



**PRICE-BID**

**Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS**

S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
<b>100 EARTH WORK</b>						
Earth work In excavation, backfilling and disposal including necessarymen/women, materials, equipment, loading, transportation, unloading, dewatering etc as per specification, drawing and as directed by engineer- in-charge for the following.						
101	Earth work in excavation in <b>all types of soil including ash which can be excavated by any means</b> including setting out, levelling, dewatering (but excluding special type of dewatering viz. well point method), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, ramming/compacting the excavated bottom, stacking, disposal of surplus excavated materials within a lead upto 500 m, spreading/levelling of disposed materials etc all complete for following depths below ground level.					
101-a	Depth from ground level but not exceeding 2 m	CUM	<b>850.00</b>	-	-	<b>1.71722805</b>
101-b	Depth exceeding 2 m but not exceeding 4 m	CUM	<b>350.00</b>	-	-	<b>0.84700122</b>
107	Backfilling upto anydepth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with <b>selected materials from compulsorily excavated soil</b> available within a lead upto 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following.				-	-
107-a	Each layer compacted so as to achieve at least 90% maximum drydensityas per IS 2720 (Part-VII)	CUM	<b>1,000.00</b>	-	-	<b>2.10442307</b>
109	<b>Extra over ST No. 101 and 103 to 107</b> for carriage of excavated earth/selected materials for every 1 km or part thereof beyond an initial lead of 500m.	CUM	<b>500.00</b>	-	-	<b>0.15779021</b>
<b>200 CONCRETE WORKS</b>						
Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating and curing, (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.						
202	Concrete of <b>grade M10</b> (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as <b>lean concrete, levelling course</b> , mud mat under and around foundations/floors at anydepth below finished floor level etc.	CUM	<b>60.00</b>	-	-	<b>5.15727771</b>

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
205	Providing and laying Design Mixcement concrete conforming to IS:456 & IS 10262- 2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in <b>foundations/substructure, grade slab, paving, drains, under floors</b> etc at anylevel below finished floor level, anyshape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete <b>as per specification &amp; drawing for the following.</b>				-	-
205-a	M25 Grade	CUM	190.00	-	-	20.21257309
211	Providing and <b>encasing</b> of structural steel member with <b>concrete</b> using nominal aggregate size of 12.5mm down. Encased member shall be wrapped with welded wire mesh/chicken wire mesh with proper lap etc. complete as per specification for the following grades. (Payment of welded wire mesh, chicken wire mesh shall be made separately)				-	-
211-a	M20 grade	CUM	8.00	-	-	0.77005959
211-b	M25 grade	CUM	3.50	-	-	0.35991315
212	<b>Screed concrete</b> conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at anylevel or thickness, drains etc complete as per following.				-	-
212-a	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume)	CUM	27.00	-	-	2.56144557
213	Providing and laying Design Mixcement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in <b>precast works</b> like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent precast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.				-	-
213-A	M 25 grade	CUM	3.00	-	-	0.41979943
215	<b>Dismantling concrete</b> workfor all types of structures at all levels including stacking of servicable material to a lead of 500 m and disposal of unservicable material upto a lead of 2 km, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.				-	-

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
215-A	Plain cement concrete of all grades	CUM	35.00	-	-	0.69973036
215-B	Reinforced cement concrete of all grades	CUM	130.00	-	-	3.55649898
216	<b>Chipping of concrete</b> in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	CUDM	12,000.00	-	-	9.59585915
217	Extra over and above St No 216 for <b>cutting of reinforcement</b> , all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	20.00	-	-	0.00424465
218	Cutting Reinforced concrete with mechanised tools like Core drilling machine etc. for cutting pockets, holes, cores in slab, beam, column or foundation as per direction of engineer in charge.	CUDM	8.00	-	-	0.10102264
222	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size <b>in substructure including foundation and pedestal</b> , any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete <b>as per specification &amp; drawing for the following, straightening of existing reinforcement, if required. The cost of new reinforcement and dismantalling of concrete will be paid seperately.</b>				-	-
c	Roughening / chipping of existing concrete face,supply, applying NITO BOND Fosroc or equivalent on existing concrete surface.(Roughing/chipping to be paid separately)	SQM	50.00	-	-	0.41676915
<b>300 FORMWORK</b>					-	-
<b>Providing, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering complete including pockets etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.</b>					-	-
301	<b>Fairface form work</b> with good qualitywater proof plywood of required thickness and smooth surface <b>below finished ground floor level</b> for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	SQM	400.00	-	-	3.45639908

