

T E N D E R S P E C I F I C A T I O N

Sl No	Tender Specification Number	Unit Number & Project
1	BHE/PW/PUR/MANUT-CVL PHA Pkg-C (U-1&2) /1454	Package-C (Unit-1&2)

Package C: All Civil and Architectural work for Power House, TG Foundation including deck, BFP Foundations, Transformer Foundations (GT, ST & Aux. Transformer Foundations), and Transformer yard all civil works and DG building etc. excluding Power House Structural fabrication and erection for **Unit# 1 & 2 AT 4X270 MW Thermal Power Station, Manuguru, Distt-Khammam, Telangana.**

PRICE BID SPECIFICATION- VOLUME- II

TENDER SPECIFICATIONS CONSISTS OF:

- **Notice Inviting Tender**
- **Volume 1 A - Technical Conditions of Contract,**
- **Volume 1 B - Special conditions of Contract,**
- **Volume 1 C - General conditions of Contract**
- **Volume 1 D - Forms & Procedures**



Bharat Heavy Electricals Limited
(A Government of India Undertaking)
Power Sector - Western Region
345-Kingsway, Nagpur-440001

Date
Seal and Signature
Place

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EARNEST MONEY DEPOSIT: Refer Notice Inviting Tender

LAST DATE FOR Refer Notice Inviting Tender
TENDER SUBMISSION .

THESE TENDER SPECIFICATION DOCUMENTS CONTAINING VOLUME-I AND VOLUME- II ARE ISSUED TO:

M/s.

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PLEASE NOTE:
THESE TENDER SPECS DOCUMENTS ARE NOT TRANSFERABLE.

For Bharat Heavy Electricals Limited

ADD. GENERAL MANAGER (Purchase)
Place: Nagpur
Date :

Date
Seal and Signature
Place

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VOLUME - II - PRICE BID SPECIFICATION

PACKAGE C: T.S.No BHE/PW/PUR/MANUT-CVL PHA Pkg-C (U-1&2) /1454

Part A: Instructions to the Bidders

1. **Bidders shall quote One Total Lumpsum Price for the entire scope of work in the format given in PART C in the price bid.** Any other entry elsewhere in the price bid shall be treated as Null and Void.
2. BHEL has fixed the % weightages for the amount of individual items of Schedule of Quantity w.r.t. the total price for SERVICE portion of work (Part B.1) and w.r.t. the total price for SUPPLY portion of work (Part B.2) of Price Bid.
3. Percentage weightage of SERVICE portion of work (Part B.1) and SUPPLY portion of work (Part B.2) w.r.t. the Grand Total Price (as quoted by the bidder in Part C) shall be as per Part B.3 of this price bid specification
4. Based on the pre-fixed % weightages, amount of individual items shall be derived by BHEL. This amount shall not be rounded off.
5. Based on the quantities of individual item and the amount arrived in Sl No 4 above, item rate of individual items shall be derived by BHEL. This item rate shall be rounded off to two decimal places.
6. The item rates thus derived as in Sl No 5 above shall be multiplied with respective quantities to arrive at the amount and grand total amount which shall be considered for award of work.
7. For the convenience of bidders, BHEL has issued an excel sheet with all requisite formulae as detailed above. However this excel sheet shall not form part of contract document.
8. Modality of award shall be as per clause no 6 of Annexure-4 of Notice Inviting Tender (NIT) of Vol-I-Technical Bid Specification.

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	32500	0.999505
b	Depth exceeding 2 m but not exceeding 4 m	CUM	21938	0.917507
c	Depth exceeding 4 m but not exceeding 6 m	CUM	7150	0.389206
d	Depth exceeding 6 m but not exceeding 8 m	CUM	1625	0.12993
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.			
b	Depth exceeding 2 m but not exceeding 4 m	CUM	2438	0.17391
c	Depth exceeding 4 m but not exceeding 6 m	CUM	10725	0.910336
d	Depth exceeding 6 m but not exceeding 8 m	CUM	4875	0.470751

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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 / from Stock Pile of other sources 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	26551	0.677726
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	11379	0.290454
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	3889	0.095676
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	2003	0.049277
109	Extra over ST No. 101 and 103 to 107 for carriage of excavated earth/selected materials for every 1 km or part thereof beyond an initial lead of 500m.	CUM		
a	Carriage beyond initial lead of 500m or part thereof but not exceeding 2 km	CUM	11228	0.124322
b	Carriage beyond 2 km or part thereof but not exceeding 3 km	CUM	11228	0.248617
c	Carriage beyond 3 km or part thereof but not exceeding 4 km	CUM	3743	0.124313
d	Carriage beyond 4 km or part thereof but not exceeding 5 km	CUM	3743	0.165744
e	Carriage beyond 5 km or part thereof but not exceeding 6 km	CUM	1871	0.103592
f	Carriage beyond 6 km or part thereof but not exceeding 7 km	CUM	1871	0.124313
g	Carriage beyond 7 km or part thereof but not exceeding 8 km	CUM	1871	0.145029
h	Carriage beyond 8 km or part thereof but not exceeding 9 km	CUM	1871	0.165749
i	Carriage beyond 9 km or part thereof but not exceeding 10 km	CUM	1871	0.186465

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	495	0.042471
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	255	0.022036
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	500	0.091644
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	500	0.314006
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	1500	1.139916

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	200	0.184447
204	Concrete under floors, paving, plinth protection, pipe encasing etc complete with 20 mm nominal size graded aggregate at any depth below finished floor level for the following grades.			
b	M20 Grade	CUM	1000	0.941986
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.			
a	M25 Grade	CUM	18000	19.568557
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	CUM	6000	6.915877

