
	Total Quantity in each						2.000
4.003	OD286929/2023-2024						
	Providing and fixing 25 x 3mm copper strip in 40mm GI pipe from earth electrode including connection with brass nut, bolt, sprn3g.						
	Earthing conductor of size 10 SWG						
		2.000					2.000
	Total						2.000
	Total Quantity in set						2.000
5	Supply, Erection, Testing and commissioning of CF type CW Pumpsets from WTP to KSEB filter house Discharge 24 lps, Head 164m						
5.001	OD286935/2023-2024						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	<p>Supply erection, testing and commissioning of CF pumpset having a discharge of 24 lps for a head of 164 m from WTP to KSEB filter house. Supply and erection of CF pump set with the following specification&lt;br&gt;1. Pump&lt;br&gt;Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal pump sets with Bronze/SS impeller, SS shaft and CI pump casing with suitable type base plate with coupling, coupling guard foundation bolts & nuts etc. complete suitable for coupling the pump and motor above the base plate etc. complete including providing suitable concrete foundation including cost of cement sand and metal etc. complete&lt;br&gt;The duty condition is as follows&lt;br&gt;Discharge - 24 lps&lt;br&gt;Total head - 164 mtrs&lt;br&gt;&lt;br&gt;Size of pumping main pipe - 200 mm DI, Length-6000 m&lt;br&gt;Speed- Less than 1500 rpm. 2. Motor&lt;br&gt;Supply, erection, testing and commissioning of KWA pre qualified reputed make horizontal solid shaft foot mounted TEFC squirrel cage induction motor suitable for the above pump working 3 phase 50 Hz AC supply, working voltage 415 V/3300V (select the suitable). The motor shall confirm to IE2/IE3 as per IS 12615-2018 including providing suitable concrete foundation including cost of cement sand and metal etc. complete For 3300v motors digital motor protection relay shall be included in starter as per CEA regulation 2010. Flexible coupling shall be used for coupling of pumps and motors.&lt;br&gt;3. Starter&lt;br&gt;Supply, erection, testing and commissioning of suitable rating (Fully Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) starter suitable for the above motor with over voltage and under voltage protection, single phase preventer, over load relay with motor protection relay with main contactor and bypass contactor as per CEA regulation 2010 and code of practice etc. complete.&lt;br&gt;&lt;br&gt;4. Panel board (suitable for operating two pump sets but one pump set at a time)&lt;br&gt;Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (the two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per CEA regulation 2010 and code of practice. The panel shall be fitted on a common base frame on suitable foundation. (Specification may be modified if there is only one)&lt;br&gt;pump set by changing 2 Nos of out going as one out going and the provision of interlocking may be avoided)&lt;br&gt;5. Cabling work&lt;br&gt;Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor. considering energy conservation.&lt;br&gt;6. Earthing&lt;br&gt;Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.&lt;br&gt;7. Capacitor&lt;br&gt;Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834&lt;br&gt;8. Valves&lt;br&gt;Supply of suitable size best quality heavy duty ISI marked CI double flanged sluice valve and Non return valve with suitable pressure rating. Fitting of valves shall include proper RCC support especially for Non return valves. In case of positive suction pump set sluice valve should be in suction as well as delivery sides for easy repair works.&lt;br&gt;9. Suction and delivery pipe connections&lt;br&gt;Supply and fitting of suitable size best quality GI/MS pipe of thickness not less than 8mm for a total length of 10 m. suitable for the above pump set and suitable size foot valve and connecting the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connecting the delivery side of the</p>						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	pump with the valves and suitable specials to connect with the pumping main. If the dia of suction pipe is above 80 mm CI pipes & specials shall be provided. .Also two year Warrantee and Supply of ELCB/RCCB to be added at panel for safety.						
	Supply erection,testing and commissioning of CF pumpset having a discharge of 24 lps for a head of 164 m from WTP to KSEB filter house.						
