

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER XI –BILL OF QUANTITIES AND % WEIGHTAGE OF INDIVIDUAL ITEMS

JOB: All civil and Architectural works required for Ash Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana.				
PART B: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price				
ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
100 EARTH WORK				
Earth work In excavation, backfilling and disposal including necessary men/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 all types of soil including ash which can be excavated by any means 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.			
a	Depth from ground level but not exceeding 2 m	CUM	150239	5.27271125
b	Depth exceeding 2 m but not exceeding 4 m	CUM	73505	3.50857675
c	Depth exceeding 4 m but not exceeding 6 m	CUM	18571	1.15366405
d	Depth exceeding 6 m but not exceeding 8 m	CUM	1445	0.13185849
103	Earth work in excavation in soft rock (rock without any recovery of excavated materials in the form of hard stone/boulder) including weathered rock which can be excavated by means of crow bar, pick axe, pneumatic rock breaker attachment with excavator machine etc but does not require chiselling or blasting including setting out, levelling, dewatering (wherever required), 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.			
a	Depth from ground level but not exceeding 2 m	CUM	3313	0.17092269
b	Depth exceeding 2 m but not exceeding 4 m	CUM	3313	0.26975607
c	Depth exceeding 4 m but not exceeding 6 m	CUM	33871	3.28095426
d	Depth exceeding 6 m but not exceeding 8 m	CUM	1445	0.15924682
e	Depth exceeding 8 m but not exceeding 10 m	CUM	1000	0.11932794
f	Depth exceeding 10 m but not exceeding 15 m	CUM	1000	0.14635426
g	Depth exceeding 15 m but not exceeding 20 m	CUM	100	0.01824506
h	Depth exceeding 20 m but not exceeding 25 m	CUM	100	0.02126402
104	Earth work in excavation in hard rock requiring blasting (but excluding controlled blasting) including wedging, line drilling, pre shearing etc as required, setting out, levelling, dewatering (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statutory clearances for blasting, supply, storage & handling of blasting materials, stacking/disposal of surplus excavated material within a lead upto 500m, spreading / levelling of disposed materials etc all complete for following depths below ground level.			
f	Depth exceeding 10 m but not exceeding 15 m	CUM	2840	0.52528907
g	Depth exceeding 15 m but not exceeding 20 m	CUM	100	0.02167913
h	Depth exceeding 20 m but not exceeding 25 m	CUM	100	0.02469810
l	Depth exceeding 25 m but not exceeding 30 m	CUM	100	0.02781551
105	Earth work in excavation in hard rock requiring controlled blasting including wedging, line drilling, pre shearing etc as required, setting out, levelling, dewatering (wherever required), shoring & strutting (wherever required), dressing the sides & bottom, all lifts, necessary licenses/statutory clearances for blasting, supply, storage & handling of blasting materials, stacking/disposal of surplus excavated material within a lead upto 500m, spreading / levelling of disposed materials etc all complete for following depths below ground level.			
a	Depth from ground level but not exceeding 2 m	CUM	10	0.00160392
b	Depth exceeding 2 m but not exceeding 4 m	CUM	10	0.00160392

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
107	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials from compulsorily excavated soil 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.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	19884	0.57921592
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	6628	0.19307197
108	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with selected materials directly from excavation and compacted as specified including watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	19884	0.55827097
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	6628	0.18609032
109	Extra over ST No. 101 and 103 to 107 for carriage of excavated earth/selected materials beyond an initial lead of 500m.			
a	Carriage beyond initial lead of 500m or part thereof but not exceeding 2 km	CUM	4186	0.05288475
b	Carriage beyond 2 km or part thereof but not exceeding 3 km	CUM	4186	0.10578323
c	Carriage beyond 3 km or part thereof but not exceeding 4 km	CUM	1395	0.05287669
d	Carriage beyond 4 km or part thereof but not exceeding 5 km	CUM	698	0.03527563
e	Carriage beyond 5 km or part thereof but not exceeding 6 km	CUM	698	0.04409626
f	Carriage beyond 6 km or part thereof but not exceeding 7 km	CUM	698	0.05291460
g	Carriage beyond 7 km or part thereof but not exceeding 8 km	CUM	698	0.06173293
h	Carriage beyond 8 km or part thereof but not exceeding 9 km	CUM	698	0.07055356
i	Carriage beyond 9 km or part thereof but not exceeding 10 km	CUM	698	0.07937190
110	Back filling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness using/with approved borrowed soil (borrowed soil to be arranged by the bidder) and compacted as specified including supplying borrowed soil, royalty (if any), watering, ramming/compaction by manual/mechanical means, dressing etc all complete for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	159073	15.57635392
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	53024	5.22932080
111	Supplying and filling sand upto any depth under floors, around foundations, plinths etc. in layers not exceeding 250 mm thickness and compacted so as to achieve at least 80% relative density as per IS-2720 (Part-XIV) including spreading, watering, ramming/compaction by manual / mechanical means, dressing, royalty (if any) etc. all complete.	CUM	785	0.16420497
200 CONCRETE WORKS				
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.				
201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as filling course at any depth below finished floor level, under and around foundations/floors, mass fill etc.	CUM	5	0.00295035

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202	Concrete of grade M10 (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations/floors at any depth below finished floor level etc.	CUM	405	0.29995701
ISG 202	Concrete of design mix of grade M10 of 20 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations/floors at any depth below finished floor level etc.complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.	CUM	135	0.11034612
203	Concrete of grade M15 (1 part cement, 2 part sand, 4 parts of 40 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations/floors at any depth below finished floor level etc.	CUM	405	0.37030772
ISG 203	Concrete of design mix of grade M15 of 20 mm graded aggregate by volume) as lean concrete, levelling course , mud mat under and around foundations/floors at any depth below finished floor level etc.complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.	CUM	135	0.12808564
205	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 in foundations/substructure, grade slab, paving, drains, under floors etc at any level below finished floor level, 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 as per specification & drawing for the following.			
ISG a'	M20 Grade	CUM	227	0.21423170
a	M25 Grade	CUM	8347	8.91455942
A205	Providing and laying Design Mix cement concrete (M20) conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in grade slab and paving using Vaccum Dewatered Flooring (VDF) method etc at any level below finished floor level, 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 as per specification & drawing.	CUM	375	0.46084364
206	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 in superstructure at any level above finished floor level, 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 as per specification & drawing for the following.			
a	M25 Grade for all works above up to 20M	CUM	5415	6.18799744
b	M25 Grade Extra over and above item no 206 (a) for all works above 20M up to 40M	CUM	50	0.06149569
210	Extra over ST Nos. 205 to 207 for conducting UPV test for concrete at all levels including all equipments, making necessary arrangements, staging, submission of report etc. all complete as directed by engineer in charge and as per specification.	CUM	50	0.01861882
ISG 210	Providing and encasing of structural steel member with concrete using nominal aggregate size of 20mm 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)			
a	M20 grade	CUM	100	0.08409168