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A207	Providing and laying Design Mix cement concrete confirming to IS:456 & IS 10262-2009 for reinforced concrete works of grade M-30 Grade in machine foundations for TG, Gas Turbine, ID/FD/PA fans,GR fan, BFP, Coal mills at all elevations below/above finished floor level except TG deck and top decks supported over vibration isolation system including addition of suitable plasticizer conforming to IS 9103(latest) to achieve a slump more than 125mm in concrete as per manufacturer's recommendation with 20 mm nominal size graded aggregate in concrete all complete as per specification & drawing.		3536	4.491959
208	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 of grades mentioned below for reinforced concrete works using graded aggregate in top decks of all machine foundations supported on vibration isolation system (excluding supply and installation of vibration system) and top deck of TG foundation at all levels including addition of suitable plastisizers conforming to IS9103 to achieve a slump more than 125 mm in concrete as per manufacturers recommendation, preperation of scheme for concreting, getting it approved by engineer, labour, materials, equipment, handling, batching, transporting, mixing, pumping, placing, leveling, vibrating, compacting, curing, testing, cleaning and rendering the exposed surface with cement sand mortar to give a smooth and even surface, maintaining and submitting records of concreting, petrographic examination and potential reactivity of aggregate etc. all complete as per specification, drawing and instructions of engineer, including UPV testing as directed by engineer in charge, rectification of the defects in concreting observed by ultra-sonic pulse velocity (UPV) testing by cement/epoxy grout etc, but excluding formwork, staging, reinforcement, embeddments and temperature control of concrete. Payment terms - a) After casting 75% ; b) After receipt of ultrasonic test report - 25%.			
a	M30 grade (with 20mm nominal size graded stone aggregate)	CUM	900	1.178189
b	M35 grade (with 20mm nominal size graded stone aggregate)	CUM	900	1.234856

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
209	Extra over St. No. 205 to 208 for controlling of temperature of fresh concrete to less than 23 degree centigrade using ice, including all related arrangements for providing, storing and mixing of ice with water, cooling of aggregates etc. All complete as per specification, drawing and instruction of engineer in charge.	CUM	1600	0.17517
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	3600	1.174647
211	Providing and encasing of structural steel member with concrete 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)			
a	M20 grade	CUM	580	0.515136
b	M25 grade	CUM	450	0.56422
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	850	0.960349
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, 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.			
a	M 25 grade	CUM	150	0.284392

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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 including addition of suitable plastisizer cum waterproofing cement additives conforming 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	650	0.73023
b	M 30 grade	CUM	100	0.133308
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	10	0.005566
b	Reinforced cement concrete of all grades	CUM	10	0.007857
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	1	0.000028
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	1	0.000032
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	1	0.000029
219	Providing and applying curing compound of approved make where ever required as per manufacturer's specification.	SQM	2000	0.026446

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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.				
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	30000	2.860036
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	30000	3.625799
A303	Fairface Formwork with good quality water proof ply wood of required thickness and smooth surface for TG Deck superstructure (above base raft level) including preparation of scheme, designing, submission and approval of staging drawing with sufficient props, braces and ties at every tier of height of approx. 4m for all heights.	SQM	5000	2.048173
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	25	0.002844
b	Pockets of depths more than 150mm and upto 300 mm depth	Each	25	0.002952
c	Pockets of depths more than 300mm and upto 600 mm depth	Each	20	0.003758
d	Pockets of depths more than 600mm and upto 1000 mm depth	Each	15	0.003911
e	Pockets of depths more than 1000mm and upto 1500 mm depth	Each	10	0.003834

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	100	0.015038
400 REINFORCEMENT				
401	Taking delivery of steel from BHEL stores/ store yard, loading, transporting and unloading at site, 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 binding wire, labour, scaffolding, transportation to & from stores etc. all complete as per specifications & drawings.	MT	10	0.019207
402	Taking delivery of steel from BHEL stores/ store yard, loading, transporting and unloading at site, straightening, cutting, bending, placing in position at any level, binding in position of steel reinforcements of TMT steel of grade Fe-500/Fe-500D 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	3000	5.762388
406	Taking delivery of steel from BHEL stores/ store yard, loading, transporting and unloading at site, straightening cutting, bending, placing in position at any level, binding of mild steel reinforcements in brickwork including cost of binding wire, labour, scaffolding etc. complete all as per specifications & drawings.	MT	2	0.003841

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407	Taking delivery of steel from BHEL stores/ store yard, loading, transporting and unloading at site, straightening, cutting, bending, placing in position at any level, binding in position high yield strength steel reinforcements in brickwork including cost of binding wire, labour, scaffolding etc. complete all as per specifications & drawings.	MT	2	0.004031
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	11000	0.217956
502	Providing and laying in-situ light weight foam concrete insulation as per relevant IS Code in suitable panels over roofs followed by a layer of 15 mm thick cement sand plaster 1:5 (1 cement: 5 coarse sand) after the curing period of laid foam concrete and providing of expansion joint at intervals as per the recommendation of manufacturer. The insulating properties shall be such that the thermal conductivity shall not exceed 0.125 Kcal/sqm-hr deg C. Cost shall include making of fillets, cleaning & preparation of surface, expansion joints at suitable intervals etc all complete for following.			
a	Average 50 mm thickness	SQM	11000	1.241517
b	Average 75 mm thickness	SQM	100	0.012239
c	Average 100 mm thickness	SQM	100	0.016022

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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	11000	1.962063
B506	Providing and applying a separation layer of non-woven polypropylene geo-textile membrane of 120 gsm for water proofing as per technical specification.	SQM	11000	0.287544
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	11000	1.85043
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	7496	0.341188
512	Anti termite chemical treatment of soil with Chloropyrifos emulsifiable concentrates (1%) conforming to IS :8944 all complete.	SQM	700	0.01679
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.			

Package C: All Civil and Architectural work for Power House, TG Foundation including deck, BFP Foundations, Transformer Foundations (GT, ST & Aux. Transformer Foundations), and Transformer yard all civil works and DG building etc. excluding Power House Structural fabrication and erection for **Unit# 1 & 2** AT 4X270 MW Thermal Power Station, Manuguru, Distt- Khammam, Telangana.

PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
a	12 mm wide joints.	SQM	100	0.030353
b	20 mm wide joints.	SQM	100	0.040225
c	25 mm wide joints	SQM	100	0.049174
d	50 mm wide joints	SQM	100	0.063351
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	350	0.015392
b	20mmX25mm	RM	300	0.020666
c	25mmX25mm	RM	250	0.030445
d	50mmX25mm	RM	250	0.060891
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	350	0.001291
b	12mm X 25mm	RM	300	0.00083
c	20mmX25mm	RM	250	0.001153
604	Supplying and filling in position hot applied bitumin sealing compound (Grade B) 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	350	0.001076
b	12mm X 25mm	RM	300	0.000737
c	20mmX25mm	RM	250	0.000999

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
605	Providing and sealing of joints with premium grade silicon sealant (Silpruf of GE silicon or approved equivalent) including cleaning of joints, raking out groove, joint filler tapes, application of primer, curing, scaffolding etc. all complete as per manufacturer's recommendation for following size groove:			
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	100	0.009225
b	230 mm wide and 8 mm thick	RM	100	0.012701
c	150 mm wide and 6 mm thick	RM	100	0.007257
d	230 mm wide and 6 mm thick	RM	100	0.022173
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	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	40	0.254884
702	Transportation from BHEL Store, 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	20	0.133623
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	25	0.112026

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
704	Transportation from BHEL store 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 as per specification.	MT	60	0.315959
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	20	0.053436
b	PVC pipes / conduits of all diameters	Quintal	20	0.108306
c	UPVC pipes / conduits of all diameters	Quintal	20	0.110979
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	0.002868
ii	Beyond 250 Kg and upto 500 kg	Each	25	0.004225
iii	Beyond 500 Kg and upto 750 kg	Each	25	0.006224
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	15	0.001489
ii	Beyond 250 Kg and upto 500 kg	Each	15	0.002269
iii	Beyond 500 Kg and upto 750 kg	Each	15	0.003565
A705	Anchor fasteners (Chemical type, galvanised) of HILTI make or equivalent of safe tensile capacity as specified below for concrete work.:			
i	Upto 250 kg	Each	15	0.002344

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
ii	Beyond 250 Kg and upto 500 kg	Each	15	0.003019
iii	Beyond 500 Kg and upto 750 kg	Each	15	0.003734
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.				
801	Providing & grouting with cement slurry mix of approved ratio using pressure pump for water retaining concrete structures as per approved procedure including cost of nipples/ nozzles, cement, admixture, curing, pressure pumps, slurry agitator etc. all complete. Cost shall include fixing of nipples at minimum 500 mm centre to centre spacing, cutting of nipples after completing of grouting, making good of the nipple hole with appropriate non-shrink cement paste, water tightness test etc. all complete wherever specified in the drawing.	SQM	50	0.00715
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	50	0.309155
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	3	0.011027
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	20	0.326421

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A805	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 GPX-2 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).	CUM	10	0.181238
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.				
901	Providing and fixing wooden frame conforming to IS 4021 made of best quality seasoned CP teakwood 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	0.032121
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	0.009485
902	Providing and fixing teakwood frame panel door shutter as per IS 1003 with 35 mm x 150 mm vertical rail & 35mm x 125 mm horizontal rail and 12 mm thick interlocked panels of teakwood with proper wood joinery including beading, preparation of working drawings, godrej or equivalent make mortice lock with handels on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fitting shall be anodised aluminium color dyed), screws, primer and finish painting / polishing etc. all complete. (Finish painting / polishing paid separately)	SQM	70	0.078058

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
B902	Providing and fixing teakwood frame panel door with PVC lamination on both sides shutter as per IS 1003 with 35 mm x 150 mm vertical rail & 35mm x 125 mm horizontal rail and 12 mm thick interlocked panels of teakwood with proper wood joinery including beading, preparation of working drawings, godrej or equivalent make mortice lock with handels on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fitting shall be anodised aluminium color dyed), screws, primer and finish painting / polishing etc. all complete. (Finish painting / polishing paid separately)	SQM	35	0.039179
903	Providing, fitting and fixing solid core flush door shutter as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldehyde synthetic resin, partical board core conforming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings. godrej or equivalent make mortice lock with handels on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color dyed), finish synthetic paint over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge. with commercial faces and teak wood edges. (Finish painting paid separately)	SQM	26	0.030488
A903	Providing, fitting and fixing solid core wooden flush door shutter with PVC lamination on both sides as per IS 2202 part II, 35mm thick homogenous particle board bonded with BWP type phenolformaldehyde synthetic resin, partical board core conforming to IS 3087 type I, 35x12 mm thick teakwood beading all around including preparation of working drawings. godrej or equivalent make mortice lock with handels on both sides, approved ISI mark anodised fittings like door stopper, 300mm long tower bolts, 16x300mm long aldrops, 125mm long handles on both sides etc. butt hinges, sliding bolt, knobs, (all fittings shall be anodised aluminium color dyed), finish synthetic paint over primer, screws etc. all complete as per drawing, specification and instruction of engineer in charge. with commercial faces and teak wood edges. (Finish painting paid separately)	SQM	31	0.036513

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	80	0.142192
906	Providing and fixing anodized extruded aluminium doors (single or double shutter) 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 necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. Glazing shall be clear float glass of 6mm thickness including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice lock with handle on both sides, etc all complete. Aluminium section shall be smooth, free of stains, straight, mitred & jointed mechanically wherever required. (Glazing shall be paid separately)	SQM	55	0.091861
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	20	0.089932

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A907	Fixing of 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	80	0.107918
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	155	0.132198
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	40	0.000938

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A909	Fixing of 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-mettalic 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	8550	0.356545
A910	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	550	0.159231
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	30	0.014097
b	Floor mounted Hydraulic door closers	Each	20	0.015997
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	1893	0.064038

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	23	0.022001
b	Mechanically Operated	SQM	45	0.053135
c	Electrically operated	SQM	30	0.060232
A913	Providing and fixing in position rolling shutter of MS 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	23	0.01871
b	Mechanically Operated	SQM	45	0.045182
c	Electrically operated	SQM	30	0.051208
914	Providing and fixing PVC doors(25 thk double skin) of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	40	0.03261

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A914	Providing and fixing Solid core PVC door shutters (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	40	0.068295
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	200	0.032475
c	6 mm thick clear float glass	SQM	50	0.011378
d	6 mm thick wired glass	SQM	450	0.102546
e	6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges.	SQM	50	0.032183
f	4 mm thick ground glass	SQM	30	0.005185
g	6 mm thick tinted heat reflecting type float glass	SQM	30	0.011938
h	6 mm thick clear toughened safety glass	SQM	40	0.021035
A915m	6 mm thick clear float glass with itching	SQM	165	0.026231
A915n	One outer 6mm thick tinted heat-reflecting type float glass and one inner 6mm thick toughened float glass hermetically sealed and seperated by 12 mm thick gap for thermal insulation (only single elevation area to be measured).	SQM	100	0.028456
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	0.002103
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	0.010954
918	Providing and fixing steel louvered window with ISMC 100 frame all round including verticals with 18G pressed steel louvers, painting etc. all complete.	SQM	30	0.027696

