



Tamil Nadu Handicrafts Development Corporation Limited,
759, Anna Salai, Chennai 600 002

Up-gradation and Renovation of Poompuhar Production Centres

Tender Reference No. 490/P1/21-22

CORRIGENDUM - I

Bidders may please note that the Corrigendum is part of the Tender document. Considering the Bidder's requisition in Pre-bid Meeting, some additional works are to be included in the existing tender documents for the proposed Upgradation and Renovation of Production Units.

Sl. No	Unit	Additional work are to be included in the existing tender documents
1	Production Units (Nachiarkoil, Madurai, Vagaikulam, Swamimalai, Thanjavur and Kallakurichi)	The provision for existing machinery to be removed technically and safely shifted & stored inside the production unit. After construction activities are completed; these machines will be replaced at the required position again and those will be technically installed and commissioned with required electrical industrial wiring and earthing, etc.,
2	Production Units (Nachiarkoil, Madurai, Vagaikulam, Swamimalai, Thanjavur and Kallakurichi)	Electrical and plumbing details (As per annexure)
3	Vagaikulam Unit	Instead of partial compound wall provision, it will convert into chain link fencing work is proposed.

Sd/...

Managing Director

ELECTRICAL & ELV BOQ FOR PRODUCTION UNIT AT NACHYARKOIL

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
1.0	POINT WIRING:						
1.1	Supply, installation, testing and commissioning of point wiring using 3 runs of 1.5 sqmm FRLS (P, N & E) PVC insulated, unsheathed,multistrand copper conductor wires in 20mm dia PVC conduit. The rate shall include wall cutting, plastering, supply of wires, conduits, junction box, termination accessories, 16G metal switch boxes modular type one/two way 6A switch/sockets,suitable front plate as required.						
a)	Primary Point(one way)	Point	30				
b)	secondary Point	Point	20				
c)	Mirror light point (one way)	Point	4				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
d)	Two way point light point	Point	4				
e)	one way fan point with 1M electronic regulator	Point	20				
f)	Exhaust fan point including 6A socket near fan	Point	7				
g)	Call bell point with bell push	Point	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
h)	Flexible spring type cable arrangement LED light point with dimmer control	Point	6				
2.0	PRIMARY CIRCUIT WIRING:						
2.1	Supply, Wiring testing & commissioning of 2R 2.5 with 1R 1.5sqmm PVC insulated copper conductor 1100 volts grade FRLS wire in suitable concealed heavy duty PVC conduit with all accessories as required for lighting & small power circuit mains from DB to switch/socket board.	Mtrs	150				
2.2	Supply, Wiring testing & commissioning of 2R 4.0 with 1R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for 16A power circuit mains from DB to socket.	Mtrs	150				
2.3	Supply, Wiring testing & commissioning of 4R 6.0 with 2R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for DB incomer.	Mtrs	50				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
3.0	POWER OUTLETS:						
3.1	Supply, fixing, testing & commissioning of 6A 5pin modular type socket & switch located at switch box/location with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	12				
3.2	Supply, fixing, testing & commissioning of 16A 5pin modular type dependent socket & switch with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	6				
3.3	Supply, fixing, testing & commissioning of 6/16A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	10				
3.4	Supply, fixing, testing & commissioning of 20A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	12				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
4.0	DISTRIBUTION BOARDS:						
4.1	Provision for -Supply, installation, testing & commissioning of 8way TPN 7segment double door MCB Distribution boards (IP42) for Lighting distribution as per the technical specification & comprising of following.	set	1				
	Incomer						
	1No 40A 4P MCB						
	Phase control						
	3Nos 40A, 30mA DP RCCB						
	Outgoings						
	24Nos 6-20A SP MCB						
4.2	Provision for -Supply, installation, testing & commissioning of 12way TPN 7segment double door MCB Distribution boards (IP42) for power distribution as per the technical specification & comprising of following.	set	1				
	Incomer						
	1No 63A 4P MCB						
	Phase control						
	3Nos 63A, 100mA DP RCCB						
	Outgoings						
	30Nos 16-20A SP MCB						
4.3	Provision for -Supply, installation, testing & commissioning of 8way SPN double door horizontal MCB Distribution boards (IP42) as per the technical specification & comprising of following.	set	1				
	Incomer						
	1No 25A 30mA DP RCCB						
	Outgoings						
	6Nos 6-10A SP MCB						

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
4.4	Provision for - Shifting, installation, testing & commissioning of existing Distribution boards as per the technical specification	set	2	0		0	
4.5	Provision for existing machineries / industrial / heavy loaded equipments,Diesel generators,etc.. to be removed technically and safely shifted & stored inside the production unit. After construction activities are completed; these machines will be replaced at required position again and those will be technically installed and commissioned with required electrical industrial wiring,controls,etc..	Set	5	0		0	
5.0	CABLE & TERMINATION:						
5.1	Supply, laying, testing & commissioning of following cables with termination using suitable glands & lugs.						
a	4Cx25sqmm A2XFY cable	Mtrs	30				
	Termination for above cable	Ends	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
b	4Cx16sqmm A2XFY cable	Mtrs	30				
	Termination for above cable	Ends	4				
6	Luminaires						
6.1	Supply, Installation of the following LED light fixtures & fans with necessary accessories such as fasteners, downrods, M.S.pipes & all accessories as required at site.						
a	26W Ceiling/false ceiling mounted LED light	Set	2				
b	20W LED tube light	Set	26				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
c	Water proof Wall Mounted fancy 12 W LED light	Set	6				
d	LED-Picture light/ Mirror light (1X8W)	Set	4				
e	LED-Outdoor water proof down light/ focus light (1X8W)	Set	6				
f	Track light fixture for Light fixture	Nos	4				
g	Track light fixture with 8W LED LIGHT	Nos	6				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
h	Track light fixture with 4W LED LIGHT	Nos	8				
i	LED strip with regulator	Mtrs	20				
j	Chandelier Light	Set	1				
k	1200mm dia Ceiling Fan	Set	10				
l	Heavy duty industrial exhaust Fan	Set	4				
m	300mm dia Exhaust Fan	Set	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
n	200mm dia Exhaust Fan	Set	2				
o	Wall Mounted fan	Set	2				
p	40W street light with wall bracket	Set	4				
q	bulkhead fitting	Set	4				
r	Buzzer	Set	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
s	Flexible spring type cable arrangement LED light point with dimmer control	Nos	6				
7.0	COMMUNICATION CABLE & CONDUITS:						
7.1	Supply and laying following sizes of Heavy duty PVC conduits concealed in the ceiling, floors, wall etc with all accessories like bends, couplers, pullwire etc including cutting and filling the chases						
a	40mm Dia	Mtr	100				
b	25mm Dia	Mtr	80				
c	19mm Dia	Mtr	25				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
7.2	Supply, laying of CAT6 cable for LAN communication.	Mtr	10				
7.3	Supply and installation of modular flush mounted RJ45 data Outlet with front plate 1.2mm thick GI Box complete with all accessories as required.	Nos	2				
7.40	Supply, laying of twin core twisted pair cable for speaker	Mtr	15				
8.0	EARTHING						
8.1	Supply,Installation, testing & commissioning of 40mm dia chemical Earth electrode with flange of 3m length buried in ground as per IS The rates shall include excavation of the pit, construction of masonry chamber,providing heavy duty concrete cast slab , painting & making etc.,	Set	1				
8.2	Supply, Wiring testing & commissioning of 2R 6.0 sqmm PVC insulated copper conductor in suitable concealed heavy duty PVC conduit with all accessories as required for main earthing	mtr	30				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
8.3	provision for the Electrical repair work to refabriching the existing electrical conduit or fixtures/ items - labour charges for fixing,modifications as per standard specifications etc., complete in all respects						
	Electrician - class 1	Nos	14	0		0	
	Electrician - class 2	Nos	12	0		0	
SUB TOTAL							
GRAND TOTAL							

PROJECT: PROPOSED PHE BOQ FOR PRODUCTION UNIT AT NACHIYARKOIL

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
I	PLUMBING AND SANITATION WORKS						
1	Receiving, Installing, testing and commissioning of white color Indian water closet with dual flush open Cistern with necessary stand, bend, check nut, P-trap (or) S-trap, stop cock etc., solid seat and cover with polythene buffer and flap, CP flanges, CP bolts and nuts, a Pair of chair bracket and painting the brackets with anti corrosive paint with nuts and bolts, wall flanges etc., complete.	Nos	4				
2	Receiving, Installing, testing and commissioning of white color European water closet with dual flush Concealed Cistern with necessary stand, bend, check nut, P-trap (or) S-trap, stop cock etc., solid seat and cover with polythene buffer and flap, CP flanges, CP bolts and nuts, a Pair of chair bracket and painting the brackets with anti corrosive paint with nuts and bolts, wall flanges etc., complete.	Nos	2				
3	supply, Fixing, testing & Commissioning of Rectangular type wash basin white color with single lever sensor tap, 32mm dia.CP bottle trap with extension pipe, 32 mm dia. CP waste Coupling, M.S.wall brackets with a pair of SS screws to support the basin, 1no.15mm CP angle valve with 450 mm long CP inlet connection pipe, CP wall flange all of approved etc	Nos	3				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	CP fittings						
3.1	Supplying, fixing, testing and commissioning, White glazed Hindware urinals with SS connection pipe, Spreader with SS bolts and nuts to fix the urinal with all hangers and brackets complete. For Pillar cock:	Nos	3				
4	Supplying, fixing, testing and commissioning, White glazed Hindware urinals with SS connection pipe, Spreader with SS bolts and nuts to fix the urinal with all hangers and brackets complete.	Nos	2				
5	Supply,Fixing, testing and commissioning, White glazed Hindware urinal Divider with SS bolts and nuts to fix and brackets complete	Nos	1				
6	Supplying, installing, testing and commissioning of CP single lever mixer unit comprising of diverter & shower unit / spout, with necessary wall flanges etc., complete	Nos	3				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
7	Collecting fixing, testing and commissioning of CP brass concealed stop cock with adjustable wall flange for master control in toilets.						
	20 mm dia	Nos	2				
8	supply, fixing, testing CP double coat hook fixed on to toilet doors with SS screws complete.	Nos	9				
9	supply, fixing, testing and commissioning of CP 20mm dia 600mm long towel rail with necessary SS screws, CP end clamps etc.complete.	Nos	3				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
10	supply, fixing, testing soap dispenser with metallic bottle and necessary SS screws, etc complete	Nos	2				
11	supply, fixing, testing CP toilet paper holder with SS flap fixed with SS screws etc, complete.	Nos	2				
12	supply, checking, storing & fixing 15 mm. dia exposed angular stop cock with 1/2" outlet with wall flange and all accessories,	Nos	4				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
II	SOIL WASTE VENT AND RAIN WATER PIPES						
13	Supplying, fixing, testing and commissioning of PVC Soil, waste and ventilating pipes (SWR) conforming to IS:13592 /1990 -Type B with rubber ring (conforming to IS : 5382) joints inclusive of all necessary specials like bends, tee, offsets, door bends, junctions, cowls etc., laid under floor /fixed on walls and in pipe shaft with proper pipe support like brackets, hangers, MS grip bolts etc., complete. The support shall be painted with two coats of enamel paint.						
	INTERNAL						
13.1	40 mm for Wash basin drains	Rmt	6				
13.2	50 mm for Washing M/c & Sink	Rmt	12				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
13.3	75 mm Waste pipe	Rmt	24				
13.4	110 mm soil pipe	Rmt	12				
	VERTICAL						
13.5	110 mm (Rain water -vertical)	Rmt	42				
13.6	110 mm (soil -vertical)	Rmt	3				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
13.7	75 mm (waste -vertical)	Rmt	3				
14	Supplying, installing, testing and commissioning of PVC Floor trap with 110mm dia inlet and 75mm dia. outlet fixed on a bed of cement concrete with 150 x 150mm stainless steel type grating with threaded cover (Heavy duty type) etc., complete. The cost shall include Cockroach Traps.,	Nos	6				
15	Providing and fixing Heavy class S.S. grating with cockroach/mosquito proof S.S. strainer of Chilly or equivalent make, as approved, (incl cockroach trap) including setting in floor with cement mortar to match with floor finish as per requirements	Nos	8				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
III	INTERNAL WATER SUPPLY SYSTEM						
16	Supplying, installing, fixing, jointing, testing and commissioning of approved make Chlorinated Polyvinyl Chloride pipes (CPVC) up to 50mm dia SDR.11, ASTM CTS, and above 50mm dia CPVC schedule 40 ASTM IPS. Fittings up to 50mm dia SDR.11, ASTM CTS and above 50mm dia CPVC CORZON schedule 40 fittings. The fittings and specials such as tees, elbows, couplers, bends, enlargers etc. with CPVC brass threaded combination / transition specials such as male adapters brass threaded female adapters, brass FPT Tee, Brass FPT elbow etc., where connection with metal is to be made including necessary drilling holes, chasing walls and making the same good in cement mortar 1:1 and restore the same in original condition neatly as directed by the Engineer in-charge. Joints to be made with CPVC solvent cement up to 50mm dia as per ASTM D-2846 and above 50mm dia primer P-70, and solvent conforming to ASTM F 4931 / 724. The solvent used shall be of approved make as recommended by the pipe manufacturer. Rate shall include necessary MS supports, clamps, hanging rods, Grip bolts and painting of all supports with 02 coats of enamel paint etc., complete in all respect.	Rmt	54				
	Cold Water - Internal						
	a) 20 mm dia (I.D)						

