

E - TENDER SPECIFICATION
NO: BHE/PW/PUR/NTPRT-STORAGE SHED/001

FOR

**CONSTRUCTION OF 3 NOS CLOSED STORAGE SHED
(60m X 15m) AT 3x800MW PVUNL PATRATU PROJECT,
PATRATU, RAMGARH, JHARKHAND.**

VOLUME II – PRICE BID



Bharat Heavy Electricals Limited
(A Government of India Undertaking)
Power Sector - Western Region
Site office – 3 x 800MW Patratu Vidyut Utpadan Nigam Limited
Patratu, Ramgarh, Jharkhand-829119

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Part A: Instructions to the Bidders

1. **Bidders shall quote Total Lump-sum Price for the entire scope of work at “Part-C of Vol-II Price Bid”**. Price mentioned elsewhere in the offer of the bidder shall be treated as Null and Void.
2. BHEL has fixed the % weightages as in “Part-B OF Vol II Price Bid” for the amount of individual items of Schedule of Quantity w.r.t. the total price of Price Bid Vol-II.
3. Based on the pre-fixed % weightages, amount of individual items shall be derived by BHEL. This amount shall not be rounded off.
4. Based on the quantities of individual item and the amount arrived in SI No 3 above, item rate of individual items shall be derived by BHEL. This item rate shall be rounded off up to two decimal places and shall be used to calculate the total amount of an item.
5. Bidders to note that this is an **‘Item rate contract’**. Payment shall be made for the actual quantities of work executed at the Unit rate arrived at as per serial no 4 above.

PART B: % weightage for amount of individual items of Schedule of quantity w.r.t. the total price (as quoted by the bidder in “Part C of Vol-II-Price Bid”)

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Item no.	Item description	UOM	Quantity	Weightage
100	Earthwork			
101	Earthwork 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 materials within a lead upto 1 km, spreading/ levelling of disposed materials etc all complete for following depths below ground level			
a	Depth from ground level but not exceeding 2m	cum	1757.7	0.0100488
A107	Earthwork in back filling upto any depth below ground level foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 300mm thickness using/ with selected materials from compulsorily excavated earth available within a lead upto 1km 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 90% maximum dry density as per IS-2720 (Part - VIII)	cum	1255.527	0.0080868
109	Extra over item no. 101 and A 107 for carriage of material/ earth for every 500m or part thereof beyond initial lead of 1 km.			
a	Carriage for stacking/ backfilling of serviceable material/ earth	cum	900	0.0004558
b	Carriage for disposal of serviceable/ unserviceable material / earth	cum	900	0.0004558
A110	Earthwork in backfilling upto any depth below ground level around foundations, plinths, trenches, drains etc to proper grade and level in layers not exceeding 250mm thickness so as to achieve required compaction with approved moorum (moorum to be arranged by the bidder) and compacted as specified including supplying moorum, royalty/ seignorage fee (if any), sorting, spreading, breaking clods, watering, ramming/ compaction by manual / mechanical means, dressing, finishing to required lines, grades and slopes, testing, all leads and lifts etc. all complete as per specification, drawing and as directed by the engineer.	cum	65.25	0.0009444
B110	Same as item no. A110 but moorum/ sand/ stone/ brick debris will be provided by BHEL inside PVUN plant boundary. Loading, transportation and unloading to the work site is in the scope of bidder.	cum	60	0.0005384
1801	Providing and filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 63mm to 45mm in layers not exceeding 200mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum 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 compacted fill.	cum	456.822	0.0410758
A1801	Providing and filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 90mm to 45mm in layers not exceeding 300mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum 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 compacted fill.	cum	322.548	0.0319171
B1801	Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range 90mm to 45mm in layers not exceeding 300mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum 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 compacted fill. Stone boulders & moorum shall be provided by BHEL inside PVUN plant boundary. Loading, transportation and unloading stone boulders is in the scope of contractor.	cum	150	0.001346