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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 seperately)	NOS	1	0.021342
B921	Providing and fixing M.S. grills of approved pattern made out of 25mm X 6mm M.S. flats and 12-20mm M.S. square bars on window frames including painting as per specification.	KG	5	0.000143
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	300	0.31229
1002	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.			
b	Using clay ash bricks as per IS 13757 with crushing strength of 75 kg/cm ² and minimum percentage of fly ash 25%	CUM	100	0.103593
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	CUM	100	0.112142
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	2500	2.687473

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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 providing 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.			
a	Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	CUM	250	0.326749
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.			
a	Using fly ash lime/cement bricks confirming to IS 12894 with crushing strength of 75 kg/cm2	CUM	50	0.053355
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	10	0.002638
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. (Rates are inclusive of Chicken wire mesh)	CUM	10	0.018973
1008	Providing and laying 75 mm thick bed of dry brick aggregate including of excavation, disposal of surplus earth spreading of earth, ramming, watering etc. complete in all respects as directed by the engineer.	SQM	2	0.000099
1009	Making openings in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete.	CUM	5	0.001768
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	10	0.000771

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	0.010225
1012	Providing and filling brick bats in soak pits all complete.	CUM	10	0.003296
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	290	0.028181
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 of the building wall/rough surface of internal wall in 1:4 cement sand mortar of 12mm thick first layer and 1:3 cement sand mortar with 8mm second layer, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete.	SQM	8600	0.976287
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	19000	1.897618

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A1204	Providing 6mm thick plaster on ceiling in cement mortar 1:3 finished to a smooth all complete.	SQM	7481	0.284289
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 enginner in charge. Rate is inclusive of chicken wire mess.	SQM	5000	0.409012
1210	Ruled pointing in masonry in CM 1:3 (1 cement and 3 fine sand) including raking out joints, curing etc. complete.	SQM	100	0.002053
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.				
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	22500	0.518974
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	3000	0.109792
A1305	Providing and applying two or more coats of 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	8000	0.29278
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	1595	0.044148

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
1310	Providing and applying 3 coats of water proof cement paint of approved make and color on exterior surface at all heights including material, labour, scaffolding, curing etc including primer coat complete as per specification.	SQM	700	0.012269
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	400	0.054618
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	7500	0.156838
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	15000	0.638822
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	350	0.037242
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	350	0.031505
1400 FLOORING AND SKIRTING				

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
	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, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	19265	1.766383
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 28mm 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, aluminium strips etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips): as per spec.	SQM	500	0.068564
1402	Providing and laying 25 mm thick heavy duty cement concrete mix 1:2:4 (1 cement: 2 sand : 4 stone aggregates) flooring with metallic hardener pigmented topping of 10 mm thick uniform graded treated iron particles in skirting and dado complete as per specification.	SQM	700	0.076436
A1404	Providing and laying 50 mm thick coloured interlocking M30 concrete tile in paving with approved colour and pattern and should be laid on the subbase and bedding as per specifications and recommendations of manufacturer.	SQM	500	0.091337

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
1406	Laying of polished Kota stone/Shahabad 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 as per specification or as directed by engineer-in-charge.	SQM	4500	0.417406
1408	Laying of polished Kota stone/Shahabad stone 18mm to 20mm thk in skirting projecting 6mm from adjacent plaster including cutting brickwall upto the required depth, edging, finishing etc. all complete as per specification or as directed by engineer-in-charge.	SQM	90	0.008116
1412	Laying of 18-20mm thick polished Granite stone of approved color and texture in flooring with brass/ stainless steel strips. Under bed shall average 30mm thk of 1 cement : 2 sand : 4 stone aggregate by volume and brought to proper level. The granite 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 as per specification or as directed by engineer-in-charge.	SQM	3427	1.082262
1414	Laying of polished Granite stone 18-20mm thk in skirting and dado with 6mm thick projection from adjacent plaster including mortar ,cement slurry ,pigments, curing, grinding,moulding, granite polishing etc. all complete as per specification or as directed by engineer-in-charge.	SQM	150	0.048809
1417	Providing and laying vitrified ceramic tiles of matt finish of size 600x600mm from reputed / approved manufacturer including underbed of cement mortar 1:3 with neat cement slurry etc. all complete for following.			
a	7mm thick tiles In flooring	SQM	500	0.179445

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
c	7mm thick tiles In skirting and dado upto specific height	SQM	500	0.178215
A1417	Providing and laying 1st quality coloured glazed ceramic tiles rom reputed / approved manufacturer including underbed of cement mortar 1:3 with neat cement slurry etc. all complete for following.			
c	5mm thick tiles In skirting and dado upto specific height	SQM	100	0.035643
d	7mm thick tiles In skirting and dado upto specific height	SQM	200	0.088446
1418	Providing and laying 10 mm thk non-skid fully vitrified 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			
a	400X400 mm	SQM	200	0.083249
b	600X600 mm	SQM	2700	1.101442
1419	Providing and laying granite stone slab of 20mm thickness single piece for wash basin / sink slab /facia of black or approved colour with cutting,making corners,moulding and opening etc. all complete.	SQM	50	0.055432
B1423	Providing & fixing acid and alkali resistant vitrified tiles in flooring/Dado beded and jointed with epoxy mortar all complete for following thicknesses. The tiles should be abrasion resistant & durable.			
a	20mm thick		500	0.533554

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	250	0.213421
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	450	0.09625
b	6mm thick	SQM	200	0.049789
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	1850	0.394828

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
1429	Providing and fixing 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	400	0.224708
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	60	0.000664
b	Aluminium strips 40 mm wide and minimum 3 mm thick	RM	60	0.001623
c	Brass strips 20 mm wide and minimum 4 mm thick.	RM	40	0.001488

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A1432	Providing and fixing 10 mm thick high polished decorated colored background first quality digital series dual charged glazed tiles of size 450mmx300 mm for dadoing etc complete as per specification and instruction of engineer in charge.	SQM	450	0.128053
A1433	Providing and laying self levelling epoxy flooring consisting of first coat of solvent free resin based dispersion primer @ 200gm/sqm, first layer of epoxy flooring @ 4.4kg/sqm of 2mm thickness, second layer of primer @100gm/sqm, final decorative epoxy topping @3.6 Kg/Sqm of approx 2mm thickness complete as per specification and including all material, labour, etc all complete.	SQM	250	0.088925
1500 ROOFING / SIDE CLADDING				
Roofing / side cladding work including all labour, material, equipment, transportation, handling, scaffolding, laps, hooks, washers, corner pieces etc. at any level as per specification, drawings and as directed by engineer - in - charge.				