	75 HP Pumpset	2.000					2.000
	Total						2.000
	Total Quantity in no						2.000
5.002	OD299525/2023-2024						
	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. DSR(E&M) 2018 ITEM 5.4						
	PLATE EARTHING						
		2.000					2.000
	Total						2.000
	Total Quantity in each						2.000
5.003	OD286987/2023-2024						
	Providing and fixing 25 x3 mm copper strip from earth electrode including connection with brass nut, bolt, sprn3g.						
	Earthing conductor of size 25x3						
		2.000					2.000
	Total						2.000
	Total Quantity in set						2.000
6	Supply, Erection, Testing and commissioning of CF type CW Pumpsets from Intermediate to Audit road Discharge 6 lps, Head 139m						
6.001	OD288386/2023-2024						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	<p>Supply erection, testing and commissioning of CF pumpset having a discharge of 6 lps for a head of 139m from Intermediate to Audit road. Supply and erection of CF pump set with the following specification</p> <p>1. Pump; Supply, erection, testing and commissioning of KWA pre-qualified reputed make Centrifugal pump sets with Bronze/SS impeller, SS shaft and CI pump casing with suitable type base plate with coupling, coupling guard foundation bolts & nuts etc. complete suitable for coupling the pump and motor above the base plate etc. complete including providing suitable concrete foundation including cost of cement sand and metal etc. complete</p> <p>The duty condition is as follows</p> <p>Discharge - 6 lps</p> <p>Total head - 139 mtrs</p> <p>Size of pumping main pipe - 100 mm GI, Length-3500 m</p> <p>Speed- Less than 1500 rpm.</p> <p>2. Motor; Supply, erection, testing and commissioning of KWA pre qualified reputed make horizontal solid shaft foot mounted TEFC squirrel cage induction motor suitable for the above pump working 3 phase 50 Hz AC supply, working voltage 415 V/3300V (select the suitable). The motor shall confirm to IE2/IE3 as per IS 12615-2018 including providing suitable concrete foundation including cost of cement sand and metal etc. complete For 3300v motors digital motor protection relay shall be included in starter as per CEA regulation 2010. Flexible coupling shall be used for coupling of pumps and motors.</p> <p>3. Starter; Supply, erection, testing and commissioning of suitable rating (Fully Automatic starter with air break contact for less than 100 HP and for above 100 HP FCMA starters to be used.) starter suitable for the above motor with over voltage and under voltage protection, single phase preventer, over load relay with motor protection relay with main contactor and bypass contactor as per CEA regulation 2010 and code of practice etc. complete.</p> <p>4. Panel board (suitable for operating two pump sets but one pump set at a time)</p> <p>Supply, erection, testing and commissioning of cubical type floor mounted MS fabricated dust and vermin proof common control panel board consisting of 1 No. suitable capacity MCCB as incomer and 2 Nos of suitable capacity MCCB as out going (the two MCCBs are interlocking with each other) providing suitable size Aluminium bus bar inter connect the above MCCBs and fitted with 3 Nos of indicator lamps, 1 No. volt meter with selector switch, 1 No. Ammeter with selector switch etc. Complete and provided with a common earth bus for the entire panel and inter connect with the MCCBs as per CEA regulation 2010 and code of practice. The panel shall be fitted on a common base frame on suitable foundation. (Specification may be modified if there is only one)</p> <p>5. pump set by changing 2 Nos of out going as one out going and the provision of interlocking may be avoided</p> <p>6. Cabling work; Supply, laying, testing and commissioning of suitable size XLPE cables for the above pump set from panel board to starter and from starter to motor. considering energy conservation.</p> <p>7. Earthing; Supply of all materials and providing suitable earthing by using suitable size pipe/plate earthing GI/copper strip buried in ground and giving double earthing to motor, starter, panel board etc. as per IE standards.</p> <p>8. Capacitor; Supply, erection, testing and commissioning of heavy duty APP capacitor for the motor to get a power factor above 0.95. The capacitor shall confirm to IS 2834</p> <p>9. Valves; Supply of suitable size best quality heavy duty ISI marked CI double flanged sluice valve and Non return valve with suitable pressure rating. Fitting of valves shall include proper RCC support especially for Non return valves. In case of positive suction pump set sluice valve should be in suction as well as delivery sides for easy repair works.</p> <p>10. Suction and delivery pipe connections; Supply and fitting of suitable size best quality GI/MS pipe of thickness not less than 8mm for a total length of 10 m. suitable for the above pump set and suitable size foot valve and connecting the suction pipe and valve with suitable flanges, nut and bolts IR sheet etc. complete and connecting the delivery side of the</p>						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	pump with the valves and suitable specials to connect with the pumping main. If the dia of suction pipe is above 80 mm CI pipes & specials shall be provided. .Also two year Warrantee and Supply of ELCB/RCCB to be added at panel for safety.						