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212	Screed concrete conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at any level or thickness, drains etc complete as per following.			
a	1:2:4 (1 part cement, 2 part sand, 4 parts of aggregate by volume)	CUM	238	0.27399598
213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in precast works 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, transporting, 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.			
b	M 30 grade	CUM	100	0.11546596
ISG 214	Providing and laying Design Mix cement concrete as per IS:456, IS 3370 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete in water retaining/conveying structures or under grounds structures including addition of suitable plastisizer cum waterproofing cement additives such as "SIKA/ FOSROC' or equivalent make confirming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate for following grades.			
a	M 25 grade	CUM	100	0.11094079
b	M 30 grade	CUM	493	0.65922124
c	M 35 grade	CUM	50	0.07891546
215	Dismantling concrete work for 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.			
a	Plain cement concrete of all grades	CUM	15	0.00952879
b	Reinforced cement concrete of all grades	CUM	15	0.01345087
216	Chipping of concrete 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	100	0.00326409
217	Extra over and above St No 216 for cutting of reinforcement , 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	0.00074404
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	20	0.00068090
ISG	Providing & laying Plum cement concrete 1:3:6 with 75% graded metal of maximum size 40 mm and 25% plums of maximum size 150 mm.	CUM	150	0.17941523
ISG 221	SHOTCRETING			
	Shotcreting (Guniting) specified concrete surfaces as per the following specifications including all materials. Labour, tools and plants, scaffolding etc all complete as per the directions of Engineer in charge, :			
	i. Fabricating and fixing in position 6mm M S bars at 750mm c/c including connecting to the lugs for fastening			
	ii. Fixing wire fabric confirming to IS;1566 as reinforcement with 3mm diameter spaced at 50mm c/c both ways electrically cross welded including securely tying to the 6mm MS bars by maintaining 100mm overlap for adjacent sheets			

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	iii. Fine aggregate shall consist of natural sand or crushed stone from a known source and shall be strong, hard, coarse, sharp, chemically inert, clean and free from any coating. It shall be free from clay, coal or coal residue, organic or any other impurities that may impair the strength or durability of the concrete and shall conform to IS: 383. The fineness modulus shall be preferably between 2.5 and 3.3. Any other value can be used, with prior approval of the Engineer. Fine aggregate (Sand) shall be well graded and particles shall range in size within limits. The Engineer may approve the use of any other grading as per requirement or as per IS: 9012.			
	iv. The surface after the placement of reinforcement and / or welded mesh and not more than six hours prior to the application of concrete, shall be thoroughly cleaned of all loose materials and dirt. The Contractor shall properly prepare the surfaces, reinforcement and / or welded mesh to receive the shotcrete. Cleaned surfaces shall be wetted not more than hour prior to shotcreting.			
	v. The mix as placed on surface shall be one part cement to three parts approved sand by mass. Cement and sand shall be dry mixed; no water shall be added after mixing and before using in the gun. The quantity of water when added shall be only that which is sufficient to hydrate the cement. For average atmospheric conditions, the water cement ratio for shotcrete in place shall be between 0.35 and 0.5 by mass. Suitable admixture shall be used wherever required.			
	vi. A uniform pressure of not less than 25 Kgf / cm ² at the nozzle shall be maintained. Necessary adjustments shall be made to ensure this pressure, taking into account the length of hose and height of the place to be shotcreted, above location of the machine.			
	vii. The application shall proceed in an upward direction. Beams, stiffeners and intermediate walls, if any, shall be wrapped with wire fabric and completely covered with shotcreting. All rebound shall be removed from the area of application as the work progresses and such rebound material shall not be reused.			
	viii. As soon as the freshly shotcreted surface shows the first dry patches, a fine spray of water shall be applied to keep too moist. After the surface has hardened, it shall be kept continuously moist for minimum seven days. If there is extreme heat, especially when accompanied by hot winds, the shotcreted surface, immediately upon completion, shall be covered with burlap or similar covering, which must be kept continuously moist for 14 days after shotcreting. The temperature of the lining shall not be permitted to exceed 38oC during placing and curing.			
	Note: 6mm MS Reinforcement and welded wire mesh as specified shall be used for thickness of Shotcreting above 50mm			
	a. Shotcreting for thickness 50mm and above of with 6mm MS Reinforcement and welded wire mesh as specified	Sqm	200	0.12653408
	b. Shotcreting for thickness 25mm <u>without</u> 6mm MS Reinforcement and welded wire mesh as specified	Sqm	100	0.03314300
300 FORM WORKS				
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.				
ISG 301	Ordinary form work below finished ground floor level for lean concrete, mud mat, plum concrete etc.	SQM	750	0.06528056
301	Fairface form work with good quality water proof ply wood of required thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	SQM	37779	4.11039070
302	Fairface form work with good quality water proof ply wood of required thickness and smooth surface above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights.	SQM	12593	1.73696116

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ISG 302	Ordinary form work above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches etc for all heights.	SQM	750	0.08275841
ISG 303	Providing ,fixing & removing curved type of shuttering including staging, propping (cost incl. of submitting supporting design & drawing and approval etc.) at all locations, heights and levels above or bellow ground with Slip Formwork complete as per specification and directions of engineer incharge	SQM	1500	0.24827523
304	Providing, fixing and removing formwork in block-outs/pockets 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.			
a	Upto 150 mm depth	Each	38	0.00493461
b	Pockets of depths more than 150mm and upto 300 mm depth	Each	38	0.00512128
c	Pockets of depths more than 300mm and upto 600 mm depth	Each	38	0.00814878
d	Pockets of depths more than 600mm and upto 1000 mm depth	Each	10	0.00297620
305	Fairface plywood with filmface/laminated formwork above finished ground floor level for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights where ever specifically mentioned in the drawing.	SQM	50	0.00858124
400 REINFORCEMENT				
	REINFORCEMENTS (TMT/ HYSD BARS STEEL SHALL BE SUPPLIED BY BHEL FREE OF COST AS PER SCC).			
	Loading, transporting and unloading from BHEL stores at location The Steel will be issued to the agency in standard lengths. Reinforcements of 8mm, 10mm & 12mm dia steel may be supplied in coil form and the item below should include cost of decoiling with no extra cost.			
401	Receipt from stores, Straightening, cutting, bending, placing in position at any level, binding of mild steel reinforcements conforming to grade 1 of IS:432 part 1 in concrete including cost of reinforcement and binding wire, labour, scaffolding, transportation to & from stores etc. all complete as per specifications & drawings.	MT	10	0.02572543
402	Receipt from stores, Straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500/ Fe-415 confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer.	MT	2066	5.31487525
406	Providing, straightening cutting, bending, placing in position at any level, binding of mild steel reinforcements in brickwork including cost of reinforcement and binding wire, labour, scaffolding etc. complete all as per specifications & drawings.	MT	5	0.01286271
407	Receipt from stores, straightening, cutting, bending, placing in position at any level, binding in position high yield strength steel reinforcements in brickwork including cost of reinforcement and binding wire, labour, scaffolding etc. complete all as per specifications & drawings.	MT	5	0.01349791
500 WATER PROOFING WORKS				
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.				
A501	Providing and laying underbed grading plaster with cement mortar 1:4 (1 cement : 4 sand) and average thickness of 15 mm including preparation of surface, batching, mixing, leveling etc. all complete.	SQM	125	0.00397469
ISG 502	Providing and laying rigid insulation (extruded polystyrene blocks) as per relevant IS Code in suitable panels over roofs.The block shall be strong enough to withstand without deformation the workload and standard loads expected on the roof. Cost shall include making of fillets, cleaning & preparation of surface, expansion joints including filling with sealants at suitable intervals etc all complete as per specification for following.			