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A1501	Fixing of 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	7500	0.883626
1502	Fixing of 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	15	0.009813

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A1503	Fixing of external sheet of Permanent colour coated metal cladding with troughed M.S. sheets manufactured out of 0.55 mm TCT(Total coated thickness) permanently colour coated zincalume sheet (150 gsm zinc-aluminium alloy coating total of both sides as per AS 1397:1993) having 300 Mpa yield strength. The colour coating shall be comprise of SMP.The colour coating shall comprise of 20 microns finish coat over a 5-micron primer coat on the exposed side and a back coat of 5 microns over a primer coat of 5 micron on the reverse side.The metal cladding shall have 500 mm cover width,47 mm high crests at 250 mm centers with special male/female side laps and anti siphoning feature to prevent leakage .The sheet shall be fixed with the help of concealed compatible interlocking clips and wafer head zinc cotted self drilling fastner/screws 4.2X25 mm long on to the sub-girts.The clips shall be concealed and no fastner are to be penetrate the external sheeting all complete as per specification.	SQM	12250	0.915039
A1505	Fixing of inner sheet of Permanent colour coated metal cladding with troughed M.S. sheets manufactured out of 0.5 mm TCT(Total coated thickness) permanently colour coated zinkalume sheet (150 gsm zinc-aluminium alloy coating total of both sides as per AS 1397:1993) having 550 Mpa yield strength . The colour coating shall be comprise of SMP.The colour coating shall comprise of 20 microns finish coat over a 5-micron primer coat on the exposed side and a back coat of 5 microns over a primer coat of 5 micron on the reverse side.The inner sheet shall have 980 mm cover width,28 mm high crests at 195 mm centers with special male/female side laps and anti siphoning feature to prevent leakage as per spec.	SQM	2100	0.171805
B1505	Fixing of inner sheet of Permanent colour coated metal cladding with troughed M.S. sheets manufactured out of 0.6 mm TCT(Total coated thickness) permanently colour coated zinkalume sheet (180 gsm zinc-aluminium alloy coating total of both sides as per AS 1397:1993) having 240 Mpa yield strength. The colour coating shall be comprise of SMP.The colour coating shall comprise of 20 microns finish coat over a 5-micron primer coat on the exposed side and a back coat of 5 microns over a primer coat of 5 micron on the reverse side.The inner sheet shall have 980 mm cover width,28 mm high crests at 195 mm centers with special male/female side laps and anti siphoning feature to prevent leakage as per spec.	SQM	2100	0.164334

Date
Place

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
1506	Providing and fixing insulation of resin bonded mineral wool of 50 mm nominal thickness conforming to IS 8183 having a density of 32 kg/cum glass wool or 48 kg/cum for rock wool, for cladding/under deck insulation including application of glue and tying with lacing wire, for glass/rock wool as per manufacturer's recommendations.	SQM	2100	0.313223
A1506	Providing and fixing insulation of polystyrene block of 50 mm nominal thickness for under deck insulation including application of glue and tying with lacing wire as per manufacturer's recommendations.	SQM	200	0.053902
1507	Providing and fixing insulation of resin bonded mineral wool of 50 mm nominal thickness conforming to IS 8183 having a density of 32 kg/cum glass wool or 48 kg/cum for rock wool, for cladding/under deck insulation including wrapping in black polythene black supported over weld mesh 75X75X1.6 MM dia to hold in position and application of glue & tying with lacing wire, for glass/rock wool as per manufacturer's recommendation.	SQM	950	0.156011
1508	Providing and installing under deck insulation using minimum 0.05 mm thick aluminium foil on exposed surface followed by 0.56 mm dia and 25 mm mesh GI wire netting, fixed at various elevations with rawl plugs including clips but excluding cost of insulation.	SQM	1200	0.16127
A1511	Providing and installing under deck insulation using Closed Cell Elastomeric Nitrile Rubber of density 40 to 60 kg/cum fixed at various elevations with rawl plugs including clips etc as per specification.	SQM	250	0.032606
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.				

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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 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.			
a	12.5 mm thick GRG board with galvanised light gauge steel load bearing supporting GI frame and finished flat (seamless).	SQM	750	0.261094
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	350	0.124965
1603	Fixing of 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	750	0.162676

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A1604	Fixing and laying of Acoustic permanently colour coated aluminium false ceiling of approved colour with stove enamel finish of approved make of either lineal panel system or aluminium tile/plank system with corrosion resistance aluminium alloys panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation (as per 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. suitable M.S. channel (minimum MC 75) grid 1200 c/c maximum shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. 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	1450	0.464194
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	225	0.114442
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.				
1706	Providing and fixing UPVC down take pipes of 160mm diameter- Class 3 as per IS:4985 all complete.	RM	100	0.025617
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	250	0.080727

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
b	150 mm Dia	RM	360	0.167728
c	200 mm Dia	RM	70	0.049448
A1707	Providing and fixing GI down take pipes conforming to IS:1239 /IS:3589 of heavy duty all complete for following diameters.			
a	100 mm Dia	RM	100	0.042439
b	150 mm Dia	RM	360	0.201495
c	200 mm Dia	RM	70	0.05597
1708	Providing and fixing HDPE down take pipes conforming to IS:4984 as per specification of following diameters.			
a	110 mm Dia	RM	50	0.005351
b	160 mm Dia	RM	50	0.007549
c	200 mm Dia	RM	50	0.010071
1800 MISCELLANEOUS WORKS				
Miscellaneous works including all labour, material, equipment etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.				
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	3210	1.309988
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	500	0.011378
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	25	0.125888

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	150	0.016791
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	110	0.016778
1807	Providing and fixing G.I strips minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete.	Kg	15	0.001171
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	70	0.009988
1809	Providing Chemical injection grouting with pressure pump for water retaining concrete structures conforming to IS:6494, including fixing nozzles, cost of approved cement, admixture, curing etc. all complete . Payment shall be made as per the consumption of chemical grout.	Kg	110	0.036399
1810	Taking delivery of steel from BHEL stores/ store yard, loading, transporting and unloading at site, cutting, placing in position at any level, 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	60	0.856739
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	65	0.244013
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	25	0.078144

