

**BHEL PSWR**  
**Chapter XII BOQ and Percentage Weightage**  
**Tender Specification Number: BHE/PW/PUR/MANUT-CVL CWP /1556**

Job: All Civil and Architectural work for CW Pump House, Fore Bay, CW Pipe Line, CW Chlorination & Treatment Plant, Clarified Water Storage Tank and Pump House etc. excluding Structural fabrication and erection for Unit # 1, 2, 3 & 4 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	% Weightage w.r.t. the total price
1	TOTAL PRICE OF SERVICE PART-A	90.899067
2	TOTAL PRICE OF SUPPLY PART-B	9.1009
3	<b>GRAND TOTAL Weightage ( SERVICE PORTION ( PART B.1) &amp; SUPPLY PORTION ( PART B.2 ))</b>	100.00

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
<b>100 EARTH WORK</b>				
<b>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.</b>				
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	64250	2.8160880687
b	Depth exceeding 2 m but not exceeding 4 m	CUM	57825	3.4468917961
c	Depth exceeding 4 m but not exceeding 6 m	CUM	11364	0.8816122010
d	Depth exceeding 6 m but not exceeding 8 m	CUM	2395	0.2729304343
e	Depth exceeding 8 m but not exceeding 10 m	CUM	1916	0.2200239193
103	<b>Earth work in excavation in soft rock</b> (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	6425	0.6533324319
c	Depth exceeding 4 m but not exceeding 6 m	CUM	7576	0.9164782203
d	Depth exceeding 6 m but not exceeding 8 m	CUM	7185	0.9888479581
e	Depth exceeding 8 m but not exceeding 10 m	CUM	7185	1.0707270884
106	<b>Earth work in excavation in hard rock requiring chiselling</b> including wedging, line drilling, pre shearing etc as required, setting out, levelling, deawtering (wherever required), dressing the sides & bottom, all lifts, stacking/disposal of surplus excavated material within a lead upto 500m, spreading / levelling of disposed materials etc all complete for following depths below ground level.			
e	Depth exceeding 8 m but not exceeding 10 m	CUM	479	0.2086868089
107	<b>Back filling</b> 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 <b>selected materials from compulsorily excavated soil</b> available within a lead upto 500m and compacted as specified including re-excavation of stacked earth, watering, ramming/compaction by manual/mechanical means, dressing etc all complete.for the following.			
a	Each layer compacted so as to achieve at least 95% maximum dry density as per IS-2720 (Part-VII)	CUM	35231	1.2816698359
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	18150	0.6602795130
108	<b>Back filling</b> 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 <b>selected materials directly from excavation</b> 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	8808	0.3088448710

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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 SUPPLY portion of work
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	4537	0.1590859650
109	<b>Extra over ST No. 101, 103 and 107</b> 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	11565	0.1824825068
b	Carriage beyond 2 km or part thereof but not exceeding 3 km	CUM	11565	0.3649650137
c	Carriage beyond 3 km or part thereof but not exceeding 4 km	CUM	3855	0.1824825068
d	Carriage beyond 4 km or part thereof but not exceeding 5 km	CUM	3855	0.2433100091
e	Carriage beyond 5 km or part thereof but not exceeding 6 km	CUM	1928	0.1520687557
f	Carriage beyond 6 km or part thereof but not exceeding 7 km	CUM	1928	0.1824825068
g	Carriage beyond 7 km or part thereof but not exceeding 8 km	CUM	1928	0.2128962579
h	Carriage beyond 8 km or part thereof but not exceeding 9 km	CUM	1928	0.2433100091
i	Carriage beyond 9 km or part thereof but not exceeding 10 km	CUM	1928	0.2737237602
110	<b>Back filling</b> upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250 mm thickness <b>using/with approved borrowed soil</b> (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	0.0609655673
b	Each layer compacted so as to achieve at least 90% maximum dry density as per IS-2720 (Part-VII)	CUM	255	0.0311829705
111	<b>Supplying and filling sand</b> 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	12880	3.3646138113
<b>200 CONCRETE WORKS</b>				
<b>Providing and placing concrete work including cost of labour, materials and equipment for handling, transportation, batching, mixing, placing, vibrating and curing, (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.</b>				
201	<b>Concrete of grade M7.5</b> (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as <b>filling course</b> at any depth below finished floor level, under and around foundations/floors, mass fill etc.	CUM	600	0.4191916932
202	Concrete of <b>grade M10</b> (1 part cement, 3 part sand, 6 parts of 40 mm graded aggregate by volume) as <b>lean concrete, levelling course</b> , mud mat under and around foundations/floors at any depth below finished floor level etc.	CUM	1306	1.1580096014
203	Concrete of <b>grade M15</b> (1 part cement, 2 part sand, 4 parts of 40 mm graded aggregate by volume) as <b>lean concrete, levelling course</b> , mud mat under and around foundations/floors at any depth below finished floor level etc.	CUM	100	0.1100137128
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	250	0.2686789083

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	% weightage w.r.t. the total price for SUPPLY portion of work
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 <b>in foundations/substructure, grade slab, paving, drains, under floors</b> 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 <b>as per specification &amp; drawing for the following.</b>			
a	M25 Grade	CUM	12510	16.0327410627
b	M30 Grade	CUM	50	0.0819843226
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 <b>in superstructure</b> 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 <b>as per specification &amp; drawing for the following.</b>			
a	M25 Grade	CUM	2995	4.1179820192
b	M30 Grade	CUM	50	0.0770534291
211	Providing and <b>encasing</b> of structural steel member with <b>concrete</b> using nominal aggregate size of 12.5mm down. Encased member shall be wrapped with welded wire mesh/chicken wire mesh with proper lap etc. complete as per specification for the following grades. (Payment of welded wire mesh, chicken wire mesh shall be made separately)			
a	M20 grade	CUM	100	0.0998012845
b	M25 grade	CUM	200	0.3038307002
212	<b>Screed concrete</b> conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/6 mm nominal size on the roof at 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	250	0.3489976847
213	Providing and laying Design Mix cement concrete as per IS:456 & IS 10262-2009 for reinforced concrete works using graded aggregate for Concrete <b>in precast works</b> like roof slabs/trench covers, fins, lintels, chajas, beams, columns, wall panels, facias etc.at all levels in all kinds of work including formwork/moulds, curing, rendering the top exposed surface with cement sand mortar (1:3), handling, storing, transpoting, all leads, erection without damage, setting in position with cement sand mortar (1:3), filling the gaps between adjacent precast units with M30 grade concrete or cement sand mortar (1:3) and including making of holes for bolts for fixing, welding etc.complete with graded aggregate (20/12.5/10 mm) and as per specification and drawing for following grades.			
a	M 25 grade	CUM	10	0.0243432733
b	M 30 grade	CUM	10	0.0138634810
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 <b>in water retaining/conveying structures</b> including addition of suitable plastisizer cum waterproofing cement additives confirming to IS 9103 latest to achieve a slump more than 125 mm in concrete as per manufacturers recommendation and conforming to limits of permeability as per IS 2545 and specification with 20 mm nominal size graded aggregate for following grades.			
b	M 30 grade	CUM	14128	22.8063353311