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a	Average 50 mm thickness	SQM	3176.5	0.95841194
A506	Providing and applying PU based water proofing treatment with elastomeric, seamless waterproof membrane applied in 2 coats to a DFT of 1.2 mm thick having a elongation capacity of over 600% and average tensile strength of 1 MPa, tear resistance as per GBT 19250-2003 >20N/m. The material shall comply with – ASTM C 836 National Std. of Canada 37.58 – M86 by CGSB. All complete as per specifications and directions of engineer in charge.	SQM	3176.5	0.64660962
B506	Providing and applying a separation layer of non-woven polypropylene geotextile membrane of 120 gsm for water proofing as per technical specification.	SQM	3176.5	0.09476130
A508	Providing and laying pressed precast concrete tiles of 20 mm thickness and size 600x600 mm conforming to IS 13801 with 15 mm thick 1:4 cement mortar over the top most layer of roofing treatment with fine joints including sealing of joints (silicon/elastomeric sealant) etc all complete. (Water proofing paid elsewhere)	SQM	3176.5	0.60982459
509	Providing and applying two coats of bitumen grade 85/25 as per IS 702 (@ 1.7kg/sqm)with 1% antistripping compound conforming to IS 6241 in foundation, wall, column etc on concrete surfaces exposed to soil / ash including surface preparation etc. all complete.	SQM	1751	0.09095155
512	Anti termite chemical treatment of soil with Chloropyrifos emulsifiable concentrates (1%) conforming to IS :8944 all complete.	SQM	750	0.02053061
600 JOINTS AND FILLERS				
Joints & fillers including all labour, material, equipment, transportation, handling etc at any level as per specification, drawings and as directed by engineer - in - charge.				
601	Supplying & installation of bitumen impregnated fibre board 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.			
a	12 mm wide joints.	SQM	65	0.02251643
b	20 mm wide joints.	SQM	75	0.03443000
c	25 mm wide joints	SQM	66.5	0.03731977
d	50 mm wide joints	SQM	6.5	0.00469947
602	Providing and applying polysulphide based sealant 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:			
a	12mm X 25mm	RM	225	0.01129208
b	20mmX25mm	RM	175	0.01375812
c	25mmX25mm	RM	50	0.00694920
d	50mmX25mm	RM	12.5	0.00347460
603	Supplying and filling in position hot applied bitumin sealing compound (Grade A) confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.			
a	10mm X 40mm	RM	25	0.00010525
b	12mm X 25mm	RM	37.5	0.00011850
c	20mmX25mm	RM	25	0.00013158
606	Providing and fixing PVC water stops in joints conforming to IS 12200 & IS 15058 all complete for the following:			
a	150 mm wide and 8 mm thick	RM	25	0.00263224

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b	230 mm wide and 8 mm thick	RM	25	0.00362374
c	150 mm wide and 6 mm thick	RM	50	0.00414139
d	230 mm wide and 6 mm thick	RM	1032	0.26114604
700 MS EMBEDMENTS				
Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
701	Supply, fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting etc. all complete.	MT	10	0.24240370
702	Same as above with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.	MT	15	0.11437201
703	Fixing of embedments, inserts, pipe sleeves, angle pieces, anchor bolts of various diameters, plates of dimensions as required etc. including scaffolding, setting in position, transportation from BHEL site stores to work spot etc. all complete.	MT	15	0.07670953
704	Supply, Fabrication, transportation, delivery at site and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (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	63.5	1.90861833
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.			
a	MS pipes of all diameters	Quintal	10	0.03049218
b	PVC pipes / conduits of all diameters	Quintal	12.5	0.07725265
c	UPVC pipes / conduits of all diameters	Quintal	12.5	0.09289738
d	Expansion fasteners (mechanical galvanised) of HILTI make or equivalent of safe tensile capacity including SS Clamps wherever required as specified below for brick work with/without expansion sleeve of A6 polyamide:			
i	Upto 250 kg	Each	25	0.00342570
ii	Beyond 250 Kg and upto 500 kg	Each	25	0.00475060
iii	Beyond 500 Kg and upto 750 kg	Each	12.5	0.00351594
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:			
i	Upto 250 kg	Each	25	0.00283405
ii	Beyond 250 Kg and upto 500 kg	Each	25	0.00431695
iii	Beyond 500 Kg and upto 750 kg	Each	12.5	0.00339125
706	Placing, locking and releasing of Vibration Isolation spring modules over the foundation at all elevations including providing all assistance under the supervision of the supplier, transportation from BHEL store, necessary staging, platforms, leveling, alignment etc. all complete.	Each	20	0.00847942
800 GROUTING				
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.				
ISG 801	Waterproofing for underground concrete structure shall be done by injecting high polymer based non- shrink waterproof grouting compound through nozzle under pressure as per manufacturer's recommendation. The pressure during injection shall not be less than 2.5 kg/Sq.m. Payment shall be made as per the consumption of grout.	KG	10	0.00075703
802	Providing & grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc. with mix 1:1 (1 cement :1 sand) using non shrink admixture etc. all Complete.	CUM	10	0.06469255

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PART B: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price				
ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with mix 1:1:2 (1 cement : 1 coarse sand : 2 aggregate of 6 mm down graded stonechips) using non shrink admixture. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).	CUM	10	0.03843791
804	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 ConbextraGP-1 or equivalent . (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	60	1.11757643
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 Conbextra GP-2 or equivalent . (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	5	0.10341826
900 DOORS, WINDOWS, VENTILATORS, LOUVERS				
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.				
A901	Providing and fixing wooden frame conforming to IS 4021 made of best quality seasoned hardwood free from large or loose knots, cracks or other defects including sand paper smoothening, hold fasts, beading, primer and finish painting / polishing etc. all complete with proper wood joinery, accurately set to required lines or levels and rigidly secured in place. (Finish painting / polishing paid separately)	CUM	1	0.01270391
904	Providing and fixing single or double steel door shutters with 45mm thk flush design shutter 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	50	0.10141251
A907	Providing and fixing fire proof steel doors (single or double shutter) with panic devices and vision panel 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	25	0.12828796
908	Providing and fixing steel windows/ventilator 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)			
a	openable type	SQM	621.09	0.60468531
b	fixed type	SQM	305.91	0.28537544
A908	Providing and fixing windows/ventilator with M.S. grills as per approved design for security purpose made of 25 mm X 6mm M.S. Flats / 12mm – 20mm M.S. square bar of approved design shall be provided to suit security requirements.	Kg	400	0.01257465

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PART B: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price

ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
A909	Providing and fixing anodised aluminium work of Jindal, Hindalco or other equivalent approved make for door/window frames, door/window shutters, ventilators, partitions, railing, grills etc with extruded standard tubular and other sections including all fittings & fixtures and accessories of approved make conforming to IS733 and IS1285, anodised and electro color dyed to required shade according to IS 1868 (minimum anodic coating of grade AC15), fixed with rawl plugs, expansion fasteners, SS screws or with fixing clips, including necessary filling of gaps at junctions, at top, bottom and sides with required PVC/neoprene felt for bi-metallc protection etc.including preperation of working drawings, aluminium cleat angle, aluminium snap-on-beading for glazing/panelling, stair case tread nosing, with all fittings and fixtures (like tower bolts, handles, door stopper with rubber shoes, 'L' drops, stays, floor springs, hydraulic door closures etc.), CP brass/stainless steel screws, providing and fixing hinges/pivots, and making provision for fixing of fitting wherever required including cost of PVC/neoprene gasket, all complete as per drawing, specification and instructions of engineer in charge (Glazing and panelling shall be paid seperately).Weight of aluminium section only shall be measure.	Kg	250	0.03965921
A910	Providing and fixing of aluminium composite panel(ACP) 3mm thick fixed in aluminium frame including sealant with minimum 0.2mm topping of precotaed aluminium foil on both side of approved manufacturer & approved shade, all complete as per specification.	SQM	425	0.46807038
911	Providing and fixing of door closers as per IS 3564 ,of approved make & quality all complete of following type :			
a	Over head hydraulic door closures	Each	25	0.01340700
b	Floor mounted Hydraulic door closers	Each	25	0.02282174
912	Providing and fixing pressed steel frames fabricated from 16 gauge M.S sheet mortised, reinforced drilled and tapped for hinges and locks bolts strikes, hold fasts adjustable floor anchors, floor tiles/weather bars ,paintings etc all complete as per specifications.	Kg	375	0.01447750
913	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel 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 lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.(partly coiled and lath/full lath).			
a	Hand Operated	SQM	12	0.01309816
b	Mechanically Operated	SQM	60	0.08084228
c	Electrically operated	SQM	12	0.02749352
914	Providing and fixing PVC doors (25 thk double skin) with PVC frame of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	25	0.02326048
A914	Providing and fixing Solid core PVC doors (25 thk double skin) with PVC frame of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	25	0.02791256
915	Providing, fixing and fitting of glazing of first grade class in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete.			
b	4 mm thick clear float glass	SQM	50	0.00926560
d	6 mm thick wired glass	SQM	5588	1.45325767
e	6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges.	SQM	10	0.00734576
f	4 mm thick ground glass	SQM	10	0.00197243
g	6 mm thick tinted heat reflecting type float glass	SQM	10	0.00454154
h	6 mm thick clear toughened safety glass	SQM	10	0.00600157

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
i	Two nos. 6 mm thick clear toughened float glass hermetically sealed and separated by 12 mm thick air gap for thermal insulation (only single elevation area to be measured)	SQM	25	0.02534873
A915m	6 mm thick clear float glass with itching	SQM	25	0.00532297
A915n	One outer 6mm thick tinted heat-reflecting type float glass and one inner 6mm thick toughened float glass hermetically sealed and separated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).	SQM	10	0.00381118
ISG 915	6 mm thick clear float glass	SQM	10	0.00259716
916	Supplying and fixing weather stripping of approved make and quality to doors as per instructions of engineer in charge and specification complete.	RM	30	0.00240066
917	Providing and fixing 12 mm thick BWP particle board , 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	20	0.01250154
ISG 918	Providing and fixing steel windows/ventilator with steel sections with necessary framework as per approved drawings, The window shutters shall be provided with M.S Louvers and 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. - louver blade shall be Z shaped and made out of 18G sheets in E27 steel frames all complete as per the directions of the Engineer in charge. Quoted rate shall be all inclusive.(Glazing shall be paid separately)			
	a. Openable type	Sqm	250	0.26340239
	b. Fixed type	Sqm	250	0.25023215
A921	Supplying, installing and commissioning of self sliding mechanism for aluminum door (double shutter) including photo operated sensors, fittings, motors, mechanical systems, electrical systems, warranty all inclusive in working condition as per specifications (aluminum and glazing to be paid separately)	NOS	2	0.05716762
1000 BRICKWORK				
Brickwork masonry including all labour, material, equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge.				
A1001	Providing brick work 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 below plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.			
a	Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ²	CUM	100	0.13761336
A1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
a	Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ²	CUM	3508	4.19262040
A1003	Providing brick work in cement mortar 1:4 (1 cement 4 coarse sand) in partition walls , chambers etc. in thickness 115mm at all heights, places and position above or below plinth/graded level including fixing of two nos. 6 mm diameter MS bars at every third layer, raking out joints, curing, scaffolding etc complete excluding plastering and painting as per specification. (MS bars shall be supplied by BHEL free of cost).			
a	Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ²	SQM	3260	0.53925750
A1004	Providing brick soling including spreading of earth, ramming, watering including 25mm thick cushion of sand complete but excluding excavation and disposal of surplus earth (excavation and disposal of surplus earth shall be measured under applicable item). Using brick on edge.			

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
a	Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm ²	CUM	12.5	0.01786490
1006	Breaking of existing brick work 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	15	0.00451698
1007	Providing and encasing of structural steel member with masonry work around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar. Encased member shall be wrapped with chicken wire mesh with 50mm lap etc. complete as per specification. (Chicken wire mesh to paid separately)	CUM	12.5	0.01395981
1009	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete.	CUM	5	0.00201806
1010	Supply and placing in position mild steel wire fabric of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in concrete including cutting, bending, fixing etc. complete.	SQM	250	0.02202369
1011	Filling existing brick wall/ partition wall opening 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	50	0.01166978
1012	Providing and filling brick bats in soak pits all complete.	CUM	15	0.00564358
1100 DAMP PROOF COURSE				
Damp proof course including all labour, material, equipment, transportation, handling, shuttering, centering, curing etc at any level as per specification, drawings and as directed by engineer - in - charge.				
1101	Providing Damp Proof Course 40mm thick 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound all complete. Two layers of hot bitumen coating 85/25 grade as per IS:702 @ 1.7Kg./sqm shall be applied one before & one after the DPC.	SQM	266.66	0.02711751
1200 CEMENT MORTAR PLASTER				
Cement mortar plaster including making grooves wherever required including all labour, material, scaffolding, curing etc at any level as per specification, drawings and as directed by engineer - in - charge.				
A1201	Providing 20mm thick plaster in two layers outside the building/rough surface of internal wall in cement mortar 1:4 on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete. The two layer include 1:4 cement sand mortar 12mm thick first layer and 1:3 cement sand mortar with 8mm.	SQM	11738	1.74001570
A1202	Providing 12mm thick plaster inside the building/boundary wall in cement mortar 1:4 on walls finished to a smooth finish as per specification all complete.	SQM	13188	1.74039700
A1204	Providing 6mm thick plaster on ceiling in cement mortar 1:3 finished to a smooth all complete.	SQM	6511.5	0.32356645
1205	Providing 12mm thick plaster in walls, drains/culverts with a paste of neat cement @ 1kg/sqm and rubbed smooth with trowel etc. all complete.	SQM	125	0.00407109
1206	Providing and making decorative plaster of all types and design on walls, ceilings, arcs, columns with various thickness upto 18 mm including finishing all complete.	SQM	10	0.00058925
1207	Forming groove of uniform size from 12X12 mm upto 20X15 mm in plastered surface as per approved pattern, using wooden battens nailed to the under layer, including removal of wooden battens, repair of the edges of plaster panel and finishing the groove etc. complete as per specification, drawing and the instructions of engineer in charge.	RM	125	0.00140406
1208	Providing drip course on plastered surface at all elevations for all type of work such as chajjas, parapet, projections etc. including scaffolding, finishing etc. complete with all labour, tools and plants as per specification, drawing and instructions of engineer in charge.	RM	125	0.00105294