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
304	Providing, fixing and removing <b>formwork in block-outs/pockets</b> and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.				-	-
304-a	Upto 150 mm depth	Each	10.00	-	-	0.04211430
304-b	Pockets of depths more than 150mm and upto 300 mm depth	Each	40.00	-	-	0.25870212
<b>400 REINFORCEMENT</b>					-	-
402	Providing, straightening, cutting, bending, placing in position at any level, binding/welding in position of <b>steel reinforcements of TMT steel of grade Fe-500</b> confirming to <b>IS:1786</b> including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer.	MT	12.00	-	-	16.34296203
405	Providing & <b>fixing of Rebar</b> in existing concrete surface by inserting reinforcement bar with <b>Epoxy based</b> suitable bonding compound of <b>Hilti or equivalent make (HIT-RE-500 of Hilti or equivalent make)</b> for interconnection of new R.C. structure with existing R.C. structure. Depth of drilled hole should be suitable to develop maximum recommended strength as per approved manufacturer's recommendation. This item includes supply of all materials including bonding chemicals, T&P required to execute the work, cost of all labour, transportation of chemical, staging to reach work place etc. all complete as directed by Engineer - in - Charge. Random Pull out non destructive test as directed by engineer shall be conducted to ensure strength of bond and same is included in this item. Reinforcement bar shall be paid separately under item no. 402 as applicable.				-	-
405 a)	8mm reinforcement bar	Nos.	1,080.00	-	-	3.37578028
405 b)	12mm Reinforcement bar	Nos.	10.00	-	-	0.04167691
405 c)	16mm Reinforcement bar	Nos.	10.00	-	-	0.07293414
405 d)	20mm Reinforcement bar	Nos.	190.00	-	-	1.97963593
<b>500 WATER PROOFING WORKS</b>					-	-
<b>Water proofing works including all labour, material, equipment, transportation, handling, curing, sampling, testing etc at any level as per specification, drawings and as directed by engineer - in - charge.</b>					-	-
501	Providing and laying underbed grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 25 mm including preparation of surface, batching, mixing, leveling etc. all complete.	SQM	370.00	-	-	1.15296747

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
503	<b>Providing and applying bitumen felt water proofing for normal treatment</b> having bonding materials consisting of blown type conforming to IS: 702 or residual bitumen conforming to IS: 73 or a mixture of the two with one layer of felt consisting of five courses and with a minimum overlap of 75 to 100 mm of felt including preparation of surfaces etc all complete. (For description of layers refer specification)				-	-
503-b	<b>With fiber base felt</b>	SQM	425.00	-	-	3.76387775
513	Providing and applying concrete structures <b>two coats of ERPB (Epoxy rasin based anticorrosive and chemical resistant paint) over a coat of CPCI</b> (concrete penetrating bipolar corrosion inhibitor) with 300 to 325 micron DFT for protection of concrete against carbonation and chloride penetration in saline/marine environment all complete of approved make and as per manufacturer's recommendation	SQM	10.00	-	-	0.03125722
<b>600 JOINTS AND FILLERS</b>					-	-
<b>Joints &amp; fillers including all labour, material, equipment, transportation, handling etc at</b>					-	-
601	Supplying & installation of <b>bitumen impregnated fibre board</b> confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete.				-	-
601-a	12 mm wide joints.	SQM	1.00	-	-	0.01302369
602	Providing and applying <b>polysulphide based sealant</b> conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves:				-	-
602-a	12mm X 25mm	RM	65.00	-	-	0.27089995
602-a	6mm X 6mm	RM			-	-
606	Providing and fixing <b>PVC water stops</b> in joints conforming to IS 12200 & IS 15058 all complete for the following:				-	-
606-a	150 mm wide and 8 mm thick	RM	1.00	-	-	0.00520948
606-b	230 mm wide and 8 mm thick	RM	1.00	-	-	0.00625144
<b>700 MS EMBEDMENTS</b>					-	-
<b>Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>					-	-
704	Taking Delivery from BHEL stores,transportation, unloading at site, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, locknuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete.	MT	2.20	-	-	0.77309845