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
17	Providing, fixing, jointing and testing in position the following U-PVC Pipes as per ASTM D 1785 Schedule 80 and threaded conforming to IS:554, All fittings to be of Schedule 80. . Cut to required lengths including all necessary fittings and specials such as bends, tees, unions, reducers, flanges and plugs etc. The pipes & fittings shall be tested to a pressure as per IS & suppliers standards. he pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality jointing lubricant. The pipes shall be erected plumb in the risers. Erection of the above pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete						
	Riser & Terrace Ring Main						
	a) 25 mm dia (I.D)	Rmt	24				
	b) 32 mm dia (I.D)	Rmt	30				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	c) 40 mm dia (I.D)	Rmt	18				
	d) 50 mm dia (I.D)	Rmt	24				
18	Supplying, installing and testing and commissioning of approved make PN 16 class GM ball valves with necessary unions etc., complete in all respect						
	a) 20 mm dia	Nos	6				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	b) 25 mm dia (Screwed ends)	Nos	2				
	c) 32 mm dia (Screwed ends)	Nos	2				
	d) 40 mm dia (Screwed ends)	Nos	2				
	e) 50 mm dia (Screwed ends)	Nos	2				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
19	Supplying, installing, testing and commissioning approved make pilot operated float valve with 2 Nos. bypass connection lines						
	a) 40mm dia	Nos	1				
20	Providing and fixing GM Air release valve incl 25 to 20 reducer , double acting, of approved make, having 2 chambers with ebonite ball, small and large orifices with isolating stop screw down valve, GM seats, high tensile brass spindle with cap, conforming to standard water works pattern. Flanges as per IS : 15381, flat faced and drilled, complete of the following nominal bore (NB) size:	Nos	1				
21	M.S brackets for the supports of pipes	Kg	20				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
V	EXTERNAL SEWERAGE SYSTEM						
22	Providing and fixing testing and commissioning of PVC pipe for Risers to IS:13592 of SWR quality Type B, for ground floor buried lines, external buried including all fittings like tees, elbows, bends, collars, coupling, brackets, clamps, fasteners, , etc jointing with rubber ring / solvent cement followed by application of leak proof adhesive like FRP paste complete. The pipes shall be fixed properly aligned vertical with suitable Galvanized MS pipe clamps. Work to include making necessary holes in the masonry walls etc.. and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. ,						
	a)75mm dia	Rmt	18				
	b)110mm dia	Rmt	24				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	c)160mm dia	Rmt	30				
23	Supplying, fixing and testing of PVC Fabricated Gully Trap with top square bodies 300mm x 300mm, set in PCC 1:3:6 bed with RCC chamber and top cover shall be as indicated in the drawings, internal and external plastering 12mm thick in CM1:6 with water proofing compound including, excavating, refilling and ramming ,D.I (heavy duty type 40T) manhole cover with frames Heavy duty etc., complete	Nos	10				
24	Construction of inspection chamber with 230mm best quality approved Table Moulded bricks in CM 1:3 over a bed of 100mm thick PCC 1:4:8, internal walls plastered in CM 1:3 with water Proofing Compound and external wall with CM1:3 with sponge finish, benching and channeling in PCC1:4:8. Supplying and fixing D.I (heavy duty type 40T) manhole cover with frames (Heavy duty) . The quoted rate shall also include necessary excavation and backfilling the area around the inspection chamber with proper compaction. Internal chamber maximum depth not exceeding 900mm.						

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	Soil Network						
	a) 450mm x 450mm (clear internal dimension)	Nos	2				
	b)600x600 internal dimension Depth up to 600mm	Nos	3				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
25	<p>FOR INJECTION WELL:</p> <p>Earth work - digging the well 4feet dia- 10feet deep for injection well.</p> <p>supply and installation of Reinforced concrete Rings - 3 feet OD & 1 feet Height, 65 MM Thick - 10 no's.</p> <p>supply and installation of Reinforced concrete slab- 3 feet in dia, 75 mm thick, and 25 mm perforated - 8 mm mild steel rods used for reinforcement -1" Perforated - 1no's.</p> <p>supply and installation of Reinforced concrete closing slab - 3 feet in dia OD, 75 mm thick, 8 mm mild steel rods used for reinforcement with 600mm x 600mm Square FRP/Plastic manhole cover - 1no's.</p> <p>supply and installation of MS grating - 6*6inch square - 2no's</p> <p>Filtration Media Installation For Injection Well Unit: 40 mm crushed stones - 0.12cum, 20 mm crushed stones - 0.12cum, Brick Bats - 0.12cum, Mixture of Brick Bats and Gravels for filling the gap between excavated earth and RCC rings- 1.6cum</p> <p>Shifting of excavated earth to the approved / authorized dumping yard as directed by the authorities / Site in charge</p>	Nos	1				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
VI	EXTERNAL WATER SUPPLY						
26	Providing, fixing, jointing and testing in position the following U-PVC Pipes as per ASTM D 1785 Schedule 80 and threaded conforming to IS:554, All fittings to be of Schedule 80. . Cut to required lengths including all necessary fittings and specials such as bends, tees, unions, reducers, flanges and plugs etc. The pipes & fittings shall be tested to a pressure as per IS & suppliers standards. he pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality jointing lubricant. The pipes shall be erected plumb in the risers. Erection of the above pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.						
	a) 32 mm dia (I.D)	Rmt	24				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	b) 40 mm dia (I.D)	Rmt	18				
27	Supplying, installing, testing and commissioning butterfly valves with standard lever conforming to IS standard 13039 with necessary flanges, nuts and bolts etc., complete.						
	a) 100 mm dia	Nos	2				
28	Supplying and fixing in position approved make PN 16 non-return valve conforming to IS 778 with unions etc., complete.						
	a) 32 mm dia	Nos	2				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	b) 40mm dia	Nos	1				
29	Supplying and fixing in position approved make pot / Y - strainer complete conforming to IS standards etc., complete.						
	a) 50 mm dia	Nos	1				
30	Supplying, installing, testing and commissioning of factory made double layer white water tank with lid.Erection of the connecting pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.(Sintex or any Eqvnt.)						

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	a)per Litre for above spec.	per litre	1				
	b) for 500Litre	Nos	1				
	c) for 1000Litre - Black colour	Nos	1				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS		
				SUPPLY	ERECTION	SUPPLY	ERECTION	
					SUB TOTAL			
					GRAND TOTAL FOR SUPPLY & ERECTION			

FIRE & SAFETY BOQ FOR PRODUCTION UNIT,NACHIYARKOIL					
SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
	FIRE & SAFETY SYSTEM				
A	P.A. SYSTEM				
1.0	Supplying, installing, testing and commissioning of package type 6 zone selector 16 Bit micro controller technology P.A. console/call zone station and interfacing with EPABX/prerecorded Message Manager with connected accessories-complete.	1	No		
2.0	Supplying, installing, testing and commissioning of solid state Amplifier of 50W RMS out put in rack with BT & USB connectivity, including necessary control wires, jacks etc. complete.	1	No		
3.0	Supplying, installing, testing and commissioning of 6W wall mounted type speakers with mounting fixtures	8	Nos		
4.0	Supplying and laying of 2 core of 1 sq. mm, Annealed tin copper conductor, PVC Sheathed armoured FRLS Cable.	90	Rmt		
5.0	Supplying, installing, testing and commissioning of intergrated smoke detector cum fire alarm hooter including necessary control wires provisions,etc. complete.	6	Nos		
6.0	Supplying, installing, testing and commissioning of 220v single phase battery cum raw power operated steel body hooter including necessary control wires and manual switch,etc. complete.	1	Nos		

SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
Sub Total for PA system					
B	FIRE EXTINGUISHERS				
1.0	Supplying, installing and commissioning Portable Fire extinguishers of following type & capacity.				
a	ABC powder type fire extinguisher of 6 Kgs. Capacity, Mono Ammonium Phosphate Powder 90, Stored pressure type, Pressure Gauge, Controllable discharge mechanism with Hose & Nozzle etc. Complete. Confirming to IS:15683	5	Nos.		
b	Carbon-di- oxide type fire extinguisher of 4.5 kgs. Capacity, CO2 gas filled in brand new seamless cylinder with control discharge mechanism fitted with bend and horn etc. complete, confirming to IS: 15683.	5	Nos.		
2.0	Supplying, installing and commissioning of 03 nos fire bucket sand along with holder stand made with mild steel and painted in approved red colour..Complete	3	Nos.		
Sub Total for Fire extinguishers					

SIGNAGE BOQ FOR PRODUCTION UNIT,NACHIYARKOIL					
SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
	SIGNAGES				
1.0	Providing and installing in position the following type of sign boards made out of 3mm thick "Opaque" PVC foam board with computer cut. PVC non-reflective self adhesive vinyle painted foam board along with directional FR Reflective tape, complete with mirror fasteners.				
a.	Signages with printed "IN CASE OF FIRE, USE STAIRS UNLESS INSTRUCTED OTHERWISE" of 1.5cm height letters in red with white back ground. The size of the board shall be 25cm * 30cm and shall be fixed at the height of 2mts, from finished floor near Exit.	1	Nos.		
2.0	Floor & room indentification signage (i.e, Drilling lathe,Store,etc..) at each stair enclosure on every floor, indicating the floor number in words,work shops,toilets,etc.. lettering size shall be 7.5cm with contrasting colour from back ground. Size shall be 15cm * 60cm.	10	Nos.		
3.0	Providing and fixing in position the signage of " Incase of fire do use this " Size 8" x 8"	1	Nos.		
4.0	Providing and fixing in position the signage of " Fire Extinguisher " to be pasted immediately above the every extinguisher. Size 4" x 4"	10	Nos.		
5.0	Providing and installing in position - the following type of sign boards made out of 3mm thick acrylic sign letters with a maximum height of 450mm required form/shape ss frames and inbuilt LED lights..Complete	3.5	Sq.M		

SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
6.0	Providing and installing in position - the following type of sign boards made out of 1mm thick printed with aluminium casing with end cap cum fixing supports,screws,labour,etc..Complete	4.0	Nos.		
7.0	Providing and installing in position - the following type of sign boards made out of 3mm thick ACP sign board with fixing supports and MS frames,screws,labour,etc..Complete	2.2	Sq.M		
TOTAL FOR SIGNAGE					

ELECTRICAL & ELV BOQ FOR PRODUCTION UNIT AT MADURAI

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
				1.0	POINT WIRING:		
1.1	Supply, installation, testing and commissioning of point wiring using 3 runs of 1.5 sqmm FRLS (P, N & E) PVC insulated, unsheathed,multistrand copper conductor wires in 20mm dia PVC conduit. The rate shall include wall cutting, plastering, supply of wires, conduits, junction box, termination accessories, 16G metal switch boxes modular type one/two way 6A switch/sockets,suitable front plate as required.						
a)	Primary Point(one way)	Point	30				
b)	secondary Point	Point	20				
c)	Mirror light point (one way)	Point	4				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
d)	Two way point light point	Point	4				
e)	one way fan point with 1M electronic regulator	Point	20				
f)	Exhaust fan point including 6A socket near fan	Point	7				
g)	Call bell point with bell push	Point	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
h)	Flexible spring type cable arrangement LED light point with dimmer control	Point	6				
2.0	PRIMARY CIRCUIT WIRING:						
2.1	Supply, Wiring testing & commissioning of 2R 2.5 with 1R 1.5sqmm PVC insulated copper conductor 1100 volts grade FRLS wire in suitable concealed heavy duty PVC conduit with all accessories as required for lighting & small power circuit mains from DB to switch/socket board.	Mtrs	150				
2.2	Supply, Wiring testing & commissioning of 2R 4.0 with 1R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for 16A power circuit mains from DB to socket.	Mtrs	150				
2.3	Supply, Wiring testing & commissioning of 4R 6.0 with 2R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for DB incomer.	Mtrs	50				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
3.0	POWER OUTLETS:						
3.1	Supply, fixing, testing & commissioning of 6A 5pin modular type socket & switch located at switch box/location with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	12				
3.2	Supply, fixing, testing & commissioning of 16A 5pin modular type dependent socket & switch with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	10				
3.3	Supply, fixing, testing & commissioning of 6/16A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	10				
3.4	Supply, fixing, testing & commissioning of 20A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	12				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
4.0	DISTRIBUTION BOARDS:						
4.1	Provision for -Supply, installation, testing & commissioning of 8way TPN 7segment double door MCB Distribution boards (IP42) for Lighting distribution as per the technical specification & comprising of following.	set	1				
	Incomer						
	1No 40A 4P MCB						
	Phase control						
	3Nos 40A, 30mA DP RCCB						
	Outgoings						
	24Nos 6-20A SP MCB						
4.2	Provision for -Supply, installation, testing & commissioning of 12way TPN 7segment double door MCB Distribution boards (IP42) for power distribution as per the technical specification & comprising of following.	set	1				
	Incomer						
	1No 63A 4P MCB						
	Phase control						
	3Nos 63A, 100mA DP RCCB						
	Outgoings						
	30Nos 16-20A SP MCB						
4.3	Provision for -Supply, installation, testing & commissioning of 8way SPN double door horizontal MCB Distribution boards (IP42) as per the technical specification & comprising of following.	set	1				
	Incomer						
	1No 25A 30mA DP RCCB						
	Outgoings						
	6Nos 6-10A SP MCB						

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
4.4	Provision for - Shifting, installation, testing & commissioning of existing Distribution boards as per the technical specification	set	2	0		0	
4.5	Provision for existing machineries / industrial / heavy loaded equipments,Diesel generators,etc.. to be removed technically and safely shifted & stored inside the production unit. After construction activities are completed; these machines will be replaced at required position again and those will be technically installed and commissioned with required electrical industrial wiring,controls,etc..	Set	5	0		0	
5.0	CABLE & TERMINATION:						
5.1	Supply, laying, testing & commissioning of following cables with termination using suitable glands & lugs.						
a	4Cx25sqmm A2XFY cable	Mtrs	50				
	Termination for above cable	Ends	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
b	4Cx16sqmm A2XFY cable	Mtrs	50				
	Termination for above cable	Ends	4				
6	Luminaires						
6.1	Supply, Installation of the following LED light fixtures & fans with necessary accessories such as fasteners, downrods, M.S.pipes & all accessories as required at site.						
a	20W LED tube light	Set	30				
b	Water proof Wall Mounted fancy 12 W LED light	Set	4				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
c	LED-Picture light/ Mirror light (1X8W)	Set	4				
d	LED-Outdoor water proof down light/ focus light (1X8W)	Set	2				
e	1200mm dia Ceiling Fan	Set	12				
f	Heavy duty industrial exhaust Fan	Set	4				
g	300mm dia Exhaust Fan	Set	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
h	200mm dia Exhaust Fan	Set	2				
i	Wall Mounted fan	Set	2				
j	40W street light with wall bracket	Set	6				
k	bulkhead fitting	Set	4				
l	Buzzer	Set	2				
m	Flexible spring type cable arrangement LED light point with dimmer control	Nos	10				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
7.0	COMMUNICATION CABLE & CONDUITS:						
7.1	Supply and laying following sizes of Heavy duty PVC conduits concealed in the ceiling, floors, wall etc with all accessories like bends, couplers, pullwire etc including cutting and filling the chases						
a	40mm Dia	Mtr	60				
b	25mm Dia	Mtr	60				
c	19mm Dia	Mtr	30				
7.2	Supply, laying of CAT6 cable for LAN communication.	Mtr	20				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
7.3	Supply and installation of modular flush mounted RJ45 data Outlet with front plate 1.2mm thick GI Box complete with all accessories as required.	Nos	4				
7.40	Supply, laying of twin core twisted pair cable for speaker	Mtr	6				
8.0	EARTHING						
8.1	Supply,Installation, testing & commissioning of 40mm dia chemical Earth electrode with flange of 3m length buried in ground as per IS The rates shall include excavation of the pit, construction of masonry chamber,providing heavy duty concrete cast slab , painting & making etc.,	Set	1				
8.2	Supply, Wiring testing & commissioning of 2R 6.0 sqmm PVC insulated copper conductor in suitable concealed heavy duty PVC conduit with all accessories as required for main earthing	mtr	50				
8.3	provision for the Electrical repair work to refurbishing the existing electrical conduit or fixtures/ items - labour charges for fixing,modifications as per standard specifications etc., complete in all respects						

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
	Electrician - class 1	Nos	15	0		0	
	Electrician - class 2	Nos	12	0		0	
	SUB TOTAL						
	GRAND TOTAL						

PROJECT: PROPOSED PHE BOQ FOR PRODUCTION UNIT AT MADURAI							
SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
I	PLUMBING AND SANITATION WORKS						
1	Receiving, Installing, testing and commissioning of white color Indian water closet with dual flush open Cistern with necessary stand, bend, check nut, P-trap (or) S-trap, stop cock etc., solid seat and cover with polythene buffer and flap, CP flanges, CP bolts and nuts, a Pair of chair bracket and painting the brackets with anti corrosive paint with nuts and bolts, wall flanges etc., complete.	Nos	4				
2	Receiving, Installing, testing and commissioning of white color European water closet with dual flush Concealed Cistern with necessary stand, bend, check nut, P-trap (or) S-trap, stop cock etc., solid seat and cover with polythene buffer and flap, CP flanges, CP bolts and nuts, a Pair of chair bracket and painting the brackets with anti corrosive paint with nuts and bolts, wall flanges etc., complete.	Nos	2				
3	supply, Fixing, testing & Commissioning of Rectangular type wash basin white color with single lever sensor tap, 32mm dia.CP bottle trap with extension pipe, 32 mm dia. CP waste Coupling, M.S.wall brackets with a pair of SS screws to support the basin, 1no.15mm CP angle valve with 450 mm long CP inlet connection pipe, CP wall flange all of approved etc.	Nos	3				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	CP fittings						
3.1	Supplying, fixing, testing and commissioning, White glazed Hindware urinals with SS connection pipe, Spreader with SS bolts and nuts to fix the urinal with all hangers and brackets complete. For Pillar cock:	Nos	3				
4	Supplying, fixing, testing and commissioning, White glazed Hindware urinals with SS connection pipe, Spreader with SS bolts and nuts to fix the urinal with all hangers and brackets complete.	Nos	2				
5	Supply,Fixing, testing and commissioning, White glazed Hindware urinal Divider with SS bolts and nuts to fix and brackets complete	Nos	1				
6	Supplying, installing, testing and commissioning of CP single lever mixer unit comprising of diverter & shower unit / spout, with necessary wall flanges etc., complete	Nos	3				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
7	Collecting fixing, testing and commissioning of CP brass concealed stop cock with adjustable wall flange for master control in toilets.						
	20 mm dia	Nos	2				
8	supply, fixing, testing CP double coat hook fixed on to toilet doors with SS screws complete.	Nos	6				
9	supply, fixing, testing and commissioning of CP 20mm dia 600mm long towel rail with necessary SS screws, CP end clamps etc.complete.	Nos	3				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
10	supply, fixing, testing soap dispenser with metallic bottle and necessary SS screws, etc complete	Nos	2				
11	supply, fixing, testing CP toilet paper holder with SS flap fixed with SS screws etc, complete.	Nos	2				
12	supply, checking, storing & fixing 15 mm. dia exposed angular stop cock with 1/2" outlet with wall flange and all accessories,	Nos	4				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
II	SOIL WASTE VENT AND RAIN WATER PIPES						
13	Supplying, fixing, testing and commissioning of PVC Soil, waste and ventilating pipes (SWR) conforming to IS:13592 /1990 -Type B with rubber ring (conforming to IS : 5382) joints inclusive of all necessary specials like bends, tee, offsets, door bends, junctions, cowls etc., laid under floor /fixed on walls and in pipe shaft with proper pipe support like brackets, hangers, MS grip bolts etc., complete. The support shall be painted with two coats of enamel paint.						
	INTERNAL						
13.1	40 mm for Wash basin drains	Rmt	6				
13.2	50 mm for Washing M/c & Sink	Rmt	12				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
13.3	75 mm Waste pipe	Rmt	24				
13.4	110 mm soil pipe	Rmt	12				
	VERTICAL						
13.5	110 mm (Rain water -vertical)	Rmt	30				
13.6	110 mm (soil -vertical)	Rmt	3				