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1209	Providing and laying encasement to box type steel beams at all levels with lath plaster 50 mm nominal thickness with cement plaster (1:4) over chicken wire mesh including all labour, materials, equipment, handling, transporting, mixing, placing, leveling, curing and cleaning, finishing the exposed surfaces etc including centering and shuttering all complete as per specification, drawing and instructions of engineer in charge (chicken wire mesh to be paid separately)	SQM	125	0.01143925
1210	Ruled pointing in masonry in CM 1:3 (1 cement and 3 fine sand) including raking out joints, curing etc. complete.	SQM	10	0.00022556
1300 FINISHES TO CONCRETE / PLASTERED SURFACES				
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.				
1303	Providing and applying two or more coats of oil bound distemper as per IS 428 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	25	0.00065810
1304	Two or more coats of acrylic distemper of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete as per spec.	SQM	7235	0.19045470
1305	Providing and applying two or more coats of acrylic emulsion paint as per IS 5411 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	10990	0.45901658
ISG 1305	Providing and applying two or more coats of waterproof external quality acrylic emulsion paint as per IS 5411 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	11738	0.51477101
1309	Two or more coats of synthetic enamel paint of approved make made from synthetic resins and drying oil with rutile titanium dioxide and other selected pigments to give smooth, hard, durable & glossy finish to all interior and exterior surfaces complete.	SQM	2198	0.06942950
1311	Providing and applying resin bonded granular textured finish, for external applications shall consist of crushed stone/quartz chips of .5 mm to 2.5 mm size and of approved natural color/shade and bonded with synthetic resins, adhesives and additives altogether in a single pack mix, applied on cured and dried plaster surface with a dry film thickness of minimum 2 mm. The final finish shall have UV resistance, fungus, bacterial resistance properties all complete with grooves filled with poly sulfide sealant of matching color and shade as per specification/drawing/approval of engineer in charge.	SQM	250	0.03895779
1312	Providing and applying 2 mm thick plaster of paris punning on walls including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	5	0.00011933
A1312	Providing and applying 3 mm thick white cement putty punning on walls (Birla White/ JK White or Similar approved) including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	8719	0.49732116
1313	Providing and applying ready made Epoxy Paint over areas other than steel structure with suitable pigments of approved shade as per specification and direction of Engineer. The epoxy paint shall be a two pack material and shall be resistant to water, splash, spillage & acidic environment. The epoxy paint coating shall be of 150micron thickness over epoxy primer.	SQM	1000	0.12143465

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
A1313	Providing and applying ready made Acid/Alkali resistant Epoxy Paint over areas other than steel structure with suitable pigments of approved shade as per specification and direction of Engineer. The epoxy paint shall be a two pack material and shall be resistant to water, splash, spillage & acidic environment. The epoxy paint coating shall be of 250 micron thickness over epoxy primer.	SQM	250	0.03013962
1400 FLOORING AND SKIRTING				
Flooring and skirting at any level 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.				
1401	Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron particles 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 quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, glass strips etc. all complete as per specification. (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	6230	0.85712071
A1401	Providing and laying 50 mm thick heavy duty patent stone cement concrete in flooring with metallic hardener pigmented topping 12mm thick uniform graded treated iron particles 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 quality metallic hardening compound :2 stone aggregate 6mm nominal size) by volume including cement slurry, rounding off edges, glass strips etc. all complete as per specification. (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	2500	0.44019489
1406	Providing and laying polished Kota stone 18mm to 20mm thk in flooring . Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregates by volume and brought to proper level. The kota stone slabs/tiles laid over under bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including pigments, curing, grinding, granite polishing etc. all complete.	SQM	250	0.08819403
1408	Providing polished Kota stone 18mm to 20mm thk in skirting projecting 6mm from adjacent plaster including cutting brickwall upto the required depth, edging, finishing etc. all complete.	SQM	75	0.02572282
1416	Providing and laying vittrified ceramic tiles of polished variety of size 600x600 from reputed / approved manufacturer, complete including underbed of cement mortar 1:3 with neat cement slurry etc. all complete for following			
a	7mm thick tiles In flooring	SQM	398	0.16975794
1418	Providing and laying 10 mm thk non-skid fully vittrified tiles of make 'MARBONITE' or 'FERRASTONE of BOSS Profile limited' or equivalent in flooring and skirting over 30 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, complete as per specification laid in pattern of following sizes			
b	600X600 mm	SQM	398	0.18526315
ISG 1418	Providing and laying 10 mm thk non-skid fully vittrified tiles of make 'MARBONITE' or 'FERRASTONE of BOSS Profile limited' or equivalent in flooring and skirting over 40 mm thick underbed of 1 part cement and 3 parts coarse sand by weight mixed with sufficient water, complete as per specification laid in pattern of following sizes			
a	400X400 mm	SQM	87.5	0.04492895
b	600X600 mm	SQM	262.5	0.12836864

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A1423	Providing & fixing Acid / Alkali resistant (Chemical resistant) tiles conforming to IS:4457 in flooring/Dado bedded and jointed with epoxy mortar all complete for following thicknesses. The tiles should be abrasion resistant & durable.			
a	20mm thick	SQM	375	0.53594701
A1425	Providing and laying polished Marble slabs (Aranga white and Abu green marble or Baroda green & Jaisalmer yellow combination or equivalent approved shade/color /design) 20 mm thk in staircase landing/skirting and corridors over minimum 20 mm thick underbed of 1 cement : 2 sand : 4 stone aggregates by volume mixed with sufficient water to form a stiff workable mass. The marble slabs shall be laid over under-bed, pressed and tapped down with wooden mallet to the proper level, lifted and pressed again with thick cement slurry spread over the surface with fine joint finished including moulded marbel nosing, pigments, curing, grinding, making corners, granite polishing etc. complete as per spec.	SQM	50	0.05716758
1426	Providing and laying marble skirting /dado (Aranga white or approved shade/color /design) equivalent of minimum 20mm thickness projecting 6mm from adjacent plaster all complete including underbed cement mortar 1:3, scaffolding etc. all complete.	SQM	3.5	0.00408931
1427	Providing and fixing glazed ceramic tiles of approved color and design of size 200x300mm / 300x300mm in dado of approved size , projecting 6mm uniformly from adjacent plaster or wall finish. The mix for underbed plaster shall consist of 1part cement and 3 parts sand by weight. fairly moist but firm, tiles shall be pressed over under bed by applying cement slurry including pigments, curing etc all complete for following thicknesses:			
a	5mm thick	SQM	125	0.03050305
A1428	Providing and laying flexible electric insulated PVC synthetic sheet as per IS 15652-2006 of Suntex Insulatic Pvt. Ltd. Or similar all complete as per specification.	SQM	1050	0.30012894
1429	Fixing of removable type flooring system consisting of steel cementitious core panel with CRCA (electrical resistant) coating of 40-60 micron of size 600X600X35 mm with 2 mm thick anti static PVC high pressure laminate and edge trim for protection including proprietary floor supporting system consisting of following min requirements: a. Base plate size 150x150x4 mm hot dip Galvanized (60-80 micron) b. Pedestal stud 32 mm dia at bottom and 2 mm thick crca (electrically resistant) and 19 mm dia - 90 mm long threaded portion MS Rod stud. fixed at bottom with 6mm dia and 40mm length dash fasteners as per grid c. Top head attachment of aluminium die cast alloy with check nuts at bottom portion for attaching the top head thread in the stud allowing for adjustment up to 25 mm up&down. d. Stringer made of hot dip Galvanized (60-80 micron) mild steel channel 30x20x1.2 mm thick e. Heavy duty removable type flooring shall be designed for distributed load of 1250 kg/sqm (minimum).	SQM	50	0.10685255
1430	Providing and fixing dividing strips in joints of cast in situ floorings at various elevations, finishing, all labour, material etc. complete as per drawing, specification and instructions of engineer in charge.			
a	Glass strips 40 mm wide and minimum 6 mm thick.	RM	25	0.00031584
b	Aluminium strips 40 mm wide and minimum 3 mm thick	RM	25	0.00077213
c	Brass strips 20 mm wide and minimum 4 mm thick.	RM	25	0.00106164
1500 ROOFING / SIDE CLADDING				