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	% weightage w.r.t. the total price for SUPPLY portion of work
215	<b>Dismantling concrete</b> 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	5	0.0039666298
b	Reinforced cement concrete of all grades	CUM	5	0.0055993035
216	<b>Chipping of concrete</b> in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes, disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	CUDM	1	0.0000407620
217	Extra over and above St No 216 for <b>cutting of reinforcement</b> , all sizes and types including labour, equipment, return of cut reinforcement to store etc all complete as per specification, drawings and instructions of engineer in charge. Measurement shall be on the cross sectional area of reinforcement cut.	SQCM	1	0.0000464599
219	Providing and applying <b>curing compound</b> of approved make where ever required as per manufacturer's specification.	SQM	3200	0.0603103063
<b>300 FORM WORKS</b>				
<b>Providing, fixing and removing formwork at any elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering complete including pockets etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.</b>				
301	<b>Fairface form work</b> with good quality water proof ply wood of required thickness and smooth surface <b>below finished ground floor level</b> for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	SQM	38917	5.2877893860
302	<b>Fairface form work</b> with good quality water proof ply wood of required thickness and smooth surface <b>above finished ground floor level</b> for columns, beams, suspended floors, roofs, lintels, cantilevers, staircases, landings, balconies, domes, arches, circular overhead tanks etc. for all heights.	SQM	11400	1.9636790296
304	<b>Providing, fixing and removing formwork in block-outs/pockets</b> and openings (below 0.1 sqm plan area) at all elevations including cutting, formation of all shapes and all other operations required for making the required shape and size all complete as per specification, drawing and instruction of engineer in charge.			
a	Upto 150 mm depth	Each	15	0.0024325741
b	Pockets of depths more than 150mm and upto 300 mm depth	Each	15	0.0025246174
c	Pockets of depths more than 300mm and upto 600 mm depth	Each	15	0.0040170345
d	Pockets of depths more than 600mm and upto 1000 mm depth	Each	15	0.0055751969
e	Pockets of depths more than 1000mm and upto 1500 mm depth	Each	10	0.0054656215
<b>400 REINFORCEMENT</b>				
401	<b>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</b> 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	15	0.0421962855

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	% weightage w.r.t. the total price for SUPPLY portion of work
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 conforming 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	2978	8.3773692220
<b>500 WATER PROOFING WORKS</b>				
<b>Water proofing works including all labour, material, equipment, transportation, handling, curing, sampling, testing etc at any level as per specification, drawings and as directed by engineer - in - charge.</b>				
A501	Providing and laying <b>underbed grading plaster with cement mortar 1:4</b> (1 cement : 4 sand) and average thickness of 15 mm including preparation of surface, batching, mixing, leveling etc. all complete.	SQM	2890	0.0707194006
A502	Providing and laying <b>rigid insulation (extruded polystyrene blocks)</b> as per relevant IS Code in suitable panels over roofs followed by a layer of 15 mm thick cement sand plaster 1:4 (1 cement: 4 coarse sand) and providing of expansion joint at intervals and filling with sealant in both directions as per the recommendation of manufacturer. The block shall be strong enough to withstand without deformation the workload and standard loads expected on the roof. Cost shall include making of fillets, cleaning & preparation of surface, expansion joints including filling with sealants at suitable intervals etc all complete as per specification for following.			
a	Average 50 mm thickness	SQM	2890	0.9174395035
A506	Providing and applying <b>PU based water proofing treatment with elastomeric, seamless waterproof membrane</b> 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	2890	0.6014759124
B506	Providing and applying a <b>separation layer of non-woven polypropylene geo-textile membrane</b> of 120 gsm for water proofing as per technical specification.	SQM	2890	0.0881490791
C506	Providing and applying <b>4 mm thick APP modified Bituminous Polyester membrane</b> for waterproofing manufactured from a rich mixture of bitumen and selected polymers blended together to obtain excellent heat resistant, flexibility, UV resistance etc. Modified bitumen then coated onto a dimensionally stable carrier to obtain excellent tensile strength, tear and puncture resistance etc complete as per technical specification.	SQM	2890	0.3888870353
A508	<b>Providing and laying pressed precast concrete tiles of 20 mm thickness and size 600x600 mm</b> conforming to IS 13801 with <b>15 mm thick 1:4 cement mortar</b> 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	2890	0.6488375170
509	<b>Providing and applying two coats of bitumen grade 85/25</b> 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	19459	1.2622789329
512	<b>Anti termite chemical treatment of soil</b> with Chloropyrifos emulsifiable concentrates (1%) conforming to IS :8944 all complete.	SQM	400	0.0136750113
<b>600 JOINTS AND FILLERS</b>				