	Supply erection,testing and commissioning of CF pumpset having a discharge of 6 lps for a head of 139m from Intermediate to Audit road						
	16 HP Pumpset	2.000					2.000
	Total						2.000
	Total Quantity in no						2.000
6.002	OD299526/2023-2024						
	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. DSR(E&M) 2018 ITEM 5.4						
	PLATE EARTHING						
		2.000					2.000
	Total						2.000
	Total Quantity in each						2.000
6.003	OD288388/2023-2024						
	Preparation of Electrical drawings, giving completion report at KSEBL and getting Electrical connections from KSEB						
	Preparation of Electrical drawings, giving completion report at KSEBL and getting Electrical connections from KSEB						
		1.000					1.000
	Total						1.000
	Total Quantity in set						1.000
6.004	OD288389/2023-2024						
	Providing and fixing 4.75 mm (6 SWG)copper strip from earth electrode including connection with brass nut, bolt, sprn3g in 40mm GI pipe (10M).						
	Earthing conductor of size 6 SWG						
		2.000					2.000
	Total						2.000
	Total Quantity in set						2.000
7	Supply, Erection of 250 KVA Indoor Transformer with panel board and required accessories at WTP						
7.001	OD286964/2023-2024						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	11KV DOUBLE POLE STRUCTURE : Supply ,assembling and erection of all materials and providing 11KV double pole structure using 2Nos. 175x85mm ISMB/ISMC GI coated joist of 9.5m height, 100x50mm, GI channel cross arms, 3 sets of 400A, 11KV gang operated 3 insulator type AB switches with operating handles of required length, 1 sets of 9.6 KV, 9 KA Lightning arrestors, pin insulators, Disc insulators and inter connections of the above items using 8mm dia copper wire with proper copper sockets and including all associated civil works like foundation works for erecting the joist poles, muffing the poles and painting of parts with 2 coats of epoxy primer and epoxy paint of recommended shade wherever necessary and providing 4 Nos pipe earthing using 40mm GI pipe as per IS standard and interconnecting the pits and equipments using 6swg copper conductor etc. complete as per standard construction practices approved by Kerala Electrical Inspectorate and relevant standards						
	11KV DP Structure with all equipments and accessories including earthing						
		1.000					1.000
	Total						1.000
	Total Quantity in set						1.000
7.002	OD286993/2023-2024						
	HT Power Cables - Supply & laying 11KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments. 3C x 300 Sqm						
	HT CABLE LAYING -3CX300SQMM						
		1.000	30.000				30.000
	Total						30.000
	Total Quantity in metre						30.000
7.003	OD287020/2023-2024						
	HT Cable Terminations - Supplying and making outdoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 300 Sqmm						
	HT CABLE TERMINATION-OUTDOOR 3Cx300SQMM						
		1.000					1.000
	Total						1.000
	Total Quantity in set						1.000
7.004	OD287019/2023-2024						
	HT Cable Terminations - Supplying and making indoor cable end termination with heat shrinkable jointing kit, including lugs and other jointing materials, for following sizes, XLPE aluminium conductor cable of 11 KV grade as required. 3C x 300 Sqmm						
	HT CABLE TERMINATION-INDOOR 3Cx300SQMM						
		1.000					1.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						1.000
						Total Quantity in set	1.000
7.005	OD299549/2023-2024 HT Unidirectional TOD Meter Supply & Providing 3 phase, 4wire, HT CT/PT operated, Unn-directional with accuracy class 0.2S for both Active and Reactive energy, -/5A, HT static tri vector meter with TOD register, DLMS compliant & AMR compatible with optical port and RS232 port having ISI Marking, suitable for measurement of active kWh, reactive energy kVARh and apparent energy kVAh and kVA MD, kW MD at nominal frequency in the range of 47.5 Hz to 52.5 Hz in balanced as well as unbalanced load conditions in the existing outdoor Meter cubicle including testing & commissioning etc. complete.						