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
705	Supplying, fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.				-	-
705-b	PVC pipes / conduits of all diameters	Quintal	0.25	-	-	0.20838259
705-d	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for brickwork with expansion sleeve of A6 polyamide:				-	-
705-d-i	Upto 250 kg	Each	2.00	-	-	0.00625144
705-d-ii	Beyond 250 Kg and upto 500 kg	Each	2.00	-	-	0.01041895
705-e	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work with expansion sleeve of stainless steel:				-	-
705-e-i	Upto 250 kg	Each	2.00	-	-	0.01041895
705-e-ii	Beyond 250 Kg and upto 500 kg	Each	2.00	-	-	0.01250289
					-	-
<b>800 GROUTING</b>					-	-
<b>Grouting including all labour, material, equipment, roughening surface, cleaning, ramming, curing etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.</b>					-	-
805	Providing & grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with <b>Conbextra GP-2 or equivalent</b> . (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	1.50	-	-	1.40658342
<b>900</b>					-	-
<b>Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material, equipments, transportation, handling, preparation of working drawings etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>					-	-
904	Providing and fixing single or <b>double steel door shutters with 45mm thk flush design shutter</b> comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including void filled with mineral wool (density as per specification), all fittings, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete.	SQM	2.00	-	-	0.16670618
905	<b>Providing and fixing single or double steel door shutters with 18 gauge M.S. sheets shutter</b> presenting a flush surface on the outside and inside stiffened with semitubular edge and central stiffening rail which shall convey the lock including fixtures, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete.	SQM	2.00	-	-	0.17504120

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
906	<b>Providing and fixing anodized extruded aluminium doors and window (single or double shutter)</b> conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and anodized and electro color coating of required shade as per IS 1868 ( minimum anodized coating of grade AC15 ). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessaryfilling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. <b>Glazing shall be clear float glass of 6mm thickness</b> including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lockwith handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanicallywherever required. (Glazing shall be paid separately)	KG	300.00	-	-	2.50061490
907	Providing and fixing fire proof steel doors (single or double shutter) with panic devices shall be 45mm thk flush design comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centers including all fittings, shop painting with approved post office/signal red color fire resistant paint and mineral wool insulation (64 kg/cum density) complete and shall be fire proof as per IS:3614, TAC requirements and as per specification. Minimum ratings shall be 2 Hrs.	SQM	2.00	-	-	0.64598646
908	<b>Providing and fixing steel windows/ventilator</b> with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision including all fittings, metal beadings, hold fasts, shop and final painting ,glazing etc. all complete. (Glazing shall be paid separately)				-	-
908-a	<b>openable type</b>	SQM	1.00	-	-	0.02500578
908-b	<b>fixed type</b>	SQM	1.00	-	-	0.02083809
911	Providing and fixing of door closers as per IS 3564 ,of approved make & qualityall complete of following type :				-	-
911-a	Over head hydraulic door closures	Each	6.00	-	-	0.15628649