Sl.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
13.7	75 mm (waste -vertical)	Rmt	3				
14	Supplying, installing, testing and commissioning of PVC Floor trap with 110mm dia inlet and 75mm dia. outlet fixed on a bed of cement concrete with 150 x 150mm stainless steel type grating with threaded cover (Heavy duty type) etc., complete. The cost shall include Cockroach Traps.,	Nos	6				
15	Providing and fixing Heavy class S.S. grating with cockroach/mosquito proof S.S. strainer of Chilly or equivalent make, as approved, (incl cockroach trap) including setting in floor with cement mortar to match with floor finish as per requirements	Nos	8				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
III	INTERNAL WATER SUPPLY SYSTEM						
16	Supplying, installing, fixing, jointing, testing and commissioning of approved make Chlorinated Polyvinyl Chloride pipes (CPVC) up to 50mm dia SDR.11, ASTM CTS, and above 50mm dia CPVC schedule 40 ASTM IPS. Fittings up to 50mm dia SDR.11, ASTM CTS and above 50mm dia CPVC CORZON schedule 40 fittings. The fittings and specials such as tees, elbows, couplers, bends, enlargers etc. with CPVC brass threaded combination / transition specials such as male adapters brass threaded female adapters, brass FPT Tee, Brass FPT elbow etc., where connection with metal is to be made including necessary drilling holes, chasing walls and making the same good in cement mortar 1:1 and restore the same in original condition neatly as directed by the Engineer in-charge. Joints to be made with CPVC solvent cement up to 50mm dia as per ASTM D-2846 and above 50mm dia primer P-70, and solvent conforming to ASTM F 4931 / 724. The solvent used shall be of approved make as recommended by the pipe manufacturer. Rate shall include necessary MS supports, clamps, hanging rods, Grip bolts and painting of all supports with 02 coats of enamel paint etc., complete in all respect.	Rmt	54				
	Cold Water - Internal						
	a) 20 mm dia (I.D)						

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
17	Providing, fixing, jointing and testing in position the following U-PVC Pipes as per ASTM D 1785 Schedule 80 and threaded conforming to IS:554, All fittings to be of Schedule 80. . Cut to required lengths including all necessary fittings and specials such as bends, tees, unions, reducers, flanges and plugs etc. The pipes & fittings shall be tested to a pressure as per IS & suppliers standards. he pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality jointing lubricant. The pipes shall be erected plumb in the risers. Erection of the above pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete						
	Riser & Terrace Ring Main						
	a) 25 mm dia (I.D)	Rmt	24				
	b) 32 mm dia (I.D)	Rmt	30				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	c) 40 mm dia (I.D)	Rmt	18				
	d) 50 mm dia (I.D)	Rmt	24				
18	Supplying, installing and testing and commissioning of approved make PN 16 class GM ball valves with necessary unions etc., <i>complete in all respect</i>						
	a) 20 mm dia	Nos	6				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	b) 25 mm dia (Screwed ends)	Nos	2				
	c) 32 mm dia (Screwed ends)	Nos	2				
	d) 40 mm dia (Screwed ends)	Nos	2				
	e) 50 mm dia (Screwed ends)	Nos	2				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
19	Supplying, installing, testing and commissioning approved make pilot operated float valve with 2 Nos. bypass connection lines						
	a) 40mm dia	Nos	1				
20	Providing and fixing GM Air release valve incl 25 to 20 reducer , double acting, of approved make, having 2 chambers with ebonite ball, small and large orifices with isolating stop screw down valve, GM seats, high tensile brass spindle with cap, conforming to standard water works pattern. Flanges as per IS : 15381, flat faced and drilled, complete of the following nominal bore (NB) size:	Nos	1				
21	M.S brackets for the supports of pipes	Kg	20				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
V	EXTERNAL SEWERAGE SYSTEM						
22	Providing and fixing testing and commissioning of PVC pipe for Risers to IS:13592 of SWR quality Type B, for ground floor buried lines, external buried including all fittings like tees, elbows, bends, collars, coupling, brackets, clamps, fasteners, , etc jointing with rubber ring / solvent cement followed by application of leak proof adhesive like FRP paste complete. The pipes shall be fixed properly aligned vertical with suitable Galvanized MS pipe clamps. Work to include making necessary holes in the masonry walls etc.. and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified.,						
	a)75mm dia	Rmt	18				
	b)110mm dia	Rmt	24				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	c)160mm dia	Rmt	30				
23	Supplying, fixing and testing of PVC Fabricated Gully Trap with top square bodies 300mm x 300mm, set in PCC 1:3:6 bed with RCC chamber and top cover shall be as indicated in the drawings, internal and external plastering 12mm thick in CM1:6 with water proofing compound including, excavating, refilling and ramming ,D.I (heavy duty type 40T) manhole cover with frames Heavy duty etc., complete	Nos	8				
24	Construction of inspection chamber with 230mm best quality approved Table Moulded bricks in CM 1:3 over a bed of 100mm thick PCC 1:4:8, internal walls plastered in CM 1:3 with water Proofing Compound and external wall with CM1:3 with sponge finish, benching and channeling in PCC1:4:8. Supplying and fixing D.I (heavy duty type 40T) manhole cover with frames (Heavy duty) . The quoted rate shall also include necessary excavation and backfilling the area around the inspection chamber with proper compaction. Internal chamber maximum depth not exceeding						

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	Soil Network						
	a) 450mm x 450mm (clear internal dimension)	Nos	4				
	b)600x600 internal dimension Depth up to 600mm	Nos	3				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
25	<p>FOR INJECTION WELL:</p> <p>Earth work - digging the well 4feet dia- 10feet deep for injection well.</p> <p>supply and installation of Reinforced concrete Rings - 3 feet OD & 1 feet Height, 65 MM Thick - 10 no's.</p> <p>supply and installation of Reinforced concrete slab- 3 feet in dia, 75 mm thick, and 25 mm perforated - 8 mm mild steel rods used for reinforcement -1" Perforated - 1no's.</p> <p>supply and installation of Reinforced concrete closing slab - 3 feet in dia OD, 75 mm thick, 8 mm mild steel rods used for reinforcement with 600mm x 600mm Square FRP/Plastic manhole cover - 1no's.</p> <p>supply and installation of MS grating - 6*6inch square - 2no's</p> <p>Filtration Media Installation For Injection Well</p> <p>Unit: 40 mm crushed stones - 0.12cum, 20 mm crushed stones - 0.12cum, Brick Bats - 0.12cum, Mixture of Brick Bats and Gravels for filling the gap between excavated earth and RCC rings- 1.6cum</p> <p>Shifting of excavated earth to the approved / authorized dumping yard as directed by the authorities / Site in charge</p>	Nos	1				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
VI	EXTERNAL WATER SUPPLY						
26	Providing, fixing, jointing and testing in position the following U-PVC Pipes as per ASTM D 1785 Schedule 80 and threaded conforming to IS:554, All fittings to be of Schedule 80. . Cut to required lengths including all necessary fittings and specials such as bends, tees, unions, reducers, flanges and plugs etc. The pipes & fittings shall be tested to a pressure as per IS & suppliers standards. he pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality jointing lubricant. The pipes shall be erected plumb in the risers. Erection of the above pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.						
	a) 32 mm dia (I.D)	Rmt	24				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	b) 40 mm dia (I.D)	Rmt	18				
27	Supplying, installing, testing and commissioning butterfly valves with standard lever conforming to IS standard 13039 with necessary flanges, nuts and bolts etc., complete.						
	a) 100 mm dia	Nos	2				
28	Supplying and fixing in position approved make PN 16 non-return valve conforming to IS 778 with unions etc., complete.						
	a) 32 mm dia	Nos	2				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	b) 40mm dia	Nos	1				
29	Supplying and fixing in position approved make pot / Y - strainer complete conforming to IS standards etc., complete.						
	a) 50 mm dia	Nos	1				
30	Supplying, installing, testing and commissioning of factory made double layer white water tank with lid.Erection of the connecting pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.(Sintex or any Eqvnt.)						

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
	a)per Litre for above spec.	per litre	1				
	b) for 500Litre	Nos	1				
	c) for 1000Litre - Black colour	Nos	1				

Sl.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
				SUB TOTAL			
				GRAND TOTAL FOR SUPPLY & ERECTION			

FIRE & SAFETY BOQ FOR PRODUCTION UNIT,MADURAI

SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
	FIRE & SAFETY SYSTEM				
A	P.A. SYSTEM				
1.0	Supplying, installing, testing and commissioning of package type 6 zone selector 16 Bit micro controller technology P.A. console/call zone station and interfacing with EPABX/prerecorded Message Manager with connected accessories-complete.	1	No		
2.0	Supplying, installing, testing and commissioning of solid state Amplifier of 50W RMS out put in rack with BT & USB connectivity, including necessary control wires, jacks etc. complete.	1	No		
3.0	Supplying, installing, testing and commissioning of 6W wall mounted type speakers with mounting fixtures	8	Nos		
4.0	Supplying and laying of 2 core of 1 sq. mm, Annealed tin copper conductor, PVC Sheathed armoured FRLS Cable.	94	Rmt		
5.0	Supplying, installing, testing and commissioning of intergrated smoke detector cum fire alarm hooter including necessary control wires provisions,etc. complete.	6	Nos		
6.0	Supplying, installing, testing and commissioning of 220v single phase battery cum raw power operated steel body hooter including necessary control wires and manual switch,etc. complete.	1	Nos		

SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
Sub Total for PA system					
B	FIRE EXTINGUISHERS				
1.0	Supplying, installing and commissioning Portable Fire extinguishers of following type & capacity.				
a	ABC powder type fire extinguisher of 6 Kgs. Capacity, Mono Ammonium Phosphate Powder 90, Stored pressure type, Pressure Gauge, Controllable discharge mechanism with Hose & Nozzle etc. Complete. Confirming to IS:15683	5	Nos.		
b	Carbon-di- oxide type fire extinguisher of 4.5 kgs. Capacity, CO2 gas filled in brand new seamless cylinder with control discharge mechanism fitted with bend and horn etc. complete, confirming to IS: 15683.	5	Nos.		
2.0	Supplying, installing and commissioning of 03 nos fire bucket sand along with holder stand made with mild steel and painted in approved red colour..Complete	3	Nos.		
Sub Total for Fire extinguishers					

SIGNAGE BOQ FOR PRODUCTION UNIT,MADURAI

SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
	SIGNAGES				
1.0	Providing and installing in position the following type of sign boards made out of 3mm thick "Opaque" PVC foam board with computer cut. PVC non-reflective self adhesive vinyle painted foam board along with directional FR Reflective tape, complete with mirror fasteners.				
a.	Signages with printed "IN CASE OF FIRE, USE STAIRS UNLESS INSTRUCTED OTHERWISE" of 1.5cm height letters in red with white back ground. The size of the board shall be 25cm * 30cm and shall be fixed at the height of 2mts, from finished floor near Exit.	1	Nos.		
2.0	Floor & room indentification signage (i.e, Drilling lathe,Store,etc.,) at each stair enclosure on every floor, indicating the floor number in words,work shops,toilets,etc.. lettering size shall be 7.5cm with contrasting colour from back ground. Size shall be 15cm * 60cm.	6	Nos.		
3.0	Providing and fixing in position the signage of " Incase of fire do use this " Size 8" x 8"	1	Nos.		
4.0	Providing and fixing in position the signage of " Fire Extinguisher " to be pasted immediately above the every extinguisher. Size 4" x 4"	10	Nos.		
5.0	Providing and installing in position - the following type of sign boards made out of 3mm thick acrylic sign letters with a maximum height of 450mm required form/shape ss frames and inbuilt LED lights..Complete	2.0	Sq.M		

SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
6.0	Providing and installing in position - the following type of sign boards made out of 1mm thick printed with aluminium casing with end cap cum fixing supports,screws,labour,etc..Complete	4.0	Nos.		
7.0	Providing and installing in position - the following type of sign boards made out of 3mm thick ACP sign board with fixing supports and MS frames,screws,labour,etc..Complete	1.3	Sq.M		
TOTAL FOR SIGNAGE					