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<b>Joints &amp; fillers including all labour, material, equipment, transportation, handling etc at any level as per specification, drawings and as directed by engineer - in - charge.</b>				
601	<b>Supplying &amp; installation of bitumen impregnated fibre board</b> conforming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/bitumin etc. all complete.			
a	<b>12 mm wide joints.</b>	SQM	100	0.0432603723
b	<b>20 mm wide joints.</b>	SQM	100	0.0573298551
c	<b>25 mm wide joints</b>	SQM	100	0.0700844330
d	<b>50 mm wide joints</b>	SQM	100	0.0902901388
602	<b>Providing and applying polysulphide based sealant</b> conforming to IS:12118 in expansion joints in concrete including cleaning of joints, raking out groove, application of primer, scaffolding etc. all complete for following size grooves:			
a	<b>12mm X 25mm</b>	RM	250	0.0156692838
b	<b>20mmX25mm</b>	RM	250	0.0245448921
c	<b>25mmX25mm</b>	RM	200	0.0347134902
d	<b>50mmX25mm</b>	RM	200	0.0694269805
603	<b>Supplying and filling in position hot applied bitumin sealing compound</b> (Grade A) conforming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.			
a	<b>10mm X 40mm</b>	RM	250	0.0013149049
b	<b>12mm X 25mm</b>	RM	200	0.0007889429
c	<b>20mmX25mm</b>	RM	200	0.0013149049
604	<b>Supplying and filling in position hot applied bitumin sealing compound</b> (Grade B) conforming to IS 1834 including cleaning, mixing, heating, pouring/injecting sealing compound in gaps in joints including application of primer etc. all complete.			
a	<b>10mm X 40mm</b>	RM	250	0.0010957541
b	<b>12mm X 25mm</b>	RM	200	0.0007012826
c	<b>20mmX25mm</b>	RM	200	0.0011395842
606	<b>Providing and fixing PVC water stops</b> in joints conforming to IS 12200 & IS 15058 all complete for the following:			
a	<b>150 mm wide and 8 mm thick</b>	RM	100	0.0131490493
b	<b>230 mm wide and 8 mm thick</b>	RM	100	0.0181018579
c	<b>150 mm wide and 6 mm thick</b>	RM	200	0.0206878376
d	<b>230 mm wide and 6 mm thick</b>	RM	200	0.0632030972
<b>700 MS EMBEDMENTS</b>				
<b>Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>				
701	<b>Fabricating and fixing of mild steel embedments, inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc.</b> including welding, bolting, cutting, drilling, scaffolding, setting etc. all complete. <b>Supply of material is in contractor scope for which payment shall be made in item no. 701 Part - B (Supply)</b>	MT	15	0.1362248087
702	<b>Same as above with BHEL supplied material free of cost including loading, transportation, unloading etc. all complete from BHEL store to plant site.</b>	MT	15	0.1428315485

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	% weightage w.r.t. the total price for SUPPLY portion of work
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	0.1596623317
704	Fabrication 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. <b>Supply of material is in contractor scope for which payment shall be made in item no. 704 Part - B (Supply)</b>	MT	20	0.2252169172
705	Supplying, fabricating, erecting and installing following items in concrete/brickwall for all kind of works, including setting material in concrete, layout, scaffolding, cutting, forming, grinding, drilling, bolting, welding, jointing, testing etc. all complete.			
a	MS pipes of all diameters	Quintal	10	0.0380796469
b	PVC pipes / conduits of all diameters	Quintal	10	0.0771805366
c	UPVC pipes / conduits of all diameters	Quintal	10	0.0812669543
d	<b>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 expansion sleeve of A6 polyamide:</b>			
i	Upto 250 kg	Each	10	0.0011965634
ii	Beyond 250 Kg and upto 500 kg	Each	10	0.0018583989
iii	Beyond 500 Kg and upto 750 kg	Each	10	0.0029979832
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	10	0.0014157143
ii	Beyond 250 Kg and upto 500 kg	Each	10	0.0021564440
iii	Beyond 500 Kg and upto 750 kg	Each	10	0.0033880717
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	10	0.0022892933
ii	Beyond 250 Kg and upto 500 kg	Each	10	0.0029484551
iii	Beyond 500 Kg and upto 750 kg	Each	10	0.0036465820
<b>800 GROUTING</b>				
<b>Grouting including all labour, material, equipment, roughening surface, cleaning, ramming, curing etc. at any level unless otherwise specified as per specification, drawings and as directed by engineer - in - charge.</b>				
801	<b>Providing &amp; grouting with cement slurry mix</b> of approved ratio using <b>pressure pump</b> 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	25	0.0050952566
802	<b>Providing &amp; grouting of pocket holes, pipe sleeves under base plates, machinery, pipe supporting structures etc. with mix 1:1 (1 cement : 1 sand )</b> using non shrink admixture etc. all Complete.	CUM	10	0.0790170205

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
803	<b>Providing &amp; 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). (Cement for mix shall be provided by BHEL free of cost)</b>	CUM	5	0.0234710530
804	<b>Providing &amp; 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).</b>	CUM	10	0.2326110659
805	<b>Providing &amp; grouting of pocket holes, pipe sleeves and under base plates of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing, etc. all complete with Conbextra GP-2 or equivalent. (Cost of all material and cleaning of the pockets by compressed air shall be in the scope of the contractor).</b>	CUM	10	0.2583043084
A805	<b>Providing &amp; 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).</b>	CUM	5	0.1291521542
<b>900 DOORS, WINDOWS, VENTILATORS, LOUVERS</b>				
<b>Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material, equipments, transportation, handling, preparation of working drawings etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>				
901	<b>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)</b>	CUM	5	0.2289008425
A901	<b>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)</b>	CUM	5	0.0694589327
902	<b>Providing and fixing teakwood frame panel door shutter as per IS 1003 with 35 mm x 150 mm vertical rail &amp; 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)</b>	SQM	24	0.0381427623

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
A902	<b>Providing and fixing teakwood frame panel door</b> 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, preperation 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	10	0.0158928176
B902	<b>Providing and fixing teakwood frame panel door with PVC lamination on both sides</b> 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, preperation 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	10	0.0159541798
903	Providing, fitting and fixing <b>solid core flush door shutter</b> 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	10	0.0167124417
A903	Providing, fitting and fixing <b>solid core wooden flush door shutter with PVC lamination on both sides</b> 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	40	0.0701922552
904	Providing and fixing <b>single or double steel door shutters with 45mm thk flush design shutter</b> comprising of two outer sheets of 18 gauge steel sheets rigidly connected and reinforced inside with continuous vertical 20 gauge stiffeners, spot welded in position at not more than 150mm on centres including void filled with mineral wool (density as per specification), all fittings, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete.	SQM	40	0.1013528723

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
906	Providing and fixing <b>anodized extruded aluminium doors (single or double shutter)</b> conforming to IS:1948, IS:1949 fabricated from extruded sections of HINDALCO/JINDAL or equivalent make having minimum 3mm wall thickness as per IS:1285, IS:733 and anodized and electro color coating of required shade as per IS 1868 ( minimum anodized coating of grade AC15 ). fixed with rawl plugs, expansion fasteners,SS screws / fixing clips necessary filling of gaps at Junctions, at top, bottom & sides with required PVC / neoprene felt for bi-metallic protection etc. <b>Glazing shall be clear float glass of 6mm thickness</b> including snap fit type beading, concealed screws, fixtures, Godrej or equivalent make Mortice 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	50	0.1190208116
907	<b>Fixing of fire proof steel doors</b> (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	0.0384557097
A907	<b>Fixing of fire proof steel doors</b> (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	40	0.0769114194
908	Providing and fixing <b>steel windows/ventilator</b> with steel sections as per IS:1038, IS:1361 & IS:7452 latest revision.including all fittings, metal beadings, hold fasts, shop and final painting ,glazing etc. all complete. (Glazing shall be paid separately)			
a	<b>openable type</b>	SQM	50	0.0607924381
b	<b>fixed type</b>	SQM	20	0.0233001154
A908	Providing and fixing <b>windows/ventilator</b> 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	50	0.0017187999