	TOD Meter						
		1.000					1.000
	Total						1.000
						Total Quantity in set	1.000
7.006	OD287966/2023-2024 250KVA, 11KV/433 V, Transformer Indoor type, Resin Cast with 11KV VCB on HT side and with KSEB metering Panel and metering equipments - 1) Design, Supply, erection, testing and commissioning of 250 KVA, 11KV/433V 3phase, Dyn 11, 50Hz. ANAN Indoor type copper wound, Resin cast distribution transformer with weather proof cable termination box on LV side and HV side fitted with 630A, 350MVA , 11KV draw out type VCB panel and shall be equipped with off circuit tapping +5% to -5% in steps of 2.5% with winding temperature scanner and hooter complete with all fittings as per IS 2026 and Kerala Electrical Inspectorate standards 2) Manufacturing and Supply of Indoor type 11kV, 630A, 26.3kA for 3 sec Horizontal Draw out VCB fitted with Manual/Motor operated spring charging mechanism with 230V AC motor and motor control switch, shunt trip coil of 24V DC, closing coil of 24V DC, Auxiliary Contact 6NO + 6NC, Mechanical ON/OFF indicator, mechanical operation counter, Anti pumping feature, overcurrent and earth fault relay, protection CT, (-/5 A, 5P10, 15VA , 11kV/110V, CI-0.2, 25VA PT Instantaneous IDMT relay with Microprocessor based 3O/C + and 1EF Protection relay, Strip Heater with thermostat, Power pack 230V AC-24 V DC emergency OFF push button, ammeter & voltmeter with selector switch 3) KSEB metering panel on HT side.- HT metering equipments for KSEB metering Include 3Nos **/5A , 15VA ,Class 0.2S resin cast CTs and 1No 3pole 11KV/110V , Class 0.2S resin cast PT with provision for fixing HT TOD meter . Armoured 2.5 Sq mm copper control cable shall be used for all external interconnections. The cost of control cables both internal and external shall be included in the cost of Transformer						
	250KVA ,11KV/433V Indoor Transformer with VCB panel and Metering						
		1.000					1.000
	Total						1.000
						Total Quantity in each	1.000
7.007	OD287968/2023-2024						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	MV PANEL FOR 250KVA TRANSFORMER: Supply, erection, testing and commissioning of cubicle type, dust and vermin proof, floor mounted, front operated extensible type MV panel board made out of 14SWG thick CRCA sheet fully compartmentalised, and painted with epoxy paints of approved colour and quality, complete with hinged and earthed front doors, name plate, danger notice board, heavy duty rubber gaskets, removable gland plates made of 3mm thick sheet steel, Digital multi-function meter, ammeters with CTs, EFR and Voltmeter with selector switch, all connections and inter-connections including mounting the following switch gears. (1) 400A 50kA 4P current limiting type MCCB with encapsulated double break mechanism with 3 O/C and E/F release and standby earth fault trip through the neutral CT -1Nos CTs: 250/5 15 VA CL0.5 -4 Nos RYB phase indicating lamps (LED) with control fuses and switches -1 set. Digital Energy meter with RS 485 class 0.5s capable of measuring and display Power factor and displacement PF Active, reactive, apparent - 1 Nos ; Outgoing (1)125A 26kA 4P current limiting type MCCB with encapsulated double break mechanism -3Nos (2)250A 26kA 4P current limiting type MCCB with encapsulated double break mechanism -3Nos (3) 63A 26kA 4P current limiting type MCCB with encapsulated double break mechanism -2Nos 4) Energy meter with RS 485 including necessary CTs.						