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
913	Providing and fixing in position <b>rolling shutter of hot rolled double dipped galvanised steel</b> lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lockplate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles. (partly coiled and lath/full lath).				-	-
913-b	<b>Mechanically Operated</b>	SQM	7.50	-	-	0.38290285
915	Providing, fixing and fitting of <b>glazing of first grade class</b> in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete.				-	-
915-c	6.0 mm thick clear float glass	SQM	12.00	-	-	0.25005928
917	Providing and fixing <b>12 mm thick BWP particle board</b> , decorative veneer (prelaminated) on both sides, as panels in aluminium framed door shutter, fixed with necessary snap-on-beading etc. all complete (excluding aluminium works).	SQM	5.00	-	-	0.12502982
923	Supply and placing in position suitable grill for all windows and ventilators on ground floor of all buildings as per drawing.				-	-
923-a	Steel	kgs	25.00	-	-	0.04167599
<b>1000 BRICK WORK</b>					-	-
<b>Brickwork masonry including all labour, material, equipment, transportation, handling,</b>					-	-
1001	Providing <b>brick work</b> in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions <b>below plinth</b> including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.				-	-
1001 a	Using <b>flyash lime bricks</b> conforming to IS 12894 with crushing strength of 75 kg/cm <sup>2</sup>	CUM	7.00	-	-	0.55239382
1006	<b>Breaking</b> of existing brick <b>work</b> at all levels including plastering, removing the rubbish up to a distance of 500 m including transportation, loading, unloading etc. all complete as directed by the engineer.	CUM	7.00	-	-	0.21880187
1011	<b>Filling existing brick wall/ partition wall opening</b> at all level including making good the broken edges/surface with cement mortar, painting, finishing to match with existing finishing, scaffolding/supporting at any level, removal of debris upto a lead of 1 km including loading, unloading, transportation etc. all complete.	SQM	3.00	-	-	0.04688584



PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
					-	-
<b>1200 CEMENT MORTAR PLASTER</b>					-	-
<b>Cement mortar plaster including making grooves where ever required including all labour, material, scaffolding, curing etc at anylevel as per specification, drawings and as directed byengineer - in - charge.</b>					-	-
1201	Providing <b>18mm thick plaster</b> in two layers <b>outside</b> the building/boundary wall in cement <b>mortar 1:6</b> on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete.	SQM	<b>40.00</b>	-	-	<b>0.15648611</b>
1202	Providing <b>12mm thick plaster inside</b> the building/boundary wall in cement <b>mortar 1:6</b> on walls finished to a smooth finish as per specification all complete.	SQM	<b>65.00</b>	-	-	<b>0.17483183</b>
1205	Providing <b>12mm thick plaster in walls, drains/culverts /boundarwall</b> with a paste of <b>neat cement @ 1kg/sqm</b> and rubbed smooth with trowel etc. all complete.	SQM	<b>15.00</b>	-	-	<b>0.04353293</b>
					-	-
<b>1300 FINISHES TO CONCRETE / PLASTERED SURFACES</b>					-	-
<b>Finishes, painting to concrete, plastered surfaces including all labour, material, equipment, surface preparation, scaffolding etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>					-	-
1303	Providing and applying two or more coats of <b>oil bound destemper</b> as per IS 428 of approved brand, shade and manufacture to give smooth, hard, durable & glossyfinish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	<b>250</b>	-	-	<b>0.26049225</b>
1305	Providing and applying two or more coats of <b>acrylic emulsion paint</b> as per IS 5411 of approved brand, shade and manufacture to give smooth, hard, durable & glossyfinish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	<b>99</b>	-	-	<b>0.20629159</b>
1312	Providing and applying <b>2 mm thick plaster of paris punning on walls</b> including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	<b>633</b>	-	-	<b>0.65956638</b>