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
909	<b>Fixing of anodised aluminium work</b> of Jindal, Hindalco or other equivalent approved make for door frames, windows, ventilators, partitions, railing 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	191	0.0113518372
A909	<b>Fixing of anodised aluminium work</b> 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	3500	0.2080179606
A910	<b>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 &amp; approved shade, all complete as per specification.</b>	SQM	100	0.0412617168
911	<b>Providing and fixing of door closers</b> as per IS 3564 ,of approved make & quality all complete of following type :			
a	<b>Over head hydraulic door closures</b>	Each	20	0.0133944982
b	<b>Floor mounted Hydraulic door closers</b>	Each	10	0.0114002257
912	Providing and fixing <b>pressed steel frames</b> fabricated from <b>16 gauge M.S sheet</b> 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	1500	0.0723197714

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
913	Providing and fixing <b>in position rolling shutter of hot rolled double dipped galvanised steel</b> lath section of <b>18 SWG tested mild steel strips</b> 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	<b>Hand Operated</b>	SQM	20	0.0272798943
b	<b>Mechanically Operated</b>	SQM	60	0.1010109970
914	<b>Providing and fixing PVC doors(25 thk double skin)</b> of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	40	0.0464775064
A914	<b>Providing and fixing Solid core PVC doors (25 thk double skin)</b> with PVC frame of sintex or equivalent make including all fitting & fixtures as per specification, drawing and instructions of engineer in charge.	SQM	20	0.0500104806
915	<b>Providing, fixing and fitting of glazing of first grade class</b> in steel/aluminium/wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete.			
b	<b>4 mm thick clear float glass</b>	SQM	100	0.0231423268
c	<b>5.5 mm thick clear float glass</b>	SQM	253	0.0820588339
d	<b>6 mm thick wired glass</b>	SQM	100	0.0324781518
e	<b>6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges.</b>	SQM	15	0.0137604801
f	<b>4 mm thick ground glass</b>	SQM	20	0.0049265104
A915m	<b>6 mm thick clear float glass with itching</b>	SQM	10	0.0023283021
A915n	<b>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).</b>	SQM	50	0.0208377368
916	<b>Supplying and fixing weather stripping</b> of approved make and quality to doors as per instructions of engineer in charge and specification complete.	RM	10	0.0009993277
917	Providing and fixing <b>12 mm thick BWP particle board</b> , decorative veneer (prelaminated) on both sides, as panels in aluminium framed door shutter, fixed with necessary snap-on-beading etc. all complete (excluding aluminium works).	SQM	10	0.0078061522
918	<b>Providing and fixing steel louvered window with ISMC 100 frame</b> all round including verticals with 18G pressed steel louvers, painting etc. all complete.	SQM	10	0.0131578153
<b>1000 BRICKWORK</b>				
<b>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.</b>				
A1001	<b>Providing brick work</b> in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions <b>below plinth</b> including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.			
a	<b>Using fly ash lime/cement bricks</b> confirming to IS 12894 with crushing strength of 75 kg/cm <sup>2</sup>	CUM	20	0.0222525745

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**PART - A (SERVICES)**

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	% weightage w.r.t. the total price for SUPPLY portion of work
A1002	<b>Providing brick work</b> in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position <b>above plinth</b> including raking out joints, curing, scaffolding etc complete excluding plastering and painting.			
a	<b>Using fly ash lime/cement bricks</b> confirming to IS 12894 with crushing strength of 75 kg/cm <sup>2</sup>	CUM	680	1.0084356586
A1003	<b>Providing brick work</b> in cement mortar 1:4 (1 cement 4 coarse sand) in <b>partition walls</b> , 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	<b>Using fly ash lime/cement bricks</b> confirming to IS 12894 with crushing strength of 75 kg/cm <sup>2</sup>	SQM	60	0.0122838419
1006	<b>Breaking</b> 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	5	0.0018803140
1007	<b>Providing and encasing</b> of structural steel member with <b>masonry work</b> around flanges, webs etc. and filling the gap between steel and masonry by minimum 12mm thick mortar. Encased member shall be wrapped with chicken wire mesh with 50mm lap etc. complete as per specification. (Chicken wire mesh to paid separately)	CUM	5	0.0018934631
1008	<b>Providing and laying 75 mm thick bed of dry brick aggregate</b> including of excavation, disposal of surplus earth spreading of earth, ramming, watering etc. complete in all respects as directed by the engineer.	SQM	10	0.0007100486
1009	<b>Making openings</b> in existing brick wall or partition wall including making good the broken edges/surface with cement mortar etc. complete.	CUM	5	0.0025202344
1010	<b>Supply and placing in position mild steel wire fabric</b> of square mesh 25 mm size and wire diameter of 2 mm for encasing of steel sections in masonry work and concrete including cutting, bending, fixing etc. complete.	SQM	10	0.0011001371
1012	<b>Providing and filling brick bats in soak pits</b> all complete.	CUM	10	0.0046985936
<b>1100 DAMP PROOF COURSE</b>				
<b>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.</b>				
1101	<b>Providing Damp Proof Course 40mm thick 1:1.5:3 concrete</b> (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	120	0.0149057623
<b>1200 CEMENT MORTAR PLASTER</b>				
<b>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.</b>				
A1201	<b>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.</b>	SQM	2600	0.1186307232