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Item no.	Item description	UOM	Quantity	Weightage
C1801	Filling in trenches, plinths, area paving and other underground structures with graded stone aggregate of size range below 150mm in layers not exceeding 300mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum 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 compacted fill. Stone boulders shall be provided by BHEL inside PVUN plant boundary. Loading, transportation and unloading stone boulders is in the scope of contractor.	cum	150	0.001346
D1801	Filling in trenches, plinths, area paving and other underground structures with brick debris in layers not exceeding 300mm in thickness including breaking of stone boulders to required sizes, filling the interstices with selected moorum 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 compacted fill. brick debris shall be provided by BHEL inside PVUN plant boundary. Loading, transportation and unloading stone boulders is in the scope of contractor.	cum	150	0.001346
200	CONCRETE WORK: Providing and placing concrete work including cost of labour, materials (unless otherwise specified in BOQ/ contract specification) and equipment for handling, transportation, batching, mixing, placing, vibrating and curing (excluding cost of centering, shuttering and reinforcement) with mechanised equipments like batching plant, transit mixer, concrete pump etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.			
201	Concrete of grade M7.5 (1 part cement, 4 part sand, 8 parts of 40 mm graded aggregate by volume) as mass filling course, lean concrete, levelling course, mud mat under and around foundations/ floors, at any depth below finished floor level etc. (BHEL will supply Cement free of Cost as per TCC)	cum	312.558	0.0591746
205	Providing and laying Design Mix cement concrete conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in foundations/substructure, grade slab, paving, drains, under floors etc at all level below finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.(BHEL will supply Cement free of Cost as per TCC)			
a	M 25 Grade	cum	160.365	0.034098
206	Providing and laying Design Mix cement concrete of grade conforming to IS:456 & IS 10262-2009 for reinforced concrete works with coarse sand and graded hard stone aggregate of 20mm nominal size in superstructure at all level above finished floor level, any shape, position or thickness etc complete including use of plasticizer/ superplasticizer conforming to IS:9103 (latest) to achieve required slump in concrete all complete as per specification & drawing for the following.(BHEL will supply Cement free of Cost as per TCC)			
a	M 25 Grade	cum	134.1	0.028853
212	Screed concrete conforming to IS 456 with coarse sand and graded hard stone aggregate 12.5mm/ 6 mm nominal size on the roof at all level or thickness, drains etc complete as per following.(BHEL will supply Cement free of Cost as per TCC)			
a	1:02:04	cum	108	0.020447
215	Dismantling concrete work for all types of structures at all levels including stacking of servicable material to a lead of 500 m and disposal of unservicable material upto a lead of 2 km, cutting of reinforcement, labour, equipment, safety precautions etc all complete as per drawings, specification and instructions of engineer in charge.			
a	Plain cement concrete of all grades	cum	3	0.0001843