ELECTRICAL & ELV BOQ FOR PRODUCTION UNIT AT VAGAIKULAM

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
				1.0	POINT WIRING:		
1.1	Supply, installation, testing and commissioning of point wiring using 3 runs of 1.5 sqmm FRLS (P, N & E) PVC insulated, unsheathed,multistrand copper conductor wires in 20mm dia PVC conduit. The rate shall include wall cutting, plastering, supply of wires, conduits, junction box, termination accessories, 16G metal switch boxes modular type one/two way 6A switch/sockets,suitable front plate as required.						
a)	Primary Point(one way)	Point	15				
b)	secondary Point	Point	10				
c)	Mirror light point (one way)	Point	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
d)	Two way point light point	Point	2				
e)	one way fan point with 1M electronic regulator	Point	8				
f)	Exhaust fan point including 6A socket near fan	Point	3				
g)	Call bell point with bell push	Point	1				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
h)	Flexible spring type cable arrangement LED light point with dimmer control	Point	4				
2.0	PRIMARY CIRCUIT WIRING:						
2.1	Supply, Wiring testing & commissioning of 2R 2.5 with 1R 1.5sqmm PVC insulated copper conductor 1100 volts grade FRLS wire in suitable concealed heavy duty PVC conduit with all accessories as required for lighting & small power circuit mains from DB to switch/socket board.	Mtrs	30				
2.2	Supply, Wiring testing & commissioning of 2R 4.0 with 1R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for 16A power circuit mains from DB to socket.	Mtrs	30				
2.3	Supply, Wiring testing & commissioning of 4R 6.0 with 2R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for DB incomer.	Mtrs	30				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
3.0	POWER OUTLETS:						
3.1	Supply, fixing, testing & commissioning of 6A 5pin modular type socket & switch located at switch box/location with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	10				
3.2	Supply, fixing, testing & commissioning of 16A 5pin modular type dependent socket & switch with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	10				
3.3	Supply, fixing, testing & commissioning of 6/16A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	10				
3.4	Supply, fixing, testing & commissioning of 20A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	6				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
4.0	DISTRIBUTION BOARDS:						
4.1	Provision for - Shifting, installation, testing & commissioning of existing Distribution boards as per the technical specification	set	1	0		0	
4.2	Provision for existing machineries / industrial / heavy loaded equipments,Diesel generators,etc.. to be removed technically and safely shifted & stored inside the production unit. After construction activities are completed; these machines will be replaced at required position again and those will be technically installed and commissioned with required electrical industrial wiring,controls,etc..	Set	3	0		0	
5.0	CABLE & TERMINATION:						
5.1	Supply, laying, testing & commissioning of following cables with termination using suitable glands & lugs.						
a	4Cx25sqmm A2XFY cable	Mtrs	10				
	Termination for above cable	Ends	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
b	4Cx16sqmm A2XFY cable	Mtrs	10				
	Termination for above cable	Ends	4				
6	Luminaires						
6.1	Supply, Installation of the following LED light fixtures & fans with necessary accessories such as fasteners, downrods, M.S.pipes & all accessories as required at site.						
a	20W LED tube light	Set	30				
b	Water proof Wall Mounted fancy 12 W LED light	Set	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
c	LED-Picture light/ Mirror light (1X8W)	Set	2				
d	1200mm dia Ceiling Fan	Set	4				
e	Heavy duty industrial exhaust Fan	Set	2				
f	Wall Mounted fan	Set	1				
g	40W street light with wall bracket	Set	1				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
h	bulkhead fitting	Set	3				
i	Buzzer	Set	1				
j	Flexible spring type cable arrangement LED light point with dimmer control	Nos	4				
7.0	COMMUNICATION CABLE & CONDUITS:						
7.1	Supply and laying following sizes of Heavy duty PVC conduits concealed in the ceiling, floors, wall etc with all accessories like bends, couplers, pullwire etc including cutting and filling the chases						
a	40mm Dia	Mtr	60				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
b	25mm Dia	Mtr	60				
c	19mm Dia	Mtr	30				
8.0 EARTHING							
8.1	Supply,Installation, testing & commissioning of 40mm dia chemical Earth electrode with flange of 3m length buried in ground as per IS The rates shall include excavation of the pit, construction of masonry chamber,providing heavy duty concrete cast slab , painting & making etc.,	Set	1				
8.2	Supply, Wiring testing & commissioning of 2R 6.0 sqmm PVC insulated copper conductor in suitable concealed heavy duty PVC conduit with all accessories as required for main earthing	mtr	30				
8.3	provision for the Electrical repair work to refabriching the existing electrical conduit or fixtures/ items - labour charges for fixing,modifications as per standard specifications etc., complete in all respects						
	Electrician - class 1	Nos	4	0		0	

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
	Electrician - class 2	Nos	4	0		0	
	SUB TOTAL						
	GRAND TOTAL						

PROJECT: PROPOSED PHE BOQ FOR PRODUCTION UNIT AT VAGAIKULAM							
SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
SUBJECT: PLUMBING AND SANITATION WORKS							
1	Receiving, Installing, testing and commissioning of white color Indian water closet with dual flush open Cistern with necessary stand, bend, check nut, P-trap (or) S-trap, stop cock etc., solid seat and cover with polythene buffer and flap, CP flanges, CP bolts and nuts, a Pair of chair bracket and painting the brackets with anti corrosive paint with nuts and bolts, wall flanges etc., complete.	Nos	2				
2	Receiving, Installing, testing and commissioning of white color European water closet with dual flush Concealed Cistern with necessary stand, bend, check nut, P-trap (or) S-trap, stop cock etc., solid seat and cover with polythene buffer and flap, CP flanges, CP bolts and nuts, a Pair of chair bracket and painting the brackets with anti corrosive paint with nuts and bolts, wall flanges etc., complete.	Nos	1				
3	supply, Fixing, testing & Commissioning of Rectangular type wash basin white color with single lever sensor tap, 32mm dia.CP bottle trap with extension pipe, 32 mm dia. CP waste Coupling, M.S.wall brackets with a pair of SS screws to support the basin, 1no.15mm CP angle valve with 450 mm long CP inlet connection pipe, CP wall flange all of approved etc.,	Nos	2				
4	CP fittings						
4.1	Pillar cock	Nos	2				
5	Supplying, installing, testing and commissioning of CP single lever mixer unit comprising of diverter & shower unit / spout, with necessary wall flanges etc., complete	Nos	1				

Sl.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
6	Supply,Collecting, fixing, testing and commissioning of CP brass Bib cock with adjustable wall flange for master control in toilets.						
	20 mm dia	Nos	3				
7	supply, checking, storing & fixing 15 mm. dia exposed angular stop cock with 1/2" outlet with wall flange and all accessories,	Nos	3				
8	Supplying, fixing, testing and commissioning of PVC Soil, waste and ventilating pipes (SWR) conforming to IS:13592 /1990 -Type B with rubber ring (conforming to IS : 5382) joints inclusive of all necessary specials like bends, tee, offsets, door bends, junctions, cowls etc., laid under floor /fixed on walls and in pipe shaft with proper pipe support like brackets, hangers, MS grip bolts etc., complete. The support shall be painted with two coats of enamel paint.						
8.1	40 mm for Wash basin drains	Rmt	6				
8.2	50 mm for Washing M/c & Sink	Rmt	3				
8.3	75 mm Waste pipe	Rmt	6				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
8.4	110 mm soil pipe	Rmt	6				
9	Supplying, installing, testing and commissioning of PVC Floor trap with 110mm dia inlet and 75mm dia. outlet fixed on a bed of cement concrete with 150 x 150mm stainless steel type grating with threaded cover (Heavy duty type) etc., complete.	Nos	1				
10	Supplying, installing, fixing, jointing, testing and commissioning of approved make Chlorinated Polyvinyl Chloride pipes (CPVC) up to 50mm dia SDR.11, ASTM CTS, and above 50mm dia CPVC schedule 40 ASTM IPS. Fittings up to 50mm dia SDR.11, ASTM CTS and above 50mm dia CPVC CORZON schedule 40 fittings. The fittings and specials such as tees, elbows, couplers, bends, enlargers etc. with CPVC brass threaded combination / transition specials such as male adapters brass threaded female adapters, brass FPT Tee, Brass FPT elbow etc., where connection with metal is to be made including necessary drilling holes, chasing walls and making the same good in cement marmor 1:1 and restore the same in original condition neatly as directed by the Engineer in-charge. Joints to be made with CPVC solvent cement up to 50mm dia as per ASTM D-2846 and above 50mm dia primer P-70, and solvent conforming to ASTM F-4931 / 724. The solvent used shall be of approved make as recommended by the pipe manufacturer. Rate shall include necessary MS supports, clamps, hanging rods, Grip bolts and painting of all supports with 02 coats of enamel paint etc., complete in all respect.						
10.1	20 mm dia	Rmt	6				

Sl.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
10.2	32 mm dia	Rmt	4				
11	Providing, fixing, jointing and testing in position the following U-PVC Pipes as per ASTM D 1785 Schedule 80 and threaded conforming to IS:554. All fittings to be of Schedule 80. . Cut to required lengths including all necessary fittings and specials such as bends, tees, unions, reducers, flanges and plugs etc. The pipes & fittings shall be tested to a pressure as per IS & suppliers standards. he pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality jointing lubricant. The pipes shall be erected plumb in the risers. Erection of the above pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.						
	25 mm dia (I.D)	Rmt	6				
12	Supplying, installing and testing and commissioning of approved make PN 16 class GM ball valves with necessary unions etc., complete in all respect.						
	a) 20 mm dia	Nos	4				
	b) 25 mm dia (Screwed ends)	Nos	2				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
13	M.S brackets for the supports of pipes	Kg	12				
14	Providing and fixing testing and commissioning of PVC pipe for Risers to IS:13592 of SWR quality Type B, for ground floor buried lines, external buried including all fittings like tees, elbows, bends, collars, coupling, brackets, clamps, fasteners, , etc jointing with rubber ring / solvent cement followed by application of leak proof adhesive like FRP paste complete. The pipes shall be fixed properly aligned vertical with suitable Galvanized MS pipe clamps. Work to include making necessary holes in the masonry walls etc.. and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. ,						
	75mm dia	Rmt	3				
	110mm dia	Rmt	3				
15	Provision for Supply- fabrication- erection of Chainlink fencing near the openwell and it surrounding with 7' Height 3.5"x3.5" C/s Stone support,ctc between the stone supports will be 3M and factory made 5' height chainlink fencing along with barbed wire including conveyance, loading unloading etc. all complete complying with relevant standard specification and as directed by the departmental officers.	Rmt	60				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
16	Provision for Supply and erection of 3HP Submersible pump with existing pipeline at openwell including conveyance, loading unloading,labour, etc. all complete complying with relevant standard specification and as directed by the departmental officers.	Set	1				
				TOTAL -Sum of Above items			

SIGNAGE BOQ FOR PRODUCTION UNIT,VAGAIKULAM					
SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
	SIGNAGES				
1.0	Providing and installing in position the following type of sign boards made out of 3mm thick "Opaque" PVC foam board with computer cut. PVC non-reflective self adhesive vinyle painted foam board along with directional FR Reflective tape, complete with mirror fasteners.				
a.	Signages with printed "IN CASE OF FIRE, USE STAIRS UNLESS INSTRUCTED OTHERWISE" of 1.5cm height letters in red with white back ground. The size of the board shall be 25cm * 30cm and shall be fixed at the height of 2mts, from finished floor near Exit.	1	Nos.		
2.0	Floor & room indentification signage (i.e, Drilling lathe,Store,etc..) at each stair enclosure on every floor, indicating the floor number in words,work shops,toilets,etc.. lettering size shall be 7.5cm with contrasting colour from back ground. Size shall be 15cm * 60cm.	4	Nos.		
3.0	Providing and fixing in position the signage of " Incase of fire do use this " Size 8" x 8"	1	Nos.		
4.0	Providing and fixing in position the signage of " Fire Extinguisher " to be pasted immediately above the every extinguisher. Size 4" x 4"	4	Nos.		
5.0	Providing and installing in position - the following type of sign boards made out of flex sign board with fixing supports and MS frames,screws,labour,etc..Complete	3.3	Sq.M		
TOTAL FOR SIGNAGE					