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**PART - A (SERVICES)**

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	% weightage w.r.t. the total price for SUPPLY portion of work
A1202	<b>Providing 12mm thick plaster inside</b> the building/boundary wall in cement mortar 1:4 on walls finished to a smooth finish as per specification all complete.	SQM	2735	0.1116400530
A1204	<b>Providing 6mm thick plaster on ceiling in cement mortar 1:3</b> finished to a smooth all complete.	SQM	4621	0.1713684087
1205	<b>Providing 12mm thick plaster in walls, drains/culverts</b> with a paste of neat cement @ 1kg/sqm and rubbed smooth with trowel etc. all complete.	SQM	50	0.0021025329
1206	<b>Providing and making decorative plaster</b> of all types and design on walls, ceilings, arcs, columns with various thickness upto 18 mm including finishing all complete.	SQM	50	0.0035787329
1207	<b>Forming groove</b> of uniform size from 12X12 mm upto 20X15 mm in plastered surface as per approved pattern, using wooden battens nailed to the under layer, including removal of wooden battons, repair of the edges of plaster panel and finishing the groove etc. complete as per specification, drawing and the instructions of engineer in charge.	RM	50	0.0007012826
1208	<b>Providing drip coarse</b> on plastered surface at all elevations for all type of work such as chajjas, parapet, projections etc. including scaffolding, finishing etc. complete with all labour, tools and plants as per specification, drawing and instructions of engineer in charge.	RM	50	0.0005259619
1209	<b>Providing and laying encasement to box type steel beams</b> 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 (chicken wire mesh to be paid separately)	SQM	50	0.0035743499
1210	<b>Ruled pointing</b> in masonry in CM 1:3 (1 cement and 3 fine sand) including raking out joints, curing etc. complete.	SQM	50	0.0013959907
<b>1300 FINISHES TO CONCRETE / PLASTERED SURFACES</b>				
<b>Finishes, painting to concrete, plastered surfaces including all labour, material, equipment, surface preparation, scaffolding etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>				
1301	<b>Two or more coats of white wash/ colour wash</b> as per IS 627 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	SQM	50	0.0003506413
1302	<b>Two or more coats of Exterior masonry paint</b> (water or solvent base) of special resins, adhesives and additives mixed with fine, hard stone aggregate and suitable pigment. The paint shall be applied on a coat of primer over dried, prepared plaster surface as manufacturers guidelines. The final finished coating shall be fungus resistant, UV resistant, water repellent, alkali resistant and extremely durable with color fastness as per specification.	SQM	100	0.0047336577
1303	<b>Providing and applying two or more coats of oil bound distemper</b> as per IS 428 of approved brand, shade and manufacture to give smooth, hard, durable & glossy finish over a coat of primer over prepared plaster surface as per manufacturers guideline.	SQM	50	0.0016436311
1304	<b>Two or more coats of acrylic distemper</b> of approved brand and manufacture to give an even shade including a priming coat with distemper primer complete as per spec.	SQM	1784	0.0586447600
1305	<b>Providing and applying two or more coats of acrylic emulsion paint</b> 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	2130	0.1110963179

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**PART - A (SERVICES)**

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	% weightage w.r.t. the total price for SUPPLY portion of work
A1305	<b>Providing and applying two or more coats of external quality acrylic emulsion paint</b> 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	2030	0.1058805283
1306	<b>Providing and applying 2 or more coats of acid/alkali resistant paint</b> of approved brand and colour to floors, walls and ceiling including preparation of surface to receive paint, providing and applying bitumen primer confirming to IS 158 complete all as per manufacturer's recommendations and as approved by engineer, at all heights above or below grade level, complete as per specifications.	SQM	100	0.0138065018
1309	<b>Two or more coats of synthetic enamel paint</b> 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	500	0.0197235740
1310	<b>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.</b>	SQM	250	0.0062457984
1312	<b>Providing and applying 2 mm thick plaster of paris punning on walls</b> including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	SQM	300	0.0089413535
A1312	<b>Providing and applying 3 mm thick white cement putty punning on walls</b> (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	500	0.0311851620
1314	<b>Providing and applying Synthetic plaster for external applications</b> composed of synthetic fibre and petroleum based chemical similar to RENOVO or equivalent and of approved natural color/shade applied on cured and dried plaster surface. The final finish Paint 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	200	0.0424275992
<b>1400 FLOORING AND SKIRTING</b>				
<b>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.</b>				
1401	<b>Providing and laying 50 mm thick heavy duty cement concrete in flooring with metallic hardener pigmented topping</b> 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, etc. all complete for following (Quoted item rate shall be inclusive of providing glass joint strips):	SQM	2100	0.2311116360
1402	<b>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</b> complete as per specification.	SQM	200	0.0290637820

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
1418	<b>Providing and laying 10 mm thk non-skid fully vitrified tiles</b> of make 'MARBONITE' or 'FERRASTONE of BOSS Profile limited' or equivalent in <b>flooring and skirting</b> 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	<b>400X400 mm</b>	SQM	150	0.0790573443
b	<b>600X600 mm</b>	SQM	200	0.1030429635
A1423	<b>Providing &amp; fixing Acid / Alkali resistant (Chemical resistant) tiles</b> conforming to IS:4457 in flooring/Dado beded and jointed with epoxy mortar all complete for following thicknesses. The tiles should be abrasion resistant & durable.			
a	<b>20mm thick</b>	SQM	200	0.3125651754
1428	<b>Providing and laying 3mm thick antistatic PVC flooring / skirting</b> of approved shade, as per IS:3462 and laying as per IS:5318 all complete.	SQM	100	0.0335300758
1430	<b>Providing and fixing dividing strips</b> 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	<b>Glass strips 40 mm wide and minimum 6 mm thick.</b>	RM	50	0.0007889429
b	<b>Aluminium strips 40 mm wide and minimum 3 mm thick</b>	RM	50	0.0019285272
c	<b>Brass strips 20 mm wide and minimum 4 mm thick.</b>	RM	50	0.0026517249
<b>1500 ROOFING / SIDE CLADDING</b>				
<b>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.</b>				
A1501	<b>Fixing of permanently color coated galvanised MS troughed metal sheet decking plate</b> 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 <b>0.8mm with minimum trough depth of 44 mm</b> 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 polyester 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	<b>Span Upto 1800mm</b>	SQM	1900	0.3190353843

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
1502	Providing and fixing shear connectors of mild steel studs having 16mm dia and minimum 75 mm projected length above purlin passing through metal decking as per relevant IS codes and specification.	QUINTAL	5	0.0155399848
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	300	0.0574613456
1510	Providing and fixing 1 mm thick corrugated/semicorrugated G.I. sheet in roofs, cladding of minimum galvanisation of 275 gsm total on both sides with minimum 150mm overlapping, 8 dia G.I. hook bolts or 'J' Bolts and nuts @305 mm c/c along with G.I. and bitumen washers including cutting of sheets for opening etc. all complete.	SQM	100	0.0658329070
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	100	0.0191011856
<b>1600 FALSE CEILING</b>				
<b>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.</b>				
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	100	0.0496157462
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	100	0.0508868209
1603	Providing and fixing permanently colour coated aluminium false ceiling of approved colour and Luxalon 84 C or approved equivalent with corrosion resistant aluminium alloy panels of minimum thickness 0.5mm including 50mm thick mineral wool insulation(density 48 kg/cum) conforming to IS:8183 bound in polythene bags on top of panels. Additional hangers and height adjustment clips shall be provided for return air grills, light fixtures, A.C. ducts etc all complete. Suitable M.S. channel grid with minimum MC 75 shall also be provided above the false ceiling level for movement of personnel to facilitate maintenance of lighting fixtures, AC ducts etc. ( Materials for structural platform grid made up of MS Channels/ Beams / Angles shall be supplied by BHEL and shall be paid under ST No 2301)	SQM	100	0.1030447167