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	6	0.008725
1815	Providing and fixing GI rungs in concrete/brick walls having zinc coating of minimum 900 g/sqm etc. all complete.	Kg	250	0.007842
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	75	0.006665
b	100 mm dia	RM	100	0.010148
c	150 mm dia	RM	100	0.016606
d	200 mm dia	RM	100	0.026786
1818	Providing and laying dry stone pitching of 230 mm thickness for slope protection in cement mortar 1:6 including hammer dressing, raking of joints, pointing, preparing the bedding surface and voids filling with stone aggregate etc. all complete.	SQM	100	0.036625
1822	Cutting of groove of 10mm X 40mm size with groove cutting machine in concrete paving all complete.	RM	50	0.000507
1823	Fire proofing of steel structures with VERMICULITE cementious 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	0.042684
1824	Supply & fixing expanded metal steel sheet conforming to IS:412. Size of mesh shall be 10mmX40mm with strands of 2.5mm width and 1mm thickness to the structural steel for facilitating fireproofing works.	SQM	5	0.000553
1825	Supply and laying approved quality Stone aggregate 40mm size in transformer yards.	CUM	100	0.039025
1826	Supply and laying approved quality rounded pebbles / gravels of 40mm size in transformer yards.	CUM	100	0.055048

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	70	0.017114
1829	Dismantling old existing plain/re-inforced concrete work at any level including clearing/cleaning, stacking the serviceable materials at plant site and disposal of unserviceable materials within a lead upto 1km all complete.	CUM	50	0.036335
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	10	0.030119
1831	Sprinkling of water by water tanker fitted with perforated GI pipe (portable tanker minimum 3000 litre capacity) for roads and miscellaneous area within plant boundary, for dust supression and reduction of suspended material at site for day to day work, as directed by BHEL site engineer (water for this purpose shall be provided by BHEL free of cost and utilisation of machine will be in terms of Tank-hour put in actual use for water sprinkling).	TANK-HR	100	0.006796
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	4	0.011886
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	20	0.005344
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	70	0.001659
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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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A2001	Supplying and erecting in position 2.4 m high PVC coated gavanised chain linked fencing of minimum 8 gauge (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 12 gauge. GI barbed wire fencing of height of 600 mm confirming to IS 298 at top of chain link fencing shall be provided with 4 strands of barbed wire hot dip galvanised wire of 12G comprising of 3 ply of wires with barbs of 16G spaced at 100mm. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts, accessories etc. all complete. (Structural post shall be separately under item 2007)	RM	200	0.106037
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 under ST No. 2007)	RM	250	0.13616
2007	Supply and fixing of hot dip galvanised mild steel posts for fencing. Rate of zinc coating shall not be less than 710 g/m2 on steel posts.	MT	10	0.293866
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 stiffners, 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	5	0.148616
2100 WATER SUPPLY				

Date
Place

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	15	0.003496
2102	Providing and fixing in position heavy duty brass stop cock of approved quality including all specials etc all complete - 15mm nominal bore.	EACH	25	0.00502
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	0.003601
b	50mm nominal bore.	EACH	8	0.007161
2104	Providing and fixing GI pipes class B medium class conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, complete for internal works with GI 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	110	0.008795
b	20 mm nominal bore.	RM	110	0.010351
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	110	0.008674
b	20 mm nominal bore.	RM	110	0.01023
c	25 mm nominal bore.	RM	50	0.005834
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	150	0.013443

Date
Place

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
b	20 mm nominal bore.	RM	150	0.014965
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	10	0.002887
2107	Providing and fixing 610mmx127mmx6mm thk clear glass with C.P Guard rails and mounted on C.P. brackets etc all complete.	EACH	10	0.002371
2108	Providing and fixing 25 mm diameter stainless steel towel rails (600mm X 25mm) all complete.	EACH	6	0.001708
2109	Providing and fixing 20mm dia chromium plated M.S. pipes wall mounted towel rod with C.P. Brackets etc all complete.	EACH	7	0.001334
2110	Providing and fixing C.P. soap holder mounted with C.P. screws etc all complete.	EACH	15	0.001863
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	10	0.001897
2112	Providing and fixing glazed vitreous wall mounted paper holder with suitable cover cum cutter fitted with CP screws etc. sll complete.	EACH	12	0.002081
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	4	0.009847
b	2000 litres capacity	EACH	4	0.01932
c	5000 litres capacity	EACH	2	0.024697
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	5	0.007231
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.				

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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	8	0.011454
b	Colored	EACH	2	0.003283
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	0.003541
2203	Providing and fixing stainless steel kitchen sink of size 610x510x200mm conforming to IS: 13983 including all fittings etc. all complete.	EACH	2	0.002532
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	15	0.026795
b	Wall mounted	EACH	2	0.00389
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	10	0.016218
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	15	0.04183

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
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.			
a	75mm dia pipes	RM	25	0.007319
b	110mm dia pipes	RM	80	0.033262
c	160mm dia pipes	RM	80	0.050337
d	200mm dia pipes	RM	20	0.012867
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	50	0.012041
b	300mm dia	RM	50	0.018669
c	450mm dia	RM	50	0.036213
b	600mm dia	RM	50	0.042754

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
e	900mm dia	RM	50	0.081601
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	50	0.009142
b	250mm dia	RM	50	0.010984
c	300mm dia	RM	50	0.015077
d	500mm dia	RM	50	0.022487
2210	Providing, laying light duty non pressure NP4 class RCC pipes with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following:			
a	450mm dia	RM	30	0.019402

Date
Place

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
b	600mm dia	RM	30	0.026192
c	900mm dia	RM	30	0.047809
2211	Providing and fixing C.I Manhole heavy duty cover of size 600mmx450mm including frame from reputed manufacture etc. all complete.	EACH	20	0.033911
2212	Providing and fixing circular heavy duty C.I. manhole cover of 600 mm dia with frame etc. all complete.	EACH	20	0.06472
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	12	0.007181
b	150x100mm P or S Type.	EACH	12	0.007816
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:			
b	150x100mm P or S Type.	EACH	10	0.006513
c	150x150mm P or S Type.	EACH	10	0.006968
2217	Providing and installing approved brand single tap water cooler of 80 L cooling capacity all complete.	EACH	5	0.043535
2218	Providing and installing approved brand single tap water cooler of 150 L cooling capacity all complete.	EACH	5	0.071241
2219	Providing and fixing white vitreous urinal partitions of size 675x325x85mm all complete.	EACH	10	0.005563
2220	Providing and fixing eye and face drinking water fountain (combined unit with receptacle conforming to IS: 10592) all complete as per specification.	EACH	5	0.058989
A2221	Providing and fixing heavy duty cast iron pipes for above and below ground sanitary works with water tight lead joint, fixing clamps, excavation, filling, disposal etc. all complete for the following.			