	MV Panel for 250KVA Transformer						
		1.000					1.000
	Total						1.000
	Total Quantity in set						1.000
7.008	OD287969/2023-2024						
	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required DAR (E&M) 1.14.1 - 1.5 sq. mm + 1 X 1.5 sq. mm earth wire						
	WIRING						
		1.000	100.000				100.000
	Total						100.000
	Total Quantity in metre						100.000
7.009	OD287970/2023-2024						
	Wiring for circuit/ submain wiring alongwith earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required -2 X 2.5 sq. mm + 1 X 2.5 sq. mm earth wire						
	WIRING						
		1.000	25.000				25.000
	Total						25.000
	Total Quantity in metre						25.000
7.010	OD287971/2023-2024						
	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium class PVC conduit, with modular switch, modular plate, suitable size GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required. GROUP B						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	WIRING LIGHT AND FAN POINTS						
		5.000					5.000
	Total						5.000
	Total Quantity in no						5.000
7.011	OD287972/2023-2024						
	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. 1.24.4--3 pin 5/6 amp socket outlet						
	SUPPLY AND FIXING MODULAR SWITCH /SOCKET 5/6A						
		5.000					5.000
	Total						5.000
	Total Quantity in each						5.000
7.012	OD288028/2023-2024						
	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. 1.24.5--6 pin 15/16 amp socket outlet						
	SUPPLY AND FIXING MODULAR SWITCH/SOCKET 15/16A						
		5.000					5.000
	Total						5.000
	Total Quantity in each						5.000
7.013	OD287974/2023-2024						
	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. 1.24.3--15/16 amps switch						
	SUPPLY AND FIXING MODULAR SWITCH 15/16A						
		5.000					5.000
	Total						5.000
	Total Quantity in each						5.000
7.014	OD287975/2023-2024						
	Supplying and fixing following modular switch/ socket on the existing modular plate & switch box including connections but excluding modular plate etc. as required. 1.24.15 --6 amps switch						
	SUPPLY AND FIXING MODULAR SWITCH /SOCKET5/6A						
		5.000					5.000
	Total						5.000
	Total Quantity in each						5.000
7.015	OD287976/2023-2024						
	Supplying and fixing of following sizes of medium class PVC conduit along with accessories in surface/recess including cutting the wall and making good the same in case of recessed conduit as required 20 mm						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	SUPPLY AND LAYING PVC CONDUIT						
		20.000					20.000
	Total						20.000
	Total Quantity in metre						20.000
7.016	OD287977/2023-2024						
	Supply & laying the following sizes of Earth Strip for earthing interconnection, termination and leads, for continuous earthing along with cables tinned at terminals etc. complete. Providing and fixing 25 mm X 6 mm copper strip on surface or in recess for connections etc. as required.						
	SUPPLY AND LAYING EARTH STRIP COPPER 25X6MM						
		1.000	30.000				30.000
	Total						30.000
	Total Quantity in metre						30.000
7.017	OD287978/2023-2024						
	PIPE EARTHING WITH 2.5M PIPE -Supply and providing pipe earthing as per IS 3043 with 2.5 m long 40 mm dia B class GI pipe, GI funnel with weld mesh, filling required quantity of charcoal & salt including construction of inspection chamber with a bed concrete of 1:4:8 PCC using 40 mm broken stone (10 cm thick), brick work in cement mortar 1:6, plastering the surface of brick masonry and the exposed surface of PCC bed with cement mortar 1:4, 12 mm thick, (the finished inside dimension shall be 300 x 300 x 300 mm) but excluding test joint, earth continuity conductor to the plate, and covering at the top.						