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
A1604	Providing, fixing and laying <b>Acoustic permanently colour coated aluminium false ceiling</b> 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	200	0.0937702539
<b>1700 RAIN WATER DOWN TAKE PIPES</b>				
<b>Rain water down take pipes including all labour, material, transportation, 2 coats of approved paint over one primary coat, fixtures, accessories etc at any level as per specification, drawings and as directed by engineer - in - charge.</b>				
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	200	0.0920433454
b	150 mm Dia	RM	200	0.1328053984
c	200 mm Dia	RM	50	0.0503389439
A1707	Providing and fixing GI down take pipes conforming to IS:1239 /IS:3589 of <b>heavy duty</b> all complete for following diameters.			
a	100 mm Dia	RM	200	0.1150541817
b	150 mm Dia	RM	200	0.1660067480
c	200 mm Dia	RM	50	0.0629236799
1708	Providing and fixing HDPE down take pipes conforming to IS:4984 as per specification of following diameters.			
a	110 mm Dia	RM	30	0.0045758691
b	160 mm Dia	RM	30	0.0064561832
c	200 mm Dia	RM	30	0.0086126273
<b>1800 MISCELLANEOUS WORKS</b>				
<b>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.</b>				
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	600	0.3489757697
1803	Anti termite chemical treatment of soil with <b>Chlorpyrifos/Lindane E.C. 20% with 1% concentration</b> 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	100	0.0032434321
1806	Providing 50mm thick <b>anti corrosive layer</b> 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	20	0.0043479523

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
1807	Providing and fixing <b>G.I strips</b> minimum 1.5mm thk and 150mm wide including fixing accessories etc. all complete.	Kg	20	0.0022265723
1808	Providing and fixing <b>aluminium strips</b> 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	20	0.0040674392
1809	Providing Chemical injection grouting with pressure pump for <b>water retaining concrete structures</b> 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	500	0.2358062849
1812	Laying of <b>earthing mats/rods</b> 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	20	0.1070069635
1813	Providing <b>Earthing pit</b> 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	5	0.0222744895
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	5	0.0103636423
1815	Providing and fixing <b>GI rungs</b> in concrete/brick walls having zinc coating of <b>minimum 900 g/sqm</b> etc. all complete.	Kg	100	0.0044706767
1816	Providing and fixing PVC <b>pressure release valve</b> of minimum dia 90mm in water retaining structure including 160 mm dia housing pipe of minimum length 3.75 m with perforation as per IS4558, nylon jali, perforated end plug, collar, graded filter, excavation, fixing in concrete slab/wall etc. all complete.	EACH	100	0.2644273823
1817	Providing and fixing <b>HDPE pipes in</b> concrete/ brick work of following sizes including cutting, fixing and levelling in position etc. all complete.			
a	Upto 75 mm dia	RM	20	0.0025333835
b	100 mm dia	RM	20	0.0028927908
c	150 mm dia	RM	20	0.0047336577
d	200 mm dia	RM	20	0.0076352146
1818	Providing and laying dry <b>stone pitching</b> of <b>230 mm</b> thickness for slope protection in <b>cement mortar 1:6</b> including hammer dressing, raking of joints, pointing, preparing the bedding surface and voids filling with stone aggregate etc. all complete.	SQM	15	0.0071582109
1819	Fabrication and erection of <b>stoplog gates in CW Pumps</b> with embedments required, lifting beams, special tools & plants, spare parts for three years, machining, casting, all materials such as structural steel, cast steel, stainless steel, brass used for seals, rubber seals, gears, ball and roller bearing, branch bushings, greasing, bolts, nuts, lugs, threaded fastners etc., cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc 750 gms/sqm., following by an application of etching primer and dipping in black bitumen as per B.S. 3416, erection along with a second stage concreting to true plumb and levels, submission of drawings / fabrication drawings for engineers approval etc all complete. The leakage through rubber seal shall not be more than 5 lit/min/metre length of seal under maximum head.(only weight of structural steel including embedments shall be considered for payment purpose) (SS component shall be measured separately for payment)	MT	90	1.6910755683

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**PART - A (SERVICES)**

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ST. NO	DESCRIPTION OF ITEM	UNIT	QTY	% weightage w.r.t. the total price for SUPPLY portion of work
1821	Fabricating and erecting in position and testing / examining bolted and / or welded structural steel work for <b>stationary screens</b> made out of rolled sections and / or plates including cutting, straightening if required, edge preparation, bolting / welding of joints, cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc as 750 gms./sqm. followed by application of an etching primer and dipping in black bitumen as per BS 3416 etc all complete.	MT	90	1.5433617778
1822	Cutting of <b>groove</b> of 10mm X 40mm size with groove cutting machine in concrete paving all complete.	RM	20	0.0002892790
1823	Fire proofing of steel structures with <b>VERMICULITE</b> cementitious coating including supply of all materials for vermiculite materials, reinforcement mesh (3mm thick wire, 50x50 size mesh) , nuts, tie wires, weldings, surface preparation, curing, staging, compatible paintings etc. all complete.	CUM	1	0.0312565175
1824	Supply & fixing <b>expanded metal steel sheet</b> 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	2	0.0003155771
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 upto 1km all complete.	CUM	5	0.0017422490
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	3	0.0031071203
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	3	0.0128781789
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 suppression 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	0.0096864663
1833	Supply & fixing <b>FRP (fibre reinforced plastic) sheets</b> 2 mm thick including GI hooks/ J or L bolts, nuts, washers, bitumen washers etc. complete including overlap 100mm .	SQM	2	0.0007617682
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	4	0.0001389065
<b>2100 WATER SUPPLY</b>				
<b>Water supply work including men, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>				
2101	Providing and fixing in position tested heavy duty type <b>chromium plated (CP) brass long neck bib cocks</b> including sockets, union, nuts etc all complete - <b>15mm</b> nominal bore.	EACH	10	0.0033223264
2102	Providing and fixing in position heavy duty <b>brass stop cock</b> of approved quality including all specials etc all complete - <b>15mm</b> nominal bore.	EACH	10	0.0028621097
2103	Providing and fixing in position heavy duty <b>brass full way valve</b> with wheel of approved quality including all specials etc all complete for following sizes:			
a	25mm nominal bore.	EACH	5	0.0025662561