Date
Place

Package C: All Civil and Architectural work for Power House, TG Foundation including deck, BFP Foundations, Transformer Foundations (GT, ST & Aux. Transformer Foundations), and Transformer yard all civil works and DG building etc. excluding Power House Structural fabrication and erection for **Unit# 1 & 2** AT 4X270 MW Thermal Power Station, Manuguru, Distt- Khammam, Telangana.

PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
a	75mm dia pipes	RM	30	0.016606
b	100mm dia pipes	RM	30	0.020758
c	150mm dia pipes	RM	30	0.027308
d	200mm dia pipes	RM	15	0.016837
e	250mm dia pipes	RM	15	0.020204
2300 STRUCTURAL STEEL				
Structural steel works including all labour, material, equipments, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.				

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A2301	Taking delivery of steel from BHEL stores / store yard, loading, Transportation, unloading, fabrication and erection of structural steel with mild steel rolled section / built up section / combination of both conforming to IS:2062, pipes conforming to IS:1161/ IS:1239, chequered plate conforming to IS: 3052, mild steel rounds, monorails, stays, safety chains, 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, connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, peening, 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 20° C for welding over 20 mm and upto 40 mm & 66° C for welding over 40 mm and upto 63 mm & 110° 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 temporary structures, 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 preparation/re submission of fabrication/erection drgs for final approval, in consultation with BHEL.	MT	10	0.04387

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
A2302	Extra over ST NO. A2301 for blast cleaning of steel structures to near white metal surface(Sa 2 1/2) and applying zinc phosphate primer in coats of minimum 25 micron (DFT) at shop and 25 micron (DFT) after erection, instead of primer coat of red oxide zinc-chromate, including touch-up painting etc all complete.	MT	10	0.011603
2304	Providing and applying two coats of synthetic enamel paint with minimum 50 micron total dry film thickness (DFT) of approved make and shade to achieve an even shade over steel sections already having primer coats and keeping overall DFT with primer not less than 110 microns including protection and cleaning, scaffolding etc. all complete.	MT	10	0.004966
2400 ROAD WORKS				
Providing Road Work including necessary material, labour, machinery, transportation etc as per				
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	8100	0.344964
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, sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing etc all complete.	CUM	2400	0.148089
2402X	Supplying and filling upto any depth below ground level for grading to proper grade and level in layers not exceeding 300 mm loose thickness with Granular Morrurum (Granular Morrurum to be arranged by the bidder) and compacted as specified including royalty, sorting, spreading, breaking clods, watering, ramming/compaction by manual/mechanical means, dressing, finishing to required lines, grades and slopes, tesing, all lead and lifts etc all complete as per specification, drawing and as directed by the engineer for the following.	CUM	2100	0.226391
2403	Providing, stacking & laying granular morrum for shoulder including watering, compaction with road roller to required camber etc all complete.	CUM	300	0.05125

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
2404	Providing & laying water bound macadam sub base course of total thickness 150mm, should be laid in two layers of 75mm thick each, 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	975	0.300568
2405	Providing & laying water bound macadam base course of total thickness 150mm, should be laid in two layers of 75mm thick each, 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	975	0.346809
2700	STRUCTURAL GLAZING			

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PART B.1: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SERVICE portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SERVICE portion of work
2701	Providing fixing Semi Unitised Structural Glazing to fixed panels with no aluminium section exposed to outside and only glass panels with silicon joint visible from outside. The system specially designed with aluminium sections of grade 63400 WP IS: 733 and IS: 1285 with pure polyester powder coated 60- 80 microns , as per AAMA 2604 in approved colour ,with mullion fixed to beams / columns through adequately designed MS powder coated members and bracket which shall be fixed with appropriate bolts and expansion fasteners, so as to withstand the dead load of the structural glazing as well as stresses due to wind pressure. The Structural glazing system shall be designed as per IS code for required wind pressure(IS: 875 part III) as per the prevailing site conditions and building profiles and use of aluminium section alloy as per IS : 8147. The System design shall considered for thermal movements, air infiltration, water penetration, seismic movement and structural movement. Silicon sealant structural grade and weathering grade shall be GE/Dow corning/Sikka or Equivalent. (The item includes cost of material such as cleats, sleeves, screws etc. necessary for fabrication of extruded aluminium frame work. Nothing extra shall be paid on this account.) The structural glazing panels shall be factory glazed with structural silicon as per standard practice and under the strict supervision of the engineering staff (on site glazing is not permitted, except for replacement of damaged/broken glasses). The contractor shall submit the structural stability report of the structural glazing system from a consultant to be get approved by the engineer in-charge.	Kg	1182	0.336353
2702	Vision Glass 24mm thick (6mm+12air gap+6mm) double insulated glass with external Glass of 6mm thick Toughened and internal 6mm thick clear toughened glass of properties U value 1.6 W/Sq. mtr-K & as per specification.	SQM	330	0.586909
2703	Openable glazing panel with two point locking with friction stays, as per design required.	SQM	50	0.029641
2704	Providing and fixing G. I. flashing at soffit level / sill level made out of 1.5mm Thick G.I. Sheet with powder coated bent to required profile and shape to seal the soffit area.	SQM	20	0.002608
GRAND TOTAL Weightage (SERVICE PORTION)				100.000

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PART B.2: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SUPPLY portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SUPPLY portion of work
700 MS EMBEDMENTS				
701	Supply of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. all complete.	MT	40	4.692806
900 DOORS, WINDOWS, VENTILATORS, LOUVERS				
A907	Supply of 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	80	1.986946