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
1315	Providing and applying two or more coats of <b>Acrylic based weather coat paint</b> of approved brand and manufacture and required shade over one coat of primer after necessary cleaning/ washing, preparing the surface using coir brush/ wire brush, sand paper, including filling of cracks with puttywherever required etc. all complete to give smooth, hard, durable & glossyfinish over a coat of primer over prepared plaster surface as per manufacturers guidelines. The final finished coating shall be fungus resistant, UV resistant, water repellant and extremely durable with color fastness as per specification.	SQM	503	-	-	1.15302434
1316	Providing and applying two or more coats of water bound distemper as per IS code of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	435	-	-	0.45325652
0					-	-
<b>1400 FLOORING AND SKIRTING</b>					-	-
<b>Flooring and skirting at anylevel including base layer, labour, material, equipments, transportation, handling, curing, polishing etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>					-	-
1401	Providing and laying 50 mm thick <b>heavy duty cement concrete in flooring with metallic hardener pigmented topping</b> 12mm thick uniform graded treated iron paricles in flooring. Under layer of 38mm thick cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates 12.5mm well graded) and top layer of 12mm thick metallic concrete of mix 1:2 (1 cement hardner mix with approved qualitymetallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	80	-	-	0.72533268
1417	Providing and laying <b>vitrified ceramic tiles of polished/matt variety of size 600x600</b> from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 minimum 40mm thick underbed for flooring and 12mm thick underbed for dado/skirting with neat cement slurry @3.3Kg/sqm etc. all complete for following				-	-
1417 b	10mm thick tiles In flooring	SQM	55	-	-	0.88275420
1417 e	10 mm thick tiles In skirting and dado upto specific height	SQM	40	-	-	0.64550023
<b>1600 FALSE CEILING</b>					-	-
<b>False ceiling including all labour, material, equipment, transportation, handling,</b>					-	-

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
1606	Providing and Fixing <b>12mm thick Gypsum board plain/perforated false celing tiles(600x600mm)</b> of India Gypsum or equivalent make in plan or elevation with aluminium grid, metal suspension system, anchor fastener adjustable hangers etc. including two or more coats of acrylic emulsion paint of approved colour to give an even shade with smooth finish all complete.as per architectural design and detail.metal suspension system as per ASTM C-635 shall be hot dipped M.S.galvanized (grade 180 as per is :277) nominal size of T-section shall be 24 x 38 mm or 24 x 25 mm cross runners. 24mm wide exposed flange surface shall be permanently color coated.suspension system shall be as per manufaturer's specification supported over movment platform.The work to be complete as per specifications, drawings and direction of engineer.( Materials for structural platform grid for movement made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)	SQM	90	-	-	0.93772228
					-	-
<b>1700 RAIN WATER DOWN TAKE PIPES</b>					-	-
<b>Rain water down take pipes including all labour, material, transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc at anylevel as per specification, drawings and as directed by engineer - in - charge.</b>					-	-
1707	<b>Providing and fixing GI down take</b> pipes conforming to IS:1239 /IS:3589 of medium dutyall complete for following diameters.				-	-
1707 b	150 mm Dia	RM	25	-	-	0.65119372
<b>1800 MISCELLANEOUS WORKS</b>					-	-
<b>Miscellaneous works including all labour, material, equipment etc. at anylevel unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.</b>					-	-
1830	Dismantling old existing structural steel workat anylevel including plates, bolts, cutting rivets, welding, dismembering and stacking the dismantled materials within a lead upto 1km etc all complete.	MT	1	-	-	0.16670600
1834	Providing and Filling below foundations with random rubble stone soling with 63 mm downgraded hard stone aggregate,watering and compaction to minimum of 90% proctor density, including filling the interstices with selected sand over well compacted earth in layers including breaking of stone boulders to required sizes, for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	110	-	-	4.27741567
<b>2300 STRUCTURAL STEEL</b>					-	-