ELECTRICAL & ELV BOQ FOR PRODUCTION UNIT AT SWAMIMALAI

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
				1.0	POINT WIRING:		
1.1	Supply, installation, testing and commissioning of point wiring using 3 runs of 1.5 sqmm FRLS (P, N & E) PVC insulated, unsheathed,multistrand copper conductor wires in 20mm dia PVC conduit. The rate shall include wall cutting, plastering, supply of wires, conduits, junction box, termination accessories, 16G metal switch boxes modular type one/two way 6A switch/sockets,suitable front plate as required.						
a)	Primary Point(one way)						
		Point	20				
b)	secondary Point						
		Point	10				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
c)							
d)	Two way point light point	Point	2				
e)	one way fan point with 1M electronic regulator	Point	6				
f)	Exhaust fan point including 6A socket near fan	Point	1				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
g)	Call bell point with bell push	Point	1				
h)	Flexible spring type cable arrangement LED light point with dimmer control	Point	10				
2.0	PRIMARY CIRCUIT WIRING:						
2.1	Supply, Wiring testing & commissioning of 2R 2.5 with 1R 1.5sqmm PVC insulated copper conductor 1100 volts grade FRLS wire in suitable concealed heavy duty PVC conduit with all accessories as required for lighting & small power circuit mains from DB to switch/socket board.	Mtrs	60				
2.2	Supply, Wiring testing & commissioning of 2R 4.0 with 1R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for 16A power circuit mains from DB to socket.	Mtrs	60				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
2.3	Supply, Wiring testing & commissioning of 4R 6.0 with 2R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for DB incomer.	Mtrs	20				
3.0	POWER OUTLETS:						
3.1	Supply, fixing, testing & commissioning of 6A 5pin modular type socket & switch located at switch box/location with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	10				
3.2	Supply, fixing, testing & commissioning of 16A 5pin modular type dependent socket & switch with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	5				
3.3	Supply, fixing, testing & commissioning of 6/16A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	10				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
3.4	Supply, fixing, testing & commissioning of 20A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	5				
4.0	DISTRIBUTION BOARDS:						
4.1	Provision for - Shifting, installation, testing & commissioning of existing Distribution boards as per the technical specification	set	2	0		0	
5	Luminaires						
5.1	Supply, Installation of the following LED light fixtures & fans with necessary accessories such as fasteners, downrods, M.S.pipes & all accessories as required at site.						
a	26W Ceiling/false ceiling mounted LED light	Set	4				
b	20W LED tube light	Set	20				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
c	Water proof Wall Mounted fancy 12 W LED light	Set	2				
d	LED-Picture light/ Mirror light (1X8W)	Set	10				
e	LED-Outdoor water proof down light/ focus light (1X8W)	Set	2				
f	Track light fixture for Light fixture	Nos	2				
g	Track light fixture with 8W LED LIGHT	Nos	4				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
h	Track light fixture with 4W LED LIGHT	Nos	8				
i	LED strip with regulator	Mtrs	6				
j	Chandelier Light	Set	1				
k	1200mm dia Ceiling Fan	Set	6				
l	Heavy duty industrial exhaust Fan	Set	1				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
m	300mm dia Exhaust Fan	Set	2				
n	Wall Mounted fan	Set	2				
o	40W street light with wall bracket	Set	3				
p	bulkhead fitting	Set	2				
q	Buzzer	Set	1				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
r	Flexible spring type cable arrangement LED light point with dimmer control	Nos	6				
6.0	COMMUNICATION CABLE & CONDUITS:						
6.1	Supply and laying following sizes of Heavy duty PVC conduits concealed in the ceiling, floors, wall etc with all accessories like bends, couplers, pullwire etc including cutting and filling the chases						
a	40mm Dia	Mtr	30				
b	25mm Dia	Mtr	20				
c	19mm Dia	Mtr	25				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
6.2	Supply, laying of CAT6 cable for LAN communication.	Mtr	20				
6.3	Supply and installation of modular flush mounted RJ45 data Outlet with front plate 1.2mm thick GI Box complete with all accessories as required.	Nos	3				
6.40	Supply, laying of twin core twisted pair cable for speaker	Mtr	20				
7	provision for the Electrical repair work to refabriching the existing electrical conduit or fixtures/ items - labour charges for fixing,modifications as per standard specifications etc., complete in all respects						
7.1	Electrician - class 1	Nos	5	0		0	

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
7.2	Electrician - class 2	Nos	4	0		0	
					SUB TOTAL		
					GRAND TOTAL		

PROJECT: PROPOSED PHE BOQ FOR PRODUCTION UNIT AT SWAMIMALAI

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
PLUMBING AND SANITATION WORKS							
I	SOIL WASTE VENT AND RAIN WATER PIPES						
1	Supplying, fixing, testing and commissioning of PVC Soil, waste and ventilating pipes (SWR) conforming to IS:13592 /1990 -Type B with rubber ring (conforming to IS : 5382) joints inclusive of all necessary specials like bends, tee, offsets, door bends, junctions, cowls etc., laid under floor /fixed on walls and in pipe shaft with proper pipe support like brackets, hangers, MS grip bolts etc., complete. The support shall be painted with two coats of enamel paint.						
INTERNAL							
1.1	40 mm for Wash basin drains	Rmt	6				
1.2	75 mm Waste pipe	Rmt	24				
VERTICAL							
1.3	110 mm (Rain water -vertical)	Rmt	36				
1.4	75 mm (waste -vertical)	Rmt	3				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
2	Supplying, installing, testing and commissioning of PVC Floor trap with 110mm dia inlet and 75mm dia. outlet fixed on a bed of cement concrete with 150 x 150mm stainless steel type grating with threaded cover (Heavy duty type) etc., complete. The cost shall include Cockroach Traps.,	Nos	2				
II INTERNAL WATER SUPPLY SYSTEM							
3	Supplying, installing, fixing, jointing, testing and commissioning of approved make Chlorinated Polyvinyl Chloride pipes (CPVC) up to 50mm dia SDR.11, ASTM CTS, and above 50mm dia CPVC schedule 40 ASTM IPS. Fittings up to 50mm dia SDR.11, ASTM CTS and above 50mm dia CPVC CORZON schedule 40 fittings. The fittings and specials such as tees, elbows, couplers, bends, enlargers etc. with CPVC brass threaded combination / transition specials such as male adapters brass threaded female adapters, brass FPT Tee, Brass FPT elbow etc., where connection with metal is to be made including necessary drilling holes, chasing walls and making the same good in cement mortar 1:1 and restore the same in original condition neatly as directed by the Engineer in-charge. Joints to be made with CPVC solvent cement up to 50mm dia as per ASTM D-2846 and above 50mm dia primer P-70, and solvent conforming to ASTM F-4931 / 724. The solvent used shall be of approved make as recommended by the pipe manufacturer. Rate shall include necessary MS supports, clamps, hanging rods, Grip bolts and painting of all supports with 02 coats of enamel paint etc., complete in all respect.						
Cold Water - Internal							
	a) 20 mm dia (I.D)	Rmt	6				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
4	Providing, fixing, jointing and testing in position the following U-PVC Pipes as per ASTM D 1785 Schedule 80 and threaded conforming to IS:554, All fittings to be of Schedule 80. . Cut to required lengths including all necessary fittings and specials such as bends, tees, unions, reducers, flanges and plugs etc. The pipes & fittings shall be tested to a pressure as per IS & suppliers standards. he pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality jointing lubricant. The pipes shall be erected plumb in the risers. Erection of the above pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.						
	Riser & Terrace Ring Main						
	a) 25 mm dia (I.D)	Rmt	12				
	b) 32 mm dia (I.D)	Rmt	36				
	c) 40 mm dia (I.D)	Rmt	18				
	d) 50 mm dia (I.D)	Rmt	24				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
5	Supplying, installing and testing and commissioning of approved make PN 16 class GM ball valves with necessary unions etc., complete in all respect.						
	a) 20 mm dia	Nos	1				
	b) 25 mm dia (Screwed ends)	Nos	1				
	c) 32 mm dia (Screwed ends)	Nos	1				
	d) 40 mm dia (Screwed ends)	Nos	1				
	e) 50 mm dia (Screwed ends)	Nos	2				
6	M.S brackets for the supports of pipes	Kg	10				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
III	EXTERNAL WATER SUPPLY						
7	Providing, fixing, jointing and testing in position the following U-PVC Pipes as per ASTM D 1785 Schedule 80 and threaded conforming to IS:554, All fittings to be of Schedule 80. . Cut to required lengths including all necessary fittings and specials such as bends, tees, unions, reducers, flanges and plugs etc. The pipes & fittings shall be tested to a pressure as per IS & suppliers standards. he pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality jointing lubricant. The pipes shall be erected plumb in the risers. Erection of the above pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.						
	a) 32 mm dia (I.D)	Rmt	24				
	b) 40 mm dia (I.D)	Rmt	24				
8	Supplying, installing, testing and commissioning butterfly valves with standard lever conforming to IS standard 13039 with necessary flanges, nuts and bolts etc., complete.						
	a) 100 mm dia	Nos	1				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
9	Supplying and fixing in position approved make PN 16 non-return valve conforming to IS 778 with unions etc., complete.						
	a) 32 mm dia	Nos	1				
	b) 40mm dia	Nos	1				
10	Supplying and fixing in position approved make pot / Y - strainer complete conforming to IS standards etc., complete.						
	a) 50 mm dia	Nos	1				
11	Supplying, installing, testing and commissioning of factory made double layer water tank with lid.Erection of the connecting pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.(Sintex or any Eqvnt.)						
	a) for 1000Litre	Nos	1				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
12	Supply and installation of Water proof treatment chemicals in layers over existing terrace surface and joints in horizontal/vertical application as per the manufacturers product details and standard specification.(Fosrac/Dr.Fixit/eqv'nt)	Sq.M	110	0		0	
	SUB TOTAL						
	GRAND TOTAL FOR SUPPLY & ERECTION						

SIGNAGE BOQ FOR PRODUCTION UNIT,SWAMIMALAI					
SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
	SIGNAGES				
1.0	Providing and installing in position the following type of sign boards made out of 3mm thick "Opaque" PVC foam board with computer cut. PVC non-reflective self adhesive vinyle painted foam board along with directional FR Reflective tape, complete with mirror fasteners.				
a.	Signages with printed "IN CASE OF FIRE, USE STAIRS UNLESS INSTRUCTED OTHERWISE" of 1.5cm height letters in red with white back ground. The size of the board shall be 25cm * 30cm and shall be fixed at the height of 2mts, from finished floor near Exit.	1	Nos.		
2.0	Floor & room indentification signage (i.e, Drilling lathe,Store,etc..) at each stair enclosure on every floor, indicating the floor number in words,work shops,toilets,etc.. lettering size shall be 7.5cm with contrasting colour from back ground. Size shall be 15cm * 60cm.	4	Nos.		
3.0	Providing and fixing in position the signage of " Incase of fire do use this " Size 8" x 8"	1	Nos.		
4.0	Providing and fixing in position the signage of " Fire Extinguisher " to be pasted immediately above the every extinguisher. Size 4" x 4"	4	Nos.		
5.0	Providing and installing in position - the following type of sign boards made out of flex sign board with fixing supports and MS frames,screws,labour,etc..Complete	3.3	Sq.M		
TOTAL FOR SIGNAGE					