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Item no.	Item description	UOM	Quantity	Weightage
b	Reinforced cement concrete of all grades	cum	6	0.0005345
216	Chipping of concrete in reinforced concrete work, cutting pockets, making openings at all levels and according to shapes , disposal of waste materials upto a lead of 2 km as directed by engineer including equipment, safety precautions, making good the broken surface etc all complete as per specification, drawing, instructions of engineer in charge but excluding cutting of reinforcement .	cudm	30	0.000091
300	FORMWORK: Providing, fixing and removing formwork at all elevations for all structures, as per specifications and including all labour, material, scaffoldings and centering etc. complete as per drawing, specifications and as per direction of engineer in charge for the following.			
A301	Fairface form work with good quality water proof ply wood with film face of required thickness and smooth surface below finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc. (Please refer corrigendum-01 dated 21/01/2019)	sqm	713.4	0.0206516
A302	Fairface form work with good quality water proof ply wood with film face of required thickness and smooth surface above finished ground floor level for foundations, footings, base of columns, walls, columns, pilasters, beams, mass concrete, trenches etc.	sqm	1467.828	0.0506709
400	REINFORCEMENT WORK : Reinforcement work including all labour, material (unless otherwise specified in BOQ/ contract specification), equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge for the following:			
403	Transportation, straightening, cutting, bending, placing in position at all level, binding in position of steel reinforcements of TMT steel of grade Fe-500D or 500EQR confirming to IS:1786 including cost of reinforcement steel, binding wire, labour, scaffolding, transportation to & from stores etc complete all as per specifications, drawings and as directed by Engineer. (BHEL will supply TMT free of cost as per TCC)	MT	24	0.013138
407	Providing, straightening cutting, bending, placing in position at any level, binding of mild steel reinforcements in brickwork including cost of reinforcement and binding wire, labour, scaffolding etc. complete all as per specifications & drawings.	MT	1.5	0.0058542
600	JOINTS AND FILLERS: Joints & fillers including all labour, material, equipment, transportation, handling etc at all level as per specification, drawings and as directed by engineer - in - charge.			
601	Supplying & installation of bitumen impregnated fibre board confirming to IS 1838 as joint filler at joints in concrete including nailing, coating of both faces with coal tar pitch/ bitumin etc. all complete.			
c	25 mm wide joints	sqm	30	0.0020384
700	MS EMBEDMENTS: Embedments including all labour, material (unless otherwise specified in BOQ/ contract specification), equipment, transportation, handling etc. at all level as per specification, drawings and as directed by engineer - in - charge.			
701	Supply, fabricating and fixing of mild steel embedments , inserts, pipe sleeves, angle pieces, rungs of various diameters, plates of dimensions as required etc. including welding, bolting, cutting, drilling, scaffolding, setting etc. all complete.	MT	0.6	0.0027501

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Item no.	Item description	UOM	Quantity	Weightage
702	Supply, Fabrication, transportation, delivery at site and erection, installation and alignment of mild steel foundation bolt assembly conforming to IS:2062 and grade 1 of IS:432 in concrete along with nuts, lock nuts (as per IS:1363, 1364 and IS:3138), washers, anchor plates, stiffner plates, protective tape, pipe sleeves, templates etc. including welding, cutting, grinding, threading, drilling etc. all complete.	MT	1.5	0.0084338
704	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.			
b	PVC pipes / conduits of all diameters	KG	30	0.0007771
800	GROUTING: Grouting including all labour, material (unless otherwise specified in BOQ/ contract specification), equipment, roughening surface, cleaning, ramming, curing etc. at all level , drawings and as directed by engineer - in - charge.			
803	Providing & grouting of pocket holes, pipe sleeves and under base plate of structural steel work/ machinery/ pipe supporting structures including roughening of surface, cleaning, ramming, curing etc. all complete with mix 1:1:2 (1 cement : 1 coarse sand : 2 aggregate of 6 mm down graded stonechips) using non shrink admixture as per specification, drawing and direction of engineer-in- charge. (Cost of all material and cleaning the pocket by compressed air shall be in the scope of the contractor).(BHEL will supply Cement free of Cost as per TCC)	cum	3	0.0030098
900	DOORS & WINDOWS: Doors, windows, ventilators, louvers, roof ventilators, rolling shutters, partitions including all labour, material (unless otherwise specified in BOQ/ contract specification), equipments, transportation, handling, preparation of working drawings etc. at all level as per specification, drawings and as directed by engineer - in - charge.			
905	Providing and fixing single or double steel door shutters with 18 gauge M.S. sheets shutter presenting a flush surface on the outside and inside stiffened with semitubular edge and central stiffening rail which shall convey the lock including fixtures, Godrej or equivalent make mortice lock with handle on both sides, shop and final painting etc all complete.	sqm	15	0.0051662
A909	Providing and fixing anodised aluminium work of Jindal, Hindalco or other equivalent approved make for door frames, windows, 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-metalic protection etc. including preparation 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.All aluminium frames to be used shall have recycled content meeting required strength criteria for frame work as per engineer incharge. The contractor should provide the material cutsheet/ declaration from manufacturer mentioning the recycled content used in manufacturing of frames.	kg	15	0.0004179