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Roofing / side cladding work including all labour, material, equipment, transportation, handling, scaffolding, lags, hooks, washers, corner pieces etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
A1501	Designing, providing and fixing permanently color coated galvanised MS troughed metal sheet decking plate of approved colour and conforming to class3 of IS 14246 over roof purlins for cast-in-situ roof slab as per relevant IS code and specification. Bare metal thickness of deck plate shall be minimum 0.8mm with minimum trough depth of 44 mm having minimum yield strength of 250 MPa and shall serve as permanent shuttering to the roof slab 100mm thick measured over crest of metal decking & shall have adequate strength to support weight of green concrete and imposed loads of min 150 kg/sqm during construction between purlins as per manufacturer's recommendations/ calculations/ test certificates for approval including fixing of plates to purlins, side lapping, end lapping etc. all complete for below mentioned spans. The sheet shall be permanently coated with silicon modified polyster paint of minimum 20 micron DFT on exposed surface (facing operating floor) and minimum 7 micron on other face over epoxy primer applied over hot dipped galvanising @ 275 gm/sqm including fixing of sheet to purlin with self drilling white zinc plated heat treated carbon steel screws of minimum 5.6 mm dia @ 260mm c/c in the trough and stich screws between two adjacent sheets and sealing with epoxy sealant. Measurement of profile sheeting shall be of the plan area of roof covered by MS trough metal decking.			
a	Span Upto 1800mm	SQM	400	0.17927543
1502	Providing and fixing shear connectors of mild steel studs having 16mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant IS codes and specification.	QUINTAL	5	0.01244360
1600 FALSE CEILING				
False ceiling including all labour, material, equipment, transportation, handling, suspension system etc at any level as per specification, drawings and as directed by engineer - in - charge.				
A1601	Providing and fixing Moisture and fire resistant glass fibre reinforced gypsum plaster board (GRG) ceiling (having gypsum core mixed with glass fibre) system consisting of metal supporting grid system forming panels of specified size, suspended from RCC slab/structural steel or catwalkway grid above with 4 mm (minimum) galvanised wires (rods) with special height adjustment clips, including preperation of working drawing, providing openings for AC ducts, return air grills, light fixtures etc (but excluding the cost of catwalkway grid) all complete as per drawings, specification and instructions of the engineer.			
a	12.5 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless).	SQM	50	0.01986480
b	12.5 mm thick GRG board in profile (dome ,curved profiled etc.) with galvanised light gauge steel load bearing supporting GI frame and finished smooth (seamless).	SQM	50	0.02037376
1603	Providing and fixing permanently colour coated aluminium false ceiling of approved colour and Luxalon 84 C or approved equivalent with corrosion resistant aluminium alloy panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation(density 48 kg/cum) conforming to IS:8183 bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures, A.C. ducts etc all complete. Suitable M.S. channel grid with minimum MC 75 shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. (Materials for structural platform grid made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)	SQM	500	0.41256478

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ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
A1606	Providing and Fixing CALCIUM Silicate Board/Tiles in false ceiling of HILUX or AEROLITE or equivalent consisting of metal supporting grid system forming panels of specified size, suspended from RCC slab/structural steel or catwalkway grid above with 4 mm (minimum) galvanised wires (rods) with special height adjustment clips, including preparation of working drawing, providing openings for AC ducts, return air grills, light fixtures etc (but excluding the cost of catwalkway grid) all complete as per drawings, specification and instructions of the engineer.	SQM	15	0.01021825
1700 RAIN WATER DOWN TAKE PIPES				
Rain water down take pipes including all labour, material, transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc at any level as per specification, drawings and as directed by engineer - in - charge.				
1704	Providing and fixing galvanised MS down take pipes of 150 mm dia- Medium quality as per IS:1239(part-I) all complete.	RM	968	0.63531151
1705	Providing and fixing UPVC down take pipes of 110mm diameter- Class 3 as per IS:4985 all complete.	RM	15	0.00311134
1706	Providing and fixing UPVC down take pipes of 160mm diameter- Class 3 as per IS:4985 all complete.	RM	15	0.00438536
1707	Providing and fixing GI down take pipes conforming to IS:1239 /IS:3589 of medium duty all complete for following diameters.			
a	100 mm Dia	RM	100	0.03685174
b	150 mm Dia	RM	968	0.51470381
c	200 mm Dia	RM	10	0.00806175
1708	Providing and fixing HDPE down take pipes conforming to IS:4984 as per specification of following diameters.			
a	110 mm Dia	RM	15	0.00183205
b	160 mm Dia	RM	15	0.00258490
c	200 mm Dia	RM	15	0.00344826
1800 MISCELLANEOUS WORKS				
Miscellaneous works including all labour, material, equipment etc. at any level unless				
1801	Providing and Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63 mm to 45 mm in layers not exceeding 230 mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected sand and compacting to 85 % of original volume of stone stack for all lifts etc. all complete. Payment shall be made for the measurement of the volume of the compacted fill.	CUM	1049.05	0.48857898
1803	Anti termite chemical treatment of soil with Chlorpyriphos/Lindane E.C. 20% with 1% concentration conforming to IS:8944 and as per IS 6313 all complete. (Plinth area of building at ground floor only shall be measured for payment)	SQM	50	0.00129864
1804	Supply and installation of approved 25mm thick vibration damping resilient pads on/around foundation of vibrating equipment and at other locations all complete.	SQM	20	0.11493528
1805	Providing 50mm thick premix carpet surfacing laid to slope in two layers 30mm and 20mm respectively with 12mm downgraded stone chips mixed with 80/100 grade bitumen @ 52 Kg/Cu.M including compaction etc. all complete.	SQM	12.5	0.00159689
1806	Providing 50mm thick anti corrosive layer laid to required slope consisting of clean & well graded coarse sand mixed with A90 grade bitumen for softening point upto 45 degree Celcius or A65 grade bitumen for softening point above 45 degree celcius as per IS: 73 or its equivalent quality 8 to 10% by volume and rolled or compacted all complete.	SQM	12.5	0.00217599
1807	Providing and fixing G.I strips minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete.	Kg	25	0.00222862
1808	Providing and fixing aluminium strips minimum 18 SWG thk and 300mm wide over expansion joints with minimum lap of 50mm length including brass / aluminium screws, rawl plugs etc. all complete.	Kg	25	0.00407125