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
<b>Structural steel works including all labour, material, equipments, transportation, handling etc. at anylevel as per specification, drawings and as directed by engineer - in - charge.</b>					-	-
2301	<b>Supplying, fabrication and erection of structural steel with mild steel rolled section / built up section / combination of both</b> conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS: 3052, mild steel rounds, monorails, stays, safetychains, ladders, MS grating etc. in columns, beams, gantry girders, bunkers, silos, hoppers, roof trusses, portals, laced purlins, space frames, hangers, struts, monorails, galleries, stiffeners, wall beams, sheeting runners, brackets, stub columns, bracings, cleats, trestles, base plates, splice plates, chequered plate flooring, decking and seal plates, steel frame grid over false ceiling, walkway platforms, ladders, stairs, stringers, treads, landings, hand-rails etc including 2 coats of redoxide zinc-chromate primer (one coat at shop and one coat after erection), connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating (min preheat and interpass temperature of 20o C for welding over 20 mm and upto 40 mm & 66o C for welding over 40 mm and upto 63 mm & 110o C for thickness over 63 mm & use of low hydrogen/ radiogenic electrodes), post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of temporarystructures, setting column bases, surface preparation by means of manual or mechanical power tools as per IS:1477 part 1, touch-up painting, rectification, dismantling and removal of all temporary structures (weight of temporary structures not payable), return of surplus / waste steel materials to store etc all complete. Including appointment of a seperate agency, approved by BHEL, for review and approval of fabrication drgs, in consultation with BHEL.				-	-
2301-a	a) Fabrication	MT	0.2	-	-	0.07710161
2301-b	b) Erection	MT	0.2	-	-	0.04501055
2301-c	c) Supply Payment Terms:- 90% on supply 10% on fabrication	MT	0.2	-	-	0.21858402

PRICE-BID						
Civil Works Of ESP Retrofitting Unit-5 of 3x210 MW ESP Retrofitting Project Unit-4,5,6 Wanakbori TPS						
S/ NO	DESCRIPTION OF ITEM	UNIT	Quantity	Total Rate	Amount	Weightage (%)
2303	Extra over ST NO. 2301 for providing and application of two coats of <b>primer consisting of chemical resistant epoxyresin</b> and hardener (Minimum 1 Kg of primer mixshall be consumed for priming of 4 to 5 m2 area of surface) instead of primer coat of red oxide zinc-chromate, including touch up painting etc. all complete.	MT	0.2	-	-	0.00145868
2307	Supplying, fabrication, erection and alignment of <b>factorymade electroforged galvanised grating units</b> with mild steel (having minimum galvanisation of 610 g/sqm) conforming to IS:2062 in flooring, platforms, drain and trench covers, walk- ways, passages, staircases with edge binding strips and anti-skid nosing in treads etc. including fixing clamps, fittings, fixtures, all taxes, duties, packing, grinding, drilling, welding, edge preparation, etc. all complete.	MT	0.2	-	-	0.40009477
	<b>MISC. DISMANTLING ITEMS</b>				-	-
2400	Dismantling of false ceiling including lighting fixtures (shall be taken care as per direction of site in charge),clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto 1km all complete(including the cost of hangers ,suspension etc)	SQM	90	-	-	0.07502509
2500	Dismantling of tiling/flooring/skirting/dado etc.including clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto 1km all complete as per dirction of site in charge	SQM	50	-	-	0.04168061
2600	Dismantling of doors and windows including stee/wooden/aluminiuml door frame , door shutter (anytype), window(anytype) including its fasteners, fixtures etc.as directed bythe engineer.	SQM	20	-	-	0.08335383
2700	Repair of doors and windows including steel door frame,door shutter (anytype), window(anytype) including its welding, fasteners, fixtures, painting etc. all complete as directed by the engineer.	SQM	5	-	-	0.02604738
2800	Removing/dismantling etc.of roof water proofing works including underbed grading plaster , bitumen felt of the surface etc. all complete as per direction of site-in-charge.	SQM	300	-	-	0.40632362
					-	100.0000000