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Item no.	Item description	UOM	Quantity	Weightage
915	Providing, fixing and fitting of glazing of first grade class in steel/ aluminium/ wooden frames, where ever required, cleaning after fixing including hardware, gaskets, clips, beadings etc. all complete.			
a	4 mm thick clear sheet glass	sqm	15	0.0010356
e	6mm thick Polycarbonate sheet multi (twin) wall fire retardant and ultra violet resistant with sealed open edges.	sqm	15	0.0020791
917	Providing and fixing 12 mm thick BWP particle board, decorative veneer (prelaminated) on both sides, as panels in aluminium framed door shutter, fixed with necessary snap-on-beading etc. all complete (excluding aluminium works).	sqm	15	0.001438
918	Providing and fixing steel louvered window with ISMC 100 frame all round including verticals with 18G pressed steel louvers, painting etc. all complete.	sqm	30	0.0042877
919	Providing and fixing 1 mm thk. MS sheet sliding shutters with frame and diagonal braces of 50X50X6 angle iron, 3 mm MS gusset plates at junction and corners, 25 mm dia pulley, 50X50X6 angle and T-iron guide at the top and bottom respectively including painting etc. all complete.	sqm	15	0.0031593
913	Providing and fixing in position rolling shutter of hot rolled double dipped galvanised steel lath section of 18 SWG tested mild steel strips at 75mm rolling centres interlocked together through their entire length and jointed together at the end by end locks mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation including wire springs, top cover, primer & shop coats of approved enamel paint etc, all complete as per IS 6248 and specification of approved make of following types: The bottom lath shall be coupled to a lock plate fabricated from 3mm thick galvanised steel plate and securely rivetted with stiffening angles.(partly coiled and lath/ full lath).			
b	Mechanically Operated	sqm	60	0.0099134
1000	BRICKWORK: Brickwork masonry including all labour, material (unless otherwise specified in BOQ/ contract specification), equipment, transportation, handling, scaffolding etc. at all levels as per specification, drawings and as directed by engineer - in - charge.			
1001	Providing brick work in cement mortar 1:6 (1 part cement 6 parts coarse sand) in walls, chambers etc. in thickness varying from 230mm to 460mm at all depths, places and positions below plinth including raking out joints, curing, scaffolding etc. complete excluding plastering and painting.(BHEL will supply Cement free of Cost for cement sand mortar only as per TCC)			
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	cum	60	0.0207828
1002	Providing brick work in cement mortar 1:6 (1 cement 6 coarse sand) in walls, chambers etc. in thickness 230mm at all heights, places and position above plinth including raking out joints, curing, scaffolding etc complete excluding plastering and painting. (BHEL will supply Cement free of Cost for cement sand mortar only as per TCC)			
c	Using burnt clay bricks of class designation 7.5 of nominal dimension	cum	660	0.2286106
1004	Providing brick soling including spreading of earth, ramming, watering including 25mm thick cushion of sand complete but excluding excavation and disposal of surplus earth (excavation and disposal of surplus earth shall be measured under applicable item). Using brick on edge.			
d	Using burnt clay bricks of class designation 5.0 of nominal dimension	sqm	30	0.0009639