	PIPE EARTHING						
		4.000					4.000
	Total						4.000
	Total Quantity in no						4.000
7.018	OD287979/2023-2024						
	Supply, laying and termination of the following sizes of copper strip/wires for earthing of substation, transformers, HTpanel boards, LT panel boards, equipments and inter connection of earth pits etc. 25x3mm copper strips.						
	SUPPLY AND LAYING EARTH STRIP COPPER 25X3MM						
		1.000	30.000				30.000
	Total						30.000
	Total Quantity in metre						30.000
7.019	OD287980/2023-2024						
	Supply, laying and termination of the following sizes of copper strip/wires for earthing of substation, transformers, HTpanel boards, LT panel boards, equipments and inter connection of earth pits 10SWG Copper						
	SUPPLY AND LAYING EARTH CONDUCTOR 10SWG						
		1.000	30.000				30.000
	Total						30.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total Quantity in metre						30.000
7.020	OD299570/2023-2024						
	Earthing with G.I. earth plate 600 mm X 600 mm X 6 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 metre long etc. with charcoal/ coke and salt as required. DSR(E&M) 2018 ITEM 5.4						
	PLATE EARTHING						
		6.000					6.000
	Total						6.000
	Total Quantity in each						6.000
7.021	OD287982/2023-2024						
	Supply and fixing of MS angle/supports for cable trays for clamping of cables in trenches/ through walls and trusses etc. Angles and plates should be painted one coat of primer and two coat of enamel paint as required as per KEI standards.						
	CABLE TRAY AND SUPPORTS						
		0.500					0.500
	Total						0.500
	Total Quantity in MT						0.500
7.022	OD287984/2023-2024						
	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured aluminium power cable, 1.1 KV grade of the following sizes using clamps noted along with the cables, spacing of clamps not exceeding 60cms, making good the damages , colour washing etc. as required. 3.5 core 185 sq mm						
	Supply & laying of one number PVC/XLPE insulated and PVC sheathed armoured aluminium power cable of 1.1KV grade 3.5Cx 185Sqmm						
		1.000	60.000				60.000
	Total						60.000
	Total Quantity in metre						60.000
7.023	OD287985/2023-2024						
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required - 3.5C x 185 Sqmm						
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required-3.5C x 185sqmm						
		6.000					6.000
	Total						6.000
	Total Quantity in no						6.000
7.024	OD287986/2023-2024						

SI No	Specification	No	Length	Width	Depth	Cf	Quantity	
	Supply & laying of one number 3.5C x 35 Sqmm PVC insulated and PVC sheathed armoured aluminium power cable of 1.1KV grade of the following sizes in ground /Cable Tray							
	Supply & laying of one number PVC/XLPE insulated and PVC sheathed armoured aluminium power cable of 1.1KV grade 3.5Cx 35Sqmm							
		1.000	30.000				30.000	
	Total						30.000	
		Total Quantity in metre						30.000
7.025	OD287987/2023-2024							
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required. 3Cx35 Sqmm							
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required-3.5C x 35sqmm							
		4.000					4.000	
	Total						4.000	
		Total Quantity in each						4.000
7.026	OD287988/2023-2024							
	LT Power Cables - Supply & laying 1.1KV stranded compact circular aluminium conductor, conductors screened with extruded semi conducting compound XLPE insulated, insulation screened with extruded semi conducting compound in combination with copper tape (0.3 kA for 1 sec.), cores laid up, inner sheath of PVC tape, galvanized steel flat strip armoured, and overall PVC sheathed cable of the following sizes in the existing cable trench conforming to IS: 7098 part II 1985 with latest amendments. 3.5C x 50 Sqmm							
	Supply & laying of one number PVC/XLPE insulated and PVC sheathed armoured aluminium power cable of 1.1KV grade 3.5Cx 50Sqmm							