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PART B.2: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SUPPLY portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SUPPLY portion of work
A909	Supply of anodised aluminium sections 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-mettalic 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 measured.	Kg	8550	6.564646
A910	Supply 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	550	2.931692
1400 FLOORING AND SKIRTING				
1406	Supply of polished Kota stone/Shahabad stone 18mm to 20mm thk in flooring all complete as per specification or as directed by engineer-in-charge.	SQM	4500	7.685141
1408	Supply of polished Kota stone/Shahabad stone 18mm to 20mm thk in skirting all complete as per specification or as directed by engineer-in-charge.	SQM	90	0.149429
1412	Supply of 18-20mm thick polished Granite stone of approved color and texture in flooring with brass/stainless steel strips all complete as per specification or as directed by engineer-in-charge.	SQM	3427	19.926122

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PART B.2: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SUPPLY portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SUPPLY portion of work
1414	Supply of polished Granite stone 18-20mm thk in skirting and dado all complete as per specification or as directed by engineer-in-charge.	SQM	150	0.898667
1429	Providing and fixing 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	400	4.137214
1500 ROOFING / SIDE CLADDING				

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PART B.2: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SUPPLY portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SUPPLY portion of work
A1501	Design and supply of 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	7500	16.268807
1502	Supply of 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	15	0.180676

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PART B.2: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SUPPLY portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SUPPLY portion of work
A1503	Design and Supply of external sheet of Permanent colour coated metal cladding with troughed M.S. sheets manufactured out of 0.55 mm TCT (Total coated thickness) permanently colour coated zinalume sheet (150 gsm zinc-aluminium alloy coating total of both sides as per AS 1397:1993) having 300 Mpa yield strength. The colour coating shall be comprise of SMP.The colour coating shall comprise of 20 microns finish coat over a 5-micron primer coat on the exposed side and a back coat of 5 microns over a primer coat of 5 micron on the reverse side.The metal cladding shall have 500 mm cover width,47 mm high crests at 250 mm centers with special male/female side laps and anti siphoning feature to prevent leakage .The sheet shall be fixed with the help of concealed compatible interlocking clips and wafer head zinc cotted self drilling fastner/screws 4.2X25 mm long on to the sub-girts.The clips shall be concealed and no fastner are to be penetrate the external sheeting all complete as per specification.	SQM	12250	16.847413
A1505	Design and Supply of inner sheet of Permanent colour coated metal cladding with troughed M.S. sheets manufactured out of 0.5 mm TCT (Total coated thickness) permanently colour coated zinalume sheet (150 gsm zinc-aluminium alloy coating total of both sides as per AS 1397:1993) having 550 Mpa yield strength . The colour coating shall be comprise of SMP.The colour coating shall comprise of 20 microns finish coat over a 5-micron primer coat on the exposed side and a back coat of 5 microns over a primer coat of 5 micron on the reverse side.The inner sheet shall have 980 mm cover width,28 mm high crests at 195 mm centers with special male/female side laps and anti siphoning feature to prevent leakage as per spec.	SQM	2100	3.163189

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PART B.2: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SUPPLY portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SUPPLY portion of work
B1505	Design and Supply of inner sheet of Permanent colour coated metal cladding with troughed M.S. sheets manufactured out of 0.6 mm TCT(Total coated thickness) permanently colour coated zinkalume sheet (180 gsm zinc-aluminium alloy coating total of both sides as per AS 1397:1993) having 240 Mpa yield strength. The colour coating shall be comprise of SMP.The colour coating shall comprise of 20 microns finish coat over a 5-micron primer coat on the exposed side and a back coat of 5 microns over a primer coat of 5 micron on the reverse side.The inner sheet shall have 980 mm cover width,28 mm high crests at 195 mm centers with special male/female side laps and anti siphoning feature to prevent leakage as per spec.	SQM	2100	3.025638
1600 FALSE CEILING				
1603	Supply of 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	750	2.995128
A1604	Supply of Acoustic permanently colour coated aluminium false ceiling of approved colour with stove enamel finish of approved make of either lineal panel system or aluminium tile/plank system with corrosion resistance aluminium alloys panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation (as per 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 as per specifications, drawings and direction of engineer.	SQM	1450	8.546477

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PART B.2: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price for SUPPLY portion of work

ST. NO	DESCRIPTION OF ITEM	UNIT	QTY.	% weightage w.r.t. the total price for SUPPLY portion of work
	GRAND TOTAL Weightage (SUPPLY PORTION)			100.00

PART B.3

Package C: All Civil and Architectural work for Power House, TG Foundation including deck, BFP Foundations, Transformer Foundations (GT, ST & Aux. Transformer Foundations), and Transformer yard all civil works and DG building etc. excluding Power House Structural fabrication and erection for **Unit# 1 & 2** AT 4X270 MW Thermal Power Station, Manuguru, Distt- Khammam, Telangana.

PART B.3: Percentage weightage of SERVICE portion of work (Part B.1) and SUPPLY portion of work (Part B.2) w.r.t. the Grand Total Price (as quoted by the bidder in Part C)

SL NO	DESCRIPTION	AMOUNT (`Rs.)	Weightage in %
1	TOTAL PRICE OF SERVICE PORTION (PART-B.1)	0.00	88.752223
2	TOTAL PRICE OF SUPPLY PORTION (PART-B.2)	0.00	11.2478
3	GRAND TOTAL Weightage (SERVICE PORTION (PART B.1) & SUPPLY PORTION (PART B.2))		100.00

VOLUME - II - PRICE BID SPECIFICATION

PACKAGE C: T.S.No BHE/PW/PUR/MANUT-CVL PHA Pkg-C (U-1&2) /1454

Part C: Format to quote total Lumpsum Price

Package C: All Civil and Architectural work for Power House, TG Foundation including deck, BFP Foundations, Transformer Foundations (GT, ST & Aux. Transformer Foundations), and Transformer yard all civil works and DG building etc. excluding Power House Structural fabrication and erection for Unit# 1 & 2 AT 4X270 MW Thermal Power Station, Manuguru, Distt- Khammam, Telangana.		
Sl No 1	Lumpsum Total Price for entire Scope of Work as detailed in Package-C of T.S.No BHE/PW/PUR/MANUT-CVL PHA Pkg-C (U-1&2) /1454	In figures:
		In Words
Note: Bidders to quote Total Lumpsum Price in this format above which shall be taken into account for evaluation and awarding and hence, it shall be complete in all respect for the full scope defined in specification and in accordance with all terms & conditions of tender.		

Date
Place

Seal and Signature