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Item no.	Item description	UOM	Quantity	Weightage
1100	DAMP PROOF COURSE: Damp proof course including all labour, material (unless otherwise specified in BOQ/ contract specification), equipment, transportation, handling, shuttering, centering, curing etc at all level as per specification, drawings and as directed by engineer - in - charge.			
1101	Providing Damp Proof Course of following thickness with 1:1.5:3 concrete (10mm and down graded aggregate) with 2% of approved admixture of water proofing compound all complete. Two layers of hot bitumen coating 85/ 25 grade as per IS:702 @ 1.7Kg./sqm shall be applied one before & one after the DPC. (BHEL will supply Cement free of Cost per TCC)			
b	50mm thick	sqm	180	0.0026444
1200	PLASTERING: Cement mortar plaster including making grooves wherever required including all labour, material (unless otherwise specified in BOQ/ contract specification), scaffolding, curing etc at all level as per specification, drawings and as directed by engineer - in - charge.			
1201	Providing 18mm thick plaster in two layers outside the building/ boundary wall in cement mortar 1:6 on walls, finished to a smooth finish including providing 3mmx3mm size grooves at junctions of two dissimilar materials all complete(BHEL will supply Cement free of Cost for cement sand mortar only as per TCC)	sqm	3000	0.033001
1202	Providing 12mm thick plaster inside the building/ boundary wall in cement mortar 1:6 on walls finished to a smooth finish as per specification all complete.(BHEL will supply Cement free of Cost for cement sand mortar only as per TCC)	sqm	2580	0.0197905
1206	Providing drip course on plastered surface at all elevations for all type of work such as chajjas, parapet, projections etc. including scaffolding, finishing etc. complete with all labour, tools and plants as per specification, drawing and instruction of enigeer in charge.(BHEL will supply Cement free of Cost for cement sand mortar only as per TCC)	rm	300	0.0006996
1207	Forming groove of uniform size from 12X12 mm upto 25X15 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	300	0.0005423
1300	FINISHES TO CONCRETE / PLASTERED SURFACES: Finishes, painting to concrete, plastered surfaces including all labour, material (unless otherwise specified in BOQ/ contract specification), equipment, surface preparation, scaffolding etc. at all level as per specification, drawings and as directed by engineer - in - charge.			
1301	Two or more coats of white wash/ colour wash as per IS 627 of approved brand and manufacture to give an even shade including a priming coat as per specifications.	sqm	3000	0.0041677
A1316	Providing and applying 2 mm thick Acrylic wall putty in two coats over cement plasted surfaces including preparation of surface, staging, etc. to achieve a smooth even surface all complete as per specification and as directed by Engineer.	sqm	2580	0.0113327
1500	Roof sheeting			
12.8	Providing reinforced by organic fibres and/ or inorganic synthetic fibres cement 6mm thick corrugated sheets (as per IS: 147810) roofing up to any pitch and fixing with polymer coated J, or L hooks, bolts and nuts 8mm dia, GI plain and bitumen washers or with self drilling fastener and EPDM washers etc. complete (excluding the cost of purlins, rafters and trusses), including cutting sheets to size and shape wherever required.	sqm	3000	0.0788613