ELECTRICAL & ELV BOQ FOR PRODUCTION UNIT AT THANJAVUR

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
1.0	POINT WIRING:						
1.1	Supply, installation, testing and commissioning of point wiring using 3 runs of 1.5 sqmm FRLS (P, N & E) PVC insulated, unsheathed,multistrand copper conductor wires in 20mm dia PVC conduit. The rate shall include wall cutting, plastering, supply of wires, conduits, junction box, termination accessories, 16G metal switch boxes modular type one/two way 6A switch/sockets,suitable front plate as required.						
a)	Primary Point(one way)	Point	10				
b)	secondary Point	Point	10				
c)	Two way point light point	Point	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
d)	one way fan point with 1M electronic regulator	Point	4				
e)	Exhaust fan point including 6A socket near fan	Point	1				
f)	Call bell point with bell push	Point	1				
g)	Flexible spring type cable arrangement LED light point with dimmer control	Point	4				
2.0	PRIMARY CIRCUIT WIRING:						

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
2.1	Supply, Wiring testing & commissioning of 2R 2.5 with 1R 1.5sqmm PVC insulated copper conductor 1100 volts grade FRLS wire in suitable concealed heavy duty PVC conduit with all accessories as required for lighting & small power circuit mains from DB to switch/socket board.	Mtrs	20				
2.2	Supply, Wiring testing & commissioning of 2R 4.0 with 1R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for 16A power circuit mains from DB to socket.	Mtrs	20				
2.3	Supply, Wiring testing & commissioning of 4R 6.0 with 2R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for DB incomer.	Mtrs	15				
3.0	POWER OUTLETS:						
3.1	Supply, fixing, testing & commissioning of 6A 5pin modular type socket & switch located at switch box/location with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	5				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
3.2	Supply, fixing, testing & commissioning of 16A Spin modular type dependent socket & switch with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	5				
3.3	Supply, fixing, testing & commissioning of 6/16A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	5				
3.4	Supply, fixing, testing & commissioning of 20A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	3				
4.0	DISTRIBUTION BOARDS:						
4.1	Provision for - Shifting, installation, testing & commissioning of existing Distribution boards as per the technical specification	set	2	0		0	
5	Luminaires						
5.1	Supply, Installation of the following LED light fixtures & fans with necessary accessories such as fasteners, downrods, M.S.pipes & all accessories as required at site.						

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
a	20W LED tube light	Set	12				
b	Water proof Wall /Floor Mounted fancy 18 W LED light	Set	6				
c	LED-Picture light/ Mirror light (1X8W)	Set	10				
d	LED-Outdoor water proof down light/ focus light (1X4W+4W)	Set	4				
e	Track light fixture for Light fixture	Nos	2				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
f	Track light fixture with 4W LED LIGHT	Nos	8				
g	LED outdoor compound wall light	Nos	4				
h	1200mm dia Ceiling Fan	Set	6				
i	Wall Mounted fan	Set	4				
j	40W street light with wall bracket	Set	1				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
k	Flexible spring type cable arrangement LED light point with dimmer control	Nos	4				
6.0	COMMUNICATION CABLE & CONDUITS:						
6.1	Supply and laying following sizes of Heavy duty PVC conduits concealed in the ceiling, floors, wall etc with all accessories like bends, couplers, pullwire etc including cutting and filling the chases						
a	40mm Dia	Mtr	35				
b	25mm Dia	Mtr	20				
c	19mm Dia	Mtr	20				

S.No.	Description	Unit	QTY	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
7	provision for the Electrical repair work to refabriching the existing electrical conduit or fixtures/ items - labour charges for fixing,modifications as per standard specifications etc., complete in all respects						
7.1	Electrician - class 1	Nos	5	0		0	
7.2	Electrician - class 2	Nos	4	0		0	
SUB TOTAL							
GRAND TOTAL							

PROJECT: PROPOSED PHE BOQ FOR PRODUCTION UNIT AT THANJAVUR

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
PLUMBING AND SANITATION WORKS							
I	SOIL WASTE VENT AND RAIN WATER PIPES						
1	Supplying, fixing, testing and commissioning of PVC Soil, waste and ventilating pipes (SWR) conforming to IS:13592 /1990 -Type B with rubber ring (conforming to IS : 5382) joints inclusive of all necessary specials like bends, tee, offsets, door bends, junctions, cowls etc., laid under floor /fixed on walls and in pipe shaft with proper pipe support like brackets, hangers, MS grip bolts etc., complete. The support shall be painted with two coats of enamel paint.						
1.1	110 mm (Rain water -vertical/Horizontal)	Rmt	60				
1.2	75 mm (waste line)	Rmt	3				
2	Supplying, installing, testing and commissioning of PVC Floor trap with 110mm dia inlet and 75mm dia. outlet fixed on a bed of cement concrete with 150 x 150mm stainless steel type grating with threaded cover (Heavy duty type) etc., complete. The cost shall include Cockroach Traps.,	Nos	2				
II	INTERNAL WATER SUPPLY SYSTEM						

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
3	Supplying, installing, fixing, jointing, testing and commissioning of approved make Chlorinated Polyvinyl Chloride pipes (CPVC) up to 50mm dia SDR.11, ASTM CTS, and above 50mm dia CPVC schedule 40 ASTM IPS. Fittings up to 50mm dia SDR.11, ASTM CTS and above 50mm dia CPVC CORZON schedule 40 fittings. The fittings and specials such as tees, elbows, couplers, bends, enlargers etc. with CPVC brass threaded combination / transition specials such as male adapters brass threaded female adapters, brass FPT Tee, Brass FPT elbow etc., where connection with metal is to be made including necessary drilling holes, chasing walls and making the same good in cement mortar 1:1 and restore the same in original condition neatly as directed by the Engineer in-charge. Joints to be made with CPVC solvent cement up to 50mm dia as per ASTM D-2846 and above 50mm dia primer P-70, and solvent conforming to ASTM F-4931 / 724. The solvent used shall be of approved make as recommended by the pipe manufacturer. Rate shall include necessary MS supports, clamps, hanging rods, Grip bolts and painting of all supports with 02 coats of enamel paint etc., complete in all respect.						
	Cold Water - Internal						
	a) 20 mm dia (I.D)	Rmt	5				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
4	Providing, fixing, jointing and testing in position the following U-PVC Pipes as per ASTM D 1785 Schedule 80 and threaded conforming to IS:554, All fittings to be of Schedule 80. . Cut to required lengths including all necessary fittings and specials such as bends, tees, unions, reducers, flanges and plugs etc. The pipes & fittings shall be tested to a pressure as per IS & suppliers standards. he pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality jointing lubricant. The pipes shall be erected plumb in the risers. Erection of the above pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.						
	Riser & Terrace Ring Main						
	a) 25 mm dia (I.D)	Rmt	18				
	b) 32 mm dia (I.D)	Rmt	24				
	c) 40 mm dia (I.D)	Rmt	18				
	d) 50 mm dia (I.D)	Rmt	18				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
5	Supplying, installing and testing and commissioning of approved make PN 16 class GM ball valves with necessary unions etc., complete in all respect.						
	a) 20 mm dia	Nos	1				
	b) 25 mm dia (Screwed ends)	Nos	1				
	c) 32 mm dia (Screwed ends)	Nos	1				
	d) 40 mm dia (Screwed ends)	Nos	1				
	e) 50 mm dia (Screwed ends)	Nos	1				
6	M.S brackets for the supports of pipes	Kg	9				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
III	EXTERNAL WATER SUPPLY						
7	Providing, fixing, jointing and testing in position the following U-PVC Pipes as per ASTM D 1785 Schedule 80 and threaded conforming to IS:554, All fittings to be of Schedule 80. . Cut to required lengths including all necessary fittings and specials such as bends, tees, unions, reducers, flanges and plugs etc. The pipes & fittings shall be tested to a pressure as per IS & suppliers standards. he pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality jointing lubricant. The pipes shall be erected plumb in the risers. Erection of the above pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.						
	a) 32 mm dia (I.D)	Rmt	12				
	b) 40 mm dia (I.D)	Rmt	12				
8	Supplying, installing, testing and commissioning butterfly valves with standard lever conforming to IS standard 13039 with necessary flanges, nuts and bolts etc., complete.						
	a) 100 mm dia	Nos	1				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
9	Supplying and fixing in position approved make PN 16 non-return valve conforming to IS 778 with unions etc., complete.						
	a) 32 mm dia	Nos	1				
	b) 40mm dia	Nos	1				
10	Supplying and fixing in position approved make pot / Y - strainer complete conforming to IS standards etc., complete.						
	a) 50 mm dia	Nos	1				
11	Supplying, installing, testing and commissioning of factory made double layer water tank with lid.Erection of the connecting pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.(Sintex or any Eqvnt.)						
	a) for 1000Litre	Nos	1				

SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
12	Supply and installation of Water proof treatment chemicals in layers over existing terrace surface and joints in horizontal/vertical application as per the manufacturers product details and standard specification.(Fosrac/Dr.Fixit/eqv'nt)	Sq.M	80	0		0	
	SUB TOTAL						
	GRAND TOTAL FOR SUPPLY & ERECTION						

SIGNAGE BOQ FOR PRODUCTION UNIT, THANJAVUR					
SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
	SIGNAGES				
1.0	Providing and installing in position the following type of sign boards made out of 3mm thick "Opaque" PVC foam board with computer cut. PVC non-reflective self adhesive vinyle painted foam board along with directional FR Reflective tape, complete with mirror fasteners.				
a.	Signages with printed "IN CASE OF FIRE, USE STAIRS UNLESS INSTRUCTED OTHERWISE" of 1.5cm height letters in red with white back ground. The size of the board shall be 25cm * 30cm and shall be fixed at the height of 2mts, from finished floor near Exit.	1	Nos.		
2.0	Floor & room indentification signage (i.e, Drilling lathe,Store,etc..) at each stair enclosure on every floor, indicating the floor number in words,work shops,toilets,etc.. lettering size shall be 7.5cm with contrasting colour from back ground. Size shall be 15cm * 60cm.	4	Nos.		
3.0	Providing and fixing in position the signage of " Incase of fire do use this " Size 8" x 8"	1	Nos.		
4.0	Providing and fixing in position the signage of " Fire Extinguisher " to be pasted immediately above the every extinguisher. Size 4" x 4"	4	Nos.		
5.0	Providing and installing in position - the following type of sign boards made out of flex sign board with fixing supports and MS frames,screws,labour,etc..Complete	3.3	Sq.M		
TOTAL FOR SIGNAGE					