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1810	Providing, laying and fixing rails and guide rails in concrete for transformer, rail track including cutting of rails, joining of rails, anchoring lugs etc all complete.	MT	10	0.28989333
1812	Laying of earthing mats/rods including risers, transportation from yard stores, loading, unloading, cutting to length, welding, protective painting of joints etc. all complete. (Excavation & Back filling shall be paid separately under respective item of earth work. Earthing mats/rods shall be supplied by BHEL free of cost)	MT	5	0.02142139
1813	Providing Earthing pit as per drawing with charcoal & salt, GI pipes, GI earth electrodes, GI wire, GI strips, brick chamber with covers including associated earthwork etc. all complete.	EACH	0.5	0.00178362
1814	Construction of below ground earthing system test pits as per drawing/ sketches including brickwork, plaster, concreting, reinforcement, formwork, providing & fixing GI strips/pipes, GI wires, covers etc as per drawing & specification including associated earthwork.	EACH	0.5	0.00082986
1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete.	Kg	250	0.00894943
1817	Providing and fixing HDPE pipes in concrete/ brick work of following sizes including cutting, fixing and levelling in position etc. all complete.			
a	Upto 75 mm dia	RM	10	0.00101430
b	100 mm dia	RM	10	0.00115820
c	150 mm dia	RM	175	0.03316638
d	200 mm dia	RM	10	0.00305693
1822	Cutting of groove of 10mm X 40mm size with groove cutting machine in concrete paving all complete.	RM	10	0.00011580
1823	Fire proofing of steel structures with VERMICULITE cementitious coating including supply of all materials for vermiculite materials, reinforcement mesh (3mm thick wire, 50x50 size mesh) , nuts, tie wires, weldings, surface preparation, curing, staging, compatible paintings etc. all complete.	CUM	2.5	0.07145953
1825	Supply and laying approved quality Stone aggregate 40mm size in transformer yards.	CUM	25	0.01113449
1826	Supply and laying approved quality rounded pebbles / gravels of 40mm size in transformer yards.	CUM	25	0.01570584
1828	Dismantling old existing reinforced/non-reinforced brickwork/blockwork/stone masonry work in mud/lime/ cement mortar at any level including clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto1km all complete.	CUM	5	0.00139510
1830	Dismantling old existing structural steel work at any level including plates, bolts, cutting rivets, welding, dismembering and stacking the dismantled materials within a lead upto 1km etc all complete.	MT	5	0.01718694
1832	Providing & filling Bentonite Powder (Sodium base) mixed with water in electronic earthing pit as per drawing & direction below ground level including all materials, transportation, labour, incidental etc all complete as per specification.	CUM	2.5	0.00847853
1833	Supply & fixing FRP (fibre reinforced plastic) sheets 2 mm thick including GI hooks/ J or L bolts, nuts, washers, bitumen washers etc. complete including overlap 100mm .	SQM	2.5	0.00076247
A1834	Providing and fixing sliding layer of bitumen paper or craft paper over the screed layer for water retaining structures to destroy the bond between the screed and the base slab concrete of the water retaining structure etc all complete.	Sqm	10	0.00031758
ISG 1836	Providing & fixing weep holes consisting of 100 mm dia HDPE pipe sleeves (average length 1500 mm) along with single side covering for the pipe mouth with galvanised welded wire fabric of 20 sqmm opening along with 300x300 sqmm, 300 mm deep, 40 mm aggregates to cover fabric mesh mouth complete as directed by engineer.	NO	100	0.02171621
2000 FENCING AND GATES				
Fencing and gates including all labour, material, equipment etc at any level as per specification, drawings and as directed by engineer - in - charge.				

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A2003	Supplying and erecting in position 2.4 m high PVC coated gavanised chain linked fencing of minimum 4 mm (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 2.5 mm. Concertina of height of 600 mm at top of chain link fencing shall be provided with all accessories. Concertina shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts etc. all complete. (Structural post shall be separately)	RM	500	0.31078294
2007	Supply and fixing of hot dip galvanised mild steel posts for fencing. Rate of zinc coating shall not be less than 710 g/m ² on steel posts.	MT	1	0.03353718
2009	Supply, fabrication and installing in position and testing galvanised MS Gates out of channels, joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffeners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete.	MT	1	0.03392149
2100 WATER SUPPLY				
Water supply work including men, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
2101	Providing and fixing in position tested heavy duty type chromium plated (CP) brass long neck bib cocks including sockets, union, nuts etc all complete - 15mm nominal bore.	EACH	20	0.00532066
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	EACH	20	0.00458364
2103	Providing and fixing in position heavy duty brass full way valve with wheel of approved quality including all specials etc all complete for following sizes:			
a	25mm nominal bore.	EACH	10	0.00410983
b	50mm nominal bore.	EACH	10	0.01021670
A2104	Providing and fixing Galvanised MS pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with MS sockets, unions, elbows, tees, nipples etc and clamps including cutting and making good the walls etc all complete for following sizes:			
a	15 mm nominal bore.	RM	20	0.00182503
b	20 mm nominal bore.	RM	25	0.00268491
c	25 mm nominal bore.	RM	10	0.00134419
2105	Providing and fixing GI pipes class B complete for external work with GI sockets, unions, elbows, tees, nipples etc including trenching & refilling, anti-corrosive paint etc all complete for following sizes:			
a	15 mm nominal bore.	RM	25	0.00258843
b	20 mm nominal bore.	RM	25	0.00287794
c	25 mm nominal bore.	RM	30	0.00431689
d	50 mm nominal bore.	RM	10	0.00228480
A2106	Providing and fixing 450X 750 mm high square edge 6 mm thick float glass mirror of adequate width to match toilet lay-out and interior decor and as per spec.	EACH	5	0.00164779
2107	Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete.	EACH	4	0.00108239
2108	Providing and fixing 25 mm diameter stainless steel towel rails (600mm X 25mm) all complete.	EACH	4	0.00129999
2109	Providing and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete.	EACH	4	0.00087040

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2110	Providing and fixing C.P. soap holder mounted with C.P. screws etc all complete.	EACH	5	0.00070896
2111	Providing and fixing stainless steel / C.P. liquid soap dispenser . Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete.	EACH	5	0.00108274
2112	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. sll complete.	EACH	5	0.00098972
2113	Providing and fixing chromium plated brass shower rose with 15 or 20 mm inlet all complete.	EACH	3	0.00094024
2114	Providing & fixing in position P.V.C. water tank of Syntex or approved equivalent including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete for following capacities. GI pipes shall be paid separately under ST No. 2105.			
a	1000 litres capacity	EACH	2	0.00561901
b	2000 litres capacity	EACH	2	0.01108781
c	5000 litres capacity	EACH	1	0.01409280
2115	Providing and fixing approved stainless steel sink with integrated drainboard as per IS:13983 of size 915x460x178mm with CI brackets, stainless steel chain with rubber plug 40mm, cp brass waste trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete as per spec.	EACH	2	0.00330121
2200 SANITARY WORKS				
Sanitary work including all labour, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge.				
2201	Supply and fixing glazed vitreous china Wash Basin conforming to IS:2556 part 4 of oval shape with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, fittings, cutting and making good the walls where required etc all complete.			
a	White	EACH	2	0.00326822
2202	Providing and fixing approved vitreous china laboratory sink of size 600x400x200mm conforming to IS:2556 (part-5) with R.S. or C.I. brackets, chromium plated brass chain with rubber plug 40mm, CP brass waste and 40mm CP brass trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete.	EACH	2	0.00404175
2203	Providing and fixing stainless steel kitchen sink of size 610x510x200mm conforming to IS: 13983 including all fittings etc. all complete.	EACH	2	0.00289058
2204	Providing and fixing colour glazed vitreous china European type water closet conforming to IS:2556 with siphon, open front solid plastic seat and plastic cover, low level 12.5 litre PVC flushing cistern (same colour as WC) with valveless fittings, necessary C.P connections etc all complete.			
a	Floor mounted	EACH	3	0.00611633
b	Wall mounted	EACH	2	0.00443975
2205	Providing and fixing colour glazed vitreous indian type Orissa pattern (580x440mm) water closet conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, necessary C.P connections etc all complete.	EACH	2	0.00370202
2206	Providing and fixing white flat back glazed vitreous china urinals of size 440x265x355 mm with photo voltaic control flushing system as per IS:2556 (part 6, section 1) with flush pipes, lead pipes, gratings, traps and necessary C.P. fittings etc. all complete.	EACH	3	0.00954775
2207	Supply, laying and jointing UPVC pipes of class 3 as per IS:4985 including bends, branches and all other necessary fittings, M.S holder bats/clamps, cutting and making good the walls and floors, jointing, testing etc all complete for following.			
b	110mm dia pipes	RM	25	0.01186273
c	160mm dia pipes	RM	25	0.01795202