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2104	Providing and fixing <b>GI pipes class B medium class</b> conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, <b>complete for internal works</b> 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	25	0.0028489606
b	20 mm nominal bore.	RM	25	0.0033530075
c	25 mm nominal bore.	RM	25	0.0041967382
A2104	Providing and fixing <b>Galvanised MS pipes class B medium class</b> conforming to IS:1239 pipes shall be concealed and painted with anticorrosive paint, <b>complete for internal works</b> 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	30	0.0034187528
b	20 mm nominal bore.	RM	30	0.0040236091
c	25 mm nominal bore.	RM	30	0.0050360859
2105	Providing and fixing <b>GI pipes class B complete for external work</b> 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	30	0.0038789695
b	20 mm nominal bore.	RM	30	0.0043128881
c	25 mm nominal bore.	RM	30	0.0053911102
d	50 mm nominal bore.	RM	30	0.0085600311
A2106	Providing and fixing <b>450X 750 mm high square edge 6 mm thick float glass mirror</b> of adequate width to match toilet lay-out and interior decor and as per spec.	EACH	10	0.0041156524
2107	Providing and fixing <b>610mmx127mmx6mm thk clear glass</b> with C. Guard rails and mounted on C.P. brackets etc all complete.	EACH	10	0.0033793056
2108	Providing and fixing 25 mm diameter <b>stainless steel towel rails</b> (600mm X 25mm) all complete.	EACH	5	0.0020293366
2109	Providing and fixing 20mm dia <b>chromium plated</b> M.S. pipes wall mounted <b>towel rod</b> with C.P. Brackets etc all complete.	EACH	5	0.0013587350
2110	Providing and fixing <b>C.P. soap holder</b> mounted with C.P. screws etc all complete.	EACH	5	0.0008853693
2111	Providing and fixing stainless steel / C.P. <b>liquid soap dispenser</b> . Dispenser shall be round and easily revolving with removable threaded nozzle and mounted on C.P. brackets etc all complete.	EACH	5	0.0013521605
2112	Providing and fixing glazed vitreous wall mounted <b>paper holder</b> with suitable cover cum cutter fitted with CP screws etc. sll complete.	EACH	5	0.0012360106
2113	Providing and fixing <b>chromium plated brass shower</b> rose with 15 or 20 mm inlet all complete.	EACH	5	0.0019570168
2114	Providing & fixing in position <b>P.V.C. water tank</b> of Syntex or approved equivalent including making all necessary inlet & outlet pipes, fixture, ball cocks, valves etc all complete for following capacities. GI pipes shall be paid separately under ST No. 2105.			
a	1000 litres capacity	EACH	2	0.0070172093
b	2000 litres capacity	EACH	1	0.0069234127
c	5000 litres capacity	EACH	1	0.0175995642
2115	Providing and fixing approved <b>stainless steel sink with integrated drainboard</b> as per IS:13983 of size 915x460x178mm with CI brackets, stainless steel chain with rubber plug 40mm, cp brass waste trap with necessary union complete including painting the fittings, cutting and making good the wall where required etc. all complete as per spec.	EACH	2	0.0041226652
<b>2200 SANITARY WORKS</b>				
<b>Sanitary work including all labour, material, equipment etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>				

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2201	Supply and fixing <b>glazed vitreous china Wash Basin</b> conforming to IS:2556 part 4 of oval shape with R.S. or C.I. brackets painted white, 15mm chromium plated brass hot & cold faucets with nylon washers, chromium plated brass chain with rubber plug, 32mm chromium plated brass bottle trap and waste of standard pattern, 32mm dia chromium plated brass trap unions, plastic connection pipe with chromium plated nuts, fittings, cutting and making good the walls where required etc all complete.			
a	White	EACH	2	0.0040814649
b	Colored	EACH	2	0.0046801849
2202	Providing and fixing approved vitreous china <b>laboratory sink of size 600x400x200mm conforming to IS:2556 (part-5)</b> 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	1	0.0025237408
2204	Providing and fixing <b>colour glazed vitreous china European type water closet conforming to IS:2556</b> 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	2	0.0050921885
b	Wall mounted	EACH	2	0.0055445158
2205	Providing and fixing <b>colour glazed vitreous indian type Orissa pattern (580x440mm) water closet</b> conforming to IS:2556 part 3 with all fittings including foot rests, low level 12.5 litre PVC flushing cistern with valveless fittings, necessary C.P connections etc all complete.	EACH	2	0.0046232057
2206	Providing and fixing white <b>flat back glazed vitreous china urinals</b> 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	8	0.0317961545
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	5	0.0020863158
b	110mm dia pipes	RM	36	0.0213330176
c	160mm dia pipes	RM	36	0.0322835459
2208	Providing, laying light duty non pressure <b>NP3 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc all complete for following.			
a	200mm dia	RM	15	0.0051807254
b	300mm dia	RM	15	0.0080143455
c	450mm dia	RM	15	0.0155158782
b	600mm dia	RM	15	0.0183232002
e	900mm dia	RM	15	0.0349567476
2209	Providing, laying light duty non pressure <b>NP2 class RCC pipes</b> with collars jointed with stiff mixture of cement mortar 1:2 including testing of joints etc complete for following.			
a	150mm dia	RM	15	0.0039249912
b	250mm dia	RM	15	0.0047205087
c	300mm dia	RM	15	0.0064759068
d	500mm dia	RM	15	0.0096842748
2211	Providing and fixing <b>C.I Manhole heavy duty cover of size 600mmx450mm</b> including frame from reputed manufacture etc. all complete.	EACH	10	0.0241679527