		1.000	30.000				30.000	
	Total						30.000	
		Total Quantity in metre						30.000
7.027	OD287989/2023-2024							
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.-3.5C X 50 Sqmm							
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required-3.5C x 50sqmm							
		1.000	4.000				4.000	
	Total						4.000	
		Total Quantity in metre						4.000
7.028	OD287992/2023-2024							

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Lighting Switch Board (LSB):- Design, engineering, supply, erection, testing and commissioning of medium voltage sheet steel clad, totally enclosed, dust tight & vermin proof, indoor floor mounted cubicle type switchboard fabricated out of 14 swg mild steel sheet and bus duct of high conductivity aluminium bus bars, PVC sleeved, air insulated and of adequate size as mentioned, for operation on 3 phase, 4 wire, 415 volts, 50 Hz. AC supply system. The MCCB/SFUs, all meters and relays etc. should be reputed make and conforming IS specifications and are assembled, interconnected, earthed and the switch board should be painted with anti-rust primer coating followed by two coats of paint of approved shade, by Kerala Electrical Inspectorate and relevant standards 250A TPN bus bars of sizes: Phase : 50 x 8 mm Al-flat Neutral : 50 x 6 mm Al-flat Earthing conductor : 25 x 3 mm copper 1No 250 A TPN Isolator as incomer, 63 A TPN SFU 4 Nos. as outgoing. Metering compartments comprising of voltmeter, ammeter, selector switches, indicating lamps etc. complete as per KEI Standards						
	LIGHTING SWITCH BOARD						
		1.000					1.000
	Total						1.000
	Total Quantity in each						1.000
7.029	OD287993/2023-2024						
	Supply, laying and clamping of 1 no. PVC insulated and PVC sheathed armoured Aluminium power cable, 1.1 KV grade 4C x 10Sqmm Aluminium Cable						
	Supply & laying of one number PVC/XLPE insulated and PVC sheathed armoured aluminium power cable of 1.1KV grade 4Cx 10Sqmm						
		1.000	20.000				20.000
	Total						20.000
	Total Quantity in metre						20.000
7.030	OD287994/2023-2024						
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required - 4C x 10 Sqmm						
	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required-4C x 10sqmm						
		4.000					4.000
	Total						4.000
	Total Quantity in no						4.000
7.031	OD287995/2023-2024						
	Lighting Distribution board (LDB), Supply, erection, testing and commissioning of MCB distribution board comprising to the following. 40A TPN 4 pole MCB 1 No. as incomer with 40A 30mA ELCB, 18 nos 6 AMPS SP MCB as outgoing, With tinned copper busbars/cables, interconnection, housed in a suitable metal enclosure as per KEI standards fixed in open system						
	LDB						
		1.000					1.000

SI No	Specification	No	Length	Width	Depth	Cf	Quantity
	Total						1.000
							Total Quantity in no 1.000
7.032	OD287996/2023-2024						
	Supplying and fixing following size/ modules, GI box alongwith modular base & cover plate for modular switches in recess etc as required. 6 Module (200mmX75mm)						
	GI BOX						
		4.000					4.000
	Total						4.000
							Total Quantity in each 4.000
7.033	OD287997/2023-2024						
	Supplying and fixing of 1200mm sweep AC ceiling fan with standard down rod and electronic type regulator						
	CEILING FAN						
		4.000					4.000
	Total						4.000
							Total Quantity in no 4.000
7.034	OD287998/2023-2024						
	Preparation of Electrical drawings, getting approval from the electrical Inspectorate , giving completion report at KSEBL and getting Electrical connections from KSEB at Well						
	Preparation of Electrical drawings, getting approval from the electrical Inspectorate , giving completion report at KSEBL and getting Electrical connections from KSEB at Well						
		1.000					1.000
	Total						1.000
							Total Quantity in L.S 1.000