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2208	Providing, laying light duty non pressure NP3 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following.			
a	200mm dia	RM	30	0.00822484
b	300mm dia	RM	30	0.01276284
c	450mm dia	RM	30	0.02477652
b	600mm dia	RM	30	0.02924847
e	900mm dia	RM	30	0.05583293
2209	Providing, laying light duty non pressure NP2 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following.			
a	150mm dia	RM	15	0.00312492
b	250mm dia	RM	15	0.00375290
c	300mm dia	RM	15	0.00515253
d	500mm dia	RM	15	0.00767660
2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete.	EACH	5	0.00967621
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	5	0.01846623
2213	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber and water tight CI cover with 300x300mm (inside). The weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg etc all complete for following sizes:			
a	100x100mm P or S Type.	EACH	2	0.00136559
b	150x100mm P or S Type.	EACH	3	0.00222955
c	150x150mm P or S Type.	EACH	2	0.00159025
2214	Providing and fixing square mouth S.W Gully trap grade 'A' complete with CI grating, brick masonry chamber and water tight CI cover with 300x300mm (inside). The weight of cover to be not less than 4.53 Kg and frame to be not less than 2.72 Kg etc all complete for following sizes:			
a	100x100mm P or S Type.	EACH	2	0.00136559
b	150x100mm P or S Type.	EACH	2	0.00148636
c	150x150mm P or S Type.	EACH	2	0.00159025
2215	Providing and fixing C.I. floor traps with C.P jalli all complete.	EACH	10	0.00256208
2216	Providing and fixing heavy duty UPVC floor traps with C.P jalli all complete.	EACH	2	0.00032570
2217	Providing and installing approved brand single tap water cooler of 80 L cooling capacity all complete.	EACH	2	0.01987397
2218	Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	EACH	2	0.03252148
2219	Providing and fixing white vitreous urinal partitions of size 675x325x85mm all complete.	EACH	5	0.00317450
2220	Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS: 10592) all complete as per specification.	EACH	2	0.02692844
2400 ROAD WORKS				
Providing Road Work including necessary material, labour, machinery, transportation etc as per specification, drawing, relevant IRC & IS codes and as directed by the Engineer-in-charge for the following.				
2401	Preparation of sub grade by excavating earth to required depth for all types of soil/ rock, dressing to camber and consolidating the base including making good the undulation etc and disposal of surplus earth within a lead upto 1 km etc. all complete.	CUM	630	0.03593443

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2402	Supplying and filling with selected good earth of approved quality in layers not exceeding 300 mm loose thickness using borrowed soil (borrowed soil to be arranged by the bidder) and compacted so as to achieve at least 95 % maximum dry density as per IS-2720 (Part-VII) including royalty/seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete.	CUM	1575	0.13015947
2403	Providing, stacking & laying granular morrum for shoulder including watering, compaction with road roller to required camber etc all complete.	CUM	202.5	0.04633232
2404	Providing & laying water bound macadam sub base course in layers of required thickness with crushed stone aggregates 90 to 40 mm down size, stone screening & blinding material including screening, sorting, spreading to template & consolidation with road roller including carriage, spreading & consolidation of blinding material moorum etc all complete.	CUM	1656	0.68372353
2405	Providing & laying water bound macadam base course in layers of required thickness with stone aggregate 63mm to 40mm size, stone screening and blinding material including screening sorting, spreading to template and consolidation with road roller including carriage, spreading and consolidation of blinding material moorum etc all complete.	CUM	900	0.42875662
A2409	Providing, mixing & laying of dense bituminous macadam course of 70mm compacted thickness using bitumen of grade 60/70 conforming to IS 73, aggregates and binder material confirming to Grade-I of MORT-H & specification including hot mixing, hot laying, rolling etc all complete as per specification.	SQM	3600	0.71984639
B2409	Providing, mixing & laying of bituminous concrete of 40mm compacted thickness using bitumen of grade 60/70 conforming to IS 73, aggregates and binder material confirming to Table 500-18 of MORT-H & specification including hot mixing, hot laying, rolling etc all complete as per specification.	SQM	3600	0.51450676
A2411	Providing and applying 5mm thk mixed seal coat with bitumen comprising of an application of a layer of bituminous binder using medium setting grade bitumen at the rate of 9.8kg/10sqm followed by a cover of medium coarse sand at the rate of 0.06 cum/10sqm including rolling etc all complete as per specification.	SQM	3600	0.10266981
2413	Providing & laying edge protection on both edges of black topping using brick on edge (bricks with crushing strength of 75 kg/cm ²) with full brick width (230 mm) etc all complete.	RM	1800	0.04316597
	Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating, shuttering, formwork and curing (excluding cost of reinforcement), with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specification and as per direction of engineer in charge for the following.			
2418	Providing and laying cement concrete of grade M30 using 20 mm nominal size stone aggregate with approved admixture (if required), provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar)	CUM	10	0.02229536
A2418	Providing and laying cement concrete of grade M30 using Vaccum Dewatered Flooring (VDF) method with 20 mm nominal size stone aggregate with approved admixture (if required), provision for necessary joints including compaction, finishing to lines and grades, curing and providing & fixing forwork etc. all complete. (Excluding the cost of reinforcement and dowel bar)	CUM	240	0.59454299
2419	Providing & laying dry lean cement concrete of grade M15 with 20 mm nominal size graded stone aggregate over a prepared sub-grade including compaction, finishing, curing etc all complete.	CUM	160	0.36587305
	REINFORCEMENT			
2420	Providing and fixing in position MS dowel bar reinforcement including surface painted with bitumen and greasing, dowel end caps with cotton fills etc all complete as per specification, drawing and as directed by Engineer.	MT	2.5	0.06113760

TECHNICAL CONDITIONS OF CONTRACT (TCC)
CHAPTER XI –BILL OF QUANTITIES AND % WEIGHTAGE OF INDIVIDUAL ITEMS

JOB: All civil and Architectural works required for Ash Handling Plant AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana.				
PART B: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price				
ST. NO	DESCRIPTION OF ITEM	UNIT	Quantity	% weightage w.r.t. the total price
2421	Straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500 confirming to IS:1786 including cost of binding wire, labour, scaffolding, transportation to & from stores etc all complete as per specification, drawing and as directed by Engineer.	MT	5	0.01683269
2422	Providing, straightening cutting, bending, placing in position at any level, binding in position of steel reinforcement of mild steel reinforcements including cost of binding wire, labour, scaffolding transportation to & from stores etc all complete as per specifications, drawings and as directed by Engineer.	MT	0.5	0.01032193
MISCELLANEOUS				
2423	Providing & installation of bitumen impregnated fibre board of specified thickness confirming to IS 1838 as joint filler including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete as per specification, drawing and as directed by engineer.	RM	150	0.01239614
2424	Providing and filling in position hot applied bitumen sealing compund (Grade A) of specified thick confirming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints, sealant primer etc all complete as per specification, drawing and as directed by Engineer.	RM	150	0.00573636
2425	Providing and laying debonding strip/tape of specified thickness before applying sealant including cleaning etc all complete as per specification, drawing and as directed by Engineer.	RM	150	0.00427790
A2428	Providing and laying Impermeable plastic sheeting 125 microns thick laid flat without creases as per IRC 15-2002 etc all complete as per specification, drawing and as directed by Engineer.	SQM	250	0.00785915
GRAND TOTAL Weightage				100.00