ELECTRICAL & ELV BOQ FOR PRODUCTION UNIT,KALLAKURICHI

S.No.	Description	Unit	Qty	Item Rate in Numbers and words		Amount in Numbers and words	
				Supply	Erection	Supply	Erection
1.0	POINT WIRING:						
1.1	Supply, installation, testing and commissioning of point wiring using 3 runs of 1.5 sqmm FRLS (P, N & E) PVC insulated, unsheathed,multistrand copper conductor wires in 20mm dia PVC conduit. The rate shall include wall cutting, plastering, supply of wires, conduits, junction box, termination accessories, 16G metal switch boxes modular type one/two way 6A switch/sockets,suitable front plate as required.						
a)	Primary Point(one way)	Point	10				
b)	secondary Point	Point	6				
c)	Mirror light point (one way)	Point	3				
d)	Two way point light point	Point	2				

e)	one way fan point with 1M electronic regulator						
		Point	6				
f)	Call bell point with bell push						
		Point	3				
g)	Flexible spring type cable arrangement LED light point with dimmer control						
		Point	3				
2.0 PRIMARY CIRCUIT WIRING:							
2.1	Supply, Wiring testing & commissioning of 2R 2.5 with 1R 1.5sqmm PVC insulated copper conductor 1100 volts grade FRLS wire in suitable concealed heavy duty PVC conduit with all accessories as required for lighting & small power circuit mains from DB to switch/socket board.	Mtrs	10				
2.2	Supply, Wiring testing & commissioning of 2R 4.0 with 1R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for 16A power circuit mains from DB to socket.	Mtrs	10				
2.3	Supply, Wiring testing & commissioning of 4R 6.0 with 2R 2.5sqmm PVC insulated copper conductor 1100 volts grade FRLS in suitable concealed heavy duty PVC conduit with all accessories as required for DB incomer.	Mtrs	6				

3.0 POWER OUTLETS:							
3.1	Supply, fixing, testing & commissioning of 6A 5pin modular type socket & switch located at switch box/location with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	6				
3.2	Supply, fixing, testing & commissioning of 16A 5pin modular type dependent socket & switch with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	6				
3.3	Supply, fixing, testing & commissioning of 6/16A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	2				
3.4	Supply, fixing, testing & commissioning of 20A modular type dependent Switch & socket with suitable front plate GI back box. The cost of including cutting and filling chases, termination, identification etc as required.	Sets	2				
4.0 CABLE & TERMINATION:							
4.1	Supply, laying, testing & commissioning of following cables with termination using suitable glands & lugs.						
a	4Cx16sqmm A2XFY cable						
		Mtrs	15				
b	Termination for above cable						
		Ends	4				

5	Luminaires						
5.1	Supply, Installation of the following LED light fixtures & fans with necessary accessories such as fasteners, downrods, M.S.pipes & all accessories as required at site.						
a	20W LED tube light	Set					
b	LED-Mirror light (1X8W)	Set	9				
c	Flexible spring type cable arrangement LED light point with dimmer control	Set	1				
d	1200mm dia Ceiling Fan	Set	3				
e	Wall Mounted fan	Set	6				
f	40W Water proof street light with wall bracket	Set	3				
			2				

	g bulkhead fitting	Set				
	h Buzzer	Set	2			
			3			
6.0	CONDUITS:					
7.1	Supply and laying following sizes of Heavy duty PVC conduits concealed in the ceiling, floors, wall etc with all accessories like bends, couplers, pullwire etc including cutting and filling the chases					
a	40mm Dia					
		Mtr	3			
b	25mm Dia					
		Mtr	3			
c	19mm Dia					
		Mtr	3			
7.0	EARTHING					
	Supply, Wiring testing & commissioning of 2R 6.0 sqmm PVC insulated copper conductor in suitable concealed heavy duty PVC conduit with all accessories as required for main earthing	mtr	5			

8	Protection Gate made with MS tubes & angles,weld mesh along with required vertical support as per the approved shop drawings and as directed by the departmental officers - which includes handle,hinges and locking facilities,other accessories,Labour Charges for fixing, Conveyance,base concrete,Painting,etc-complete in all respects complying with relevant standard specification.	KG	180			
9	provision for the Electrical repair work to refabrishing the existing electrical conduit or fixtures/ items - labour charges for fixing,modifications as per standard specifications etc., complete in all respects					
9.1	Electrician - class 1	Nos	2			
9.2	Electrician - class 2	Nos	2			
10	SUB TOTAL					
11				GRAND TOTAL (Sum of above Items)		

PROJECT: PROPOSED PHE BOQ FOR PRODUCTION UNIT AT KALLAKURICHI							
SI.No	DESCRIPTION	UNIT	QTY	ITEM RATE IN NUMBERS & WORDS		AMOUNT IN NUMBERS & WORDS	
				SUPPLY	ERECTION	SUPPLY	ERECTION
SUBJECT: PLUMBING AND SANITATION WORKS							
1	Receiving, Installing, testing and commissioning of white color Indian water closet with dual flush open Cistern with necessary stand, bend, check nut, P-trap (or) S-trap, stop cock etc., solid seat and cover with polythene buffer and flap, CP flanges, CP bolts and nuts, a Pair of chair bracket and painting the brackets with anti corrosive paint with nuts and bolts, wall flanges etc., complete.	Nos	2				
2	Receiving, Installing, testing and commissioning of white color European water closet with dual flush Concealed Cistern with necessary stand, bend, check nut, P-trap (or) S-trap, stop cock etc., solid seat and cover with polythene buffer and flap, CP flanges, CP bolts and nuts, a Pair of chair bracket and painting the brackets with anti corrosive paint with nuts and bolts, wall flanges etc., complete.	Nos	1				
3	supply, Fixing, testing & Commissioning of Rectangular type wash basin white color with single lever sensor tap, 32mm dia.CP bottle trap with extension pipe, 32 mm dia. CP waste Coupling, M.S.wall brackets with a pair of SS screws to support the basin, 1no.15mm CP angle valve with 450 mm long CP inlet connection pipe, CP wall flange all of approved etc.,	Nos	2				
4	CP fittings						
4.1	Pillar cock	Nos	2				

5	Supplying, installing, testing and commissioning of CP single lever mixer unit comprising of diverter & shower unit / spout, with necessary wall flanges etc., complete	Nos	1				
6	Supply,Collecting, fixing, testing and commissioning of CP brass Bib cock with adjustable wall flange for master control in toilets.						
	20 mm dia	Nos	3				
7	supply, checking, storing & fixing 15 mm. dia exposed angular stop cock with 1/2" outlet with wall flange and all accessories,	Nos	3				
8	Supplying, fixing, testing and commissioning of PVC Soil, waste and ventilating pipes (SWR) conforming to IS:13592 /1990 -Type B with rubber ring (conforming to IS : 5382) joints inclusive of all necessary specials like bends, tee, offsets, door bends, junctions, cowls etc., laid under floor /fixed on walls and in pipe shaft with proper pipe support like brackets, hangers, MS grip bolts etc., complete. The support shall be painted with two coats of enamel paint						
8.1	40 mm for Wash basin drains	Rmt	6				

8.2	50 mm for Washing M/c & Sink	Rmt	3				
8.3	75 mm Waste pipe	Rmt	6				
8.4	110 mm soil pipe	Rmt	6				
9	Supplying, installing, testing and commissioning of PVC Floor trap with 110mm dia inlet and 75mm dia. outlet fixed on a bed of cement concrete with 150 x 150mm stainless steel type grating with threaded cover (Heavy duty type) etc., complete.	Nos	1				

10	<p>Supplying, installing, fixing, jointing, testing and commissioning of approved make Chlorinated Polyvinyl Chloride pipes (CPVC) up to 50mm dia SDR.11, ASTM CTS, and above 50mm dia CPVC schedule 40 ASTM IPS. Fittings up to 50mm dia SDR.11, ASTM CTS and above 50mm dia CPVC CORZON schedule 40 fittings. The fittings and specials such as tees, elbows, couplers, bends, enlargers etc. with CPVC brass threaded combination / transition specials such as male adapters brass threaded female adapters, brass FPT Tee, Brass FPT elbow etc., where connection with metal is to be made including necessary drilling holes, chasing walls and making the same good in cement mortar 1:1 and restore the same in original condition neatly as directed by the Engineer in-charge. Joints to be made with CPVC solvent cement up to 50mm dia as per ASTM D-2846 and above 50mm dia primer P-70, and solvent conforming to ASTM F-4931 / 724. The solvent used shall be of approved make as recommended by the pipe manufacturer. Rate shall include necessary MS supports, clamps, hanging rods, Grip bolts and painting of all supports with 02 coats of enamel paint etc., complete in all respect.</p>						
10.1	20 mm dia	Rmt	6				
10.2	32 mm dia	Rmt	4				

11	Providing, fixing, jointing and testing in position the following U-PVC Pipes as per ASTM D 1785 Schedule 80 and threaded conforming to IS:554, All fittings to be of Schedule 80. . Cut to required lengths including all necessary fittings and specials such as bends, tees, unions, reducers, flanges and plugs etc. The pipes & fittings shall be tested to a pressure as per IS & suppliers standards. he pipes shall be duly fixed at site, with necessary cutting & jointing of pipe with approved quality jointing lubricant. The pipes shall be erected plumb in the risers. Erection of the above pipe including cutting, jointing of pipes with necessary fittings, erection of the pipes plumb to vertical, clamping the pipes on to MS Hot dip galvanized clamps, pressure testing of pipes, complete.						
	25 mm dia (I.D)	Rmt	6				
12	Supplying, installing and testing and commissioning of approved make PN 16 class GM ball valves with necessary unions etc., complete in all respect.						
	a) 20 mm dia	Nos	4				
	b) 25 mm dia (Screwed ends)	Nos	2				
13	M.S brackets for the supports of pipes	Kg	10				

	Providing and fixing testing and commissioning of PVC pipe for Risers to IS:13592 of SWR quality Type B, for ground floor buried lines, external buried including all fittings like tees, elbows, bends, collars, coupling, brackets, clamps, fasteners, , etc jointing with rubber ring / solvent cement followed by application of leak proof adhesive like FRP paste complete. The pipes shall be fixed properly aligned vertical with suitable Galvanized MS pipe clamps. Work to include making necessary holes in the masonry walls etc.. and making good the damaged portions with mortar filling with 1:4 mix. Before handing over, leak test shall be carried out and any defects found shall be rectified. ,						
14.1	75mm dia	Rmt	3				
14.2	110mm dia	Rmt	3				
15	Provision for Flushing the Existing borewell up to 30M depth- Clearing and flushing the bore and refit/refurbish the same along with existing pipe available.. including conveyance, loading/unloading,labour, etc. all complete complying with relevant standard specification and as directed by the departmental officers.	Set	1	0.00		0	
TOTAL -Sum of Above items							

SIGNAGE BOQ FOR PRODUCTION UNIT,KALLAKURICHI					
SL.NO	DESCRIPTION	QTY	UNIT	Item Rate in Numbers and words	Amount in Numbers and words
	SIGNAGES				
1.0	Providing and installing in position the following type of sign boards made out of 3mm thick "Opaque" PVC foam board with computer cut. PVC non-reflective self adhesive vinyle painted foam board along with directional FR Reflective tape, complete with mirror fasteners.				
a.	Signages with printed "IN CASE OF FIRE, USE STAIRS UNLESS INSTRUCTED OTHERWISE" of 1.5cm height letters in red with white back ground. The size of the board shall be 25cm * 30cm and shall be fixed at the height of 2mts, from finished floor near Exit.	1	Nos.		
2.0	Floor & room indentification signage (i.e, Drilling lathe,Store,etc..) at each stair enclosure on every floor, indicating the floor number in words,work shops,toilets,etc.. lettering size shall be 7.5cm with contrasting colour from back ground. Size shall be 15cm * 60cm.	4	Nos.		
3.0	Providing and fixing in position the signage of " Incase of fire do use this " Size 8" x 8"	1	Nos.		
4.0	Providing and fixing in position the signage of " Fire Extinguisher " to be pasted immediately above the every extinguisher. Size 4" x 4"	4	Nos.		
5.0	Providing and installing in position - the following type of sign boards made out of flex sign board with fixing supports and MS frames,screws,labour,etc..Complete	3.3	Sq.M		
TOTAL FOR SIGNAGE					