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Item no.	Item description	UOM	Quantity	Weightage
12.9	Extra for straight cutting in reinforced by organic fibres and/ or inorganic synthetic fibres cement corrugated, semi corrugated 6mm thick sheet roofing for making openings of area exceeding 40 square decimeter	metre	30	0.0001207
12.10	Extra for circular cutting in reinforced by organic fibres and / or inorganic synthetic fibres cement corrugated/ semi corrugated 6mm thick sheet roofing for making openings of area exceeding 40 square decimeter	metre	30	0.0003334
12.11	Extra for providing and fixing wind ties fo 40 x 6 mm flat iron section	metre	30	0.0002629
12.12	Providing and fixing ridges and hips in fibre cement reinforced by organic fibres and / or inorganic synthetic fibres roofing with suitable fixing accessories or self drilling fastener and EPDM washer etc. complete			
12.12.1	Corrugated serrated adjustable ridges	metre	15	0.000377
12.12.2	Plain wing adjustable ridges	metre	15	0.000377
12.12.3	Close fitting adjustable ridges	metre	15	0.0004239
12.12.4	Unserrated adjustable hips	metre	15	0.0003763
12.13	Providing and fixing fibre cement reinforced by organic fibres and / or inorganic synthetic fibres roofing accessories in all colours with polymer coated J or L hooks, bolts and nuts and / or GI seam bolts and nuts, GI plain and bitumen washers or with self drilling fastener and EPDM washer etc. complete:			
12.13.1	Corrugated apron pieces	metre	15	0.0003121
12.13.2	Eave's filler pieces	metre	15	0.0002528
12.13.3	North light curves	metre	15	0.0004234
12.13.4	Ventillator curves	metre	15	0.0004602
12.13.5	Barge boards	metre	15	0.0005442
12.13.6	Ridge finials	pair	15	0.0002267
12.13.7	Special north light curves	each	15	0.0007582
12.13.8	S type louvers	metre	15	0.0003958
12.14	Providing flat iron brackers 50 x 3 mm size with necessary bolts, nuts and washers etc. for fixing GS sheet gutters with purlins	metre	30	0.0001234
12.41	Provid and fixing on wall face unplasticised rigid PVC rain water pipes conforming to IS: 13592 Type A, including jointing with seal ring conforming to IS: 5382, leaving 10mm gap for thermal expansion, (i) single socketed pipes:			
12.41.1	75mm diameter	metre	15	0.0001749
12.41.2	110 mm diameter	metre	15	0.0002654
12.42	Providing and fixing on wall face unplasticised PVC moulded fittings/ accessories for unplasticised rigid PVC rain water pipes conforming to IS: 13592 Type A, including jointing with seal ring conforming to IS: 5382, leaving 10mm gap for thermal expansion			
12.42.1	Coupler			
12.42.1.1	75mm diameter	each	15	0.0000677
12.42.1.2	110 mm diameter	each	15	0.0001025
12.42.2	Single pushlift coupler			
12.42.2.1	75mm diameter	each	15	0.0000677
12.42.2.2	110 mm diameter	each	15	0.0000943
12.42.3	Single Tee with dooor			
12.42.3.1	75 x 75 x 75mm	each	15	0.0001217
12.42.3.2	110 x 110 x 110 mm	each	15	0.0001769
12.42.4	Single tee without door			
12.42.4.1	75 x 75 x 75mm	each	15	0.0001065
12.42.4.2	110 x 110 x 110 mm	each	15	0.000164
12.42.5	Bend 87.5 ⁰			
12.42.5.1	75mm diameter	each	15	0.0000782
12.42.5.2	110 mm diameter	each	15	0.000113
12.42.6	Shoe (plain)			
12.42.6.1	75mm diameter	each	15	0.0000689