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
2212	Providing and fixing <b>circular heavy duty C.I. manhole cover of 600 mm dia</b> with frame etc. all complete.	EACH	10	0.0461224820
2213	Providing and fixing <b>square mouth S.W Gully trap</b> 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	5	0.0042668665
b	150x100mm P or S Type.	EACH	5	0.0046438059
c	150x150mm P or S Type.	EACH	5	0.0049681491
2215	Providing and fixing <b>C.I. floor traps with C.P jalli</b> all complete.	EACH	5	0.0015998010
2216	Providing and fixing <b>heavy duty UPVC floor traps with C.P jalli</b> all complete.	EACH	5	0.0010168598
2217	Providing and installing approved brand single tap <b>water cooler of 80 L</b> cooling capacity all complete.	EACH	2	0.0248192689
2218	Providing and installing approved brand single tap <b>water cooler of 150 L</b> cooling capacity all complete.	EACH	2	0.0406139070
2219	Providing and fixing white vitreous <b>urinal partitions</b> of size 675x325x85mm all complete.	EACH	5	0.0039644383
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	0.0840728300
<b>A2221</b>	<b>Providing and fixing heavy duty cast iron pipes for above and below ground sanitary works</b> with water tight lead joint, fixing clamps, excavation, filling, disposal etc. all complete for the following.			
a	75mm dia pipes	RM	10	0.0046021672
b	100mm dia pipes	RM	10	0.0065306945
c	150mm dia pipes	RM	10	0.0098617870
d	200mm dia pipes	RM	10	0.0138503319
e	250mm dia pipes	RM	10	0.0181895182
<b>2300 STRUCTURAL STEEL</b>				
<b>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.</b>				

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
A2301	Taking delivery of steel from BHEL stores/ store yard, loading, transporting and unloading at site, 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 including 2 coats of zinc-phosphate primer (one coat at shop and one coat after erection), connection design & preparation of fabrication drgs, collection of steel from stores, fabrication, straightening, cutting, bending, rolling, grinding, machining, drilling, welding, electrodes and other consumables, alignment, erection bolts & nuts (weight of erection bolts, nuts and welds not payable), assembly, edge preparation, preheating (min preheat and interpass temperature of 20o C for welding over 20 mm and upto 40 mm & 66o C for welding over 40 mm and upto 63 mm & 110o C for thickness over 63 mm & use of low hydrogen/ radiogenic electrodes), post heating, testing of welders, inspection of welds, visual inspection, non destructive and special testing, rectification and correction of defective welding works, production test plate, inspection and testing, erection scheme, protection against damage in transit, stability of structures, installation of 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.	MT	10	0.0642488410
A2302	Extra over ST NO. A2301 for <b>blast cleaning of steel structures</b> 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	0.0165371210
2304	Providing and applying two coats of <b>synthetic enamel paint</b> 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	0.0070785715
<b>2400 ROAD WORKS</b>				
<b>Providing Road Work including necessary material, labour, machinery, transportation etc as per specification, drawing, relevant IRC &amp; IS codes and as directed by the Engineer-in-charge for the following.</b>				
2401	<b>Preparation of sub grade</b> 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	0.5051996250

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**PART - A (SERVICES)**

**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 SUPPLY portion of work
2402	Supplying and <b>filling with selected good earth</b> of approved quality in layers not exceeding <b>300 mm loose thickness</b> 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	0.2168856795
2402X	<b>Supplying and filling</b> upto any depth below ground level for grading to proper grade and level in layers <b>not exceeding 300 mm loose thickness</b> with <b>Granular Morrurum</b> (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, <b>all lead and lifts</b> etc all complete as per specification, drawing and as directed by the engineer for the following.	CUM	2100	0.3315585389
2403	Providing, stacking & laying <b>granular morrum</b> for shoulder including watering, compaction with road roller to required camber etc all complete.	CUM	300	0.0750587183
2404	Providing & laying <b>water bound macadam sub base course</b> 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	0.4401943410
2405	Providing & laying <b>water bound macadam base course</b> of total thickness 250mm, should be laid in layers not exceeding 75mm in compacted 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	0.5079198345
	GRAND TOTAL Weightage ( SERVICE PORTION)			<b>100.00</b>

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**PART - B (SUPPLY)**

**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
<b>700 MS EMBEDMENTS</b>				
<b>Embedments including all labour, material, equipment, transportation, handling etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>				
701	<b>Supply 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.</b>	MT	15	3.1747277307
704	Supply 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	20	5.2486944148
<b>900 DOORS, WINDOWS, VENTILATORS, LOUVERS</b>				
<b>Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material, equipments, transportation, handling, preparation of working drawings etc. at any level as per specification, drawings and as directed by engineer - in - charge.</b>				
907	<b>Supply of fire proof steel doors</b> (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	0.8962127326
A907	<b>Supply of fire proof steel doors</b> (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	40	1.7924254653
909	<b>Supply of anodised aluminium work</b> of Jindal, Hindalco or other equivalent approved make for door frames, windows, ventilators, partitions, railing 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	191	0.2645552815

**BHEL PSWR**  
**Chapter XII BOQ and Percentage Weightage**  
**Tender Specification Number: BHE/PW/PUR/MANUT-CVL CWP /1556**

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**PART - B (SUPPLY)**

**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	<b>Supply of anodised aluminium work</b> 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	3500	4.8478716512
A910	<b>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 &amp; approved shade, all complete as per specification.</b>	SQM	100	0.9616069052
<b>1500 ROOFING / SIDE CLADDING</b>				
<b>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.</b>				
A1501	<b>Design and Supply of permanently color coated galvanised MS troughed metal sheet decking plate</b> 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 <b>0.8mm with minimum trough depth of 44 mm</b> 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	<b>Span Upto 1800mm</b>	SQM	1900	7.4351396886
<b>1800 MISCELLANEOUS WORKS</b>				
<b>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.</b>				

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**PART - B (SUPPLY)**

**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
1819	Design and supply of <b>stoplog gates in CW Pumps</b> with embedments required, lifting beams, special tools & plants, spare parts for three years, machining, casting, all materials such as structural steel, cast steel, stainless steel, brass used for seals, rubber seals, gears, ball and roller bearing, branch bushings, greasing, bolts, nuts, lugs, threaded fastners etc., cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc 750 gms/sqm., following by an application of etching primer and dipping in black bitumen as per B.S. 3416, erection along with a second stage concreting to true plumb and levels, submission of drawings / fabrication drawings for engineers approval etc all complete. The leakage through rubber seal shall not be more than 5 lit/min/metre length of seal under maximum head.(only weight of structural steel including embedments shall be considered for payment purpose) (SS component shall be measured separately for payment)	MT	90	39.4106224336
1821	Supply of bolted and / or welded structural steel work for <b>stationary screens</b> made out of rolled sections and / or plates including cutting, straightening if required, edge preparation, bolting / welding of joints, cleaning, sand blasting, hot double dip galvanised with minimum coating of zinc as 750 gms./sqm. followed by application of an etching primer and dipping in black bitumen as per BS 3416 etc all complete.	MT	90	35.9681432581
	GRAND TOTAL Weightage ( SUPPLY PORTION)			<b>100</b>