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Item no.	Item description	UOM	Quantity	Weightage
12.42.6.2	110 mm diameter	each	15	0.000099
12.43	Providing and fixing unplasticised PVC pipe clips of approved design to unplasticised PVC rain water pipes by means of 50 x 50 x 50 mm hard wood plugs, screwed with MS screws of required length, including cutting brick work and fixing in cement mortar 1 : 4 (1 cement : 4 coarse sand) and making good the wall etc. complete			
12.43.1	75mm diameter	each	15	0.0002524
12.43.2	110 mm diameter	each	15	0.0002512
12.44	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams	each	15	0.0000411
12.51	Providing and fixing precoated galvanised steel sheet roofing accessories 0.5 mm (+0.05%) total coated thickness, zinc coating 120 grams per sqm as per IS: 277, in 240 Mpa steel grade, 5 - 7 microns epoxy primer on both side of the sheet and polyester top coat 15 - 18 microns using self drilling / self tapping screws complete:			
12.51.6	Gutter (600 mm over all girth)	metre	510	0.0308134
1800	MISCELLANEOUS: Miscellaneous works including all labour, material (unless otherwise specified in BOQ/ contract specification), equipment etc. at all level unless otherwise specified as per specification, drawings and as directed by engineer in - charge.			
1804	Providing and fixing weep holes in Retaining wall, drains, etc consisting of 100 mm dia HDPE pipe sleeves with single side covering for the pipe mouth with galvanised welded wire fabric of 20 mm sq. opening all complete.	each	15	0.0001443
2000	FENCING AND GATES: Fencing and gates including all labour, material (unless otherwise specified in BOQ/ contract specification), equipment etc at all level as per specification, drawings and as directed by engineer - in - charge.			
2001	Supplying and erecting in position 2.4 m high PVC coated galvanised chain linked fencing of minimum 8 gauge (including PVC coating) of mesh size 75mm x 75mm. The diameter of the hot dip galvanised steel wire for chain link fencing excluding PVC coating shall not be less than 12 gauge. GI barbed wire fencing of height of 600 mm confirming to IS 298 at top of chain link fencing shall be provided with 4 strands of barbed wire hot dip galvanised wire of 12G comprising of 2 ply of wires with barbs of 16G spaced at 100mm. Cost to include for GI hook bolts, rings & washers, hot dip galvanised tension wires, 25X6 mm GI flat stretcher bar at end posts, accessories etc. all complete. (Structural post shall be paid separately under item 2007)	rm	15	0.0015121
2006	Supplying and fixing 600mm high concertina on top of boundary wall including GI tension wires, clips, anchors, accessories etc. all complete. Concertinal shall be from tensile serrated galvanised wire (HTSW) made with wire diameter of 2.5 mm which will be stretched to 6m and attached on two strands of galvanised HTSSW (high tensile spring steel wire) of 2.5mm dia by means of clips at 1m interval. These two HTSSW strands will be attached to the fence posts/ angles with 12 mm security fasteners. (Structural post shall be separately under ST No. 2007)	rm	15	0.0002449
2008	Supply, fabrication and fixing of mild steel posts for fencing including painting etc all complete.	MT	3	0.014196
2010	Supply, fabrication and installing in position and testing MS Gates out of channels , joists, angles, flats, plates, pipes, welded steel wire mesh & sheets including stiffeners, bracings, fabricated hinges, MS Aldrops with locking arrangement, tempered steel pivot, guide track of MS Tee, bronze aluminium ball bearing arrangements, castor wheels, paintings etc. all complete.	MT	3	0.0156314
2300	STRUCTURAL STEEL WORK			

PRICE BID: PART B

CONSTRUCTION OF 3 NOS CLOSED STORAGE SHED (60m X 15m) AT 3x800MW PVUNL PATRATU PROJECT, PATRATU, RAMGARH, JHARKHAND

Item no.	Item description	UOM	Quantity	Weightage
10.2	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete	kg	3000	0.0177036
A10.2	Same as item no. 10.2 but structural steel will be provided by BHEL free of cost. Loading, transportation and unloading including rust cleaning (wherever required) is in the scope of contractor.	kg	40500	0.0800984
10.16	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete			
10.16.3	Electrical resistance or induction butt welded tubes	kg	5400	0.0405104
13.50	Applying priming coat:			
13.50.3	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel galvanised iron/ steel works	sqm	900	0.0026465
13.50.4	With ready mixed red oxide zinc chromate primer of approved brand and manufacture on steel works	sqm	900	0.0014196
13.52	Finishing with epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete			
13.52.1	On steel works	sqm	900	0.0099045

PART C: FORMAT TO QUOTE TOTAL AMOUNT

CONSTRUCTION OF 3 NOS CLOSED STORAGE SHED (60m X 15m) AT 3x800MW PVUNL PATRATU PROJECT, PATRATU, RAMGARH, JHARKHAND AS PER T.S. No BHE/PW/PUR/NTPRT-STORAGE SHED/001

Total amount for the entire bill of quantities given in Part B

In figures

In words

Note:

Bidder to quote total amount in this format given above, which shall be taken into account for evaluation and awarding and hence, shall be complete in all respect for the full scope defined in specification and in accordance with all terms & conditions of tender.

Date:

Signature and seal of bidder